



CAMBODIA

SUSTAINING STRONG GROWTH
FOR THE BENEFIT OF ALL

A Systematic Country Diagnostic

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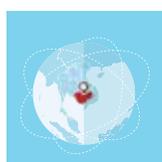
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Abbreviations

ASEAN	Association of Southeast Asian Nations	LDC	Least Developed Country
ASYCUDA	Automated System for Customs Data	L-MIC	Lower Middle-Income Country
BSP	Budget Strategic Plan	LPI	Logistics Performance Index
CCT	Conditional Cash Transfer	LUCF	land Use Change and Forestry
CDC	Council for the Development of Cambodia	MDG	Millennium Development Goal
CMT	Cut-Make-Trim	MFI	Microfinance Institutions
CPP	Cambodian People's Party	MFN	Most Favored Nation
CR	Cambodian riel	MPWT	Ministry of Public Works and Transport
CSES	Cambodia Socio-Economic Survey	MTEF	Medium-Term Expenditure Framework
CSO	Civil Society Organization	NDC	Nationally Determined Contribution
D&D	Decentralization and Deconcentration	NIS	National Institute for Statistics
EBA	Everything-but-Arms	NLC	National Logistics Council
ECD	Early Childhood Development	NFP	National Forest Programme
EIA	Environmental Impact Assessments	NGO	Non-Governmental Organization
ELC	Economic Land Concession	ODA	Official Development Assistance
EU	European Union	OOP	Out-of-Pocket
EVFTA	EU-Vietnam Free Trade Agreement	PES	Payment Ecosystem Services
FDI	Foreign Direct Investment	PFM	Public Financial Management
FMIS	Financial Management Information System	PIM	Public Investment Management
FOB	Free on Board	PPA	Paris Peace Agreement
FTA	Free Trade Agreement	PPP	Public-Private Partnership
GCF	Gross Capital Formation	PPP	Purchasing Power Parity
GDP	Gross Domestic Product	RBS	Risk-Based Supervision
GII	Global Innovation Index	RGC	Royal Government of Cambodia
GMAC	Garment Manufacturers Association in Cambodia	R&D	Research and Development
GNI	Gross National Income	SCADA	Supervisory Control and Data Acquisition
G-PSF	Government-Private Sector Forum	SCD	Systematic Country Diagnostic
GSP	Generalized System of Preferences	SDG	Service Delivery Grant
GVC	Global Value Chain	SDG	Sustainable Development Goals
HEF	Health Equity Fund	SEA	Strategic Environmental Assessment
HEI	Higher Education Institution	SEZ	Special Economic Zone
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome	STEM	Science, Technology, Engineering, and Mathematics
HR	Human Resource	TB	Tuberculosis
IDP	Industrial Development Policy	TFP	Total Factor Productivity
IFRS	International Financial Reporting Standards	TVET	Technical and Vocational Education and Training
IWRM	Integrated Water Resources Management	UN	United Nations
KHR	Cambodian Riel	UNTAC	United Nations Transitional Authority in Cambodia
kWh	Kilowatt Hour	US	United States
		USD	United States Dollar
		VAT	Value-Added Tax
		WTO	World Trade Organization

Currency Equivalents

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Currency Unit = KHR (Cambodian Riel)
KHR 4083.30 = USD 1.00
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Executive Summary

Over the past two decades, Cambodia has achieved stellar economic growth and poverty reduction

Thanks to rapid and sustained growth, Cambodia has become one of the world's leaders in poverty reduction and shared prosperity. Official estimates show that poverty incidence under the national poverty line fell from 47.8 percent in 2007 to 13.5 percent in 2014, a trend supported by improvements in other indicators of living standards such as asset ownership, housing amenities, and human development outcomes. Poverty reduction was particularly dramatic during the 2007-9 period, when poverty declined by 25 percentage points and 3.3 million people escaped poverty, thanks in large part to an expansion of cultivated area and high international food prices which benefited both farmers and agriculture workers. As commodity prices started to decline and agriculture slowed down (2012 onwards), rural households have diversified their livelihoods, tapping into a growing rural non-farm economy and remittances from an increasing number of domestic and international migrants. Overall, consumption per capita for the poorest 40 percent of the population grew by 7.8 percent per annum on average during 2007-14, putting Cambodia among the top ten countries in the world and helping to reduce income inequality.

Cambodia sustained an average growth rate of 7.6 percent in 1994-2015, ranking sixth in the world, and has now become a lower middle-income economy. Growth has been driven by exports of goods and services (mainly garments and tourism), which grew by a blistering 19.6 percent a year, with Cambodia ranking second in the world after Equatorial Guinea and ahead of stellar

performers such as Vietnam (15.5) and Bangladesh (15.3). Agriculture and, more recently, construction and real estate have also been main engines of strong economic growth. As a result, gross national income (GNI) per capita more than tripled from USD 300 in 1994 to an estimated USD 1,070 in 2015, the year in which Cambodia became a lower middle-income economy (Ly, 2016a). Cambodia's impressive achievements have been built upon openness to trade and capital flows and driven by preferential trade treatment and large official development assistance (ODA) and foreign direct investment (FDI) inflows (7.9 percent of GDP on average in 2005-15, among the highest in the world).

To a large extent, Cambodia's success has ridden on employment creation. Over the past two decades, the increase in raw labor input alone accounted for more than one-quarter of aggregate output (or real GDP) growth in Cambodia. With its growing working-age population, Cambodia is still in the early phases of its "demographic dividend" and has so far been extremely successful in creating jobs for youth and women in labor-intensive activities. The country has benefited from a large structural transformation—meaning the reallocation of economic activity across the three broad sectors of agriculture, manufacturing, and services—with around 3.6 million net jobs created in industry and services and 0.7 million in agriculture and fisheries over the past two decades.

Growth has also been driven by the country's rich and diverse natural capital, which supports the livelihoods of millions of Cambodians. Agriculture, which depends heavily on natural resources and ecosystem services, contributed to 30 percent of gross domestic product (GDP) in 2015. More than five million people depend on agriculture and fisheries to supplement their income and support their food security, and 88

percent of the population still relies on traditional biomass for cooking. Cambodians are also the largest consumers of freshwater fish per capita, with fish and other aquatic resources contributing 37 percent of total protein. Tourism, another engine of economic growth, is also becoming increasingly dependent on natural resources and environmental sustainability.

As a lower middle-income economy, Cambodia is facing new challenges to sustaining strong economic growth

Going forward, Cambodia may not be able to rely on the same factors that drove strong growth and poverty reduction over the past two decades.

Cambodia's eventual graduation from being a least-developed country (LDC) will bring a progressive decline in donor financing and an erosion of preferential trade treatment. At the same time, salaries are rising, and it will be increasingly difficult for Cambodia to keep exporting unprocessed rice and low-end garments. In the case of agriculture, the outlook for commodity prices is not positive, and Cambodia's scope for further gains in cultivated area is more limited nowadays, especially considering the need for environmental sustainability.

Notably, labor productivity gains have been lower than in other rapidly growing economies, partly due to lower capital intensity.

During 1993-2014, Cambodia registered 3.5 percent growth in labor productivity compared to the 4.7 percent achieved by Vietnam during the same period and the 7.1 percent average growth rate in Thailand during the boom years of 1986-96. Productivity in the garment industry remains lower than in most comparator countries, and evidence indicates relatively little investment in equipment and machinery upgrading. Gross capital formation as a percentage of GDP averaged less than 20 percent of GDP over the past two decades, lower than comparator countries and much lower than Vietnam and Thailand during boom years.

In the face of declining competitiveness, Cambodia's low-value production and heavy concentration in garments and tourism will become increasingly problematic.

Cambodia's export-led growth has been driven by garments, which comprise more than 70 percent of total merchandise exports. Most of Cambodia's garment export items are targeted to the low-quality/low-price segment of the U.S. and EU markets. Only in recent years have some garment factories started to move toward higher value addition (embroidery, washing, printing), likely spurred by declining external competitiveness in the context of U.S. dollar appreciation and the rapidly rising minimum wage (from USD 80 a month in 2013 to USD 153 a month in 2017, now on par with Vietnam). While some nascent higher-value export products (including bicycles, television parts, and ignition wires) have been observed in recent years, most of the activities located in Cambodia are still mainly labor-intensive assembly, with little to no production of pieces and parts and with only incipient integration into regional value chains. Tourism is also coping with U.S. dollar appreciation and rising wages, and challenges in infrastructure and environmental sustainability constrain diversification of activities within the sector. With tourism accounting for 70 percent of the total, diversification in service exports remains limited, and future prospects may be hampered by limited adoption of technologies.

A number of institutional, human capital, and, to a lesser extent, infrastructure constraints hamper competitiveness as well as the creation of a vibrant private sector in Cambodia.

While some progress has been made, Cambodia still lags behind other lower middle-income economies in these areas (Figure 1). Burdensome formalization processes make Cambodia one of the most difficult places in the world to register a business—Cambodia ranks 180th out of 189 countries on this dimension, with 87 days needed to start a business (compared to 25.9 in East Asia and the Pacific) and high costs in terms of income per capita (78.7 percent). Low educational attainment also poses an increasing constraint to

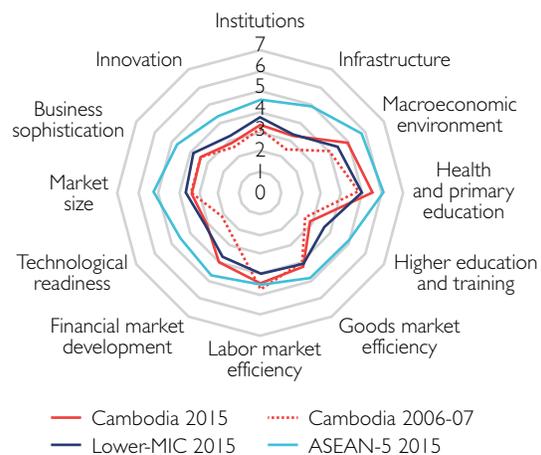
economic diversification and upgrading: although net enrollment in primary education increased significantly, lower secondary completion rates (43 percent in 2013) are significantly below the average for lower middle-income economies (71 percent). Entrepreneurs report that school credentials (certificates, degrees), even at the tertiary education level, are not a signal of competence of workers, pointing to quality challenges. Moreover, technical and vocational education and training (TVET) faces negative perceptions (which results in low enrollment rates) and does not seem to address the skills demand of the private sector. In terms of infrastructure, although Cambodia's power sector supply has improved significantly in the past five years, the price of electricity remains high compared to neighboring countries: the average tariff for large industrial consumers was at least 35 percent higher than in Thailand, Myanmar, or Vietnam.

To ensure that growth will continue to be inclusive, a series of constraints that particularly affect poorer households must be overcome

Limited human capital hinders socioeconomic mobility. Most Cambodians not in extreme poverty are by international standards either moderately poor or economically vulnerable, with two-thirds of the population living under USD 5.50 a day PPP. The slow growth of an economically secure (and consumer) class in Cambodia can be explained in part by low household endowments in terms of education, health, and land. A national assessment of student achievement (MoEYS, 2015) found that 39 percent of grade 6 pupils had a below basic proficiency rating for reading in Khmer. Such poor learning outcomes—which can be attributed to fewer and inadequately trained teachers and fewer hours compared to peers—affect the ability of individuals to climb the socioeconomic ladder.

Human capital limitations begin early in life due to poor nutrition, lack of nurturing care, and

Figure 1. Cambodia still lags behind on some dimensions of economic competitiveness



Source: *Global Competitiveness Indicators, World Economic Forum.*

absence of early stimulation. Having grown up in a period of very high poverty and maternal and child undernutrition, the majority of Cambodia's current cohort of young workers likely experiences some of the lifelong, negative consequences of childhood malnutrition and other early life deprivations. Although malnutrition prevalence has declined over the past two decades, about 33 percent of children under the age of five are stunted. Over half of children 6-59 months of age have late schooling, and only 35.9 percent of 3-5 year olds were enrolled in early childhood education during the 2014-15 academic year. Access to improved water and sanitation facilities (at 75 and 42 percent of total population, respectively) remains significantly below the average for lower middle-income economies (90 and 52 percent, respectively) and is a major contributor to stunting, along with sub-optimal infant feeding practices and low dietary diversity. In addition, Cambodia still has one of the highest maternal mortality rates in the region (161 per 100,000 live births in 2015), which points to problems in quality and access to healthcare.

Socioeconomic mobility is also hampered by high exposure to financial and weather shocks, with

very limited social protection to help households manage shocks. Approximately 6.3 percent of the population had catastrophic spending in 2013, and 3.1 percent had to incur debt to pay for health expenditures. Cambodia ranks among the world's top ten countries in terms of out-of-pocket (OOP) health spending, with OOP payments for health services at 60 percent of all health expenditure. While the expansion of health equity funds (HEF) could help increase utilization of public health services and lower OOP expenditures among the poor and vulnerable, coverage is still limited, and challenges in design and implementation remain. Disasters are another source of catastrophic spending, with Cambodia ranked as the 8th most disaster-prone country in the world in 2015 by the United Nation's World Risk Index. A 2013 post-flood needs assessment found that the average monthly incomes of those affected dropped more than 25 percent, amounting to USD 37.6 million. Meanwhile, social protection systems are only incipient, with Cambodia spending less than 0.1 percent of GDP on social assistance compared to the world average of 1.6 percent.¹

Persistent gender gaps in earnings and job quality also pose a challenge to achieving shared prosperity. Female labor force participation in Cambodia, at 79 percent in 2014, is among the highest in the world, and female-owned enterprises comprise more than half of all business establishments in Cambodia. However, female-owned businesses are generally smaller, less profitable, and less likely to be registered than male-owned businesses. While women represent 85 percent of the garment sector labor force, most of them are engaged in assembly, while the higher-paying quality and supervision work is done by men. Moreover, according to the Cambodia Socio-Economic Survey (CSES) 2014, the gender earnings gap in 2014 was as high as 30 percent among those with low education, notably dropping to 7 percent

¹ ASPIRE database. Accessible at datatopics.worldbank.org/aspire/.

among college graduates, which underscores the importance of closing the educational attainment gap. Analysis also shows that female-headed households are more likely to rely on remittances, less likely to save, and more vulnerable to natural and health shocks. Notably, women in Cambodia also face difficult tradeoffs between childcare and work, particularly since they dominate employment in the garment sector, where 97 percent of workers moved to Phnom Penh for their job (World Bank, 2015d). In terms of political representation, women account for only 7 percent of ministerial posts, placing Cambodia in the bottom 20 percent globally (Inter-Parliamentary Union, 2016).

Consultations with civil society organizations (CSOs) highlighted that some population groups still experience marginalization and exclusion, heightening their vulnerability and preventing them from sharing the benefits of growth. For example, approximately 10 percent of the population suffers from at least one form of disability. About 45 percent of adults with disabilities do not earn an income, and household wealth for people with disabilities is about half that of non-disabled people. People who are lesbian, gay, bisexual, transgender, and/or intersex (LGBTI) continue to face stigmatization by their families, communities, and the media, along with discrimination in workplaces and schools. Although ethnic minorities do not have significantly higher poverty rates than the average, they are highly vulnerable to the loss of land. In 2007, it was estimated that indigenous communities had lost 30 percent of their traditional land since 1989, and conflict over land remains one of the most contentious issues in the country.

While not preventing strong growth and poverty reduction thus far, governance challenges affect firm competitiveness, the quality of public service delivery, and access to assets and opportunities. While some progress has been made, bribery incidence (affecting 63 percent of reporting firms in 2016) remains by far the highest among peer

countries. In the 2015 Corruption Perceptions Index, Cambodia ranked 150th, with only Afghanistan and North Korea performing worse in the Asia-Pacific region. While government spending on health and education has increased significantly in recent years (at around 1.3 and 2.1 percent of GDP in 2015, respectively), it remains below average for a lower middle-income economy, and overreliance on donors for public service delivery persists. This problem is compounded by fundamental weaknesses in public finance management (RGC, 2015b), patronage, misallocation of human resources, and limited civil service capacity. Finally, in a context of poor rule of law, land disputes and displacement have disproportionately affected the poor and vulnerable, although notable progress has been made over the past 15 years.

Risks stemming from rapid credit growth and natural resource degradation could affect economic sustainability

Compounding the above challenges, a number of rising risks could potentially affect Cambodia's development path, including increasing exposure to microfinance debt and financial overheating. Although Cambodia presents low risk of debt distress (IMF, 2016), a programmed fourfold increase in the public sector wage (between 2013 and 2018) may eventually result in fiscal pressures, since the public payroll already represents around 40 percent of revenue. In terms of macro-financial risks, Cambodia's credit to private sector as a percentage of GDP is booming and jumped from 2 percent in 1993 to 63 percent in 2015, already above the average for lower middle-income economies. Following a sharp decline in construction activity in the aftermath of the 2009 global crisis, credit to construction, real estate, and mortgages increased from around 4 percent of GDP in 2010 to an estimated 13 percent of GDP as of 2015, or around 20 percent of total outstanding credit to the private sector. Credit at microfinance institutions

(MFI) is also booming, growing at annual rates of over 40 percent in recent years, and outstanding MFI loans reached 12 percent of GDP in 2014. In a decade, average loan sizes have increased from around USD 200 to USD 1,000, doubling the pace of expansion of income per capita in 2004-14. A series of macroprudential measures introduced by the National Bank of Cambodia in 2016 and 2017, including rising liquidity and capital requirements, are expected to help mitigate risks related to fast credit growth.

Climate change, coupled with natural resource degradation and unplanned urbanization, could also affect future growth. Natural disasters have caused significant deterioration of livelihoods and destruction of infrastructure in Cambodia, with average damages from disasters estimated at USD 235 million per year (Germanwatch, 2016). Notably, Cambodia lacks the infrastructure and planning capacity needed to respond to the hydro variability in the country. In the future, climate change will heighten the vulnerability to natural disasters and extreme weather events: based on the scenario of a 2°C temperature rise by 2050, initial estimates suggest that climate change will reduce Cambodia's total GDP by at least 1.5 percent in 2030 and 3.5 percent in 2050 (RGC, 2015a). Compounding climate change-associated risks, Cambodia's natural capital is being degraded rapidly by unsustainable economic activities. According to official estimates, forest cover declined by 21 percent between 2006 and 2014, and approximately 45 percent of the country's original, natural wetland area has been lost. Such losses have wide-ranging impacts, including on the productivity of the agricultural and fisheries sectors, hydropower generation, and tourism assets. In addition, negative externalities from urbanization could hamper economic growth. Although urbanization in Cambodia is still in its early stages, average population density in urban areas (8,500 people per square kilometer in 2010) is already higher than in Vietnam or China, and a large percentage of the population lives in urban poor settlements.

In light of these challenges, a set of ten priority areas for development has been identified

Based on in-depth analysis and extensive consultations, this Systematic Country Diagnostic (SCD) identified some key areas of development for ensuring strong, inclusive, and sustainable growth going forward. Identification of the priority interventions involved a two-step process.² First, in-depth analytical work and a literature review, together with an extensive consultation process, informed the selection of ten development areas for action. Second, following consultations, a two-tier methodology was applied to assess the constraints to growth and asset accumulation and to identify the most pressing priorities within those ten areas for development (Table 2). Interventions in the identified areas for development contribute to three different “pathways” or avenues for achieving the twin goals of poverty reduction and shared prosperity in Cambodia. These pathways would also benefit from cross-cutting public administration and public finance reforms to strengthen the capacity of the public sector.

The areas for development were ranked based on (i) their impact in creating and enhancing households’ participation in better economic opportunities, (ii) the share of population affected, and (iii) complementarity with other interventions. The areas for development identified as “highest priority” have the largest impact on the twin goals in terms of boosting firms’ ability to create more productive jobs, sustaining growth, and raising household income. “High priority” areas have a moderate immediate direct impact on the twin goals but form the building

² Extensive engagement with key stakeholders (government, civil society, private sector, development partners, academia, and the National Assembly) comprised nine meetings held in four different regions of the country. Participants provided feedback on the key development opportunities for achieving poverty reduction and inclusive growth in a sustainable manner in Cambodia.

blocks for sustained growth and increased income-generating capacity of households. “Moderate priority” areas include those actions that may not yet address the most significant constraints but have consequential implications in the long term or those that have high but localized impacts. Some selected policy options in each of the ten areas are also shown in Table 2.

The first pathway involves enhancing export competitiveness and economic diversification to sustain strong growth and create jobs. At a time when companies are facing declining competitiveness due to U.S. dollar appreciation, the most pressing need is to reduce the costs of firm establishment and operation by improving the business environment, reducing informal fees, and bringing down electricity costs and trade transaction costs. These interventions could be complemented by a series of measures aimed at boosting infrastructure and mechanization to facilitate value addition and economic diversification: introducing a framework for public investment and asset management, streamlining existing tax incentives, supporting the development of capital markets, and cooperating with the financial sector to foster domestic savings. It will also be critically important to ensure macro-financial resilience to mitigate the risks from strong credit growth while increasing financial inclusion, which would involve introducing Risk-Based Supervision in the financial sector, enhancing data quality and oversight, supporting crisis preparedness, and establishing a financial safety net. At the same time, given the continued importance of the agricultural sector to growth and poverty reduction, Cambodia will need to foster a gradual transformation of the sector through intensification, diversification, and value addition. The public sector could facilitate expanded irrigation, knowledge and technology adoption in collaboration with the private sector, and strategies of quality differentiation by enhancing systems for managing quality and food safety and introducing an overall coherent approach to ‘brand’ Cambodian food and agriculture.

Table 2. Cambodia SCD pathways and identified priority areas for development

Pathway	Area for development	Priority	Selected policy options in this area	
i. Increasing economic competitiveness and diversification to sustain strong growth and create jobs	1. Reducing the costs of firm establishment and operation (including business environment, informal fees, trade facilitation, electricity costs)	Highest	Task force to improve business environment and curb informal fees	Establish a National Single Window for trade facilitation
	2. Boosting public and private investment in infrastructure and machinery acquisition while developing capital markets	High	Pass a PIM Sub-decree and develop manuals and procedures	Develop an internal bond market (including sovereign and private)
	3. Strengthening regulation and supervision of the financial sector to mitigate risks from strong credit growth, while building further financial inclusion	Moderate	Introduce a Risk-Based Supervision approach	Enhance crisis preparedness, establish a financial safety net
	4. Fostering agricultural modernization in the aftermath of the commodity price boom	High	Facilitate knowledge and technology adoption throughout the value chain (via PPPs, incubators, pluralistic extension)	Strengthen systems and stakeholder capacities to manage product quality, food safety and risks
ii. Building human assets to facilitate economic mobility and shared prosperity	5. Endowing people with skills by boosting attainment and learning outcomes of secondary and higher education	Highest	Implement the Lower Secondary School Effectiveness Standards	Improve accreditation and quality assurance mechanisms in higher education and TVET
	6. Investing in the early years (nutrition, pre-primary education)	High	Implement the Fast Track Road Map for Improving Nutrition	Expand access to opportunities for early learning and stimulation through community centers
	7. Protecting households from shocks (OOP in health, DRM, social protection)	Moderate	Expand Health Equity Funds to other vulnerable groups	Strengthen the ID Poor targeting system and establish conditional cash transfers

Table 2. *continued*

Pathway	Area for development	Priority	Selected policy options in this area	
iii. Ensuring a sustainable growth pattern by investing in natural capital, climate resilience and urban development	8. Maintaining and developing natural capital, while strengthening climate resilience	High	Adopt an integrated approach to natural resource management in the Cardamom and Tonlé Sap	Improve sustainable management and conservation in protected areas and forests
	9. Promoting competitive, sustainable, and inclusive cities through integrated urban planning	Moderate	Implement an integrated urban planning agenda	Develop a centralized sanitation network and solid and liquid waste management solutions
iv. Cross-cutting	10. Public administration and public financial management reforms for improved service delivery	High	Upgrade human resource management systems and introduce performance monitoring	Enhance citizen feedback mechanisms to improve public service delivery

Source: World Bank staff analysis in consultation with stakeholders.

The second pathway focuses on building human assets to foster economic mobility and shared prosperity. Analysis shows that human capital is the most valuable asset for escaping poverty and vulnerability in Cambodia: about 76 percent of household members in the most economically secure group have at least lower secondary education, compared to just 17 percent among the least successful group, and the probability of having a wage job is much greater for people with secondary education and above. To reap the demographic dividend and meet increasing demand by entrepreneurs for skilled workers, Cambodia needs to introduce measures to improve learning outcomes significantly and foster attainment in secondary education, higher education, and TVET/skills training. Addressing the high degree of malnutrition and stunting will also be critical to building human capital. Evidence-based nutrition-specific interventions to be applied in Cambodia could include fortification, supplementation, and behavior change communication, which could ideally

be combined with promotion of early childhood education; improvements in households' water supply and sanitation, increased availability and affordability of nutritious diets, and social protection policies and programs to support families in caring for young children. Measures aimed at fostering mobility should be complemented with others aimed at mitigating shocks and building resilience to help shield household income and prevent households from falling into poverty, such as expanding the HEFs to increase coverage of vulnerable groups and reduce their health OOP expenditure, refining the ID Poor targeting mechanism and introducing conditional cash transfers (CCTs), and consolidating current pension schemes.

The third pathway aims to ensure the sustainability of growth by investing in Cambodia's natural capital and sustainable urban development, while strengthening climate resilience. Given the interlinkages between natural resource-based ecosystems and man-made urban environments,

addressing these challenges requires spatially integrated planning, management, and investment approaches. For natural resources, this means taking into account natural challenges and trade-offs related to modernizing agriculture, improving fisheries, expanding sustainable tourism, and developing hydropower within a specified landscape, in coordination with managing and restoring degraded forests and aquatic ecosystems and strengthening resilience to climate change and natural disasters. For urban planning, this means developing a long-term strategy for implementing reforms across various urban sectors (including water, sanitation, transport, and disaster risk management) in a specified city, covering its central urban areas, urban poor settlements, and peri-urban areas. In support of this integrated approach, a series of additional institutional measures and investments are needed to strengthen the implementation of existing national-level reforms, plans, and programs. These include developing targeted public expenditure programs to address gaps in financing (including at the local level), conducting environmental impact assessments (EIAs) and strategic environmental

assessments (SEAs), strengthening co-management across different sectors, implementing the new policy on conservation corridors, implementing the planning provisions in the current Water Resources Law, and improving land use rights. In addition, support is needed for institutional reform and targeted investments in urban sanitation, transport, and upgrading of urban poor settlements.

Finally, all the areas for development and policy options identified in the SCD depend on significantly improving public sector capacity for reform implementation and service delivery.

Ultimately, the success of all these interventions rests on improving the quality of public service delivery. Cambodia has initiated its decentralization and deconcentration reform, and the redefinition of new roles and responsibilities needs to be accompanied by enhanced allocation and use of public resources (public financial management reform) and human resources (public administration reform) and complemented with strengthened civil servant performance monitoring and enhanced citizen feedback mechanisms.





Introduction

Thanks to rapid and sustained growth, Cambodia has become one of the world's leaders in poverty reduction and shared prosperity. Driven by strong economic growth and high agricultural commodity prices, poverty incidence declined from 47.8 percent in 2007 to 13.5 percent in 2014, according to official estimates. During this time, the average growth of mean consumption per capita for the poorest 40 percent of the population was around 7.9 percent, putting Cambodia among the top ten countries in the world and helping to reduce income inequality. The employment-to-population ratio (82 percent in 2014) and female labor force participation ratio (79 percent in 2014) are also among the highest in the world, partly thanks to the emergence of the garment industry.

In addition to reducing absolute poverty incidence dramatically,³ Cambodia—considered to be one of the Millennium Development Goal (MDG) “trailblazers”—has made substantial

progress on the non-income dimensions of poverty (Leo and Barmer, 2010). In particular, significant progress has been made in increasing primary education enrollment, combating HIV/AIDS, and reducing child and maternal mortality rates (from 117.3 in 1990 to 28.7 per 1,000 live births in 2015).⁴ Access to improved sanitation and drinking water has also increased substantially, with national-level MDG targets met (Table 17 in Annex 1). Although further progress is still needed in some areas as discussed in Box 1, Cambodia is looking toward attaining the next set of goals, the Sustainable Development Goals (SDGs), by 2030, as well as graduating from least developed country (LDC) status by the 2020s.

With an average annual growth rate of 7.6 percent over the past two decades, Cambodia is ready to join the “Olympians of growth.” Cambodia ranked sixth among the most rapidly growing economies in the world in 1994-2015, ahead of Vietnam and almost all others. Cambodia is expected to join the “Olympians of growth,” a group of 13 economies in the world that have grown at an average rate of more than 7 percent a year for 25 years or longer (Ly and Aldaz-Carroll, 2014). Gross national income (GNI) per

³ Based on the USD 1.25 per day international extreme poverty line set for the MDGs, the proportion of Cambodians living below the poverty line declined from 32.8 percent in 2004 to 10.1 percent in 2011. Using the new USD 1.90 per day poverty line set in 2015 to reflect changes in the cost of living over time, extreme poverty incidence declined from 31.9 percent in 2004 to 8.9 percent in 2011 and 6.2 percent in 2012.

⁴ See the Annex 1 for more details.



Box 1: MDG attainment and LDC graduation criteria

Overall, Cambodia has made significant progress in achieving the Millennium Development Goals (MDGs). The country has more than halved extreme poverty (from 33 percent in 2004 to 10 percent in 2011), more than halved maternal mortality (from 1,020 per 100,000 live births in 1990 to 161 in 2015), reduced child mortality (from 117 per 1,000 in 1990 to 28 in 2015), increased the primary education enrollment rate (from 92.1 percent in 2000 to near-universal enrollment of 94.7 percent in 2014), made significant progress in combating HIV/AIDS (with the incidence rate declining from 0.08 per 100 people in 2001 to 0.01 in 2013), nearly achieved gender parity in primary and secondary education, and improved access to safe water and sanitation (see *Annex 1* for more details). Cambodia mainstreamed the MDGs into its national strategic development plans, and the Sustainable Development Goals (SDGs) are expected to enjoy the same level of ownership by the government.

However, achievements are mixed for a number of MDGs, including tuberculosis (TB), environmental sustainability, demining, and gender equality. TB incidence and death rates remain high. Although the pace of deforestation has slowed down slightly thanks to recent policy changes, it has remained high over the past two decades. Similarly, although the percentage of contaminated land cleared of unexploded ordinances has increased to 45 percent, it still falls far short of the target of 100 percent. Cambodia also needs to improve the roles of women in employment and political participation.

Moreover, Cambodia's gains in poverty reduction remain highly precarious, as most households that escaped poverty did so by only a small margin. In 2012, it was estimated that a small negative shock of USD 0.30 per day would cause the national poverty rate to increase to 40 percent, or approximately six million people (World Bank, 2015).

In terms of development status, Cambodia has become a lower middle-income economy according to the World Bank classification system but remains a least developed country (LDC) according to the United Nations (UN). At the 2015 review, Cambodia was found ineligible for graduation from LDC status. While the threshold has been met for the Human Assets Index, economic vulnerability remains high, and income per capita is still below the threshold (Table 3).

Cambodia aims to become eligible for LDC graduation by 2024. LDC graduation is expected to imply the phasing out of preferential treatment by donors. For example, after Cambodia meets the LDC graduation criteria in two consecutive triennial reviews, the European Union (EU) will initiate a three-year process for phasing out its Everything-but-Arms Agreement with Cambodia.

Table 3: Cambodia's scores on LDC graduation criteria

	Threshold	Cambodia		Threshold	Cambodia
GNI per capita	>USD 1,242	USD 1,070	Economic Vulnerability Index	<32	38.3
Human Assets Index	>66	67.2	Exposure index		34.3
Undernourishment		81.5	Economic structure		42.5
Under-5 mortality		83.1	Shock index		42.2
Literacy rate		65.2	Natural shocks		63.2

Source: United Nations, Development Policy and Analysis Division (2015).

capita more than tripled from USD 300 in 1994 to an estimated USD 1,070 in 2015, the year in which Cambodia became a lower middle-income economy (Ly, 2016a). Growth has been driven by garment exports, agriculture, tourism, and, more recently, construction and real estate.

However, going forward, Cambodia may not be able to rely on the same factors that drove strong growth and poverty reduction over the past two decades. Land expansion and rising agricultural prices have been the most significant contributors to poverty reduction thus far. However, the outlook for commodity prices is not positive, and Cambodia's scope for further gains in cultivated area is limited, especially considering the need for environmental sustainability. On the growth side, and with Cambodia's eventual graduation from least-developed country status, a progressive decline in donor financing and an erosion of preferential trade treatment are expected. Export diversification coupled with household economic mobility and job creation are seen as the avenues to promoting sustained economic growth with shared prosperity going forward, but significant challenges and risks lie ahead.

This Systematic Country Diagnostic (SCD) aims to help Cambodia achieve its development aspirations by identifying pathways for addressing the key challenges that remain. The objective of the SCD is to help Cambodia, the World Bank Group (WBG), and other partners identify key priority areas for further progress in sustaining strong growth in a sustainable manner, reducing poverty and promoting shared prosperity. The analysis presented is not limited to areas or sectors where the WBG is currently active but rather focuses on the country's key development challenges and remaining constraints.

This SCD comes at an opportune time when its policy impact is likely to be maximized. The approval in 2015 of a new Industrial Development Policy for 2015-25, together with the upcoming

preparation of Cambodia Vision 2050, signal the commitment of the Royal Government of Cambodia (RGC) to overcome existing and emerging development challenges. The SCD is expected to help Cambodia define strategic development priorities for addressing the key challenges going forward.

The SCD is structured around a series of questions that focus on understanding the drivers of growth and poverty reduction in Cambodia and identifying pathways for ensuring strong, shared, and sustainable growth in the future. These questions are:

- i. What were the drivers of Cambodia's fast and robust growth and poverty reduction over the past two decades?
- ii. What factors need to be in place to sustain strong economic growth and enhance equity outcomes in the next decade and beyond?
- iii. How sustainable is the current development model, and what potential risks threaten Cambodia's development trajectory and require mitigation?
- iv. Based on the above, what are the key pathways and development areas for action to attain strong sustainable growth and poverty reduction in Cambodia going forward?

For greater clarity and specificity, discussion of governance issues is presented in the various parts of the SCD as relevant, including discussion of control of corruption (in relation to firm operating costs), rule of law (land issues, environmental impact assessments), public service delivery (social sectors), and government effectiveness (public finances).

The SCD tries to answer these questions based on analysis to date. The SCD draws from analyses on sources of growth, labor market, trade outcomes, gender gaps, firm performance, and innovation that were specifically commissioned for this SCD; a literature review presented in a separate document; and written inputs from World Bank specialists



in different areas (back to Table 1). A country benchmarking exercise was also conducted (see Annex 1), and throughout the document, Cambodia is compared to a number of structural peers (Box 2).

This SCD is organized as follows. It begins with an overview of the country context, describing Cambodia's development trajectory and recovery from its devastating civil conflict. It then takes a closer

look at the drivers of Cambodia's stellar growth and poverty reduction performance over the past couple decades. A series of challenges and risks to Cambodia's growth and its inclusiveness and sustainability going forward are then discussed. Based on this analysis as well as inputs from consultations with government and other stakeholders, some key priority areas for ensuring strong, inclusive, and sustainable growth in Cambodia are proposed.

Box 2: Proposed peer selection criteria

This SCD benchmarks Cambodia vis-à-vis countries with the same lower middle-income classification, a set of structurally similar countries ("structural peers"), as well as other ASEAN economies (Thailand) for aspirational purposes.

Structural peers are countries anywhere in the world that meet five criteria that also define Cambodia:

- Lower middle-income countries;
- Economies not highly dependent on exports of natural resources (identified by excluding economies for which "natural resource as a share of exports in 2006-12" does not exceed 20 percent);
- High exposure to natural disasters (top quintile);
- Countries in which the rural population is at least 40 percent of total population; and
- Countries that are not classified as islands, small countries, or landlocked.

Using these criteria, the structural peers for Cambodia, which recently joined the lower middle-income group (USD 1,070 GNI per capita in 2015 according to the Atlas Method), are: Bangladesh (USD 1,190), Guatemala (USD 3,590), Philippines (USD 3,540), Nicaragua (USD 1,940 per capita), and Vietnam (USD 1,980 per capita). Due to varying data availability, not all the peers are included in all the comparisons. Most of these economies currently have a strong garment industry and relatively low complexity in their exports (Hausman and Hidalgo, 2009), with the exception of the Philippines. Nicaragua and Cambodia also have in common a recent past marked by tragic civil conflict that affected human and economic development.





Context: Cambodia's development path

Cambodia, from conflict to success as a highly open export-oriented economy...

Cambodia's achievements are impressive given the country's devastating civil conflict, which left its fragile social, human, institutional, and physical capital decimated and required a new phase of nation-building. Following its declaration of independence from French colonial rule in 1953, and despite its neutrality policy, Cambodia was soon involved in the Second Indochina War. Three decades of war and instability, including the oppressive Democratic Kampuchea regime (1975-1979), resulted in the loss of 1.7 million people from starvation, overwork, disease, and outright execution (Chandler, 1991). Driven by ultranationalist and utopian thought, the Khmer Rouge undertook massive socio-economic engineering, depopulating urban centers, enslaving the entire population, and forcing them to engage in intense agricultural activities with heavy workloads and little food. When Vietnamese forces toppled the Khmer Rouge in 1979, Cambodia had no semblance of a functioning state, and the population was demoralized and impoverished.

The 1991 Paris Peace Agreement and the democratic elections of 1993 signaled a new phase of state-building. Due to geo-political rivalries, the Cambodian conflict dragged on until 1991, following the demise of the Soviet Union. This development resulted in the historic settlement of the Cambodian conflict in 1991, known as the Paris Peace Agreement (PPA). The PPA permitted the United Nations Transitional Authority in Cambodia (UNTAC) to organize multi-party elections for a Constitutional Assembly in 1993. The Constitutional Assembly enacted a new constitution which contained all the necessary elements for liberal democracy such as periodic multi-party elections, political and civil liberties, and the mechanisms of checks and balances.

Cambodia's state capacity in the early 1990s was typical of other post-conflict countries and was marked by insecurity. The physical infrastructure was in a poor state, and the economy was characterized by fragmented, unplanned, unregulated, and uncoordinated exploitation of natural resources—particularly from logging—geared toward short-term gain (Hall, Hirsch, and Li, 2010; Hughes and Un, 2011). For much of the 1990s, political competition between the two major party leaders saw efforts to strengthen the power base



through political patronage rather than efforts to build the state around a formal and professionalized bureaucracy (Le Billon, 2010). Such competition put the coalition government formed by the two major parties following the 1993 UNTAC-sponsored election in an uneasy position, leading to an armed clash in July 1997. Eventually, the consolidation of power under the current ruling party led to a long period of stability.

Over the past two decades, Cambodia has been able to achieve political stability and economic progress. Cambodia has transformed itself from a war-torn country to a peaceful one and from a centrally planned and ineffective economy to a regionally and globally linked and rapidly growing economy. The country embraces a democratic system of government, with elections being held at regular intervals. Economically, political stability and the absence of violence facilitated the surge in economic activity.⁵ Despite criticism of widespread corruption, the country has achieved sustained economic growth. Socially, the fruits of economic growth have been felt among the Cambodian public with increased poverty reduction and general improvement in human development indicators, although numerous challenges remain. Considerable progress has also been made in adopting several national-level policies and development action plans, albeit with varying results across sectors.

Once stability was regained, Cambodia showed a strong commitment to economic openness with the signature of free trade agreements (FTAs) and accession to the World Trade Organization (WTO). The United States granted Cambodia most favored nation (MFN) status in 1996, which—together with the Generalized System of Preferences (GSP) in 1997, the signature in 1999 of a bilateral textile agreement between Cambodia and the United

⁵ From the viewpoint of some investors, the ability to maintain political stability and reduce violence is a necessary condition for people to develop entrepreneurial activities (Kelsall and Heng, 2014, p. 29).

States to link favorable access to the U.S. market with labor conditions in Cambodian factories (Slocumb 2010), and the enactment of the European Union's Everything-but-Arms (EBA) agreement in 2001—contributed to the entry of garment manufacturers operating in Southeast Asia into Cambodia (Bargawi, 2005; Hill and Menon, 2014). In terms of multilateral initiatives, Cambodia joined the Association of Southeast Asian Nations (ASEAN) in 1999 and became a member of the WTO in 2004.

In addition, Cambodia adopted a series of reforms aimed at becoming a highly open market-oriented economy and fostering private sector development. The most notable reform was the adoption of the 1994 law on investment, which allowed 100 percent foreign-owned investment and provided guarantees against nationalization and regulation on price. The creation of the Council for the Development of Cambodia (CDC) as a one-stop service office for investors also helped channel foreign investment. This was accompanied by the enactment of critical regulations, including land, banking, bankruptcy, and company laws (Kelsall and Heng, 2014). Cambodia has also introduced notable cross-border trade facilitation improvements in recent years, resulting in faster export and import procedures (Table 16 in Annex 1). Cambodia ranks among the top 5 percent of economies in the world in terms of merchandise trade (imports plus exports), at 144 percent of gross domestic product (GDP) in 2015. Compared to other Southeast Asian countries, Cambodia is also recognized as having the least trade restrictions in services (ASEAN Secretariat and World Bank, 2015).

To a large extent, the development of global industries has been coordinated with stakeholders. For the garment sector, the Garment Manufacturers Association in Cambodia (GMAC) was created by the first group of investors as a vehicle for collectively dialoguing with the RGC. This body became instrumental to the coordination processes of garment production and export, with an official role in garment exports recognized by the

RGC to become members of GMAC. The GMAC also represents the manufacturers in policy discussions as well as during negotiations on wage increases demanded by labor unions, resulting in a collective minimum wage setting mechanism for the industry. For the broader private sector, the Government-Private Sector Forum (G-PSF) was established and supported by “a system of industry specific and cross-cutting working groups, bringing together private-sector representatives and ministerial officials to solve industry problems” (Kelsall and Heng, 2014).

Cambodia's rapid economic development has also been fueled by foreign inflows, supported by a stable exchange rate policy. Despite not being a commodity exporter, Cambodia was among the countries in the world that attracted the most foreign direct investment (FDI) during 2005-15 (average of 7.9 percent of GDP annually). Another distinguishing feature of Cambodia's economic development is large aid flows and donor presence contributing to development. The relative importance of such aid is on the decline, with net official development assistance (ODA) received as a percentage of GNI dropping from 12.2 percent in 1996 to 5 percent in 2014. Notably, large aid inflows and tourism and export receipts have ultimately led to dollarization of the economy. The stable exchange rate policy with respect to the U.S. dollar, which provides a nominal anchor for economic agents and underpins stable prices, may have contributed to FDI attraction by minimizing exchange rate risks (World Bank, 2015b).

... with persistent governance challenges...

Cambodia has been able to attain strong economic growth despite continued governance challenges. Growth has been feasible thanks to relative predictability and certainty in a business environment that is relatively open. Basic state functions have been guaranteed, including its ability

to coordinate and seek cooperation from the citizens. Rent-seeking activities of public officials continue to exist but are contained at a level that does not fully jeopardize economic activities, with some variation across sectors. In the case of garments, presence of the GMAC, a capable private sector organization, helped create “good enough governance” through collective action and negotiation, which lowers transaction costs and facilitates growth in the sector. The GMAC helped sustain support to the industry and create a sense of security by playing an intermediary role between garment manufacturers and the public sector with its ability to get things done (World Bank, 2009a; Ear, 2011). Other industries, such as those for rice milling and food processing more generally, did not enjoy a similar level of support from a business association to interface with government and resolved problems through collective action (World Bank, 2009a).

Cambodia still rates low on citizen engagement in rulemaking, control of corruption, and rule of law relative to the ASEAN-5 countries and to other lower middle-income countries (L-MICs) (Figure 2). Cambodia ranks 150th out of 167 countries in perception of corruption⁶ and, while declining in recent years, still has the highest bribery incidence in Southeast Asia.⁷ Public Sector capacity has improved but remains uneven across ministries, and progress in the public financial management, public administration, legal and judicial, and decentralization reforms pursued over the past decade has been sluggish. This hampers the ability of the public sector to address the demands of a vibrant civil society organization (CSO) sector, and the rising expectations of an increasingly educated citizenry.

Although Cambodia's current political system is based on the principles of democracy, weak governance quality is challenged by weak legislative and judiciary bodies. Cambodia

6 Corruption Perceptions Index 2015, Transparency International.

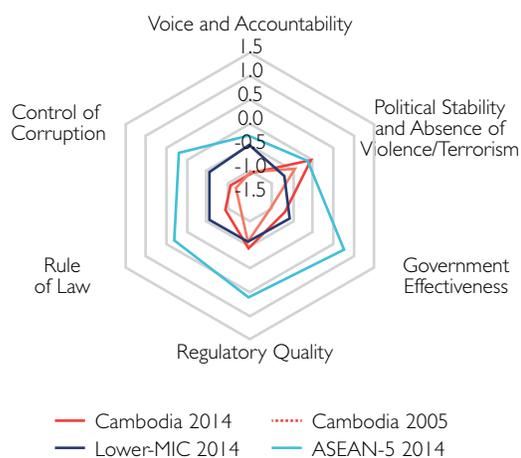
7 Enterprise Surveys, 2016, World Bank Group.



ranks 112th out of 113 countries in World Justice Project's 2016 Rule of Law Index. Weak legislative and judiciary bodies undermine multi-party pluralism, rule of law, and civil and political liberty (Un, 2005). While a number of judicial reforms and laws and regulations adopted over the past fifteen years have broadened the role and increased the use of the court, there is evidence of the lack of judicial independence, often in favour of elites (Un, 2008). In 2015, an overwhelmingly large number of Cambodians (91 percent) felt that democracy is the best form of government; however, the percentage of respondents who were satisfied with how democracy works in Cambodia was only 69 percent, down from 82 percent in 2012 (Chu et al., 2016). A series of political crises in 1997, 1998, 2003/4, and 2013 highlighted the need to strengthen state institutions further.

Lack of voice and limited access to legal protection due to weak democratic governance contribute to the slowdown of institutionalization of public services and could eventually threaten overall social stability. While the existing patronage-based distribution of resources has allowed for some trickle-down to the Cambodian poor and has contributed to social stability to some extent (Craig and Pak, 2011),

Figure 2. Cambodia rates relatively low on certain governance indicators



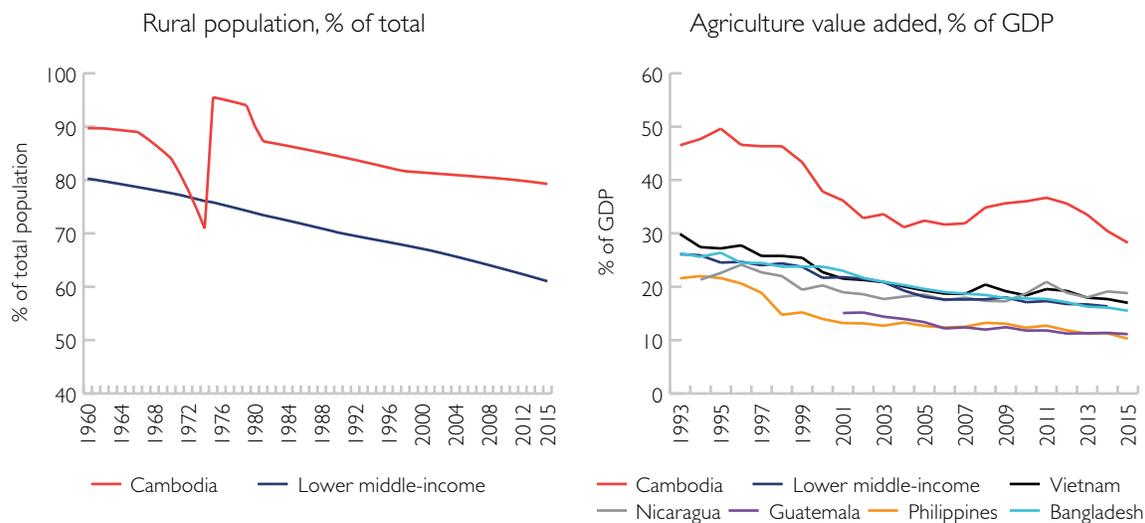
Source: World Governance Indicators, World Bank Group.

a lack of focus on systematic and institutionalized provision of social services poses risks to shared prosperity. Patron-client relations pervade the formal state administration, making it systematically less functional, and pose challenges to even access and quality of public services (e.g., access to justice to sort out problems over land or, in some cases, rent-seeking by doctors and teachers). These barriers disproportionately affect the poor and vulnerable. For these reasons, this SCD discusses challenges and potential reforms in this area to ultimately enhance state effectiveness while enhancing voice and accountability and limiting corruption in service delivery (see section 6.5).

... and a large rural population that still depends on agriculture and remains vulnerable

Another distinguishing feature of Cambodia is its predominantly rural population and, for a MIC, the level of continued reliance upon agriculture for income and employment. In the 1970s, a large proportion of the population was forced to relocate to rural areas. The proportion of rural population today, at 80 percent, is still higher than it was prior to the Khmer Rouge regime (Figure 3, left panel). Agriculture has played an important role in growth and poverty reduction and still represents a major portion of the economy. In the short period from 2007 to 2009, 3.3 million people escaped from poverty, with most of the 25-percentage-point decline in poverty during that time attributable to agricultural and agricultural wage income. Around 4 million Cambodians rely on agriculture and fisheries as their primary source of livelihood, while an additional 1 million people work in agriculture on a seasonal basis to supplement their income and/or support their food security (FAO, 2014). Although the share of agriculture value-added in total GDP declined from 50 percent to 33 percent during the 1990s, it has averaged 33 percent since 2000—now one of the highest proportions in the world (Figure 3, right panel).

Figure 3. Cambodia stands out in agriculture value-added and rural population



Source: World Development Indicators.

Despite the remarkable progress achieved thus far, rural areas lag behind urban areas in socio-economic outcomes and in access to basic public goods and services. Although national-level MDG targets for access to improved sanitation and drinking water have been met, rural areas have significantly lower access to improved sanitation facilities (30.5 percent in rural areas versus 88.1 percent in urban areas in 2015) and improved water supply (69.1 percent in rural areas versus 100 percent in urban areas in 2015).⁸ Access to electricity has increased significantly, from 33 percent in 2012 to an estimated 60 percent in 2015; however, only half of the rural population has access to electricity compared to almost the entire urban population.⁹ Access to all-weather roads and reliable transport options is also significantly lower in these areas. In addition, health centers are scarce in rural areas, and strong evidence indicates that the lack of secondary schools in the Northeastern and Southwestern provinces is correlated with the percentage of young people out of school (Sohnesen et al., 2016).

⁸ WHO/UNICEF Joint Monitoring Program.

⁹ According to SCD-related discussions with the Ministry of Mines and Energy, conducted in October 2016.

Cambodia's rural population is also especially vulnerable to natural hazards and to the adverse impacts of unsustainable natural resource use. Cambodia has relatively high exposure to natural disasters and is expected to be one of the countries most affected by climate change. Most of Cambodia's food-insecure are rural people who are active in agriculture, and weather shocks often have severe impacts on rural livelihoods. For example, during the 2015-16 El Nino event, three-fourths of the wet season paddy rice production area experienced a loss of more than 25 percent in yield due to drought. Over the past two decades, Cambodia has experienced a degradation of its natural resources—including through illegal logging, soil exhaustion due to mono-crop cultivation, and overfishing. Natural asset degradation threatens the livelihoods and physical safety (from landslides and flooding) of many Cambodians.







What have been the drivers of stellar growth and poverty reduction performance in Cambodia?

3.1 Success in poverty reduction thanks to job creation and a windfall from higher agricultural commodity prices

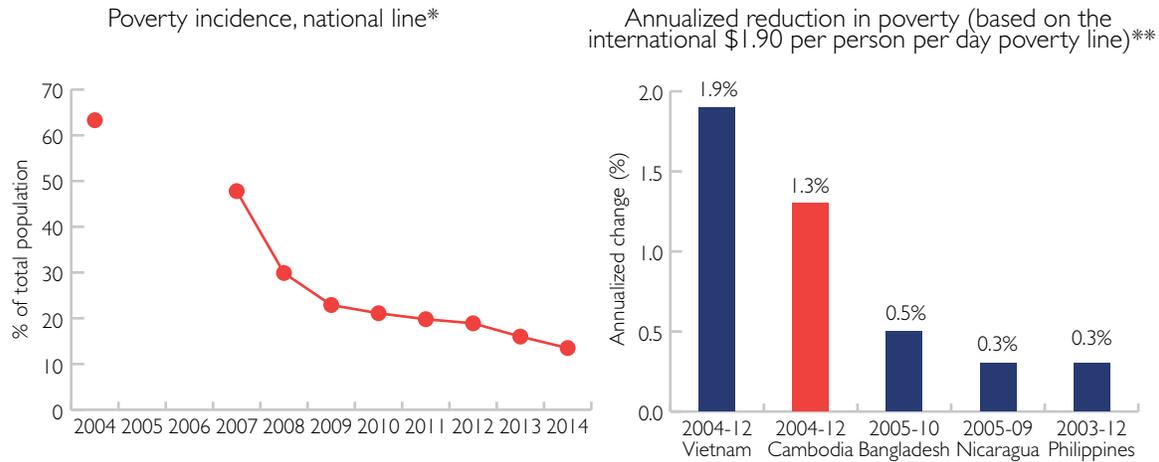
Cambodia has been one of the leading countries in poverty reduction and shared prosperity

Over the last decade, high economic growth in Cambodia has been accompanied by an impressive reduction in monetary poverty, with Cambodia outperforming its peers. As of 2014, only 13.5 percent of the population lived under the national poverty line, compared to 47.8 percent of the population in 2007 (Figure 4, left panel). The reduction was particularly dramatic during the 2007-9 period, at the peak of the agricultural commodity boom, when poverty declined by about 25 percentage points, and more than 3.3 million people escaped poverty. Estimates based on the international poverty line of USD 1.90 (in 2011 PPP) a day also show strong performance throughout 2007-14, with

extreme poverty now estimated to be below the World Bank Group target of 3 percent. Over a comparable time period between 2004 and 2012, extreme poverty (based on USD 1.90 a day at 2011 PPP) declined at a rate of 1.3 percentage points per year on average—the second highest rate among Cambodia’s peers, behind only Vietnam where poverty declined by 1.9 percentage points per year over that period (Figure 4, right panel). In the aftermath of the global financial crisis, Cambodia also showed the highest rate of growth in mean consumption among the bottom 40 percent compared to its peer group, including Vietnam (World Bank, 2016).

Cambodia’s performance in monetary poverty reduction is mirrored by improvements in living standards. The gains in poverty reduction are reflected in other indicators of living conditions: between 2007 and 2015, ownership of cell phones increased by 51.9 percentage points, ownership of a motorcycle by 28.5 percentage points, access to electricity by 34.9 percentage points, and access to piped water by 7.3 percentage points (Figure 5).

Figure 4. Cambodia has achieved impressive progress in poverty reduction over the past decade



Source: Official estimates, and CSES (2004-2014); World Bank staff estimates from the Global Monitoring Report (2015).
 Notes: *Authorities re-estimated the poverty line using the 2009 CSES and have not produced comparable estimates for 2004. ** Different periods used in cross-country comparisons due to data availability.

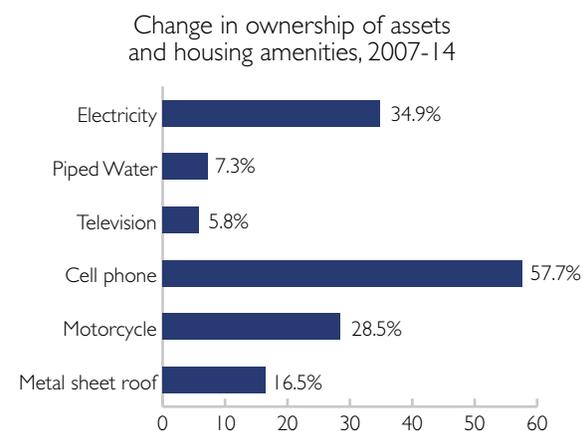
These indicators show that overall living standards have improved, a trend that is confirmed using alternative estimates (see Annex 2).

Growth in Cambodia has been particularly favorable for the poor and near-poor since 2007, contributing to a decline in inequality. Since 2007, consumption per capita for the bottom 40 percent grew at an annual average rate of 7.8 percent, compared to growth in mean consumption for the top 60 percent of 4.7 percent (Figure 6, left panel). Growth in consumption per capita for the bottom 40 percent was especially rapid in 2007-09 with the commodity price boom, at more than 19 percent per year on average—much higher than the 11 percent annual growth for the top 60 percent. Consumption for the bottom 40 percent continued to grow at a higher pace than the top 60 percent after 2009, but the pace of growth had slowed to about 3.3 percent per annum. The pattern of growth favorable to the poor is mirrored in declining inequality. The Gini coefficient fell from 36.5 in 2007 to 24.3 in 2013, although an increase in the Gini coefficient to 27.4 in 2014 indicates that inequality has begun to rise (Figure 6, right panel). Nevertheless, Cambodia is more equitable than other countries in the region

now, although differences in the way aggregate welfare is measured make direct comparisons challenging.

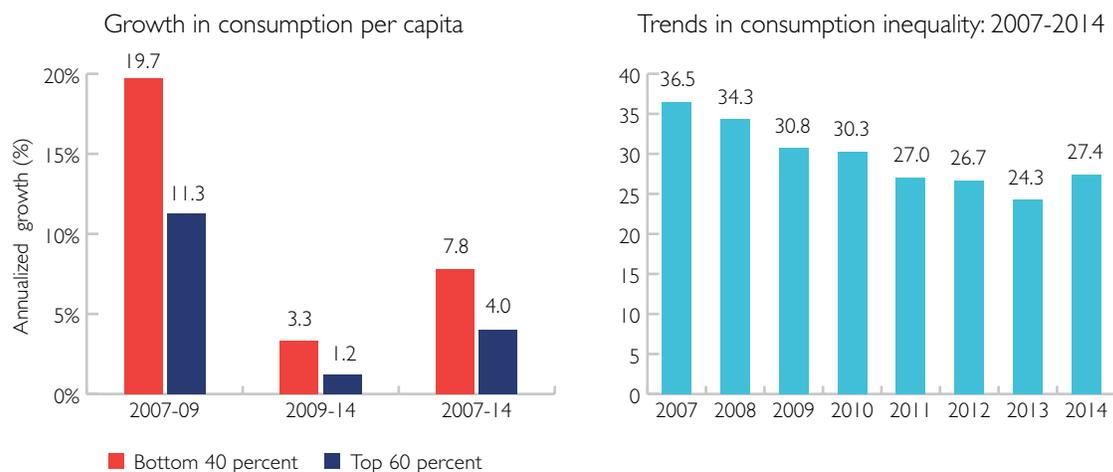
The poorest segments of society experienced the biggest reduction in poverty. Different socioeconomic groups—including ethnic minorities, the poorly educated, and especially small-scale farmers—experienced a sharp decline

Figure 5. Household ownership of assets and housing amenities have improved significantly



Source: World Bank staff estimates from the CSES, 2007-2014.

Figure 6. Growth became pro-poor after 2007, in the context of high agricultural commodity prices



Source: World Bank staff estimates from CSES (2007-2014).

in poverty (Table 4). In terms of economic sectors, the incidence of poverty in 2007 was highest among those headed by someone in agriculture (57 percent), who then experienced a 44.5 percentage point reduction in poverty during 2007-14. Notably, unlike in neighboring Lao PDR and Vietnam, poverty declined faster among ethnic minorities. High vulnerability among ethnic minorities now drives the differences in poverty incidence between ethnic minorities and the Khmer: in good years, the incidence of poverty among ethnic minorities has been similar to that of the Khmer (e.g., in 2013), but in other years, poverty among ethnic minorities has increased to rates significantly higher than the poverty rates of the Khmer. Recent official statistics do not provide a regional profile of poverty, but alternative estimates point to methodological challenges that distort the regional profile of poverty (see Annex 2).

However, despite the observed progress in living standards by all measures, significant challenges remain on the human development front. Although maternal mortality per 100,000 live births dropped from 1,020 in 1990 to 161 in 2015, it remains high by international standards (Figure 7, left panel).

While child survival has improved significantly, with under-five mortality declining from 117 to 29 deaths per 1,000 births between 1990 and 2015, as many as 33.5 percent of children under age 5 remained stunted in 2014. Similarly, while notable progress has been made in primary education completion (96.3 percent), secondary completion rates in Cambodia are still low and among the lowest compared to its peers at 43.6 percent in 2013, versus 71.2 for the average lower middle-income economy (Figure 7, right panel).

The lower-than-expected human development outcomes are partly a legacy of conflict and also of growth and monetary poverty reduction driven by factors independent of the unfinished human development agenda. The many killings of Cambodia's semi-skilled and skilled people robbed the country of its human capital—including teachers and doctors—which generally undermined the public sector's capacity to deliver services. While a large disconnect between the levels of monetary welfare indicators and human development outcomes points to challenges in the effectiveness of service provision in general, it also suggests that poverty reduction has been driven by factors that

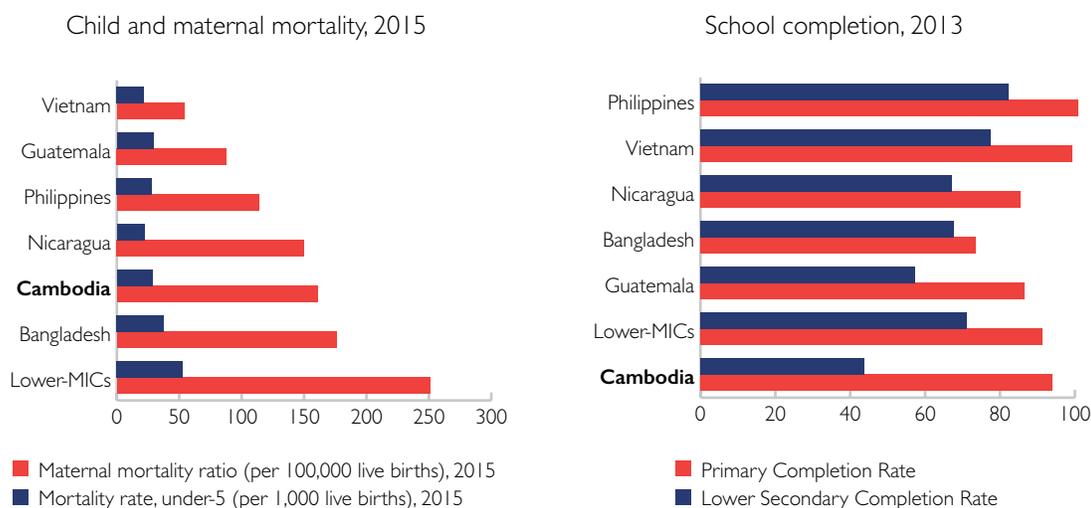


Table 4. Nearly all types of households and areas experienced a reduction in poverty in 2007-14

Household characteristics		2007	2009	2014
Gender of household head	Female	43.6	23.2	17.5
	Male	49.6	23.0	11.7
Ethnicity of household head	Khmer	48.4	22.8	12.5
	Other	52.3	28.6	20.4
Education of household head	No education	53.3	26.8	15.7
	Primary education	39.6	15.2	8.1
	Secondary education	6.1	7.5	2.0
	Tertiary education	4.7	4.5	0.9
Employment sector of household head	Agriculture	57.2	27.5	12.7
	Mining and manufacturing	50.7	21.3	11.4
	Construction	59.8	25.3	17.1
	Services	30.1	13.6	9.1
Dependency ratio	<0.5	38.7	17.1	9.6
	0.5-1	53.0	24.8	14.4
	1-1.5	59.8	33.2	17.7
	>2	56.4	39.5	24.8

Source: World Bank staff estimates from CSES (2007-2014).

Figure 7. Cambodia still faces challenges in non-monetary dimensions of well-being



Source: WDI, 2016. Latest available data.

are independent of the large, unfinished human development agenda.

The drivers of poverty reduction have been low-skilled urban job creation and agricultural expansion

Prior to 2007, the main driver of poverty reduction in Cambodia was growth in low-skilled wage employment in the non-farm sector. In particular, poverty reduction was driven by the movement of people out of agriculture and into the fast-growing garment sector. Evidence indicates that participation in the garment sector significantly increased welfare for the bottom 40 percent and that remittances¹⁰ originating from the sector contributed to greater household expenditures on education, health, and investments in agriculture (Mejia-Mantilla and Tesfaye, 2016). The increase in salaried non-farm employment was concentrated in urban areas—for example, a rise of 9.8 percentage points in urban areas compared to 0.9 in rural areas between 2004 and 2008. Those with post-primary education were better placed to take advantage of these new job opportunities, and while educational attainment increased among the poor, the majority of the better-educated came from non-poor families in that period. This combination of factors meant that, prior to 2007, the pattern of growth was urban-centered and less inclusive (World Bank, 2013a).

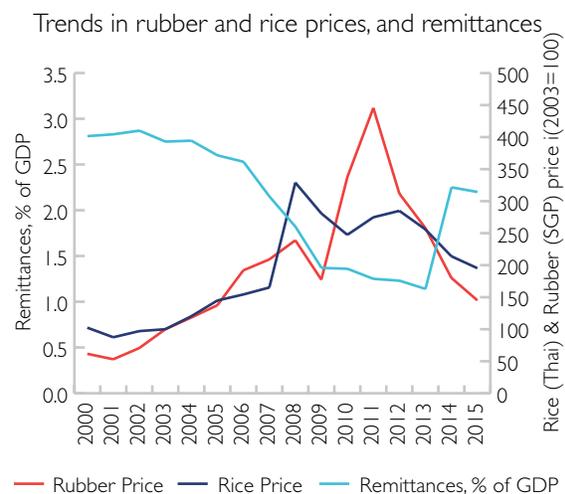
After 2007 and up through 2012, the largest gains in poverty reduction came from agriculture, as high agricultural prices had a cascading effect on rural incomes and made growth pro-poor. Higher commodity prices incentivized farmers to increase their use of purchased inputs, bring fallow land into production, and diversify into livestock and/or industrial crop production like cashews, cassava and rubber (Eliste and Zorya, 2015). Investments in rural roads gave farmers access to previously

10 Income from remittances and transfers increased by 25 percent between 2004 and 2009, and 43 percent of households received remittances in 2011 (ADB, 2014).

unreachable land just when the returns from prices were high. This also enabled better movement of perishable higher-value commodities. Unlike in other countries at the time, authorities in Cambodia avoided food price controls, associated taxes or levies, and restrictions on trade (World Bank, 2016c). Cambodia was exceptional in permitting the export of large quantities of un-milled paddy, which enabled farmers to ride on the wave of Vietnam's surging rice exports. Many farmers were thus able to benefit greatly from the elevated food and agricultural raw material prices, which continued to the end of 2012 (Figure 8). High commodity prices seem to have also temporarily resulted in a decline in remittances from abroad.

During the boom, rising prices benefited both surplus producers and land-poor agricultural laborers who experienced higher real wages. Based on estimates from the 2009 CSES, about 37 percent of rural households owned land that could produce a surplus and thus benefited directly from price increases. For the 17 percent who did not have land and another 24 percent who had insufficient land, rising rice prices affected them as consumers, yet this was outweighed by the positive effect of

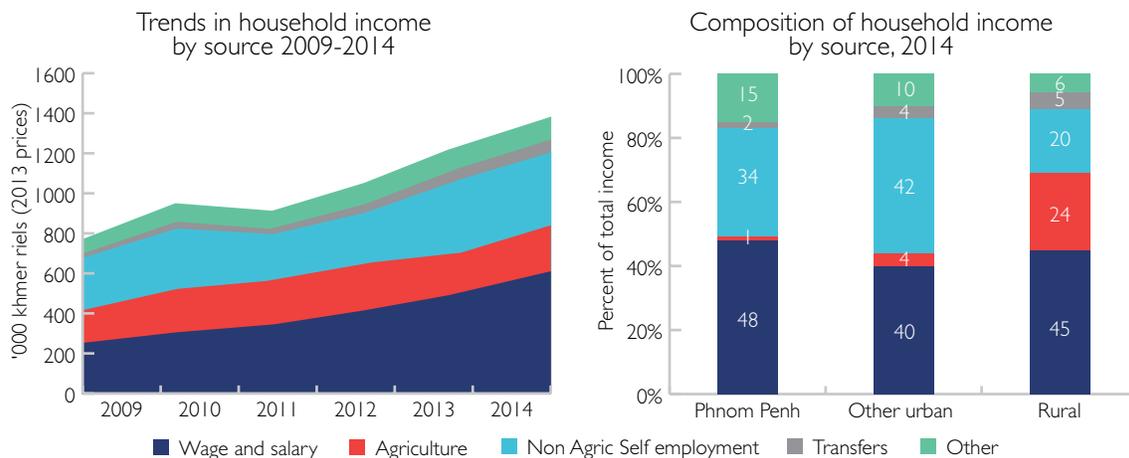
Figure 8. Agricultural commodity prices boomed from 2007 to 2012



Source: World Bank commodity prices database.



Figure 9. Household income sources have become more diversified in recent years



Source: CSES, National Institute for Statistics.

increased agricultural wages and higher demand for agricultural labor on the expanded rice-growing areas and on lands that had diversified into other crops (World Bank, 2013a). Daily wages for various agricultural activities spiked at the height of the food price increases, exceeding overall inflation. For instance, daily wages for ploughing for men increased by 44 percent and for harvesting by 41 percent between 2007 and 2008 at the height of the initial price increases. Rising wages, together with land expansion, have given rise to an accelerated use of tractors and other machines since the late 2000s.

Around 2012, households began diversifying their income into non-farm income, as the agriculture sector started to experience a slowdown. In 2012, rice prices started to decline, and rubber prices collapsed, especially affecting farmers who had diversified into industrial crops. Declining prices, coupled with weather events in 2013 and 2015, resulted in a slowdown and stagnation in agricultural GDP in recent years. However, rural households have increasingly diversified their livelihoods, tapping both into the rural off-farm economy and remittances which sustained income growth in rural areas (Figure 9, left panel). By 2014, agricultural income only accounted for about one-quarter of total rural incomes (Figure 9, right panel) and one-

third of income for the bottom 40 percent, with the rest coming from wages (including agricultural wages), household businesses, and remittances. Thus, non-agricultural sources of income cushioned the impact of declining agriculture growth. In this respect, Cambodia is similar to Vietnam where livelihood diversification in rural areas contributed to poverty reduction and shared prosperity, and now non-wage agriculture income constitute about 36 percent of incomes for the bottom 40 percent. This implies that the rural non-farm economy could be a significant contributor to poverty reduction and shared prosperity in Cambodia in years to come.

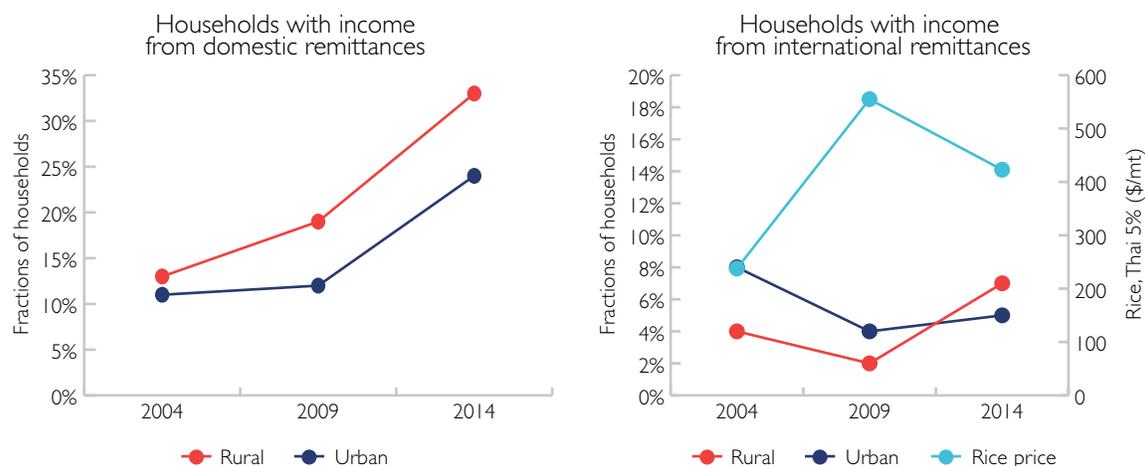
Rural households have increased the contribution of non-farming income sources by diversifying into non-farm household businesses and non-farm wage employment, rather than transitioning entirely out of agriculture. Overall, the share of households engaged in agriculture remained very high, at nearly 95 percent, indicating that most households engage in agriculture and have not entirely transitioned out of the sector. An increasing number of these households diversified into non-farm sources of income instead. By 2014, less than one quarter of rural households depended on agriculture as their sole source of income, down by nearly 13 percentage points if compared with 2007.

The highest growth was in construction, with the share of households earning income from the sector, increasing from an average of 10 percent during 2007-2011, to about 16 percent in 2014. Participation in manufacturing activities has lately rebounded, with a 3 percentage point increase in households with this source of income since 2011. The bump in participation in the hotel and restaurant sector occurred prior to 2007 and the share of households obtaining income from this sector has hovered around 6 percent since then. The outcome of a combination of increased income from the non-farm sector and remittances is that agriculture now only constitutes one-fifth of rural incomes.

Migration contributed to the continued reduction in poverty during the current agriculture slowdown. Estimates from the CSES indicate that domestic remittances recipient households increased significantly, reflected in the substantial increase in the proportion of rural households who received domestic remittances, from 11 percent in 2004 to close to 33 percent in 2014. International migration also increased, with about 7 percent of rural households having an international immigrant in 2014. As of 2015, there were an estimated 900,000 registered Cambodian migrants (or 6 percent

of the total Cambodian population) in Thailand alone, with evidence suggesting the presence of significant but unknown additional numbers of undocumented migrants (EMD and USAID, 2016). International remittances seem to have increased when agriculture prices declined and vice-versa (Figure 10), suggesting that either people migrate more and/or migrants remit more money when there is a slump in agriculture. Thus migration and remittances act as a household coping mechanism. A recent study finds that households receiving internal and international remittances could reduce their poverty headcount rate by 3-7 percentage points (Roth et al., 2015). However, this study also indicated that a majority of international emigrants are illegal, especially to Thailand. Thus, continuous efforts from both countries towards formal registration are required to avoid the risk of unsafe migration methods and human trafficking. Furthermore, most potential migrants have not completed school and work in either construction or crop farming, and therefore do not possess the necessary technical or professional skills that are most in demand by businesses. Evidence from a firm survey (EMC and USAID, 2016) shows that businesses' top selection criteria include related work experience and literacy in both Khmer and English, in addition to completion

Figure 10. Households with income from domestic and international remittances has significantly increased in recent years



Source: CSES, National Institute for Statistics.



of a certificate in certain skills – the type of skills most Cambodian migrants do have.

Nonetheless, agriculture remains a core part of the economy and rural livelihoods. While it has been declining—as is typical during processes of structural transformation—the share of agriculture in total GDP (30 percent in 2015) remains significantly higher than in other Asian economies, as well as the average for lower middle-income countries (around 18 percent of GDP). As of 2014, Cambodia had 4 million direct jobs in agriculture (including livestock and fisheries) which represented 47 percent of total employment. It is also worth noting that consumption growth was substantially lower when agriculture growth slowed down after the commodity price boom. Thus reinvigorating agriculture growth will be just as important as sustaining non-agricultural growth in reducing poverty in the coming years.

3.2 Cambodia's main engines of growth to date: export-led growth linked to basic human and natural resources

Over the past two decades, economic growth in Cambodia has been rapid and resilient. As mentioned earlier, Cambodia ranked sixth in the world in economic growth in 1994-2015, with an average rate of 7.6 percent. Economic growth has also been resilient, with the economy expanding at 5 percent in 1998, the year of the East Asian financial crisis. Although economic growth decelerated to 0.1 percent in 2009 in the context of the global financial crisis, it rapidly rebounded and remained strong at an average of 7.2 percent during 2010-2015. Except during those two external crises, inflation has been kept at single digits.

Cambodia's exceptional GDP growth has been driven by exports and investment as well as structural transformation. Exports of goods and services—mainly garments, rice, and tourism—grew at an average rate of more than 19 percent annually during 1994-2014, and total investment

grew at nearly 13 percent a year.¹¹ Growth in total factor productivity (TFP) contributed one-seventh of GDP growth during this time. By sector, out of the average 7.6 percent economic growth, services (including tourism) contributed 2.4 percentage points to GDP growth on average during 1995-2015, and garments contributed another 1.5 percentage points. The contribution of agricultural crops and livestock averaged around 1 percentage point up to 2013, but the sector stagnated in 2014 and 2015 due to adverse weather conditions (see UNICEF, FAO, and WFP, 2016), lower commodity prices, and other factors as discussed above (Figure 11). Likewise, the contribution to growth from the fisheries sector averaged 0.3 percent between 1996 and 2013 but fell to zero for 2014 and 2015, likely due to variation in hydrological conditions caused by drought. Recently, construction and real estate have joined as the fourth driver of growth, although this sector has proven highly volatile, with a price bubble burst in 2009-10 provoked by the global financial crisis. In terms of employment, around 3.6 million new jobs were created in industry and services and 0.7 million in agriculture and fisheries over the past two decades, highlighting the urban transformation, with jobs increasingly located in towns and cities.

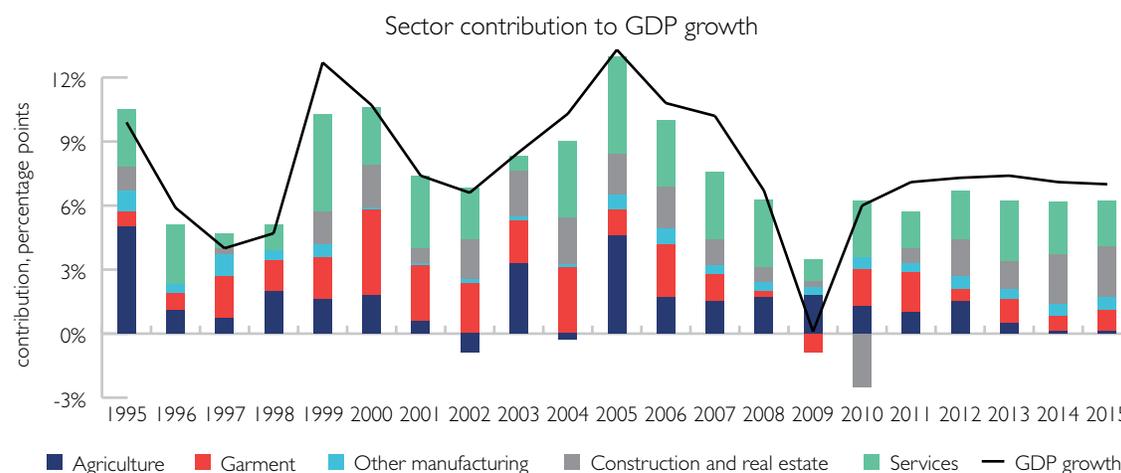
Cambodia has enjoyed blistering growth in labor-intensive exports of goods and services

During 1994-2014, Cambodia registered the world's fastest growth rates in exports of goods and services, with particularly dramatic growth in garment exports. The annual growth rate of goods and services exports was a blistering 19.6 percent, with Cambodia ranking second in the world after Equatorial Guinea and ahead of stellar performers such as Vietnam (15.5) and Bangladesh (15.3).¹² This growth was driven mostly by garment exports and tourism receipts. Investors were encouraged to invest in these sectors because of growing comparative

¹¹ World Development Indicators, the World Bank Group.

¹² World Development Indicators.

Figure 11. Growth in Cambodia has been driven by garments and services, with more volatile contributions from agriculture (including fisheries) and construction



Source: National accounts of Cambodia.

advantage and export opportunities not limited by the size of its domestic market. Growth in garment exports was especially dramatic (albeit from a low base): between 1993 and 2014, garment exports grew at such a high annualized rate (31 percent) that in practice they doubled every two years until the financial crisis in 2008.¹³

The impressive growth of tourism has been another success story, with the sector becoming an important engine for growth, employment generation, and investment attraction. Cambodia received nearly five million tourists in 2015, up from less than 250,000 in 1995, contributing around 17 percent of GDP and making tourism an important source of foreign exchange, investment, and employment (Figure 12, right panel). The tourism boom, mostly around the world-famous Angkor Wat complex, attracted more than USD 19 billion in foreign investment between 1994 and 2011, accounting for more than half of total investment approved in Cambodia over this period and more than the combined investment in agriculture (USD

2.7 billion) and industry (USD 9.8 billion) (Council for Development of Cambodia, 2012). Travel (tourism) accounted for about 70 percent of services exports in 2013, and it was estimated to be a source for direct employment opportunities for 300,000 people in 2014.¹⁴

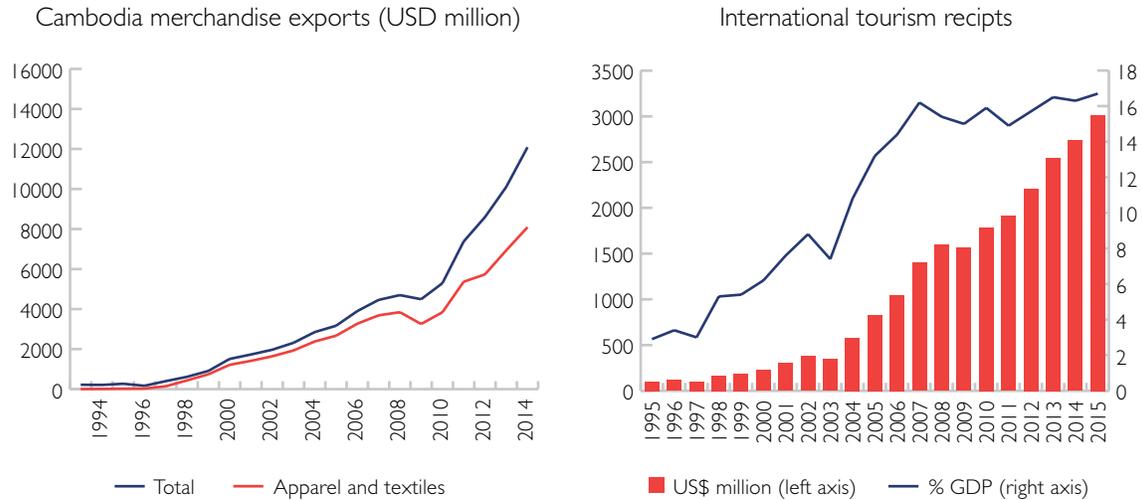
Strong economic performance was facilitated by domestic reforms, highly favorable policies, and the external environment. As discussed earlier, Cambodia has been a highly open economy since its early days, with few restrictions on trade in goods and services. More than two decades of sustained large donor inflows helped fund much-needed public infrastructure after the long destructive civil war. The United States' granting of MFN status to Cambodia in 1996 and increasing quotas after 1999 contributed to the entry of garment manufacturers operating in Southeast Asia into Cambodia (Bargawi, 2005; Hill and Menon, 2014). Although the U.S. quota system ended in 2004, the European Union's preferential duty-free access for all exports since 2001 under the EBA arrangement has ensured continued high

¹³ Given stagnant or declining unit values over this period, the volume of textile and garment exports grew more than that in dollar value.

¹⁴ World Bank staff estimates following the UN World Tourism Organization's recommendation on concepts, definitions and classifications for basic tourism statistics, and based in the CSES 2014.



Figure 12. Cambodia has experienced blistering growth in garment and tourism exports



Source: World Bank staff estimates using data from COMTRADE (mirror data), WDI.

growth in garment exports as well as exports of footwear and fragrant milled rice. Import tariffs are the only protective tool, although accession to the WTO and ASEAN has already reduced applicable tariffs substantially. Cambodia offers de jure one of the most open investment regimes, maintaining very few policy restrictions and prohibitions to FDI entry. Cambodia's service sector is also one of the most open, with an 'open skies' civil aviation policy and foreign companies able to invest and operate in the legal, accounting, transport, banking, and telecommunications sectors.

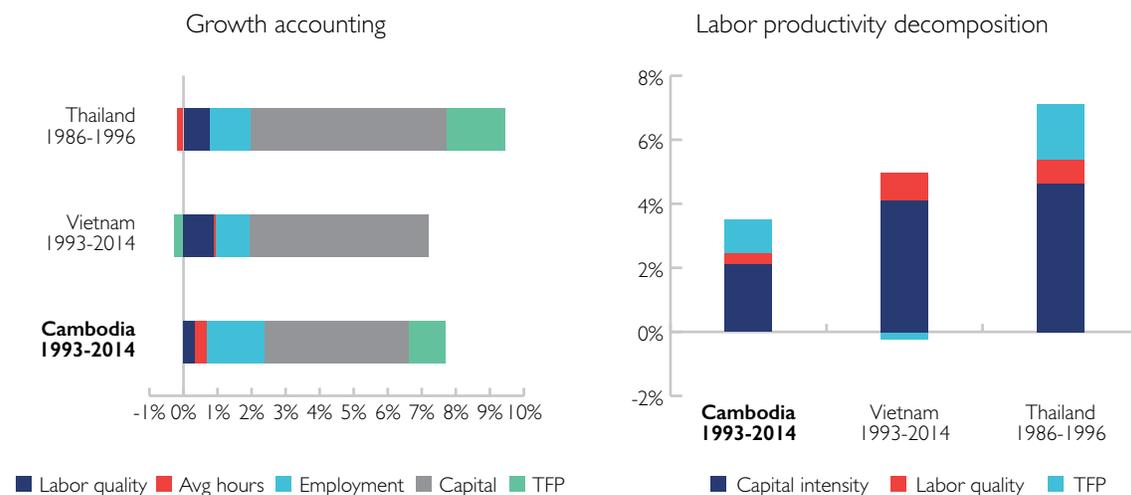
Workforce expansion has been driving economic growth in Cambodia, while labor productivity gains have been more modest than in other fast-growing countries

Growth has been driven mainly by labor inputs and capital, with Cambodia enjoying faster TFP growth than Vietnam. Cambodia's growth in 1993-2014 was driven by the contributions of capital (4.2 percentage points) and employment (1.7) and, to a lesser extent, by TFP, labor quality, and working hours (Figure 13, left panel). From 1993 to 2014, the increase in raw labor input alone accounted for more

than one-quarter of aggregate output (or real GDP) growth in Cambodia. With its growing working-age population, Cambodia is still in the early phases of its "demographic dividend" and has so far been extremely successful in creating jobs for youth and women in labor-intensive activities. The contribution of employment in Cambodia was very substantial during the boom years of 1999-2007, but then decelerated in the aftermath of the crisis. Similarly, the TFP contribution was strong in 1993-2007 but decelerated in 2010-2014, although it remains stronger than in Vietnam. To compensate for this, Cambodia is sustaining economic growth through capital deepening, although the contribution of capital accumulation is still significantly lower than in Thailand or Vietnam during the boom years.

Cambodia's performance on labor productivity looks less impressive. In 1993-2014, Cambodia registered 3.5 percent growth in labor productivity compared to the 4.7 percent achieved by Vietnam during the same period and to the 7.1 percent average growth rate in Thailand during the boom years of 1986-96 (Figure 13, right panel). Capital deepening contributed only 2.1 percentage points to Cambodia's average productivity growth rate—significantly lower than in Vietnam and Thailand,

Figure 13. Cambodia's growth has relied on capital and workforce expansion, while labor productivity gains have been lower than in comparators



Source: World Bank staff calculations using National Accounts and WDI.

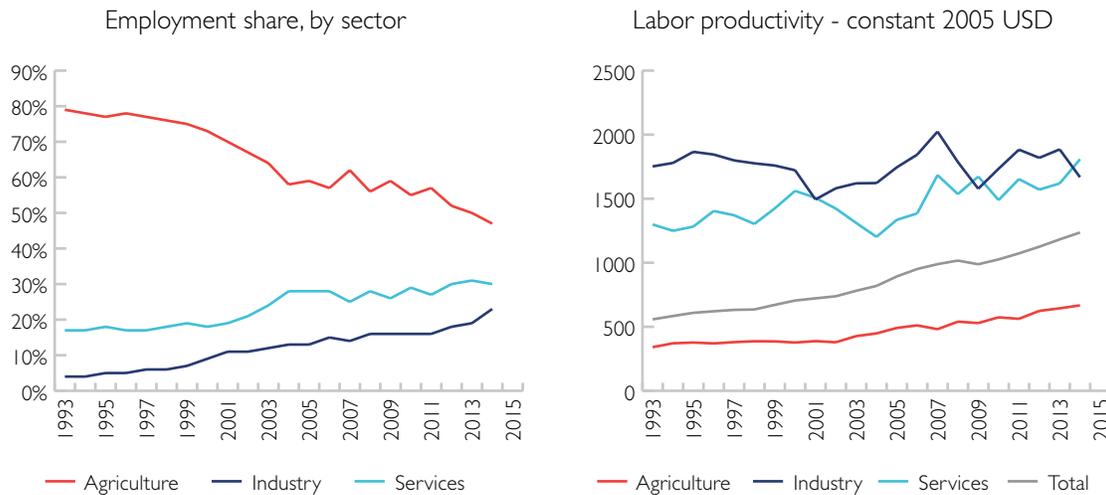
which suggests that Cambodia has fallen behind in upgrading its production technology. This may help explain why labor productivity in industry does not seem to be significantly higher than it was in the 1990s (Figure 14, left panel).

Structural transformation, or the movement of labor from lower-productivity activities (such as agriculture) to higher-productivity activities (such as industry and services), contributed significantly to economic growth over the past two decades. The transfer of labor reduced agriculture's share of employment from 79 percent in the early 1990s to 47 percent by 2014 (Figure 14, left panel) and enabled a significant contribution to labor productivity growth. Nonetheless, a decomposition analysis of labor productivity shows some slowdown in structural transformation during the second half of the 2000s, in the context of rising agricultural productivity and commodity prices, and wages in industry not increasing significantly. The level of labor productivity in the industry and service sectors in the mid-1990s was around 5 and 4 times, respectively, that in agriculture, but by 2014, agriculture productivity was catching up, narrowing the difference to just 3 times (Figure 14,

right panel). It is worth highlighting the caveat that standard productivity estimation techniques may underestimate the productivity of the agriculture sector due to its high seasonality, as observed in other countries. Alternative calculations under an assumption that labor force in agriculture is overestimated by 30 percent would imply a higher agriculture productivity level, while a large productivity gap with respect to the manufacturing and services sectors would still persist, and structural transformation (inter-sectoral reallocation of workforce) would remain the main driver of labor productivity growth in Cambodia (World Bank, 2012a). In fact, during 2009-2015, 1.3 million jobs were created in industry and services, while employment in agriculture decreased by 0.4 million jobs in a context of declining commodity prices. Nonetheless, it is also worth mentioning that the observed low levels of agriculture productivity in Cambodia are, in part, likely to do with the fact that Cambodia is specialized in the production of unprocessed rice, while there is evidence that other crops (coffee, pepper, fruits) have higher productivity. Thus, diversifying beyond rice would be a way for Cambodia to significantly increase agriculture productivity and growth.



Figure 14. The labor productivity gap between the modern and traditional sectors has narrowed, partly contributing to some slowdown in structural transformation



Source: World Bank staff calculation using national accounts.

At the same time, strong agriculture performance and high commodity prices contributed to the reduced (relative) attractiveness of out-migration and garment factory work at a time when wages in manufacturing were not rising significantly. Labor productivity in agriculture grew faster than in industry and services, reducing the gap between agricultural and non-farm wages. Rising agricultural labor productivity stemmed from smallholder land-use expansion, gains in crop yields, and diversification into higher value-added crops including through increased plantings of rubber, cashews, pepper, and other tree crops (Table 5). Land under cereal production increased by 50 percent between 2002 and 2012 as a result of favorable prices and improved market access. Between 2002 and 2012, the average annual growth in yields was an impressive 5.0 percent for rice, 9.1 percent for maize, and 6.3 percent for sugarcane production. Rubber plantings nearly quadrupled from just under 56,000 hectares in 2002 to 213,000 hectares in 2011. Contributing factors included increased use of high-quality seed, better access to mechanized services, and, in some locations, improved access to irrigation (Eliste and Zorya, 2015), although there is evidence

that investments in irrigation in Cambodia have not been as productive as expected (Wokker, Santos, and Ros, 2012).

The levels of capital accumulation and savings have been lower than in other economies experiencing sustained fast growth

Cambodia achieved strong growth in investment for more than two decades, although investment rates remain lower than for its comparators and other sustained-growth countries.¹⁵ Gross capital formation (GCF) grew by an average of nearly 13 percent annually in 1994-2014—much faster than annual growth in employment, implying rising capital intensity for the economy. However, preliminary evidence suggests that growth in capital

¹⁵ Countries that have grown at high rates for many decades like Thailand, Malaysia, Korea, Indonesia, and China have maintained high investment rates since the 1970s, and even as late as 1980-2010 averaged rates of 34, 31, 38, 28, and 40 percent of GDP, respectively (Kim et al., 2014). The Growth Commission report recommended that countries maintain investment rates of at least 25 percent of GDP or more for sustained strong growth based on successful countries.

Table 5. The agricultural sector has experienced rapid land-use expansion and growth in yields

Crop	2002			2012			Annual Average Growth Rate (%)		
	Production (ton)	Cultivated Area (ha)	Yield (ton/ha)	Production (ton)	Cultivated Area (ha)	Yield (ton/ha)	Production (ton)	Cultivated Area (ha)	Yield (ton/ha)
Rice	3,822,509	1,994,645	1.916	9,290,940	2,980,297	3.117	9.3%	4.1%	5.0%
Maize	148,897	80,470	1.85	950,909	215,442	4.414	20.4%	10.3%	9.1%
Cassava	122,014	19,563	6.237	7,613,697	337,800	22.539	51.2%	33.0%	13.7%
Vegetables	163,175	34,433	4.739	411,435	54,155	7.597	9.7%	4.6%	4.8%
Soybean	38,661	33,438	1.156	120,165	70,972	1.693	12.0%	7.8%	3.9%
Sugarcane	173,105	9,581	18.068	1,220,255	36,722	33.230	21.6%	14.4%	6.3%

Source: World Bank staff calculation using national accounts.

stock per unit of labor has not grown as rapidly as it did in Vietnam or Thailand. Capital formation as a percentage of GDP has traditionally averaged less than 20 percent of GDP in different sub-periods, lower than for all of Cambodia's comparators except Guatemala (Figure 15, left panel).

Most of the investment was financed by donor inflows and foreign investors because national savings have been low and falling in recent years. While the gap between national savings and capital formation was under 2 percent of GDP for most of the past decade, it increased significantly in the aftermath of the 2009 crisis and was above 10 percentage points of GDP in 2015 (Figure 15, right panel). It is estimated that in 2015, about 10 percent of GDP in terms of capital formation was financed by FDI, and around 6 percent of GDP was financed by donors. Government-financed investment accounted for a modest 2-2.5 percent of GDP in 2015 (Sánchez-Martín et al., 2016), which is low by international standards, and the rest up to 22 percent of GDP would have been financed by non-government domestic savings.

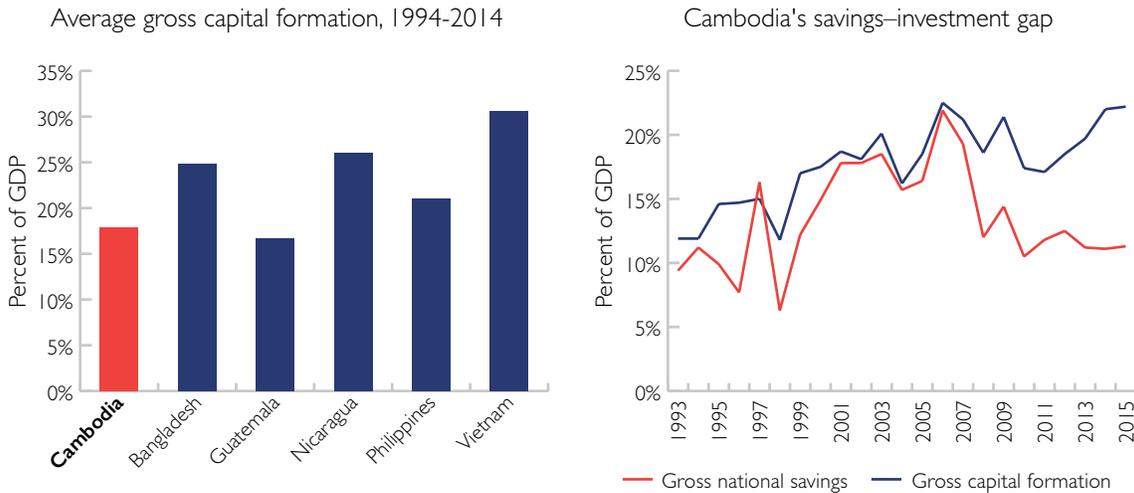
While capital formation has increased in recent years, the allocation of this investment appears to have become less efficient, as manifested in

the falling rate of return on investment. Physical capital investment is a robust determinant of growth (Fernandez, Ley, and Steel, 2004; Durlauf, Kourtellos, and Tan, 2008), although the impact of such investment varies widely.¹⁶ What is critically important for the effective translation of capital accumulation into output (i.e. for higher productivity of capital) is the incentive for making investment as well as the incentive for allocating that investment efficiently. Equipment investment is found to generate more growth than building investment, and countries with high equipment investment had higher growth (Summers and DeLong, 1991, 1992). While total investment in Cambodia has been rising in recent years, it has not done so significantly in equipment and machinery but rather in residential and commercial buildings with lower rates of return (Figure 16). The return to capital is indeed falling, although it remains significantly higher than in Thailand or Vietnam.

In summary, growth in Cambodia has been led by exports of goods and services, with growth

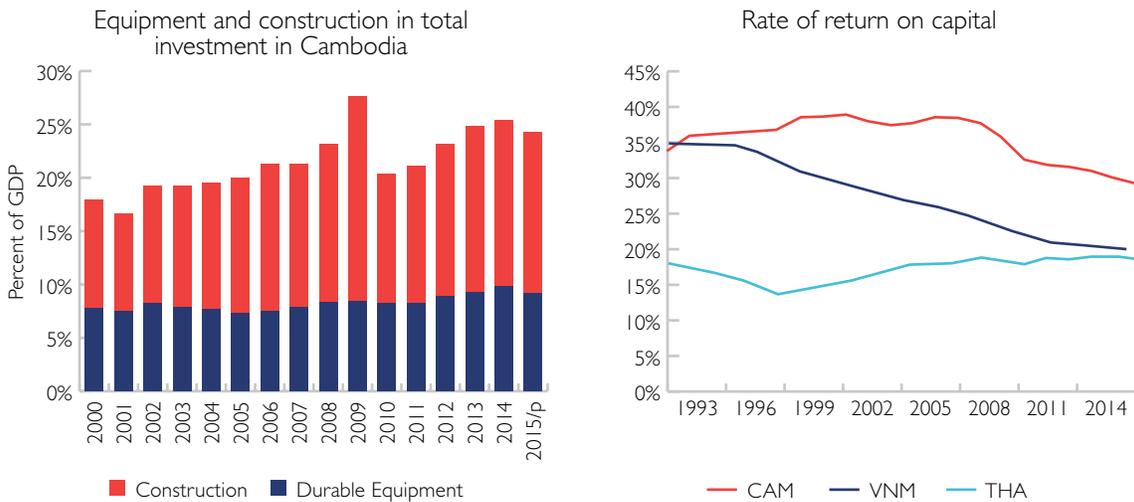
¹⁶ The Soviet case is instructive in that it had a very high rate of investment, but it resulted in low productivity of capital because investments went into activities without consideration of their productivity levels, with little incentive to invest in higher-productivity activities.

Figure 15. Gross capital formation in Cambodia has been lower compared to almost all comparator countries, and the savings-investment gap has been growing



Source: World Development Indicators.

Figure 16. Cambodia's share of equipment investment in total investment has not increased significantly, and the return to capital has been falling



Source: National accounts of Cambodia, Vietnam, and Thailand.

in labor inputs and substantial unskilled job creation, while most of the poverty reduction in rural areas can be attributed to higher productivity and prices in agriculture. While Cambodia has been able to attain strong and sustained growth led by the garment and tourism

sectors, labor productivity in industry has grown more slowly than in other countries during fast growth periods. In addition, capital accumulation in terms of machinery and durable equipment seems to have been lower than in Vietnam and Thailand during the years of the boom.





What are the challenges Cambodia faces in sustaining strong growth and improving equity outcomes over the next decade?

Going forward, increased human and physical capital are needed for Cambodia to reap the demographic dividend and reach upper middle-income status

Cambodia still has the opportunity to enjoy a demographic dividend over the next three decades. The UN population projections indicate that Cambodia's population will continue to grow at an average compounded rate of 1.06 percent per year from 2015 to 2050, while the growth rate of the working-age population (between 15 to 64 years old) is projected to be slightly higher at around 1.12 percent. Taking population dynamics into account, the pool of potential workers is expected to expand by more than 135,000 persons per year on average over the next 35 years. The increase in the potential workforce will not be uniform, and the pool will start to contract around the year 2047. The total dependency ratio is projected to improve gradually until 2044, and then start to increase thereafter (Figure 17). Hence, the gradual entry of Cambodia's

youthful population into the labor market will continue to serve as a natural engine for growth in the foreseeable future.

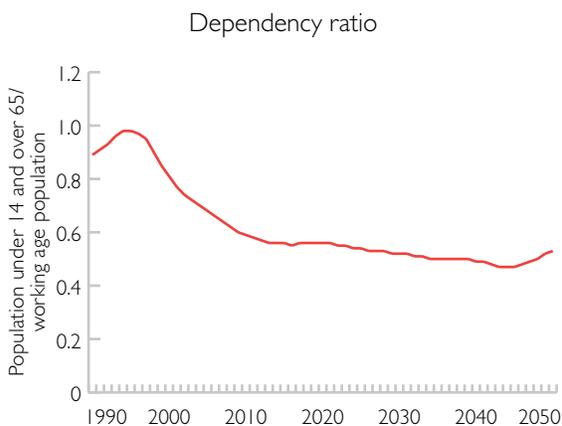
However, it is clear that the contribution to growth will not be as substantial as that observed during the last two decades. The demographic dividend is at risk given the relatively high level of child stunting, at about 33.5 percent in 2014 as discussed earlier. This implies that one-third of the future workforce is likely to be less productive, at least in terms of cognitive skills. Moreover, the fractions of the population with no schooling and primary education are projected to only decline from 33 and 52 percent, respectively, to 23 and 49 percent between 2016 and 2050,¹⁷ which may be insufficient if Cambodia needs to "leapfrog" beyond low-end garments.

The challenge is to ensure that the country makes the investments that will allow it to capitalize on the benefits of the dividend as well as prepare

¹⁷ These numbers were calculated using a linear probability projection of educational attainment based on current trends.



Figure 17. Cambodia's demographic dividend would need to be accompanied by higher physical and educational investments



Source: United Nations World Population Prospects: 2015 Revision.

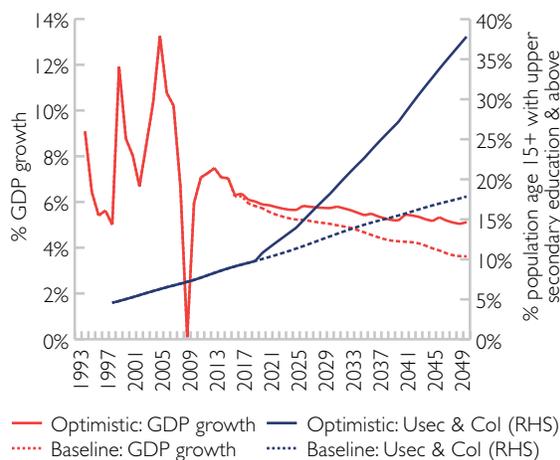
for the eventual aging of the population. Going forward, it will become increasingly important to promote productivity growth (capital deepening) and to foster savings to avoid future fiscal problems with old age dependency. In addition, better education opportunities are needed for new generations to meet the requirements of employers as they try to move into higher value-added processes and products.

Long-term growth projections suggest that increased capital investment and a significant shift in educational attainment are necessary for Cambodia to become an upper middle-income economy before 2050. A companion paper to this SCD, aimed at contributing to the preparation of the *Cambodia Vision 2050*, features long-term growth projections based on historical trends (baseline scenario) and under a higher physical capital and educational attainment scenario (optimistic scenario). Under the baseline, and assuming a yearly gross investment rate of 24 percent of GDP, labor productivity and GDP growth rates would gradually fall to 3.2 percent and 3.6 percent, respectively, by 2050. Under this baseline workforce educational attainment scenario, Cambodia would attain upper middle-income status by 2058. The optimistic

scenario assumes significant improvements in the shares of the population with upper secondary and post-secondary education, totaling 38 percent by 2050 (compared to 17 percent in the baseline), and a gross investment rate of 27 percent of GDP. Under the optimistic scenario, the labor productivity growth rate would hover above 4 percent throughout the forecast horizon, while real GDP growth would decline gradually to around 5 percent by 2050, with Cambodia reaching upper middle-income status by 2049 (Figure 18).

Looking beyond projections based on historical trends and into concrete sectors, going forward, Cambodia may not be able to rely on the same factors that drove poverty reduction over the past decade, including high agricultural prices. As discussed in the previous section, productivity gains and rising agriculture prices contributed the most to poverty reduction through direct increases in farmer and agricultural labor income and the multipliers these had through the demand for services. In the coming years, agricultural commodity prices are not expected to return to the levels that prevailed in the

Figure 18. Higher physical and educational investments would be needed for Cambodia to become an upper middle-income economy by 2050



Source: World Bank staff calculations. Note: "USEC and Col" refers to upper secondary and college education.

late 2000s to early 2010s. Setting aside forested and protected areas, the scope for agricultural land use expansion is much more limited now than in the past. Going forward, Cambodia's agriculture would need to generate 'more from less'—that is, realize higher levels of farmer, fisher, and consumer welfare and non-farm spillovers, while directly employing fewer people,¹⁸ improving its natural resource use efficiency, and reducing its overall environmental footprint. To achieve this, a gradual transformation of the sector would involve processes of intensification, diversification, and value addition.¹⁹ As being witnessed in the region—and notably in Vietnam²⁰—these processes can be enabled by securing land tenure (and farmer rights to choose land uses), supporting a more vibrant multi-actor system for agricultural innovation, facilitating private value chain investment, and strengthening (public and market) institutions to manage food and agricultural risks.

Moreover, weaknesses in the economic development model are becoming more apparent and challenge the prospects for strong economic growth in the coming decades. The prospects for non-agricultural employment will depend upon greater investments in export upgrading and manufactured product diversification. Excessive

18 Official statistics indicate that primary agriculture (plus fisheries and forestry) accounted for 47 percent of employment in 2014. This is likely to be an over-estimate. Many farm activities, especially crop production, require part-time and/or seasonal labor effort. For example, a 2013 survey found wet season rice to involve 48 person days/ha while both dry season rice and maize required less than 32 days/ha. Farm families typically use a combination of household and hired workers plus devote considerable amounts of time to other activities, including micro-enterprises, trading, construction, etc. As most of the latter activities involve informal rather than formal work, household members are typically just categorized as 'agricultural' workers.

19 Going forward, we would expect to see far fewer people regularly employed in rice farming, more people engaged in horticultural and livestock production, and increasing numbers of people involved in upstream (i.e. mechanical services) and downstream (i.e. food processing; food service) dimensions of the agro-food system.

20 World Bank (2016) Transforming Vietnamese Agriculture: Gaining More from Less. Vietnam Development Report.

concentration of total exports on garments, along with weakening external competitiveness, could risk a slowdown in growth of total exports and hurt future growth (ADB, 2014). The potential for economic diversification may be constrained by rising wages, limited human capital, and relatively high costs in terms of informal fees and electricity (ADB, 2014; Hill and Menon, 2014; UNDP, 2014a). In addition, the widening investment-savings gap makes strong growth in investment increasingly difficult, as domestic savings are not sufficiently rising and as Cambodia becomes increasingly dependent on foreign savings. This section discusses both challenges to economic diversification and constraints to household economic mobility, i.e. opportunities to escape from poverty as well as to transition from the non-poor but vulnerable stratum into economic security.

4.1 Challenges to economic diversification

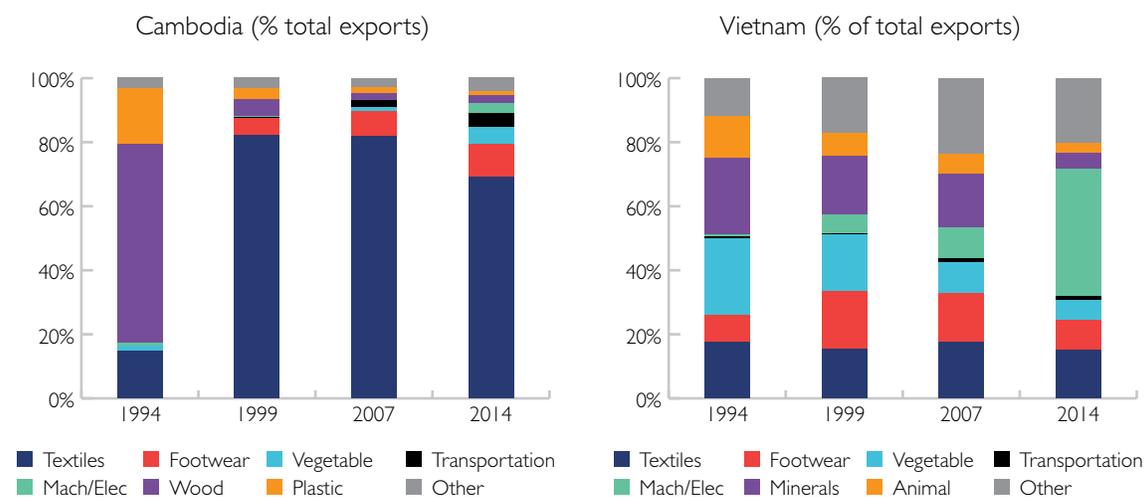
The rapid growth of the garment sector, which transformed the country's export basket in a relatively short period of time, has resulted in a high degree of product and market concentration.

The share of resource-based products like wood and rubber fell from 80 percent of merchandise exports in 1995 to less than 10 percent by 1999, while garments quickly expanded to represent 80 percent of total goods exports (Figure 19).²¹ Rapid concentration in garments is explained by the nature of the first FTAs signed by Cambodia and its comparative advantage in low-wage assembly, and its openness to capital flows. Some export diversification into electrical appliances and other manufacturing has been observed in Cambodia

21 The analysis of export performance in this section is based on mirror data from COMTRADE unless otherwise noted. Some differences exist between different data sources on the exact value and composition of Cambodia's exports. However, the use of mirror data seems to minimize the major inconsistencies found in other data due to unofficial exports to Vietnam and Thailand (mainly of agricultural products) and transshipment of Cambodia's exports in Singapore and Hong Kong.



Figure 19. The dramatic shift in sector composition of Cambodia's merchandise exports resulted in a high concentration in garments



Source: World Bank staff estimates using data from COMTRADE.

in recent years, representing around 5 percent of total exports in 2014, but they are far from the levels observed in Vietnam (60 percent of total). Cambodia's garment exports have been directed mainly to the U.S., although the EU became the top destination in 2014, with fast growth since the simplification on rules of origin and the introduction of "single transformation" to qualify for access under the EBA from 2012 onwards (Figure 20).²²

Most of Cambodia's garment export items are targeted to the low-quality/low-price segment of the U.S. market, with little diversification within garments. Seven of the top eight 8-digit garment export items, accounting for half of all garment exports, have unit values of less than one (where one implies the import price of the Cambodian item equal to the weighted average U.S. import price of

that same item from all countries).²³ In addition, few new garment products have been introduced, with the rate of addition of new products falling from 25 per year to only 10 in recent years—in fact, the same 20 items have accounted for three-quarters of all garment exports since 2000.²⁴ Competition in the low-quality export market is challenging since large low-cost suppliers like Bangladesh and Vietnam also target this segment.

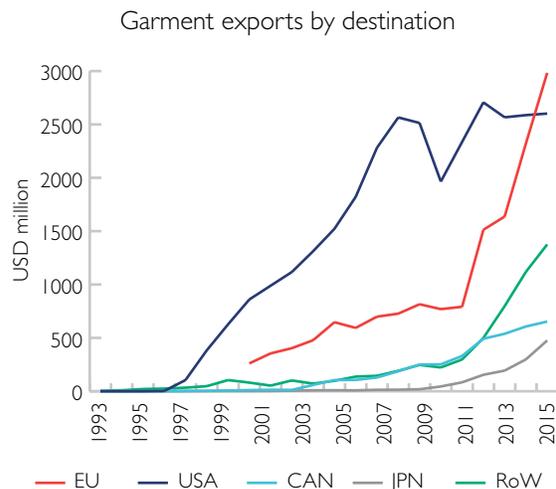
Going forward, diversifying within and beyond garments, attracting more FDI, and exploiting new export markets would be necessary to continue creating job opportunities. As a lower middle-income economy, Cambodia will likely experience a progressive erosion in preferential trade treatment and a decline in concessional financing over the next decade. Therefore, some of the factors that were supportive of economic growth in the past may no longer be there.

²² Between 2001-2011, double transformation (i.e. 'yarn to fabric and fabric to garments conversion') was required for Cambodian garment exports to qualify for duty-free, quota-free access in the EU. This constrained export potential since Cambodia is not a producer of fabric, with most of the inputs for the industry imported from China (74 percent in 2015).

²³ One item (i.e. HS 61103030 "other sweaters, man-made fabric") has consistently registered unit values that are well above the average unit value in the U.S. market.

²⁴ World Bank staff estimates using data from COMTRADE and USITC.

Figure 20. Cambodia's garment exports have been concentrated mainly on the EU and U.S. markets



Source: World Bank staff estimates from COMTRADE (mirror data).
Note: RoW = rest of the world.

Cambodia stands at a critical juncture in generating new sources of job creation. Cambodia's large-scale agricultural workforce makes it important to foster linkages between small landholders and large-scale agricultural farms or corporations to ensure the development of agro-processing industries, increase the amount of high value-added exports, and accelerate agro-industries growth. However, the most critical source of job creation and long-term economic growth will come from Cambodia's industrialization, with new industries as well as manufacturing breaking into new markets with high value-added products, including consumer products and production equipment. The industrial and services sectors are where most of Cambodia's jobs—and better-quality jobs—would likely be created. This, in turn, opens up important public policy questions for Cambodia around cluster development within the national business environment.

Declining external competitiveness and erosion in preferential treatment challenge exports

Despite recent efforts toward higher value-addition, productivity in Cambodia's garment sector is still lower than in most structural peers. While labor productivity for the median manufacturing firm in Cambodia is better than in most comparator countries (except for the Philippines and Vietnam), productivity for the median garments firm is the second lowest after Myanmar (Figure 21, left panel). The results suggest that Cambodia's relatively low labor productivity—at least compared to the best-performing countries in the region—may be partly related to low capital intensity and the fact that investors in the garment industry use Cambodia mainly as an export platform for low-cost, low-productivity production. Differences in worker education and investment climate might also explain part of the observed gap. There is some evidence of training by firms to improve workers' skills so they can work with higher-technology machines (Yamagata, 2006).²⁵

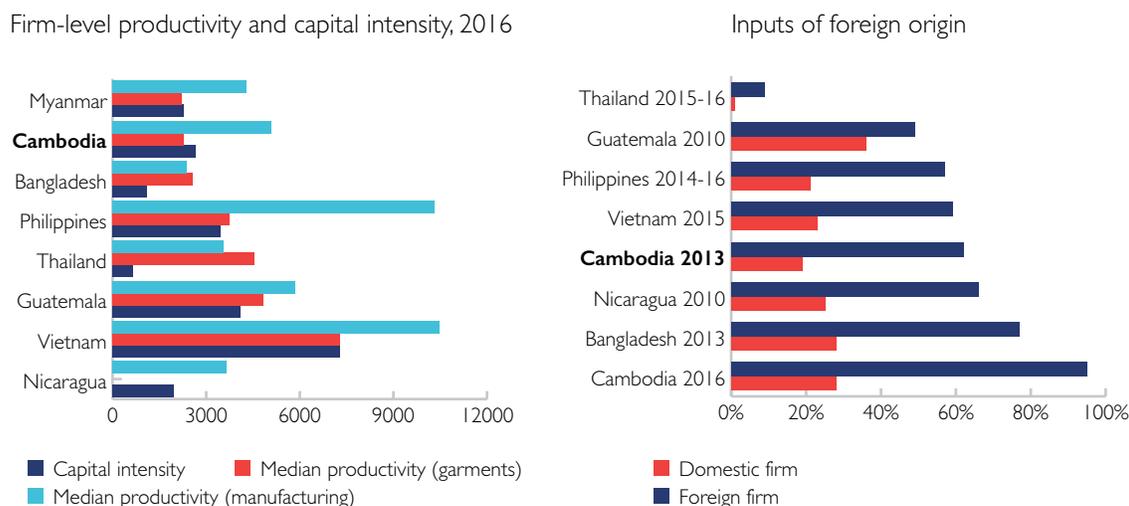
The slow movement toward more complex and higher value-added garment production is likely due to the high degree of foreign ownership. Most factories in Cambodia are involved in cut-make-trim (CMT) production, and only in recent years has there been a gradual movement of factories toward full-package-service free on board (FOB) production (ILO, 2016).²⁶ Unlike CMT, FOB factories must source and purchase inputs on their own, make samples, maybe wash and print, as well as negotiate with buyers on the samples. These tasks require the capacity to finance, procure, and develop samples for approval, involving competencies and skills that go beyond

²⁵ The same study found that all surveyed firms provided training to their local personnel, ranging from one week to more than three months, although a number of their trained workers moved when they found better jobs.

²⁶ Preliminary evidence shows that the CMT share of production fell from 87 percent of the total in 2006 (Yamagata, 2006) to 60 percent in 2013 (Kane, 2014).



Figure 21. Stagnation in garment labor productivity may be the result of firms specializing in low-productivity / low capital-intensive areas; foreign firms rely on foreign inputs



Source: Enterprise Surveys, World Bank Group.

cutting and sewing. These factories are also the ones that are likely to generate higher domestic value-added. The slower movement toward FOB is likely due to the fact that almost 95 percent of garment factories are wholly foreign-owned.²⁷ The parent companies have less incentive to build capacity and upgrade in Cambodia, unless shifting value-adding activities from parent headquarters to Cambodia reduces cost.

Foreign-owned firms are export-oriented and rely on imported inputs. Since the global crisis, Cambodia has attracted larger net FDI inflows on average than any other peer countries, at an average of 8.5 percent of GDP in 2010-2015. In 2012-2014, an average of 48.2 percent of total FDI inflows originated in China, followed by ASEAN (18.3 percent), South Korea (16.1 percent), Taiwan (6.2 percent), Japan (4.7 percent), and the EU (4.6 percent). Most Chinese investment occurs in the garment and construction

sectors, while Koreans invest in construction, and Vietnamese invest mostly in agriculture. Preliminary data from the Enterprise Survey 2016 suggests that foreign-owned manufacturing firms are mostly using Cambodia as an export platform for low-cost, low-productivity production activities with limited potential for transferring capital and knowledge to Cambodia. According to enterprise surveys, the share of imported inputs for the production process by foreign-owned manufacturing firms established in Cambodia, at 95 percent, is by far the largest among peer countries (Figure 21, right panel).

Firms relying on foreign inputs are also more prone to licensing foreign technologies, but contrary to other countries, the use of foreign technologies in Cambodia does not seem to be associated with more propensity to innovate or introduce new products. Similarly, exporters in Cambodia are not found to be more likely to undertake innovation activities than non-exporters and domestic firms, and firms in retail and other services are more likely to undertake innovation activities than manufacturing firms. These findings suggest that foreign investors, especially in garments, see Cambodia mainly as an export-oriented low-cost platform and do not have

²⁷ The vast majority of these factories are integrated into triangular manufacturing networks in which global buyers from the EU and United States source from transnational producers headquartered in Taiwan (China), Hong Kong (China), Korea, Malaysia, and mainland China, with production, export, and management decisions for factories in Cambodia made in those headquarters (Natsuda et al., 2009).

plans for long-term production upgrading and diversification. While domestic Cambodian firms also report using significant imported inputs (28 percent), the difference with respect to other countries is more modest. In general, firms that use imported inputs would be better-integrated into global supply chains than others, although the potential spillover benefits related to FDI would be smaller when foreign-owned firms and exporters primarily use imported inputs (lower scope for backward linkages).

Despite the ease of establishing wholly foreign-owned firms, no significant investment has been made in backward integration of the garment sector, probably due to the costly business environment. According to interviews with private sector representatives, the fact that firms in Cambodia have specialized in *maquila* (assembly) types of activities may be in part because factories for producing knitted fabrics are much more capital-intensive than those for garments and require adequate scale and availability of raw materials. It may also be in part because such factories consume much more electricity and water, and so must rely much more than garment factories on infrastructure like reliable electricity and water supply at competitive cost. More recently, garment sector competitiveness has weakened due to rapid escalation in legislated minimum wages. The minimum wage has risen at an average rate of more than 23 percent annually between 2012 and 2016, significantly faster than wage increases in competitor countries like Bangladesh and Vietnam, as discussed in the next section. If other costs (electricity, transport and logistics, management) do not come down substantially or labor productivity does not rise at that rate, these higher wages are likely to reduce profit margins for higher-value garment producers/exporters and/or render many other garment operations unprofitable (Hill and Menon, 2014; ILO and IFC, 2016).²⁸

²⁸ GMAC reports suggest a greater number of garment firm closures than opening of new ones in 2015. Further examination of 2010-16 data on FDI applications and approvals in the garment sector, annual closings and openings

Low wages and preferential market access—two pillars that allowed the impressive growth of Cambodia’s exports over the last two decades—are expected to be eroded in the medium term.

A changing external environment will bring more competitive pressure for Cambodia’s exports in the medium term. As mentioned earlier, higher wages, the emergence of new low-wage competitors like Myanmar, and preference erosion in main export markets will pose challenges to further export growth (Hill and Menon, 2014). The EU-Vietnam FTA (EVFTA) will eliminate nearly all tariffs for Vietnamese products in the EU over a seven-year period. Nonetheless, it is worth noting that most Vietnamese garment exports will be subject to double transformation to enter duty-free in the EU, which will require backward integration and production of some fabrics locally, while Cambodia, under the EBA, is only required to undertake single transformation and can import fabrics and other inputs from anywhere in the world. For the garment industry, the most promising sign is the recent expansion of duty-free access to some travel goods by the United States which would benefit Cambodia, among other least developed countries.

In this context, some nascent diversification toward higher-value export products aside from garments, footwear, and agriculture seems to be taking place.

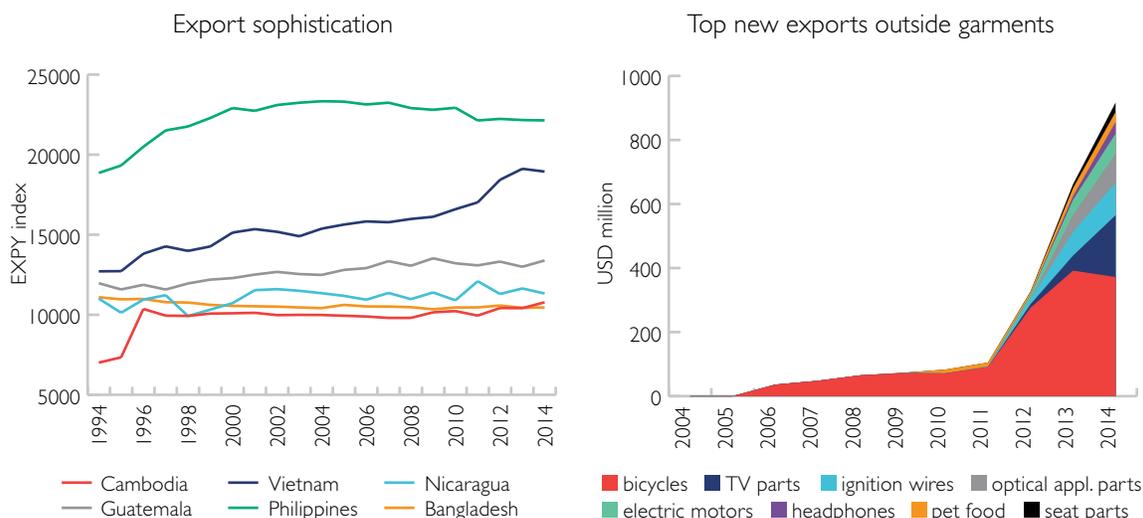
Export sophistication,²⁹ dominated by low value-added garments, has remained flat since the mid-1990s and until recently, when a few emerging products appeared in the export mix (Figure 22). A number of these products—such as bicycles, ignition wires, optical appliance parts, electric motors (including for smartphones),

of garment firms, and changes in garment-buyers order pipelines may provide more evidence on how garment firms are affected.

²⁹ The sophistication of a country’s export basket (denoted as ‘EXPY’) derives from the sophistication of the individual products in it (denoted as ‘PRODY’) and is based on the exports of developed economies. Hausmann, Hwang, and Rodrik (2006) show that high-EXPY countries tend to have higher future growth rates, supporting the idea that countries ‘become’ what they export by converging to the income level implied by their export baskets.



Figure 22. Export sophistication and emerging exports products have started to increase in Cambodia



Source: World Bank staff estimates using data from COMTRADE.

television parts, and headphones—have grown very rapidly in recent years. Although together they account for more than one-fifth of all non-garment exports, their contribution to total export growth remains modest. These exports are part and parcel of the regional value chains in machinery and transport in China and Thailand and are led by Japanese firms,³⁰ although it should be noted that the production processes taking place in Cambodia encompass mainly assembly.

This is a great start to merchandise export diversification to higher-value products that ought to be nurtured. Upgrading and expanding garment exports remains important for sustaining strong export growth and employment in the coming decade, while Cambodia pursues integration in other global value chains. The challenge will be to maintain competitiveness (as discussed in more detail in the next subsection), provide incentives for

upgrading and backward integration, and strengthen education and industry-specific skill development in order to keep attracting FDI and achieve economic diversification (UNDP, 2014a).

For agriculture, Cambodia would need to reposition its exports and develop a competitive response to high-value food imports in order to return to a higher growth trajectory. With the primary exception of high-quality fragrant rice exports to the EU, Cambodia’s agricultural exports have been raw materials (e.g., dried paddy, dried cassava, in-shell cashews, raw rubber) transported to neighboring countries where value addition takes place. In several of these areas, there is scope to attract investment in agro-processing and sell the finished product regionally and beyond, but Cambodia will have difficulty competing as a low-cost bulk supplier. It will need to position both its primary and finished product exports in the high-quality and sustainably produced segments of the market. For example, Cambodia could position itself in the lucrative and growing markets for organic cashews, pepper, mango, and other products, while scaling up its exports of high-quality branded rice. At home, a dietary transition has begun with

30 Minebea, Denso, Sumitomo Electric, and Yazaki are among the companies that have already invested in the Phnom Penh export processing zone. Minebea is the most advanced, employing 6,500 people, and has begun a major expansion of its factory to expand employment to 20,000, for the first time introducing processes other than assembling.

increased demand for animal products, vegetables, and processed foods. A large proportion of current demand is imported, yet there is ample scope for import substitution for a range of these products. This is not simply to serve Cambodia's growing (yet still quite small) middle-income consumer class, but perhaps more importantly—given the country's nutritional deficit—to ensure physical and economic access of the poor and near-poor to high-nutrient foods.

With regard to services exports, Cambodia has unique assets for tourism development but risks sliding toward a 'low-value, high-volume' model.

Key attractions include the World Heritage Site of Angkor Wat, religious and cultural sites, and nature tourism and adventure activities. These tourist arrivals exhibit a stable pattern of travel through regional hubs in Thailand, Vietnam, and China. Direct employment in the tourism sector was estimated at 300,000 people in 2014,³¹ of which more of half are taken by women. However, some challenges could threaten the chances for developing tourism as a central pillar of an inclusive economy. Value captured per tourist has not changed much in the past decade, from USD 585 in 2005 to USD 630 in 2015—higher than the average for Lao PDR or Myanmar but just one-third that of Vietnam. International tourists who visit as part of a package tour stay in Cambodia for an average 4.6 days, while independent travelers stay for 7 days. Average daily spending across all international overnight markets is about USD 120 per day. Low-end businesses have mushroomed, stays are short with limited repeat visits, and there are signs of overcrowding and degradation of the key assets at the Angkor temples.

Diversification of tourist attraction sites beyond the Angkor Wat complex may be necessary to restore strong growth in tourism arrivals.

Unlike Thailand, where 80 percent of tourists prefer

sea-sun-sand and nature-based destinations, Cambodia's tourism sector remains narrowly focused around the Angkor Wat complex, although the country is endowed with numerous historical, cultural, and natural destinations. Tourist destination diversification would help improve Cambodia's tourist return rate—which currently stands at about 16 percent compared to over 50 percent for Thailand—and further broaden the domestic market base, encouraging additional investments in the services sector such as travel services, telecommunications, transport, and hospitality. Development of eco-tourism could help create employment opportunities in rural areas, potentially providing households with a complementary income source, and would also help to mitigate environmental degradation.

Cambodia faces three main challenges to diversifying and increasing value in tourism: insufficient infrastructure beyond the main tourism enclaves, limited human capital availability, and declining price competitiveness.

First, according to the World Economic Forum's *Travel and Tourism Competitiveness Index*, Cambodia lags behind Asia-Pacific benchmarks for infrastructure competitiveness (113th out of 141 countries in 2015), health and hygiene (112th), and environmental sustainability (118th). The insufficient transport infrastructure and poor environmental services hold back sustainable and more inclusive tourism growth, as many secondary destinations are unable to attract private investment. This discourages visitors from venturing off the beaten track, which keeps driving the imbalanced growth around Siem Reap and Phnom Penh. Second, industry stakeholders report that the need for quality human resources far outstrips supply, and lack of well-trained workers is one of the main barriers to improving tourism service quality and competitiveness. Technical and vocational education and training (TVET) enrollment as a percentage of secondary enrollment is just 2.3 percent, and tertiary gross enrollment rates are the lowest in ASEAN after Myanmar. Third, in recent years (2013–15), Cambodia has experienced a significant decline

31 World Bank staff estimates following the UN World Tourism Organization's recommendation on concepts, definitions and classifications for basic tourism statistics, and based in the CSES 2014.



in competitiveness for tourism services, with rising prices and exchange rate “leakages” (in the context of U.S. dollar appreciation). The business environment remains challenging (129th), and while Cambodia is doing well overall in terms of prioritization of tourism services by country authorities (37th), it still lacks a country brand strategy.

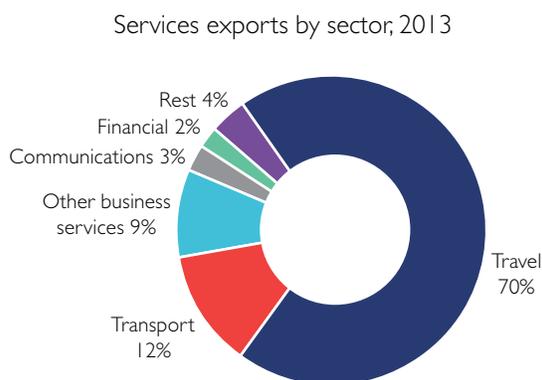
Beyond tourism, while a high degree of openness in terms of regulation helps increase Cambodia’s diversification in services, human capital may be a constraint. While travel receipts represent 70 percent of total service exports in Cambodia (Figure 23), modern services exports to other East Asian countries—including information technology-related services—are expected to play a more important role in Cambodia in the future. Cambodian firms are already tentatively exporting some niche services such as computer-based animation. A potential opportunity for Cambodia is that it is one of the most open ASEAN economies in terms of trade in services (ASEAN Secretariat and World Bank, 2015), although transparency issues and informal fees need to be tackled in order to attract foreign investment and to promote the expansion and diversification of high-value services (World Bank, 2014a). While Cambodia’s largely young population is a potentially critical asset for the expansion of services industries, low educational attainment at the secondary level

could pose a serious constraint. Some of these issues are discussed in more detail in the next subsection.

Strengthening the modern services sector could be a way for Cambodia to move on from its current labor-intensive, low value-added (assembly) mode of global value chain (GVC) participation. Modern services such as finance, insurance, telecommunications, and transport and logistics are critical inputs for manufacturing exports, and an efficient services market is essential to enhance a country’s competitiveness. Since services areas like design, marketing, and retailing are segments where the majority of value added is captured within value chains, enhancing the competitiveness of the services sector is a main priority for upgrading in GVCs. The contribution of services for manufacturing exports in Cambodia (6.3 percent) has improved, but it is still one of the lowest in the region and lags other countries that have successfully integrated into GVCs like Thailand (10.2 percent) and Vietnam (9.5 percent).

However, diversification in services may be constrained by still-limited technological readiness. With very little infrastructure remaining after the civil conflict, Cambodia bypassed rebuilding the fixed-line market and quickly launched into alternative technologies, jump-starting its telecommunications infrastructure with digital technology. Not surprisingly, mobile services have completely overwhelmed the market. At 133 in 2015, Cambodia holds the largest mobile cellular subscriptions per hundred people among its peers. Mobile broadband subscriptions, at 10 per hundred,³² are below the shares of Guatemala (18 percent) and Vietnam (10 percent) but higher than in other lower middle-income economies (Figure 24). The expansion of internet services in Cambodia has been largely overshadowed by the strong focus on mobile services. Internet take-up rates remained

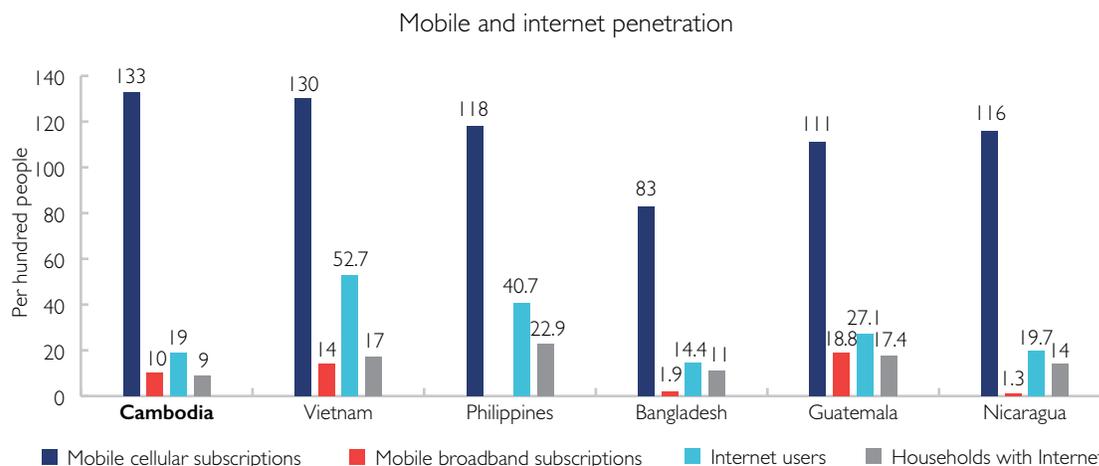
Figure 23. Services exports are concentrated in tourism



Source: UNCTAD Stats.

32 Telecommunication Regulator of Cambodia “Mobile Phone Subscribers.” Available at <http://www.trc.gov.kh/mobile-phone-subscribers/>. Accessed on December 30, 2016.

Figure 24. The expansion of internet services in Cambodia has been overshadowed by the strong focus on mobile services



Source: International Telecommunication Union, World Telecommunication's ICT Development Report and database, and country authorities.

disconcertingly low for many years, with the country claiming one of the lowest fixed internet broadband penetration rates in the region (0.6 percent in 2016). Overall, according to the World Economic Forum, Cambodia has significantly improved in terms of technological readiness, from lagging significantly behind in 2005-2006 to being close to the lower middle-income average in 2015-2016, but is still far from the ASEAN-5.

Finally, low innovation and public and private research and development (R&D) spending could hurt prospects for economic diversification and value addition. According to the Global Innovation Index (GII), Cambodia ranked 95th out of 128 countries in 2016, a significant improvement compared to just 3 years ago (110th in 2013).³³ Among its peers, Cambodia is ahead of Bangladesh and Nicaragua

33 The GII has been jointly prepared each year since 2007 by the World Intellectual Property Organization (WIPO), Cornell University, and INSEAD, using a variety of different data sources on innovation inputs and outputs (for details and methodology, see: <https://www.globalinnovationindex.org>). While it constitutes a good starting point for the analysis, it may not perfectly capture the scope of innovation in LDCs such as Cambodia, where there are issues of data availability/quality and where innovation is likely to be more incremental and consist more of adaptation of existing technology and processes.

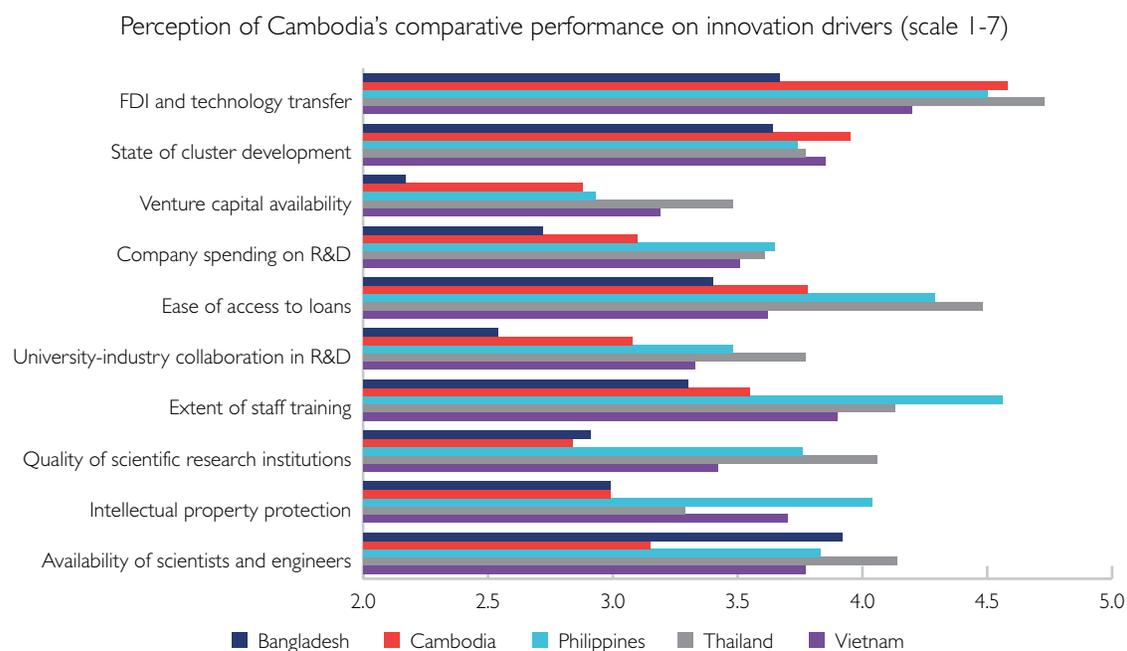
but still lags significantly behind the Philippines and Vietnam. These countries are also better than Cambodia at turning relatively poor availability of inputs (institutions, human resources, infrastructure, market and business sophistication) into innovation outputs (such as knowledge and creative goods). Limited ICT adoption and low tertiary education attainment are likely to constrain Cambodia's ability to innovate. In addition, perception data by company executives points to likely areas of relative weakness for Cambodia compared to better-performing comparators, such as the availability of scientists and engineers, company spending on R&D, and availability of venture capital (Figure 25). Cambodia's modest innovation drivers result in low innovation outputs, such as a low share of high-tech products in manufactured exports (less than 1 percent) and a lack of patent applications, which challenges prospects for economic diversification and sophistication.

Informal competition and fees challenge the creation of a vibrant private sector

Entrepreneurs point to a number of constraints that hinder external competitiveness as well as the creation of a vibrant private sector in Cambodia, with informal sector practices emerging as the

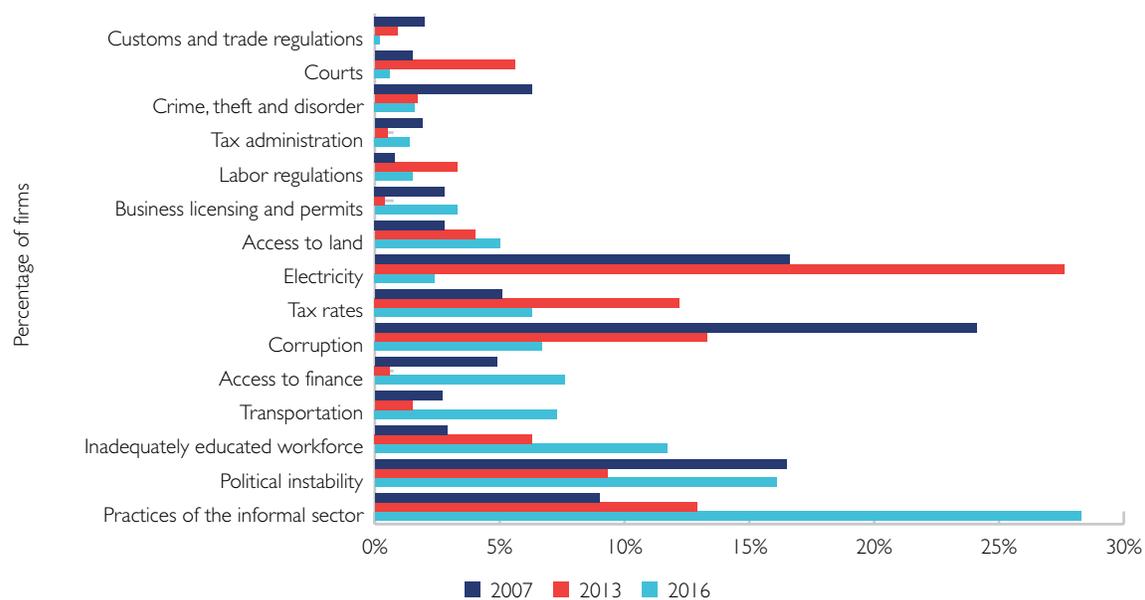


Figure 25. Cambodia lags behind comparators on availability of scientists and engineers and R&D



Source: WEF, Executive Opinion Survey 2016.

Figure 26. Biggest obstacle to firm operation



Source: WEF, Executive Opinion Survey 2016.

top constraint. Perceptions are consistent with the ratings on dimensions of economic competitiveness by the World Economic Forum (2015), as presented earlier. The latest World Bank Group Enterprise Survey³⁴ indicates that in 2016, informal sector practices were perceived as the main obstacle for firm operation (28 percent of respondents), followed by political instability (16 percent), an inadequately educated workforce (11 percent), and access to finance and transportation (Figure 26). Electricity is no longer listed among the main concerns—most likely a product of improvements in reliability of supply, although costs do remain high. Increased concerns over informal sector practices may be related to the sustained increase in wages that is resulting in the emergence of informal garment suppliers. Following labor riots in the aftermath of the 2013 National Assembly election, political instability has become a rising concern, especially as the 2018 elections approach. Nonetheless, the tripartite taskforce created in August 2013 to determine minimum wage in the garment sector has shown to be an effective mechanism for fostering dialogue and agreement.

Informal competition puts firms based in Cambodia in a disadvantageous position. According to the Enterprise Surveys, informal practices are an increasing concern. In 2016, the percentage of firms that declared they were competing against unregistered or informal firms (77.8 percent) was the highest among Cambodia's structural peers (Figure 27). In addition, the percentage of firms formally registered appears to have declined significantly between 2013 and 2016 (from 83.5 percent to 69.5 percent), a period in which both minimum salary and tax compliance efforts increased significantly. According to the latest enterprise census, Cambodia's private sector is dominated by informal and very

small informal enterprises and only a few large, modern businesses.³⁵ Burdensome formalization processes, which make Cambodia one of the most difficult places in the world to register a business,³⁶ may be one of the explanations for the 'missing middle' segment of businesses, which would be key to productivity improvements and job creation since many firms may opt to remain 'small.'

Although fewer entrepreneurs are listing corruption as the top obstacle, corruption is still regarded as an impediment to private sector development. In 2013, 47.8 percent of firms regarded corruption as one of the biggest obstacles to conducting business in Cambodia. This number dropped to 10.2 percent in 2016, as informal practices have become the main concern. Nonetheless, during consultations, business leaders described how corrupt practices occur through the acceleration of approvals, licenses, and other paperwork required for investment. Lack of transparency in the handling of dealings between the public and private sectors was cited as a source of frustration that hindered making existing markets more efficient and the creation of new markets. The consequence is not only the formation of inefficient projects but also the corollary of higher costs to consumers.

In fact, Cambodia still has the highest incidence of corruption among its structural peers and

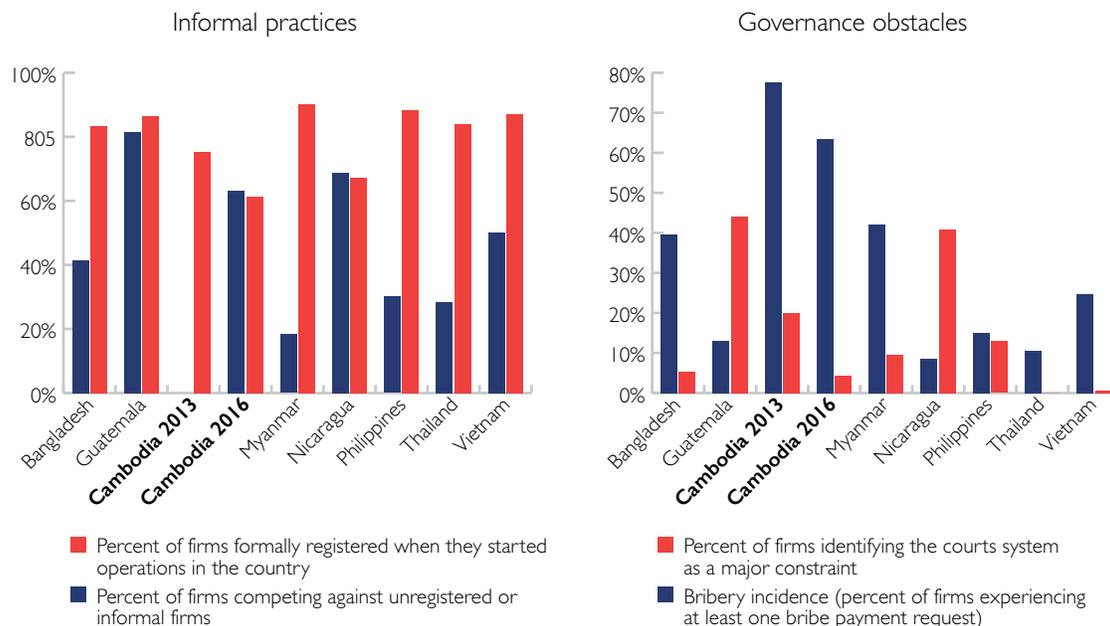
³⁴ Business owners and top managers in 373 firms were interviewed from February 2016 through June 2016. The sample comprised 135 manufacturing firms, 102 retail firms, and 136 firms operating in other services. Survey data is publicly available at the following webpage: <http://www.enterprisesurveys.org/data/exploreeconomies/2016/cambodia>

³⁵ According to the Economic Census of Cambodia 2011, microenterprises (employing between 1-20 staff) account for around 97 percent of firms, while large enterprises (employing over 100 staff) represent less than 1 percent of businesses. A weakness in the structure of Cambodia's private sector is the 'missing middle': only 2 percent of businesses fall into the category of being SMEs that employ between 11-50 staff, while medium-sized enterprises with between 51-100 staff account for 0.2 percent of businesses.

³⁶ Cambodia made progress in 2015 in making it easier to start a business by simplifying company name checks, streamlining tax registration, and eliminating the requirement to publish information in the official gazette. Nonetheless, Cambodia still ranks 180th out of 189 countries on this dimension, with 87 days needed to start a business (compared to 25.9 in East Asia and the Pacific) and high costs (78.7 percent) and minimum capital requirements (24.1 percent) in terms of income per capita, which are likely to discourage the establishment of firms.



Figure 27. Informal practices and bribery incidence are high compared to structural peers



Source: Enterprise Surveys, World Bank Group.

economic competitors. In the 2015 Corruptions Perceptions Index, Cambodia still ranked 150th (with only Afghanistan and North Korea performing worse in the Asia Pacific region).³⁷ When looking at actual bribes, Cambodia still has the highest incidence among comparators by far (Figure 27, right panel). As of 2016, gifts or informal fees were expected in public transactions (according to 59.4 percent of total respondents), meetings with tax officials (58.7 percent), construction permits (86.8 percent), electrical connection (61.6 percent), and water connection (48 percent). In 2013-2016, significant efforts were made to curb informal fees for getting operating licenses (declining from 100 to 50.3 percent) and import licenses (from 87.7 to 63.4 percent). However, the percentage of firms surveyed that declared to be expected to give gifts to secure a public contract is now much higher than before (from 7 to 87.5 percent in the same period). According to both domestic and foreign entrepreneurs, informal

fees have a significant negative impact on the competitiveness of firms located in Cambodia.

In terms of infrastructure constraints faced by the private sector, most of the transportation requirements of Cambodia continue to be served by road. According to the Ministry of Public Works and Transport (MPWT), the country had 2,200 kilometers and 5,000 kilometers of first- and second-order national roads in 2015, of which 100 and 57 percent were paved, respectively. The network also includes about 8,000 kilometers of provincial/tertiary roads plus an estimated 35,000 kilometers of rural roads, most of which are unpaved and in very poor condition, hampering access to markets (including for agricultural goods), schools, and services in rural areas. Given funding limitations, the focus has been first on those national roads that comprise the backbone of international connectivity, followed by domestic main arteries (inter-provincial), then intra-provincial, and so forth. Both policy and overall road management functions reside almost entirely with the MPWT, which is in charge of primary and

37 Transparency International: <http://www.transparency.org/cpi2015>

secondary roads. The Ministry of Rural Development is in charge of tertiary and rural roads and faces funding and capacity constraints in managing its extensive rural network.

A main concern is that Cambodia's transportation network is not keeping pace with rapid economic growth. During the period 2008-2013, the average annual growth in the number of registered vehicles was 14 percent, reaching approximately 2.5 million registered vehicles in 2013 and with motorcycles growing the most (22 percent). Congestion is already a major problem in Phnom Penh. The infrastructure needs are also illustrated by the rice sector. Cambodia is expected to produce about 7 million metric tons of paddy surplus (up from 4.3 million in 2012), thanks to better irrigation and improvement of extension services. Currently, most processed rice is exported in containers through Sihanoukville Port. To export 7 million metric tons of rice, Cambodia would need about 350,000 20ft containers, thus about 28 times the number of containers it now uses. Such an increase would bring road traffic to a stand-still (see Slayton and Muniroth, 2015). The rehabilitation and opening of the Phnom Penh-Sihanoukville railway in 2016 appears to be a (slower) alternative to Cambodia's seaside and main port, and there are two railways planned to the Thai and Vietnamese borders, but they are facing funding issues. While aviation growth has been strong (tourism and garments),³⁸ other modes play less of a role. Waterways from Phnom Penh to Vietnam (mainly oil and cargo) are also used, but most of the transportation requirements of Cambodia continue to be served by road.

The overall quality of transportation infrastructure is similar to that of peer countries

³⁸ Cambodia is a member of the ASEAN Open Skies initiative, which aims to liberalize the commercial aviation market in Southeast Asia. According to Cambodia Airports, from 2011-2015, air passenger traffic grew 13.5 percent per annum and air freight 17 percent per annum. Domestic traffic in 2015 comprised 11 percent of total movements by air for passengers and less than 2 percent for cargo.

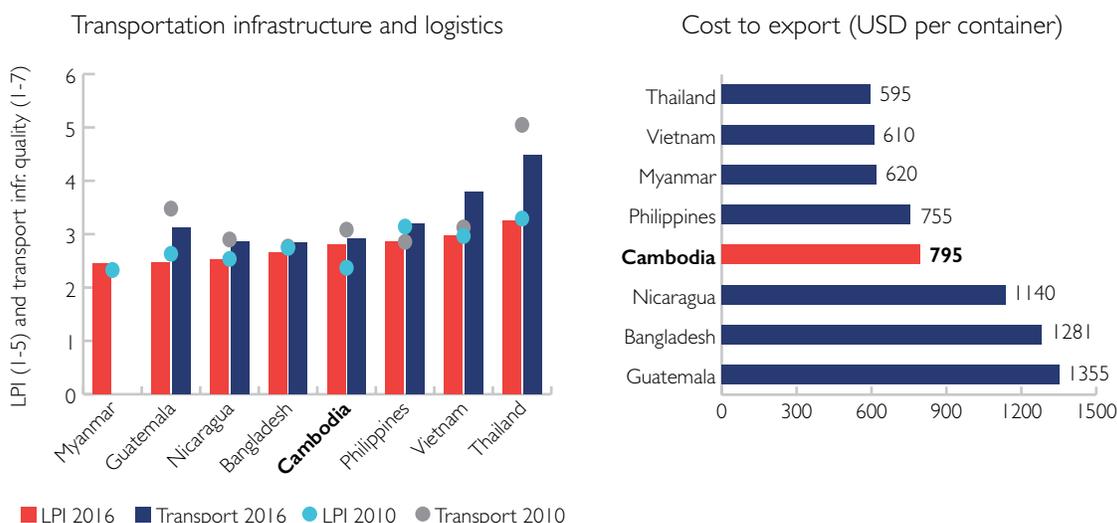
but slightly declined since 2010. The observed decrease in the transport infrastructure quality index, from 3.1 out of 7 in 2010 to 2.9 in 2016 (Figure 28, left panel), may be due to several factors. First, Cambodia's transportation infrastructure is highly vulnerable to extreme weather events, with a substantial part of the network at risk (UNDP, 2014b). In addition, maintenance of assets, often built by donors, is seldom adequate, with modest funding and limited subnational capacity. Systematic road asset management is still at an early stage in Cambodia. An assessment of state-funded public investment management reveals that most line ministries do not have established feasibility study requirements for project selection or minimum implementation standards, and large infrastructure projects (roads, rural roads, canals) are often delegated to the donors due to lack of capacity (Minh Le et al., 2017). This poses challenges for the provision of public infrastructure to ensure economic competitiveness.

Cambodia has introduced substantial improvements in trade facilitation and logistics in recent years, but charges to exporting are still significantly higher than in other countries. Cambodia has made consistent improvements in its ranking on the World Bank's Logistics Performance Index (LPI), surging to 73 after ranking a lowly 129 in 2010, a jump of 56 places, with its score improving from 2.3 to 2.8 (Figure 28, left panel). The country ranks fourth among the top 10 performing low-income economies thanks to a series of reforms implemented over the past decade, including the adoption of a Customs law,³⁹ the adoption of a risk management strategy at customs, the implementation of automation following international standards (ASYCUDA system), the introduction of single-stop inspection at the border, and the simplification of transit operations with neighboring countries (RGC, 2014b). However, despite these improvements, and while transportation prices are not significantly

³⁹ Law NS/RKM/0707/017 of July 2007.



Figure 28. Cambodia's transportation infrastructure and charges are competitive, but forwarding charges are overall higher than in competing countries



Source: Logistic Performance Index (LPI, the World Bank Group), transportation infrastructure quality index (World Economic Forum), and Doing Business Indicators (the World Bank Group).

higher than in neighboring countries, informal fees heighten total costs. Trucking firms report that informal payments are routinely collected at weighbridges and checkpoints. According to interviews with private sector stakeholders, forwarding charges beyond the official customs processing fee (USD 15) would amount to around USD 200 (World Bank, 2014c), which is approximately the difference in average cost to export between Cambodia and Vietnam or Thailand (Figure 28, right panel).

In terms of electrical supply, Cambodia has made rapid strides in providing access to electricity, availability has improved significantly, and Cambodia has become nearly self-sufficient in supply for the current power demand. Cambodia's power system expanded significantly between 2011 and 2015, nearly tripling in size, largely driven by private sector investments. The household electrification rate increased from below 30 percent to 60 percent, transmission lines also significantly expanded and energy generation almost doubled in the same period, from 2,564 GWh to 4,489 GWh (Ministry of Mines and Energy, 2015; Electricity

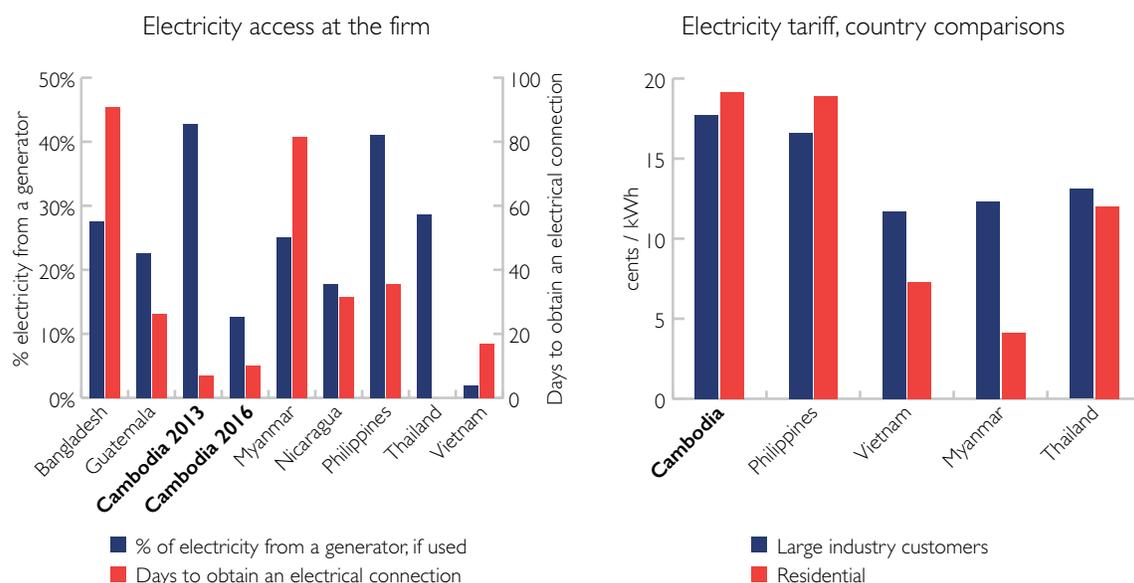
Authority of Cambodia, 2016).⁴⁰ Enterprises reported less outages,⁴¹ and the number of days (7.9) required to set up an electrical connection in Cambodia is one of the lowest among Cambodia's structural peers (Figure 29, left panel). However, the quality of services—including reliability and affordability—continues to be a concern.

However, the price of electricity remains relatively high compared to neighboring countries, and is due to the lack of competitive bidding in energy generation, and fragmentation in transmission and distribution (Figure 29, right panel). Although Cambodia has managed to reduce the tariff from its highest point by the introduction of new hydropower and coal plants, and the displacement

40 401 MW were imported in 2015 from Vietnam, Thailand, and Lao PDR.

41 Power outages in Cambodia declined from 6 per month in 2013 to 1.4 in 2016, and the duration if an outage occurred decreased from 1.8 to 1.3 hours. These improvements in the reliability of electricity meant that firms relied less on expensive diesel-fueled generators, with the surveyed enterprises reporting that the proportion of their electricity from diesel generators declined from 22.9 percent to 9 percent in the same period.

Figure 29. While electricity reliability has improved, tariffs remain relatively high compared to those in neighboring countries



Sources: Enterprise Surveys, World Bank Group; Electricity Authority of Cambodia, 2015; Philippines Energy Regulatory Commission, 2016; Vietnam Ministry of Industry and Trade, Decision No. 2256/QD-BCT, 2015; Myanmar Ministry of Electric Power, 2015; Thailand Energy Regulatory Commission, 2016; De Ferranti et al., 2016. Latest available data.

of expensive, small-sized fuel oil-based generation (EAC, 2016), it still has one of the highest tariffs in the world (Derbyshire, 2015). Seasonal fluctuations in hydro generation (de Ferranti et al., 2016), the high degree of uncoordinated private sector investments in transmission and distribution, under-utilization of generation and transmission capacity, small economies of scale, inefficient system planning and dispatch, and a large number of small distribution and retail service providers add to the costs. To counteract power shortages and enhance energy security, Cambodia has pursued private sector investments in generation, transmission, and distribution, with 85 percent of generated electricity coming from Independent Power Producers (IPPs) in 2015.⁴² While Cambodia has managed to mobilize a relatively large sum of FDI, predominantly from China and South Korea, none of the generation and transmission public-

private partnerships (PPPs) (except for the first grid solar project tendered in October 2016) were procured through competitive bidding. In addition, contingent liabilities arising from an increasing number of energy PPPs could result in significant fiscal risks if not managed carefully. Overall, Cambodia's high cost of electricity has reduced its regional competitiveness and is hindering the growth of value-added production that requires increased mechanization.

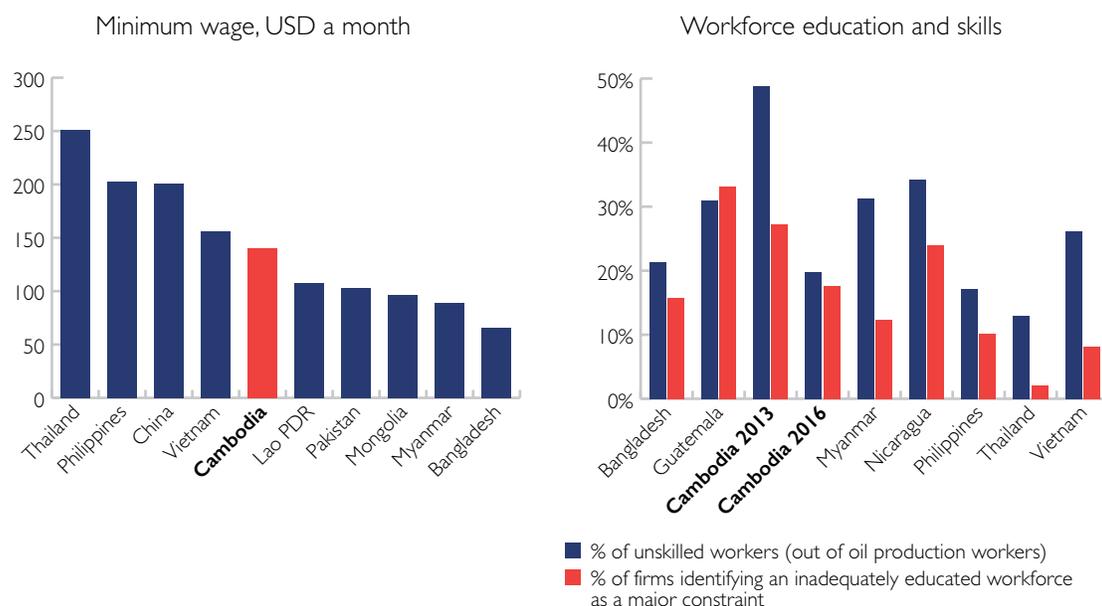
The available skills are unlikely to meet the upcoming needs of firms

In the context of rising wages and increasing competitiveness challenges, higher labor productivity and a better-trained workforce will be needed to fill the new jobs created at higher value-added activities. Cambodia has traditionally been a destination for export-seeking FDI based on its strategic geographical location and supply of cheap unskilled labor. After a decade of unmodified low salaries and following the establishment of an

42 44 percent of High Voltage (HV) substations and 52 percent of HV lines were built and operated by the private sector; 58 percent of the customers were served by 336 licensed service providers, and the rest were served by EDC.



Figure 30. The minimum wage is relatively high, while the education level of the workforce remains a concern to firms



Source: Enterprise Surveys, the World Bank Group. Ministries of Labor of the different countries.

effective wage-setting mechanism,⁴³ the minimum wage in the garment sector nearly doubled from about USD 80 a month in 2013 to USD 153 a month in 2017, but productivity improvements have not kept pace. The minimum wage is already significantly higher than in Pakistan and Bangladesh (garment exporters) and close to that of Vietnam, which enjoys a higher level of labor productivity (Ly, 2016b; Figure 30, left panel). As a result, most companies are trying to offer washing, embroidery, printing, and other activities that add value to the final export, in order to be able to keep competing in the context of rising costs.

In 2016, an inadequately educated workforce was among the top three concerns of entrepreneurs,

43 A tripartite body consisting of representatives from the Ministry of Labor and Vocational Training, employer associations, and trade unions under the Labor Advisory Committee has been established to handle annual minimum wage negotiations, helping to maintain good industrial relations after large-scale labor unrest occurred in 2013 and 2014, which had negative impacts on investors' confidence.

and human capital is expected to be increasingly critical as Cambodia tries to move up the value chain and diversify beyond garments. According to the latest World Bank Enterprise Surveys, the proportion of unskilled workers in surveyed firms dramatically decreased from about 50 percent of the total in 2013 to 20 percent in 2016, showing that entrepreneurs are demanding a more skilled workforce. While the percentage of firms reporting an inadequately educated workforce as a major constraint declined compared to 2013, it is still higher than in other countries in the region (Figure 30, right panel). Consulted business leaders argue for the need to ensure that secondary school curricula are at the highest standards and that students are being properly prepared for the workforce in order to avoid a skills mismatch and facilitate business upgrading and higher value addition.

The training needs are extensive, but for the most part, only large firms have the capacity to provide such training. Anecdotal evidence from the private sector indicates that those hired

at the factory gate have limited skills. Firms need to start with very basic skills training, adjusting their training programs and even processes to accommodate the low levels of literacy in Cambodia. Most foreign firms provide training to new hires—from a week to a month in most cases—to train workers to meet factory specifications and firm policies. Firms provide training, predominantly in house, with only large firms able to achieve economies of scale to make the massive workforce development investment necessary to start operations. Despite interest from the private sector, the skills intermediary ecosystem also seems to be underdeveloped, and just a few pioneer examples can be found in some special economic zones (SEZs).⁴⁴ In general, intermediaries in Cambodia have low capacity and lack support (Warr and Menon, 2015). These systemic deficiencies will limit both SME development as well as the ability to attract smaller-scale FDI in emerging sectors, given that finding skilled workers is particularly challenging for SMEs.

Relatively high turnover rates also create a disincentive for firms to make any significant investment in worker training. Apart from low skills, 22 percent of firms reported high turnover as their top concern in the Enterprise Surveys. High turnover appears to be related to job (e.g., night shift work, better job and wage offers, and labor migration to other countries such as Korea and Malaysia where wages are higher) and non-job issues (e.g., holidays, peak agricultural season with workers heading home to farms, transportation and safety issues). To help retain workers, some firms located in SEZs provide non-financial incentives to workers such as housing/dormitories within the SEZ, cafeterias, and transportation. In general, costs and availability of housing and transportation services will be a limiting factor for the future expansion of new industries at a scale envisioned around the SEZs and industrial

44 Some SEZs see training as one of the services for all investors (e.g., Kerry Worldbridge SEZ), while in other SEZs (e.g., PPSEZ and Sihanoukville SEZ), the training center is another investor in the industrial park that will provide training.

parks, and authorities will need to consider policies to address housing and basic services in these new agglomerations.

Filling vacancies remains a challenge for firms in Cambodia across all sectors, skill levels, and regions.

The vacancies judged more difficult to fill were those requiring skilled workers, machine operators, managers, and craft workers. Vacancies for elementary occupations (unskilled) were also considered hard to fill in almost 75 percent of cases (Bruni, Luch, and Kuoch, 2013). Consultations with private sector firms revealed that hiring of low-skilled/unskilled recruits is largely done at the factory door, with recruitment done by word of mouth—for example, through family members or neighbors in the provinces outside of Phnom Penh. Interviews with the private sector indicate that firms do not ask for educational credentials from their factory recruits, only requiring basic language and math literacy. Factories have difficulty finding workers with the minimum requirements of basic language and math literacy, while management positions are generally held by international workers. Other recruitment channels include the internet (websites), job announcements in newspapers and radios, working with universities and TVETs to identify potential recruits, and the local National Employment Agency. At present, labor market intermediation services are limited and ineffective.

School credentials (certificates, degrees) are not a signal of competence or skills of workers.

Results from a 2011 ILO survey of 78 employers in Cambodia indicate that 73 percent of employers feel that Cambodia's university graduates do not have the right skills, and more than 62 percent of employers also noted that vocational training graduates do not have the right skills (World Bank, 2012b). Around 55 percent of the interviewed establishments reported that employees did not perform at the required level. More than 20 percent of the establishments considered four skills to be necessary: job-specific tasks, oral communication, knowledge of a foreign language, and manual dexterity (Bruni et al., 2013).



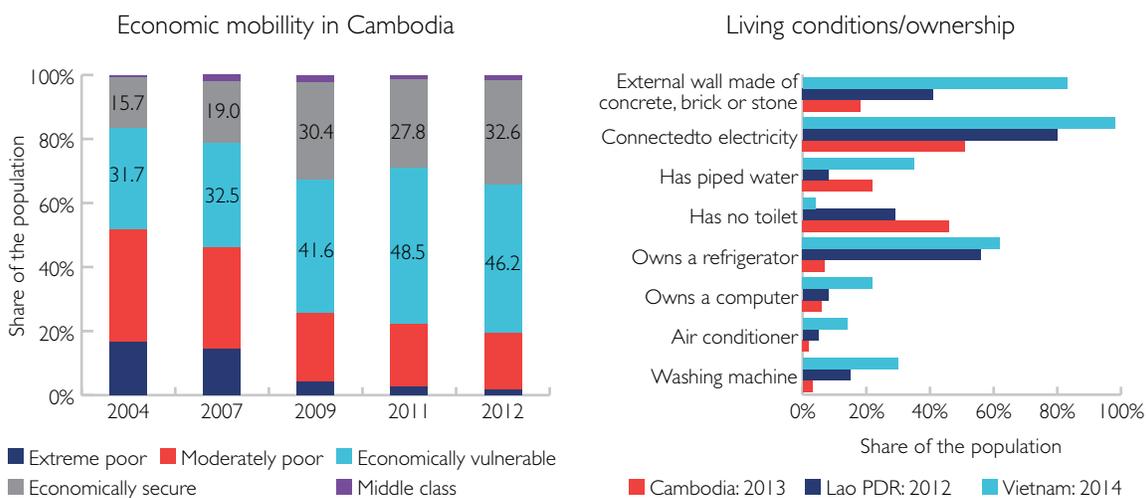
Most of the universities depend on tuition fees, tend towards offering programs relating to business, and invest very little in research. According to the Ministry of Education, Youth, and Sports, half of the students registered in majors in 2012 were pursuing business administration degrees, compared to just 8 percent for IT and 3 percent for engineering. Business degrees have mushroomed along with economic and financial sector development. The number of universities increased from just 14 in 2000 (6 of them private) to 121 in 2016 (73 private). With regards to R&D at Higher Education Institutions (HEIs), funding is limited and there are little incentives to research, especially in private universities that run on a business/fee basis. At the public HEIs, only some PhD holders are committed to R&D on their own with little or no support for the management; most HEI lecturers make their living by teaching.

Reported skills shortages in the country are also the result of weak TVET, which continues to face numerous reputational, financial, regulatory and operational challenges. To begin with, TVET faces a pool of potential learners with very limited foundational skills in reading, writing, mathematics, problem solving, communications and teamwork; as a result of high lower and upper secondary dropout rates, a majority of young people are not eligible to enter TVET certificate level courses (CQF 2 and above). Attracting students to TVET is another challenge, as Cambodians have a negative perception of TVET as a 'second rate' education compared with attending university, and others do not want to give up work in order to attend training. Cambodia has the lowest relative number of students enrolled in TVETs, both upper secondary and tertiary, across Southeast Asia (CDRI, 2013). Youth also experience financial challenges with paying for transport, accommodation and meals, and receive little career guidance on employment options after graduation. The majority of TVETs focus on short, community-based courses to support households in poverty or risk of exclusion. Upper secondary programs—critical for Cambodia's current approach to developing a skilled workforce—is shrinking due to lower demand.

TVETs are not meeting the skills demand of the private sector.⁴⁵ In addition to the challenge of attracting a pool of students with strong foundational skills, Cambodia's existing TVET programs face several institutional challenges in expanding to meet industry needs. Financial resources for TVET systems are limited, governance and coordination is weak across various line ministries with skills development programs, and curriculum offerings are not sufficiently diverse. TVETs are expanding their two-year diploma and four-year bachelor degree programs in response to demand so they can raise revenue from these programs. Currently, most TVET curriculum exists for the Certificate 1 (CQF 2) or the Diploma level (CQF 5), with curriculum for CQF levels 2–5 focused on traditionally male-dominated occupations—air conditioning repair, automotive engineering, civil engineering and electrician training. Such limited course offerings also contribute to the negative perception of TVET among young people as only for blue-collar workers and low-paying jobs. Increasing curriculum offerings, however, would not currently require significantly greater infrastructure. The 325 existing TVET institutions are not currently being fully utilized; they could enroll many more students using the teachers in their existing facilities. However, upgrading the curriculum and investing in teachers' professional development will be required (ADB & ILO, 2015; ADB, 2016). Even for TVETs that have a good reputation with the private sector, no channels for collaboration have been established to understand skills demand and needs. Better coordination between vocational training and the main education system would also be needed.

⁴⁵ The National Employment Agency surveyed in 2013 more than 500 establishments in six sectors (food and beverage; garment, apparel, and footwear; rubber and plastic; construction; financial services and insurance; and accommodation). The results showed 72.6% of respondents had hard-to-fill vacancies. Of the companies with hard-to-fill vacancies, a third attributed unfilled vacancies to a lack of the required skills among applicants. The 325 TVET institutions produce around 2,500 qualified graduates per year. Using job vacancies as a proxy for industry demand, the TVET system currently provides an annual supply of suitable graduates of less than 0.1% of vacancies (ADB, 2016).

Figure 31. Growth in the share of economically secure households has been slow, and living conditions lag behind comparator countries



Source: World Bank staff estimates from CSES 2004-2013; Lao Expenditure and Consumption Survey (LECS) 2012/13; Vietnam Household Living Standards Survey (VHLS) 2014.

4.2 Constraints to household economic mobility

Beyond extreme poverty, socioeconomic mobility has been limited

Despite sustained economic growth and a rapid reduction in extreme poverty, the share of economically secure (emerging consumer class) and the middle class barely grew after 2009.

By international standards, most Cambodians not in extreme poverty are either moderately poor or economically vulnerable (Figure 31, left panel),⁴⁶ with per capita consumption of the poorest 20 percent below USD 3.10 (in 2011 PPP) and the next 46 percent between USD 3.10-5.50 per day. Since 2009, only a small segment of the Cambodian population has attained economic security and joined the ranks of an emerging consumer class, while an estimated 58

percent of the Vietnamese population had joined the emerging consumer class as of 2015. Slow growth in the share of economically secure households in Cambodia is reflected in how the level of comfort (in terms of living conditions) lags behind that in other lower middle-income countries in the region (Figure 31, right panel). Only 18 percent of households live in houses built with brick, concrete, or stone, compared to 40 percent in Lao PDR and 83 percent in Vietnam. Just 7 percent of households own a refrigerator, compared to 62 percent in Vietnam. This pattern broadly reflects that most households have escaped extreme poverty by only a small margin. The concentration of the distribution in Cambodia implies large similarities between the second and third quintiles, which means that the agenda for shared prosperity extends to a larger segment of society.

The slow growth of an emerging consumer class in Cambodia can be traced to three factors which reflect weaknesses in the current development model. First, household endowments are low in terms of both human capital (education and health) and physical assets (land). Second, households in

46 The economic classification is based on daily consumption per capita (CPE) in 2011 PPP terms, categorized as follows: Extreme Poor: < USD 1.91 PPP 2011; Moderate Poor: USD 1.91-3.10 PPP 2011; Economically Insecure: 3.10-5.50; Economically Secure: USD 5.50-15 PPP 2011; Middle Class: USD 15-50 PPP 2011.



Cambodia have high exposure to shocks. Third, limited economic diversification has meant slower growth of economic opportunities outside the garment sector. This combination of factors has shaped the livelihoods and opportunities for Cambodians, which in turn determines their ability to grow into an emerging consumer class and attain economic security. These factors are discussed in greater detail below, and are generally underlined by poor public sector service provision in part driven by weak governance systems.

Limited access to education and land inhibits socioeconomic mobility

Although land is one of the key assets owned by households in Cambodia, it is unequally distributed, and many households own only a modest amount. The average amount of land owned by a rural household is 1.3 hectares, which at current yields is enough to generate market surplus for a family of five people but is not enough to propel households into economic security or the middle class. Moreover, 23 percent of rural households did not own land in 2014, and another 15 percent owned less than 0.5 hectares (Table 6) and relied mainly on agriculture wage labor. The median land size has been declining since 2007, indicating that new land areas are no longer significantly gained from conflict areas, minefields, or forests. This decreasing

land size trend will likely continue, as land is seen as an important source of security and parents divide and parcel out land to their children. Many older people will be left with little land as a result, adding to those among this generation who did not acquire land after the conflict. Thus, closing the productivity gap in agriculture between Cambodia and other countries (e.g., Vietnam and Thailand) will become increasingly important.

Despite progress thus far, education outcomes are still poor for many households in Cambodia.

While net enrollment in primary education and completion rates are high at 97 and 90 percent, respectively, attainment of secondary education or above is low. The average share of working-age people with a secondary education is 21 percent. With low enrollment in lower secondary school (38 percent) and upper secondary school (18 percent), this situation is only changing slowly. It is also made worse by high dropout rates: only 41 percent of those enrolled in secondary education and only 27 percent of those enrolled in upper secondary education complete the necessary grades. Drop-outs have actually risen, resulting in a decline in the completion rate of lower secondary education from 49 percent in 2008 to the current levels. Consequently, Cambodia has the lowest share of adults with lower secondary education among ASEAN economies (CDRI, 2013) and its peers.

Table 6. Rural land ownership and land sizes have been decreasing in recent years

	Land ownership category (shares)					Land owned (ha)	
	No land	Less than 0.5 ha	0.5 – 1 ha	1 – 2 ha	More than 2 ha	Mean	Median
2004	19.7	19.9	27.6	19.6	13.2	1.3	0.68
2007	16.2	19.5	25.5	23.5	15.3	1.4	0.80
2009	17.3	19.0	26.7	20.0	16.9	1.5	0.75
2011	16.2	19.1	28.8	20.3	15.6	1.2	0.73
2014	22.7	15.3	29.6	17.5	15.0	1.3	0.70

Source: World Bank staff estimates from the CSES, 2004-2013.

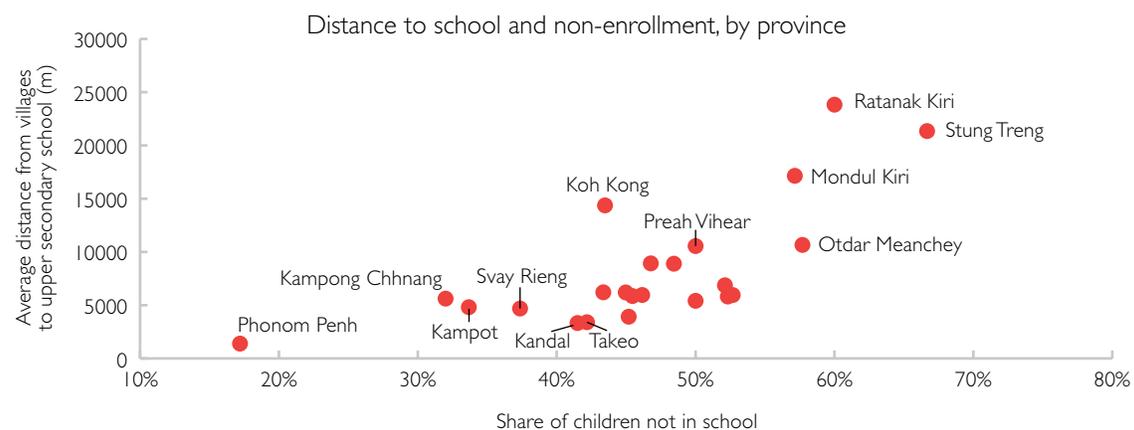
Secondary completion has been limited by scarcity of schools in certain areas. While monetary obstacles is the most prominent reason for lack of enrollment in secondary education, access to schools remains an issue in certain provinces (Sohnesen et al., 2016). The share of out-of-school children 13-18 years of age is highest in Stung Treng, Ratanak Kiri, and Mondul Kiri provinces in the Northeast, which combined have 43 lower and upper secondary schools (Figure 32). These areas are sparsely populated compared to the provinces surrounding Phnom Penh, where population density and availability of secondary schools are higher. The lower concentration of schools in the Northeastern and Eastern areas and the higher percentage of out-of-school children there partly reflect the challenges of effective service delivery to areas with low population density.

Households face demand constraints that have become the main factors behind limited grade completion in recent years. About 67 percent of 15-18 year olds who dropped out of secondary school in 2015 were more likely to cite being too poor or the need to contribute to household income as the main reason for dropping out of school, and another 8 percent cited household chores. Focus

group discussions with youth revealed similar results (Save the Children and DANIDA, 2014), finding that children over age 15 were more likely to cite the need to earn money for the family (35 percent), too many household chores (31 percent), or cost (14 percent) as the main reasons for dropping out of school. Only 20 percent (but 31 percent among those under age 15) cited long distance to school as their reason for dropping out, although cost could also be reflecting the issue of traveling distance. On the other hand, lack of interest (23 percent) and unavailability of schools (12 percent) are the most cited reasons for dropping out of school by children between 6 and 14 years old. The higher drop out due to income related reasons for older children thus reflects an increasing opportunity cost for investing in education among the poor.

The gains from achieving universal primary education are undermined by poor learning outcomes in primary education, and progress toward improving learning outcomes has been mixed. A national assessment of student achievement (Ministry of Education, Youth and Sport, 2015) found that 39 percent of grade 6 pupils had a below basic proficiency rating for reading in Khmer, and 76 percent were rated below basic on writing

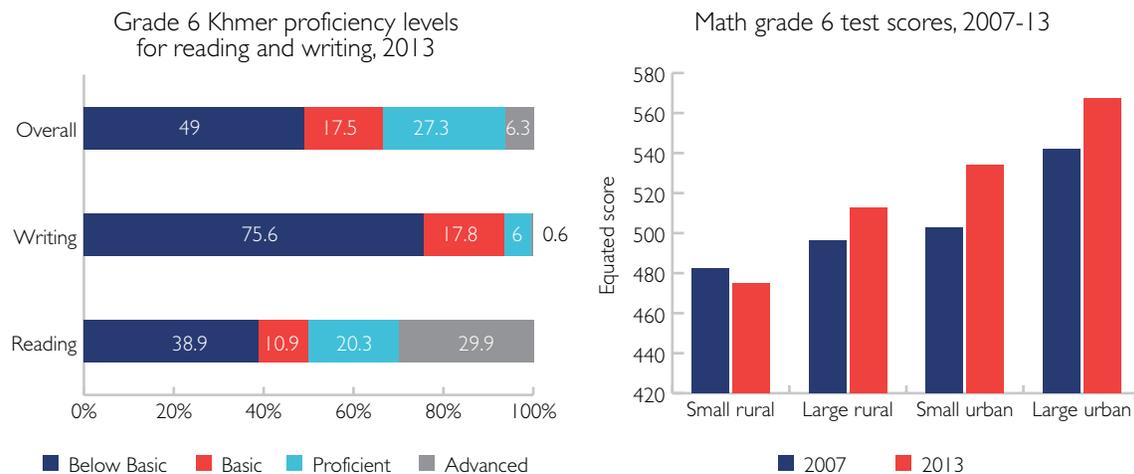
Figure 32. Sparsely populated provinces in the Northeast have more children out of secondary school due to distance



Source: GPS location of villages and secondary schools, and out of school population from CSES 2014.



Figure 33. Proficiency levels in reading and math are generally very low, and progress has been mixed



Source: EQAD grade six assessments, 2007, 2013.

(Figure 33, left panel). Pupils also performed poorly on math, with an average test score of 43.4 percent. Compared to 2007, test scores have declined in small rural areas, stagnated in large rural areas, and mostly improved in urban areas (Figure 33, right panel). These poor learning outcomes are echoed in employers' concerns about recruits who have poor reading and numeracy skills.

Poor learning outcomes can be attributed to a combination of fewer and poor-quality teachers compared to peers, fewer learning hours, and delayed engagement of children in schools due to low early childhood education enrollment (World Bank, 2015a). At 46 pupils per teacher, the average pupil-to-teacher ratio in Cambodia exceeds the upper limit (of 40 pupils per teacher) for which a teacher can provide quality learning for each pupil (CDRI, 2014). Primary and secondary school pupils spend fewer hours in class (3 hours 20 minutes) than the international benchmark of 6 to 8 hours. This impairs cognitive development, especially considering the majority of pupils who do not enroll in early childhood education and thus miss out on the prime period for child brain growth. This problem is compounded by double shifting,

often caused by misallocation of teachers across schools, many of them being reluctant to teach in the countryside (Sohnesen et al., 2016). The quality of instruction is also low: most grade 6 teachers do not know the national curriculum or curriculum standard, and while curriculum posters are on classroom walls, teachers have never understood them. Poor monitoring exacerbates the situation, as most provincial officers of education focus their monitoring on school program budgets (Ministry of Education, Youth and Sport, 2015).

Persistent malnutrition affects learning outcomes and human capital formation

New research traces school achievement gaps to the earliest years and highlights the long-term consequences of undernutrition. The physical, academic, and socio-emotional performance of Cambodian children is impaired by early life malnutrition and low access to and enrollment in pre-primary education. In Cambodia, only 35.9 percent of 3-5 year olds were enrolled in early childhood education during the 2014-2015 academic year, with enrolment especially low among the bottom 40 percent (Ministry of Education,

Youth and Sports, 2015). The 2016 baseline for a World Bank impact evaluation of 2-4 year old children finds that children's scores for literacy, numeracy, cognitive, non-cognitive, and motor skills all improved when children were enrolled in any school; however, this benefit was offset by reductions in scores of 30-50 percent for children who were stunted. These findings of impaired ability are supported by global literature showing that children who survive early life undernutrition have been exposed to factors associated with cognitive delays (Qian, Wang, and Watkins, 2005), which have lifelong impacts on educational attainment and productivity. Malnutrition contributes to low human capital accumulation, undermining investments in health and education by increasing susceptibility to infection and lowering pupils' ability to learn (World Food Programme, 2013).

Maternal and child malnutrition is widespread in Cambodia, particularly among the poor. About 1 in 3 children under age 5 is stunted, exceeding the WHO threshold for 'high' stunting (and is higher than comparator countries such as Vietnam).⁴⁷ Furthermore, nearly 10 percent of children under age 5 experience acute malnutrition (or wasting), and more than half of children 6-59 months of age and pregnant women are anemic. As in many other countries, poverty contributes to malnutrition, and stunting among the poorest Cambodian children is much higher than among the better-off. About 42 percent of children under age 5 in the poorest quintile were stunted, compared to 18.5 percent of children in the top quintile (Figure 34, left panel). Recent research estimated that inadequate breastfeeding alone costs Cambodia 0.08 percent of GNI annually (Walters et al., 2016).

Lack of access to improved water and sanitation is a major cause of stunting. Cambodia lags behind its peers in provision of these services (Figure 34, right panel), and access is much lower among the

poor and in rural areas, with 82-90 percent of the bottom 40 percent of households in 2012 practicing open defecation (WHO and UNICEF, 2015). High exposure to fecal matter is associated with a subclinical condition disorder of the small intestine known as tropical/environmental enteropathy which affects a child's ability to absorb and utilize nutrients (Humphrey, 2009).

Poor dietary diversity—due to both income-related food insecurity and socio-cultural factors—also contributes to high levels of stunting.

Cambodians rely mainly on fish and rice for their daily dietary energy sources. Over time, the proportion of calories available from rice has declined from 78 percent of total calories available per person per day in 1992 to 63 percent in 2011,⁴⁸ as more diverse foods have been introduced into the food system. Additional calories are available from fish, sugars, oils, and pulses, whereas increases in the supply of vegetables, fruits, and other non-seafood animal source foods has been more limited. This is particularly true in the Northeast, where poverty and food insecurity remain more of a limiting factor for achieving optimum nutrition than elsewhere in the country. Nationally, 22 percent of households in the poorest wealth quintile experience inadequate dietary diversity compared to only 4.8 percent in the richest. The prevalence of food adequacy in Cambodia at an average of 23 percent in 2014-2016, is above the average for lower middle-income countries (21 percent).⁴⁹

Evidence suggests that it is not only income but also socio-cultural factors that limit the provision of a nutritionally adequate diet for Cambodian infants and young children.

Achieving adequate dietary diversity and food security at a household level does not necessarily yield improved diets for infants and young children: in households *with* adequate dietary diversity, 56 percent of children *did not* consume diverse diets (compared to 77 percent of

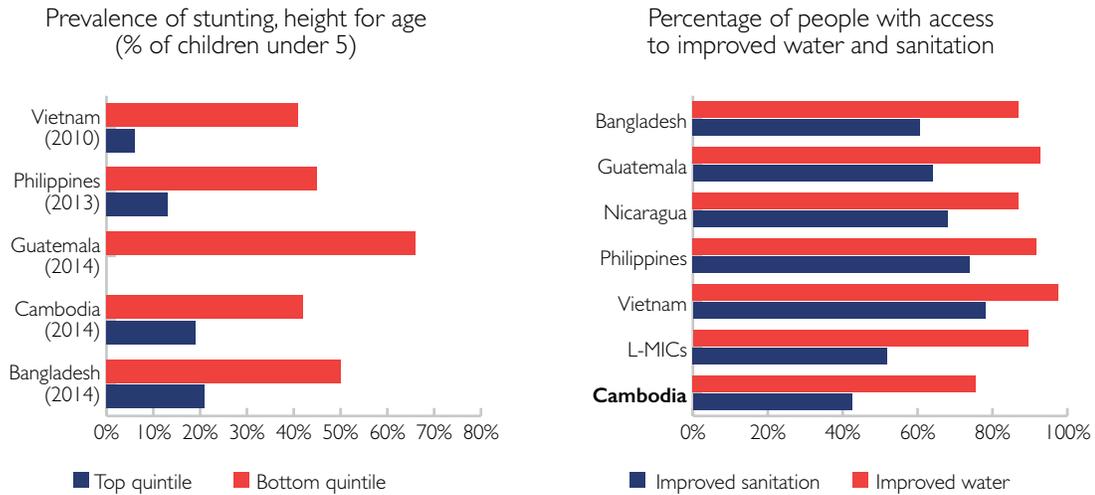
47 World Health Organization, Global Database on Child Growth and Malnutrition (2016).

48 Food and Agriculture Organization of the United Nations (FAO). 2015. FAOSTAT: Food and Agricultural Price Statistics. Available from: <http://faostat.fao.org> (accessed 5 June 2015).

49 FAOSTAT, 2017.



Figure 34. Prevalence of stunting is higher among the poor; and Cambodia lags behind other countries in access to improved water and sanitation facilities



Source: UNICEF; WHO/UNICEF Joint Monitoring Program.

children in food-insecure households). A 2013 study of current infant and young child diets in Cambodia demonstrated that the 'best diet' for children ages 6-8 months and 9-11 months required increasing servings of animal-source foods, vegetables, fruits, and bakery products above the median consumption and decreasing servings of rice below median consumption. Even so, this 'best diet' failed to achieve recommended intakes for key nutrients. In this context, interventions to improve household incomes and behaviors would be insufficient to achieve optimum diets for young children. Additional micronutrient interventions, interventions to improve market access to nutrient-rich animal-source and formulated complementary foods, and strong social and behavior change messages to encourage changes to traditional dietary practices, are needed to achieve these health outcomes.

New dynamics related to employment and labor migration, time use, and childcare are emerging as important contributors to child malnutrition in Cambodia. Young women in Cambodia face difficult tradeoffs between childcare and working to provide for their families. The high labor force participation of women, especially in the garment industry,

leads women to relocate to urban areas, leaving their children in villages with grandparents, other family members, and caretakers. After controlling for education and economic status, children of formally employed mothers were more likely to be stunted than those whose mothers were not formally employed, which could be due to several factors. A 2016 study found that only 65 percent of garment sector employees with children live with these children (ILO, 2016), and women often face constraints to take full maternity leave (National Nutrition Program, UNICEF, and HKI, 2017). Managing the tradeoffs and ensuring that spouses, relatives, or other caregivers can provide adequate childcare is a major challenge for these households.

The low availability and coverage of nutrition services through the health sector are barriers to reducing child malnutrition. Although there have been general improvements in health service delivery, policy attention to nutrition has not translated into financing and implementation of programs at scale. The RGC's priority nutrition interventions have achieved only limited scale: only 57 percent of pregnant women received the recommended dose of iron-folic acid supplementation during pregnancy,

and only 9 percent of children with severe acute malnutrition are treated. Although health workers are a trusted source of information, they currently provide little and/or inappropriate nutrition advice to patients despite the regular and nearly universal opportunities offered by antenatal and immunization contacts.⁵⁰ Current support to the sub-sector is often provided by development partners through a project-based approach. Bottlenecks include: low human resource capacity, constraints in procurement of nutrition supplies and supply-chain management, poor motivation of village health volunteers and health center staff, and the absence of a well-functioning nutrition information system (CARD, 2014).

Exposure to health and environmental shocks compounds challenges to achieving socioeconomic mobility

Compounding low asset ownership is the high level of household vulnerability due to high exposure to shocks, of which health shocks are among the most significant. While the incidence of illness has declined, about 15 percent of the population still reported having been ill in the four-week period before they were interviewed in 2014.⁵¹ Many of them (83 percent in rural areas and 92 percent in Phnom Penh) seek medical care and face high out-of-pocket (OOP) expenditures. Approximately 6.3 percent of the population had catastrophic spending in 2013, and 3.1 percent had to incur debt to pay for health expenditures. The impact is even greater for the elderly and disabled, among whom 8.6 percent and 13.4 percent incur catastrophic spending, respectively. Indeed, OOP payments for health services in Cambodia are among the highest in the world, at 60 percent of all health expenditure.⁵²

⁵⁰ Doctors are found to routinely encourage the use of formula milk in hospitals (National Nutrition Program, UNICEF, HKI 2017).

⁵¹ Cambodia Socio Economic Survey, National Institute for Statistics.

⁵² Global Health Expenditure Database, World Health Organization.

While the expansion of health equity funds (HEF) could help increase utilization of public health services and lower OOP expenditures, challenges in design and implementation remain.

An evaluation of the HEF shows that beneficiaries were twice as likely to utilize public health facilities compared to the near-poor, and receipt of free treatment was the main factor driving beneficiaries to use public services. However, the same study found that only one-third of HEF beneficiaries who sought outpatient services and about half of those who sought inpatient services actually used their HEF cards for these services. The main reasons for not doing so were quality of care and access (distance or cost of transportation and non-acceptance of HEF cards at some public facilities), but others were simply not aware of the HEF benefits. This indicates challenges in the design and implementation of the HEFs as well as concerns about the poor quality of public health care delivery.

Extreme weather events are another source of shock for Cambodian households.

In 2015, Cambodia was ranked the eighth most disaster-prone country in the world by the United Nation's World Risk Index (Figure 35). Frequent disasters are a major source of catastrophic spending, pushing non-poor households into poverty and making it more challenging for poor households to eventually escape poverty. For instance, based on a 2013 post-flood needs assessment, average monthly incomes of those affected dropped more than 25 percent, amounting to USD 37.6 million, with (mostly rural) households reliant on agriculture for income and food experiencing the most severe consequences (RGC, 2014a). Although some of those who managed to maintain their average monthly incomes did so through alternative livelihoods, about 71 percent of households interviewed took out a loan after the flood as a coping mechanism (RGC, 2014a). Finally, these disasters have also had indirect health consequences from contaminated drinking water and the overflow of sanitation and sewerage systems caused by flooding. In addition to the estimated USD 2.7 million loss in water and sanitation infrastructure

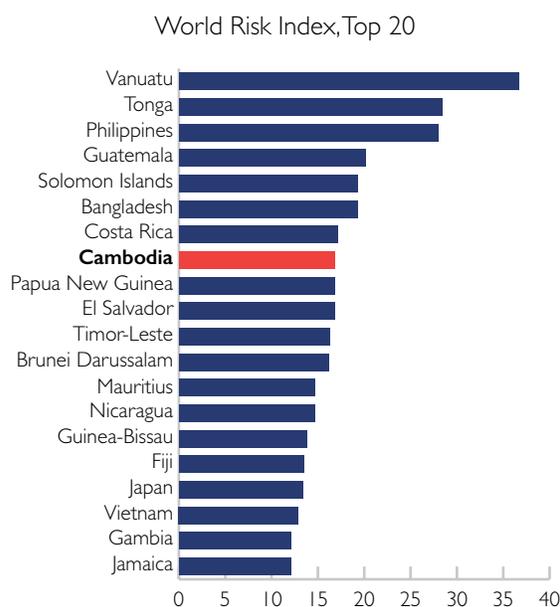


caused by the 2013 flood, the total average annual economic loss of poor sanitation in Cambodia is estimated at USD 448 million per year, or USD 32 per capita (WSP, World Bank, 2008). Overall, the underdevelopment of the insurance industry is a constraint to helping the population and the poor protect themselves against the risks of loss of assets, death of relatives, unemployment, sickness, car accidents, natural disasters, and so on.

Challenges in public service delivery affect human development outcomes

Strengthening public services will be critical for raising household endowments. The inadequacy of key services and below-average quality—to some extent a legacy of the Khmer-Rouge conflict—meant Cambodia had a much larger catch-up gap with other countries in the region. These low initial conditions have shaped the development of human capital and service provision since then. However, current systemic issues also include poor

Figure 35. Compared to other countries, Cambodia is highly exposed and vulnerable to disasters



Source: United Nations University (2015).

institutional capacity to deliver services effectively, patronage, and inadequate attention to demand-side constraints in access to services. These issues are discussed in greater detail below.

Public investment in social services in post-conflict Cambodia has been suboptimal, leading to persistent gaps in service provision.

Government-funded education expenditure, traditionally low, has significantly increased in recent years, from 1.6 percent of GDP in 2012 to 2.1 percent of GDP in 2015; this has been complemented by donor financing, amounting to 0.6 percent of GDP in recent years, while remaining significantly below the average for lower middle-income economies (4.3 percent of GDP in 2010). Government-funded public health expenditure in Cambodia has averaged close to 1.4 percent of GDP in 2010-2014, compared to an average of 1.6 percent of GDP in lower middle-income economies. Consequently, private spending constitutes 80 percent of total health spending, which is a significant burden on households and contributes to their vulnerability, as discussed above (Sánchez-Martín et al., 2016).

While public spending in social sectors has been increasing, there is room to further improve the allocation of resources and the alignment with priorities identified in sectoral plans.

The budget mainly goes toward salaries and wages, so development of social services infrastructure or provision of other inputs has lagged behind the country's needs. In the education sector, total budgeted expenditure in 2017 has risen to 3 percent of GDP. However, 80 percent of the budget goes to salaries and wages. While the Education Strategic Plan (ESP) 2014-2018 places an emphasis on early childhood education, only an estimated 0.7 percent of the budget is allocated for early childhood development (ECD), even though enrollment is rising. Cambodia also faces a major challenge in the skills and competencies of its health workforce, but only a small share of public spending goes to pre-service and in-service training improvements or competency-based training (Sohnesen et al., 2016).

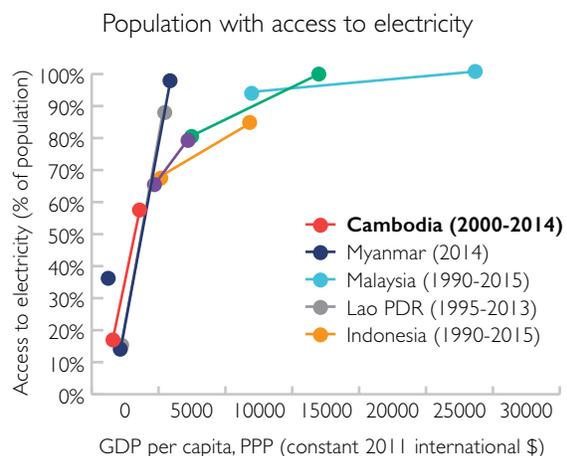
Investment in service delivery beyond health and education has generally been low, as illustrated by the fact that more than 40 percent of Cambodia's population still has no access to electricity. While access to electricity has improved significantly, it remains low relative to other countries in the region (Figure 36), particularly for rural areas where only about half of the population has access to electricity from alternative off-grid sources or grid-supplies, compared to nearly 100 percent in urban areas (Climate Investment Funds, 2016). Moreover, access does not ensure affordability, particularly for the poor. Although authorities have introduced subsidized life-line tariffs for grid-connected households who consume less than 50 kWh per month,⁵³ in the lowest consumption category, electricity expenditures represent as much as 30 percent of household disposable income. Improved electricity access has also come with negative externalities that have had significant impacts on the bottom 40 percent, in particular, as the expansion of hydropower endangers the flow of soil nutrients (vital for agriculture) and migratory fish.

Social protection spending is among the lowest in the world, despite the potential to address demand-side constraints to access to services and minimize vulnerability. Demand side constraints to equitable access to services or attainment of human development outcomes in Cambodia are numerous. Catastrophic health expenditures are a drag on welfare improvements, the need/desire to work can lead to school drop-outs, and lack of resources contributes to inadequate dietary intake among the poor. Social protection programs can help address some of these constraints, yet Cambodia invests less than 0.1 percent of GDP in social assistance, compared to the world average of 1.6 percent of

⁵³ For EDC customers connected to the national grid, the tariff in 2016 is USD 0.15/kWh for urban consumers for less than 50 kWh/month, and USD 0.17/kWh for consumption between 51-200 kWh/month. For rural consumers, the life-line tariff is USD 0.12/kWh for consumption below 10 kWh/month and for water pump stations in the agricultural sector.

GDP.⁵⁴ Social assistance (excluding scholarships and subsidized health insurance) covers less than 2 percent of the poorest quintile of the population. Although a few social assistance programs already exist and have been tested successfully (CCTs, public works, food assistance, social pensions), they are pilots or feature partial coverage and mostly depend on donor financing. Social assistance schemes thus remain limited, although the situation is expected to start changing with implementation of the new Social Protection Policy Framework (SPPF) beginning in 2017. The poor, informal workers, and the unemployed do not currently receive any form of social or subsidized access to pensions as social security benefits mainly cover civil servants (National Social Security Fund for Civil Servants), members of the military (National Fund for Veterans), and formal private sector workers (National Social Security Fund), though benefits are modest. One noteworthy positive feature in social protection is the existence

Figure 36. Although access to electricity has improved, Cambodia still ranks second lowest in the region



Sources: World Bank and IEA, 2015, *Progress Towards Sustainable Energy*; Cambodia Demographic and Health Survey, 2015; ADB, 2015, *Achieving Universal Electricity Access in Indonesia*; IEA, 2015, *World Energy Outlook*; World Bank, 2012, *Lao PDR – Power to the People*; Castalia Strategic Advisors, 2014, *Myanmar NEP Roadmap and Investment Prospectus*; World Bank, 2011, *The Rural Electrification Experience*.

⁵⁴ ASPIRE database. Accessible at datatopics.worldbank.org/aspire/.



of a central targeting mechanism, ID-Poor, which continues to be the main tool for registering the poor across Cambodia and is fully managed by the Ministry of Planning.

Although the foundation of an effective state has been developed, public service delivery is still uneven and non-systematic. As mentioned earlier, the efforts to construct a rational legal bureaucracy developed in parallel to (but with far less effect than) the consolidation of authority around elite patronage networks. This century-old patron-client relationship is a reciprocal (although unequal) relationship that involves exchanges of personal favors and was nurtured alongside the formal bureaucracy to provide crucial power based on off-budget resources (Un, 2005; Hughes and Un 2011). The product was a hybrid polity, which is characterized by the coexistence of a rational legal arrangement and a personalized network of patron-client relationships. The lack of institutionalization of services in the hybrid political system results in practice in a high cost for the citizens to benefit from public services, given that in many cases they need to resort to primary relations or informal payments. This speaks to the capacity of state institutions to deliver public services, which requires significant upgrading to satisfy the changing needs of the Cambodian people.

Wrong incentives and limited capacity also hamper public service delivery and have contributed to poor-quality services. For instance, in the health sector, the increase in hospitals and health care centers have not yet guaranteed that Cambodian citizens have access to quality of care. A 2014 study suggested that approximately “74 percent of all patients would potentially be mismanaged [wrong diagnoses and treatment]” (World Bank, 2014b). Inadequate incentives and performance management for frontline service providers cause health workers to resort to dual practice (i.e. working as employees of public health facilities and offering private consultation at the same time) and to move to urban areas where there are more opportunities

for private practices; in the process, rural areas are left behind. In response, the introduction of pilot Service Delivery Grants (SDGs) introduced a performance evaluation mechanism to district facilities that is expected to improve patient access as well as overall quality of service.

Three key and interrelated reforms are central to improving service delivery in terms of access, quantity, and quality: public financial management, civil service, and decentralization reforms. Public sector services fail poor people for a number of reasons. First, services may be outright inadequate due to lack of budget, and when budget is available, the existing institutional arrangements may not allow the efficient use of public resources. For example, long delays in funds flow to frontline service providers often result in non-delivery of services. Second, the presence of public service facilities may not always guarantee that services are delivered due to lack of attention by inadequately incentivized civil servants. Third, lack of citizens’ voice in the way public services are delivered due to highly centralized public service management often leads to non-delivery or poor quality of public services. Successful public financial management, civil service, and decentralization reforms would help tackle challenges in these three dimensions, leading to a well-managed public sector that delivers services for citizens and facilitates businesses through good management of infrastructure and other public investment, regulations on social and economic behavior, adoption of sound policies, and support of fiscal and institutional sustainability (World Bank, 2003; Blum, Manning, and Srivastava, 2012). Although Cambodia has made substantial progress in the three areas to date, daunting challenges persist.

While the start of decentralization reforms in 2002 has led to some improvement in public service delivery and citizen engagement at the grassroots level, progress at the national level remains limited. The introduction of local elections through the decentralization and

deconcentration reforms has helped open up space for multiple-party engagement in local politics. Decentralization has produced “new attitudes and practices” at the local level, mainly an increase in inter-party collaboration (Ninh and Hank, 2005; Rusten et al., 2005). In addition, decentralization has increased collaboration between local government and non-governmental organizations (NGOs), resulting in improved service delivery and thereby generating further demands by people to their elected councilors (Rusten et al., 2005). Citizen engagement around the financing and delivery of public services is growing at the local level, with the district roll-out of reporting on budgets, expenditures, and services delivered at health centers, primary schools, and Commune Councils. In contrast, engagement at the national level—particularly around budget information—is limited. According to the 2015 Open Budget Index, national budget openness was assessed to be very low, “scant or none,” with a score of 8 out of 100 (down from 15 in 2013)—the lowest score in East Asia and the Pacific except for Myanmar.

Resources and responsibilities are being progressively transferred to subnational levels, but finances for development investment fall well short of local needs, capacity is inadequate for fulfilling new functions, and national ministry support is uneven. Annual unconditional transfers for the district/municipality and commune/sangkat levels (two levels of subnational administration below the province) represent a 1 percent and 2.8 percent share of 2016 national current expenditure, respectively. While allocations to the subnational levels have generally improved over the years, the amount of funding remains small and is consumed largely by administrative expenses. As a result, only a few proposed development projects in each commune/sangkat are funded, and almost no development investments are financed at the district/municipality level where 71 percent of the funding is devoted to staff costs. In terms of transferring functional assignments to the subnational level, progress has been slow and highly uneven across

ministries.⁵⁵ Functional transfers are intended to shift responsibility for the quality of service delivery closer to the service providers, allowing subnational administrations to be more responsive to the specific needs of their citizens. However, only two ministries have so far identified and transferred some functions to the district/municipality level. Even as such transfers take place, line ministries have taken limited steps to provide the financial resources, training, and procedural guidance to fully equip the subnational staff to perform their new roles.

The introduction of a Public Financial Management (PFM) Reform Program has led to the overall improvement in country systems, while further efforts towards program budgeting implementation will be key to ensure the success of decentralization reform. A Financial Management Information System (FMIS) is under implementation—currently operational at the Ministry of Economy and Finance (MEF) including all provincial treasuries—to support the timeliness of payments and accuracy in financial reporting. Nonetheless, a host of issues still constrains the public sector’s ability to deliver core public programs and services based on stated national priorities and, importantly, its ability to demonstrate the effectiveness of these programs and services at the most reasonable cost. Payments are sometimes delayed because cash is not immediately available due to the way in which the cash is managed, how revenues and expenditures are recorded and accounted for, and inadequate discretion for budget managers to utilize budget at their disposal. While the introduction of program-based budgeting in 2015 is expected to help improve expenditure allocation and outcomes, a number of challenges remain, including disconnects between priorities in sector strategic plans and requests for budgeting, lack of integration

55 Management of solid waste and sewerage, early childhood education, primary education, and non-formal education have been transferred to the district/municipality level, with an ambitious target of 14 ministries set by the National Committee for Subnational Democratic Development for 2017.



of donor funding into program budgeting, and institutional inertia influencing the definition of programs. Another set of limitations includes weak procurement systems and management capacity, lengthy payment processes, weak internal controls, lack of transparency and non-availability of credible financial information, weak external oversight, and slow adoption and implementation of international standards. Lengthy processes continue to hamper timely in-year budget disbursements, affecting the ability of the recently created budget entities to deliver quality public services (RGC, 2015b).

Thus far, civil service reform has introduced salary increases but challenges remain in providing incentives to attract skilled professionals into the civil service, as well as in actual performance monitoring. Decentralization efforts would need to be accompanied by sufficient funding for competencies and services transferred to the subnational level, as well as by an adequate endowment of human resources that are well incentivized and also subject to monitoring and evaluation. The National Program for Public

Administration Reform (2015-2018) has increased the minimum wage across the public sector, improved incentives for teachers and health care workers (including location-based allowances to encourage remote postings), and ensured timely salary payment through the use of the banking system and automatic tax deductions for salary beyond certain thresholds. The minimum salary in the public sector increased from approximately USD 80 a month in 2013 to USD 160 a month in 2015 and is expected to reach USD 250 by 2018. However, ensuring that civil service pay and non-material benefits are sufficiently competitive to attract, retain, and motivate professionals of various key skill sets remains a major challenge. For example, a 2014 study finds that “the best students are not attracted to teaching” and that “most teacher trainees scored in the E, D, and C ranges on the grade 12 exam” (Prateek, and Fukao, 2015). Even if better professionals were to be attracted through the salary increases or additional incentives, performance monitoring and citizen feedback mechanisms in Cambodia are weak and need to be strengthened for actual improvements in efficiency and quality of public service delivery to materialize.





Is the current development model sustainable?

Even if a large share of the emerging agenda is addressed effectively, developing countries like Cambodia remain vulnerable to large unanticipated external and internal shocks, with slow recoveries that could affect the growth and development agenda for the next decade substantially (Rodrik, 1999; Cerra and Saxena, 2005; Reddy and Minoiu, 2006; Hausmann et al., 2006).⁵⁶ This section discusses the real and ongoing threats to social, environmental, and economic sustainability which could constrain growth and household economic mobility going forward.

5.1 Risks to the sustainability of macroeconomics and public finances

Although public finances remain sustainable, maintaining public investment levels will become more challenging

Cambodia has traditionally had a high reliance on aid, although the grant component declined as a percentage of total revenue in recent years.

⁵⁶ Developing countries are found not only to be more vulnerable to large internal and external shocks but also to take a longer time to return to their pre-shock trend growth rates. There is an emerging literature on growth collapses.

The ratio of grants to total revenue in Cambodia is significantly higher than the average for lower middle-income economies (Figure 37, left panel). However, following a sharp increase in the aftermath of the global crisis, grants have been dwindling: aid grants received by Cambodia declined from around 5 percent of GDP in 2010 to 2 percent of GDP in 2015, the year in which the country graduated from low-income status.

To compensate for the decline in grants, Cambodia has achieved outstanding improvements in tax collection over the past five years and is now above the average for lower middle-income countries. Cambodia has increased efforts to boost tax revenue through implementation of the Revenue Mobilization Strategy launched in 2014, with emphasis on strengthening the tax administration, including improved implementation of import tariffs, anti-smuggling efforts, arrears collection, and enhancement in tax compliance with a focus on tax audits and taxpayer services. These efforts, coupled with fast economic growth, have helped lift tax revenue from around 10 percent of GDP in 2010 to an estimated 13.8 percent in 2014. This has allowed Cambodia to catch up with and surpass the average for lower middle-income economies (Figure 37, right panel).

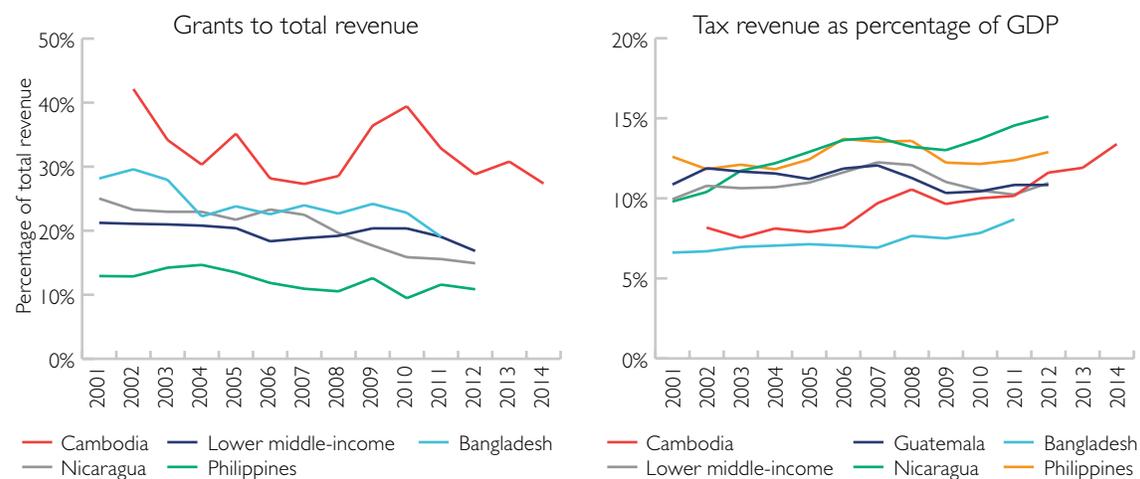


On the expenditure side, a programmed fourfold increase in the public sector wage may eventually result in fiscal pressures. Following the 2013 election, the RGC announced the public sector minimum wage will reach USD 250 per month by 2018, amounting to close to 9 percent of GDP (compared to USD 80 per month in 2013). While traditionally below the level of neighboring countries, the rising wage bill in Cambodia (estimated at 7.2 percent of GDP in 2016) is already on par with the average for low-income economies (7.0 percent; Table 7). This could eventually pose budgetary pressures, since

the public payroll already represents around 40 percent of revenue. Notably, while the number of civil servants (2.9 percent of total population) is well below the averages for low-income economies (4.0) and East Asia and the Pacific (4.4), the ratio of public administration wage relative to GDP per capita (3.1) is already among the highest in the world (Sánchez-Martín et al., 2016).

Cambodia has traditionally relied on donor funding, currently in decline, for infrastructure financing. At low levels in the 2000s, public

Figure 37. Cambodia has achieved impressive progress in revenue collection, at a time when grants are dwindling



Source: World Development Indicators.

Table 7. Public sector wage bill for selected country groups, latest available year

Public sector payroll	% of GDP	% of government expenditures	% of government revenues
Cambodia	7.2	32.5	41.0
Asia and Pacific	6.6	27.5	22.9
Low-income	7.0	25.8	26.8
Middle-income	8.7	31.8	28.2
European Union	9.9	25.4	25.3
High-income	10.4	28.0	25.9

Source: Cambodia's 2016 budget and IMF.

capital expenditure in Cambodia was boosted in the aftermath of the global crisis, partly thanks to a significant increase in donor-financed capital. Externally financed public capital expenditure increased from 4.6 percent of GDP in 2008 to 8.2 percent of GDP in 2011, then progressively declined to an estimated 5.3 percent of GDP in 2015 (Figure 38, left panel). Meanwhile, locally financed capital expenditure has hovered around 2 percent of GDP in recent years and has traditionally been allocated mainly to smaller-scale road and hydraulic projects.

Although public capital spending in Cambodia is high by regional standards, there are concerns about its sustainability and maintenance.

Cambodia has been able to meet the capital expenditure goals set in the National Strategic Development Plans (NSDP), but the maintenance budget has not kept the same pace of nominal expansion as that of domestically financed capital spending (Figure 38, right panel), not to mention externally financed infrastructure. High fragmentation in aid efforts hampers the quality of investment and results in authorities spending a large share of their time on meeting missions and reporting (Chanboreth and Hach, 2015). Enhancing donor coordination, avoiding a piecemeal approach to project selection, strengthening public investment management for domestically financed projects, and ensuring adequate operations and maintenance budgets are needed to guarantee that large public capital expenditure translates into good quality infrastructure.

At the same time, a series of capacity and sustainability challenges in PFM reform may hamper the effectiveness and efficiency of public spending.

The second phase of PFM reform, launched in 2008, focused on establishing a Financial Management Information System (FMIS) that would help enhance transparency, predictability, and oversight during budget implementation. A series of improvements have been made in arrear payment elimination and consolidation under a Treasury Single Account. However, a series of procurement

issues delayed actual contracting for the FMIS until December 2013. While the FMIS is now the system of record at both the center and the Phnom Penh provincial treasury, some difficulties remain at other provincial treasuries related to the lack of timely detailed budget breakdowns provided by the provincial finance departments, which encourages the continued use of parallel systems. Further efforts to ensure the success of the reform include providing additional capacity building to promote greater confidence in and encourage usage of FMIS, streamlining processes, and introducing proactive change management when required.

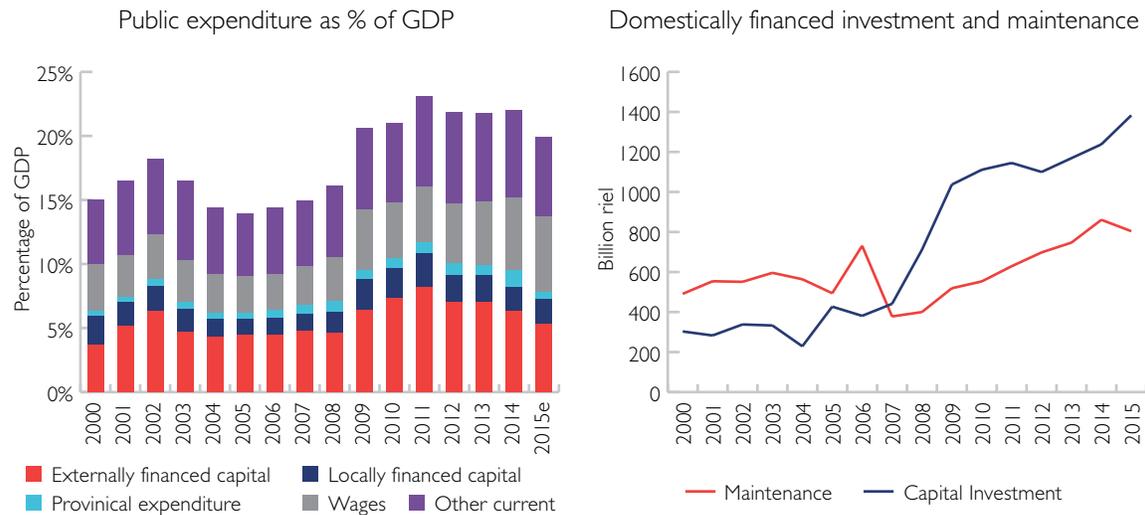
Effective implementation of program-based budgeting appears to be the next step in strengthening the link between medium-term policy priorities and the budget.

Program budgeting has been extensively piloted in ten Ministries, extended to budget entities in 2015, and will be rolled out to provincial departments in 2016.⁵⁷ Fiscal aggregates are now prepared for a three-year rolling timeframe based on bottom-up budget strategic plans (BSPs) that attempt to better link the National Strategic Development Plan and sector-specific priorities to the medium-term expenditure framework (MTEF) and annual budget. Efforts have been made to gradually improve costing and set more realistic outcome and output targets, but progress remains uneven, and further improvements are needed before program budgeting and BSPs can be considered fully effective. Current limitations of program budgeting include: a systematic approach to program evaluation is lacking; major elements of the budget are missing from program budgeting, including staff costs and capital projects; and budget strategic plans lack realism and robust input-output/outcome linkages. Moreover, strategic sector planning remains

57 Fifteen more line ministries are to be added in 2016, with the final three ministries to be included in 2017 for the 2018 budget. The main elements of the program budget system are a three-year rolling budget, strategic plans that identify programs, and annual program budgets and outturn statements.



Figure 38. Public capital spending has been declining as a percentage of GDP since its peak in 2011, and expenditure in maintenance may not be sufficient



Source: World Bank Staff calculations using TOFE (Ministry of Economy and Finance). Note: "e" denotes that figures for 2015 are based on preliminary estimates.

weak, and the MTEF has not been fully developed yet (RGC, 2015b). In addition, in most ministries, domestically and externally financed budgets have not yet been integrated, including both current and capital spending.

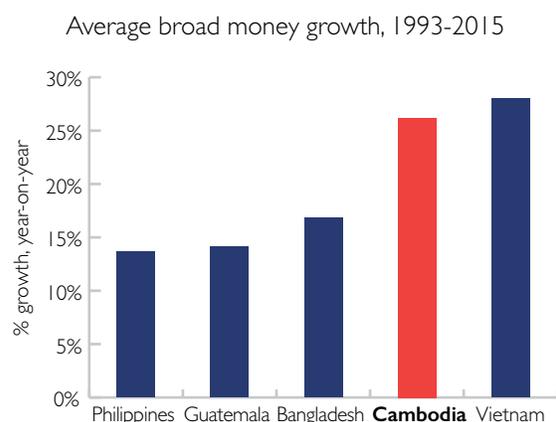
These risks notwithstanding, Cambodia has been one of the few developing countries able to implement countercyclical fiscal policy in recent years, and public finances are expected to remain sustainable. After several years of fiscal consolidation, expansionary fiscal policy resumed in 2016, mainly driven by the public wage bill, and the overall fiscal deficit (after grants) is expected to widen slightly to 1.2 percent of GDP in 2016. In the coming years, the deficit after grants is expected to stabilize around 3 percent of GDP, assuming a business-as-usual scenario. Cambodia's debt distress rating in the latest WB/IMF Debt Sustainability Analysis remains low, with the ratio of public debt to GDP at 32.5 percent as of end 2015 (IMF, 2016). Most of the outstanding debt has concessional terms, although bilateral debt (especially from China) has been rising over time.

Macro-financial vulnerabilities are rising due to a credit boom

Strong economic growth in Cambodia has been underpinned by fast broad money growth under dollarization. In the late 1980s and early 1990s, Cambodia relied on domestic banks to finance its public sector deficits, which resulted in high inflation and encouraged the use of other substitution currencies. The arrival of UNCTAD in 1992 and the opening up to foreign aid and investors resulted in large inflows of U.S. dollars, displacing the Khmer riel (KHR) as the primary currency in just a few years. Dollarization has also led to the second-fastest broad money growth rate observed among peers (Figure 39). These days, the share of foreign currencies in broad money hovers around 80 percent, and the share of U.S. dollar deposits to total deposits has remained above 90 percent for the past two decades.

The high levels of dollarization in Cambodia have so far been supportive of growth and macroeconomic stability, although the poor

Figure 39. Dollarization has driven fast money growth



Source: World Development Indicators.

are more exposed to a potential currency crisis.

Dollarization is mainly an urban phenomenon, with FDI, garment exports, and tourist receipts benefiting mostly urban areas, while the riel-based rural economy has lagged behind to some extent (Duma, 2011). Better access to financial institutions and higher likelihood of foreign currency income explain higher foreign currency holdings in urban areas (Siregar and Chan, 2014). The poor have a higher degree of exposure to exchange rate fluctuations (Lay, Kakinaka and Kotani, 2010), although the Khmer riel is de facto softly pegged to the U.S. dollar,⁵⁸ which provides a nominal anchor for economic agents and underpins stable prices. It also discourages the public sector from resorting to domestic financing and money printing in excess (World Bank, 2015b). Dollarization prevented Cambodia from suffering a major currency depreciation such as that experienced by Thailand and Malaysia during the 1998 Asian financial crisis.

At the same time, dollarization hampers the ability of authorities to make effective use of monetary and exchange rate policies. While eliminating exchange rate risk has been highly

58 The currency has been fluctuating between KHR 4,000 and 4,100 per U.S. dollar since 2011.

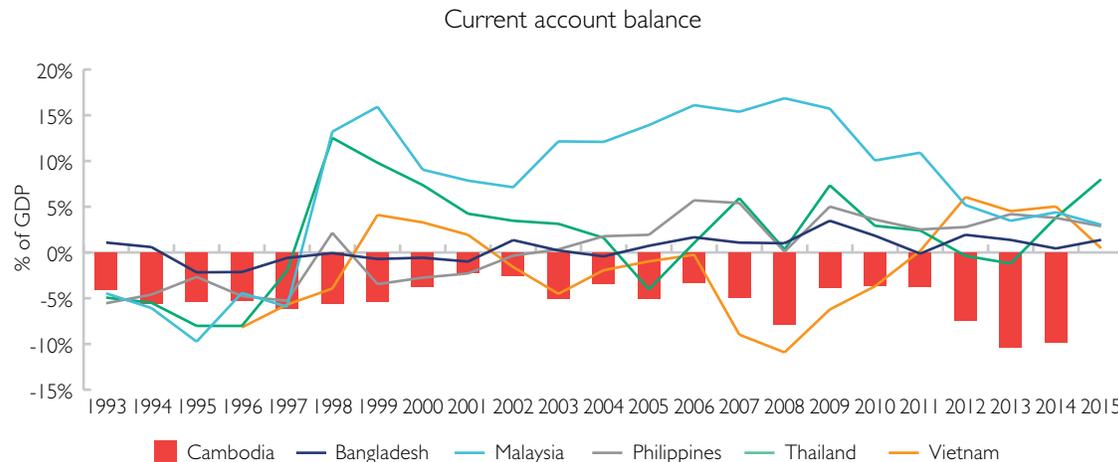
beneficial for an economy that was exporting intensely to the United States, the limitations of dollarization have become apparent with the European Union becoming the main trading partner. Recent U.S. dollar appreciation vis-à-vis the Euro and other currencies has eroded Cambodia's external competitiveness, dis-incentivizing the production of tradable goods and making trips to Cambodia more expensive for non-American tourists. Contrary to other economies in the region, this has also led to persistent current account deficits (Figure 40) which tend to be motivated by demand for import of consumption goods, including investment in non-tradable goods such construction, land, and real estate. Cambodia depends on large FDI, at around 10 percent of GDP in recent years, and foreign aid inflows to finance this external gap. In addition, dollarization prevents the effective use of interest rate policy, restrains *seigniorage* gains from printing money in local currency (World Bank, 2015b), and hampers the ability of the Central Bank as lender of last resort. Nonetheless, Cambodia's foreign currency reserves of USD 6.4 billion (or 5.4 months of imports) as of mid-2016 are considered adequate according to the latest IMF Article IV Consultation and would serve as a buffer in case of an external shock.

Large inflows and deposits in foreign currency have been supportive of booming credit growth.

Capital account openness and ease for foreign financial institutions to access funds from headquarters, current account deficits leading to large foreign currency inflows, and large tourism receipts coupled with the lack of developed capital markets in Cambodia have led to fast foreign currency deposit growth (averaging close to 25 percent growth year on year during 2010-2015). This has fueled one of the fastest capital deepening episodes in the region, with Cambodia's credit to private sector as a percentage of GDP jumping from 2 percent in 1993 to 63 percent in 2015, already above the average for lower middle-income economies. Only Vietnam has sustained a faster rate of credit growth in the same period (Figure 41, left panel).



Figure 40. Dollarization has resulted in persistent current account deficits



Source: World Development Indicators.

Outstanding credit is dominated by trade activities, although the share of construction and real estate is increasing.

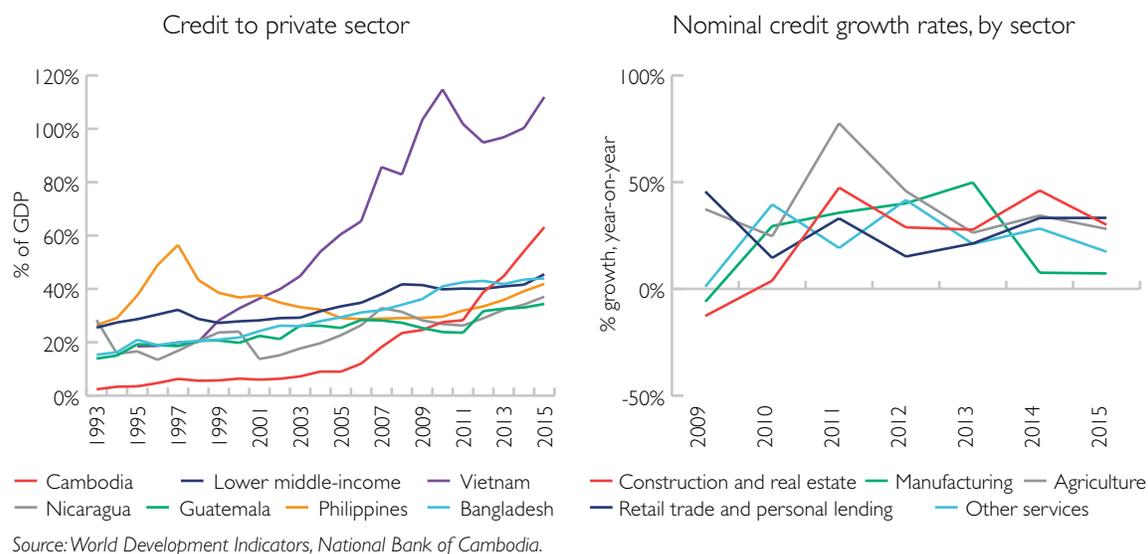
Following a sharp decline in construction activity in the aftermath of the 2009 global crisis, credit to construction, real estate, and mortgages increased from around 4 percent of GDP in 2010 to an estimated 13 percent of GDP as of 2015, or around 20 percent of total outstanding credit to the private sector. In contrast, loans to the manufacturing sector have flattened since 2013, remaining around 5 percent of GDP. In 2014 and 2015, nominal credit growth in construction, real estate, and mortgages and in retail trade and personal lending has been above 30 percent, while growth in manufacturing has stayed at around 7 percent (Figure 41, right panel). This is probably explained by the abovementioned decline in external competitiveness and disincentives to invest in tradable goods under U.S. dollar appreciation. Fast credit growth with increasing exposure to the supply-driven boom in the real estate and construction sectors is associated with rising macro financial risks (Ahmed et al., 2014; IMF, 2016).

Although the rapidly expanding banking system supports economic growth and access to finance, the wide interest rate spread points to inefficiencies. Outstanding credit granted by

the banking system reached 54 percent of GDP in 2015 and served 2.3 million borrowers, compared to 27 percent of GDP and just over a quarter million borrowers in 2010 (World Bank, 2016b). The banking system remains concentrated, with the five major banks accounting for more than half of all banking sector assets, and there is a need to further develop the financial sector infrastructure. Borrowing costs have been reduced substantially, with the weighted average of short-term lending rates dropping from 22.4 percent per year in 2010 to 11.6 percent per year in 2015. However, the wide interest rate spread between deposit and lending rates (7 percent as of February 2016) indicates inefficiencies in the financial market, with heightened profitability for financial institutions at the expense of higher costs for other economic agents.

The expansion in microfinance institutions (MFIs) has been even more remarkable, providing access to finance for a segment of the population that would otherwise have to rely on unregulated private money lenders, although Cambodia remains a predominantly cash economy. Since the global financial crisis, both assets and credit at MFIs have been growing at rates of more than 40 and 50 percent a year. The 50 MFIs and eight micro-deposit-taking institutions

Figure 41. Cambodia has had one of the fastest capital deepening episodes among its peers, driven by construction and retail



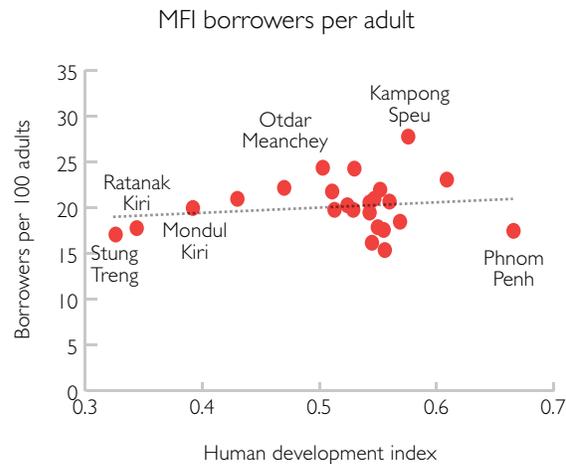
lent a record high of USD 2.9 billion in outstanding loans in 2015 that reached 2 million borrowers, compared with only USD 426 million and 0.9 million borrowers at the end of 2010 (World Bank, 2016b). The high return on equity (22 percent on average for microfinance institutions) has resulted in tighter competition and lending growth, although 10 percent of MFIs still account for 90 percent of total lending. This has placed Cambodia among the top developing countries in terms of percentage of people who borrowed money from a financial institution during the past year (27.7 percent). However, only 3.6 percent of the population ages 15 and above saved at a financial institution, and just 44.3 percent withdrew money from an account during the past year—one of the lowest percentages in the world (see Table 16 in Annex 1). Thus, Cambodia remains a predominantly cash economy, with people accessing loans from MFIs but with the majority of the population still being unable to save.

At the household level, access to finance has eased as a constraint, but low financial literacy may hamper outcomes and heighten risks. While

MFI outstanding credit in Phnom Penh fell from KHR 7.2 million in 2010 to KHR 6.8 million in 2014, credit to other urban areas doubled in the same period (from KHR 3.3 to 6.6 million), and credit to households in rural areas jumped from KHR 1.5 to 3.6 million (World Bank, 2015). There does not seem to be a significant difference in the number of borrowers per 100 adults between those provinces lagging behind in terms of human development and other parts of the country (Figure 42). At the same time, due to lack of financial literacy, enhanced access to credit does not always lead households to make appropriate investments that would reduce their economic vulnerability. On the contrary, many households may be over-borrowing and increasing their exposure to risks, and there are signs that the market is already highly saturated, given estimated capacity at this level of development (Mimoso, 2016). Notably, the National Bank of Cambodia is already making progress in improving financial consumers' awareness about their rights and responsibilities through the "Let's Talk Money" campaign launched in 2015, which represents an important step forward in improving consumers' capacity for good financial decision-making.



Figure 42. Fast penetration of MFI lending has taken place across both better-off and poorer provinces



Source: Mimoso Project and IMF Financial Access Survey.

Cambodia's potential indebtedness problem at the household level seems to be not so much a case of parallel lending but a case of rapidly expanding loan sizes. Among surveyed countries, Cambodia has the largest outstanding MFI loans as a percentage of GDP (12.1 percent), followed by Peru (Figure 43).⁵⁹ The percentage of borrowers with three or more loans (4.5 percent of total as of November 2015) remains at reasonable levels. However, the average loan size of MFIs that focus on the poorest clients in Cambodia now stands at 70 percent of median annual income, up from 45 percent just two years ago (Mimoso, 2016). In a decade, average loan sizes have increased from around USD 200 to USD 1,000 (Figure 43, right panel), with loans to adjusted yearly per capita income growing from 12 percent to 21 percent between 2004 and 2014. Nonetheless, the percentage of indebted households slightly declined between 2012 and 2014, from 36 percent to 32 percent. Evidence indicates that the increasing larger loans are in many cases served by the pooled income of several household members.

⁵⁹ The IMF Financial Access Survey comprised 21 countries in 2014.

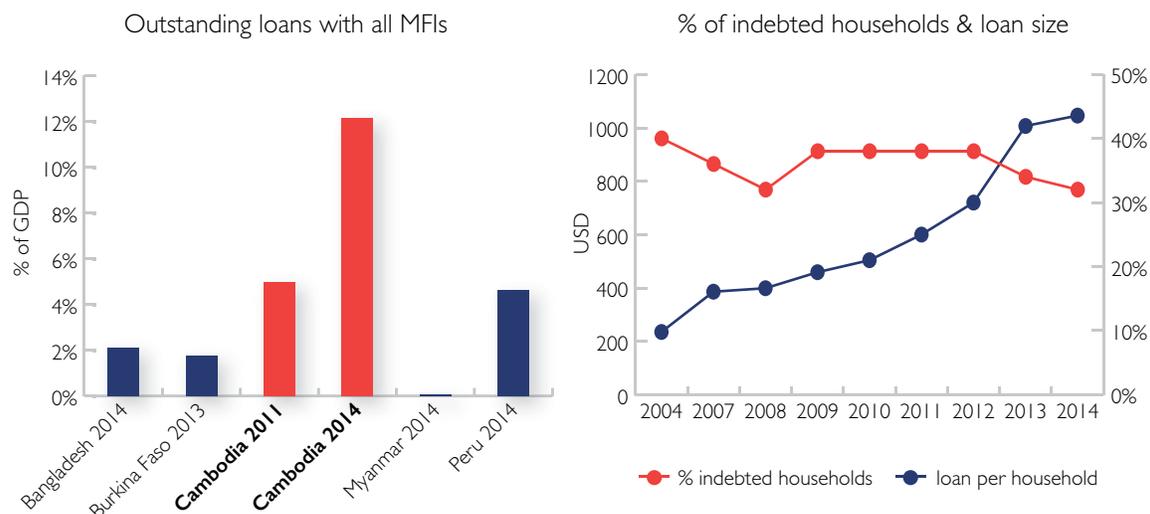
A sudden deterioration in asset quality has been observed recently, with the indicator PAR30 for MFIs (representing loans overdue by 30 days or more) increasing by 80 percent in 2015, although the indicator remains below 1 percent. The fastest growth in the PAR30 indicator was registered in the category of social loans, which likely signals increasing difficulties for the poor and vulnerable to honor their loans in a context of poor agricultural performance.⁶⁰

In the context of fast credit growth, the Cambodian authorities have recently introduced a series of macro-prudential measures to improve the resilience of the financial sector. The National Bank of Cambodia recently introduced new minimum capital requirements for financial sector institutions as well as new reserve requirements for foreign borrowing and an increase in the liquidity coverage ratio. These measures seem to have helped ease the pace of credit growth, from around 27 percent during 2015 to 17 percent as of October 2016, year-on-year.

Overall, while the introduced measures constitute a positive development, additional actions are needed to mitigate the macro-financial risks associated with fast credit growth. One area of concern is weak corporate governance practices in both public and private enterprises, partly due to the sub-optimal accounting infrastructure which results in limited reliable financial data for financial monitoring and planning. In addition, there is still much room for improvement in credit information, including through the inclusion of more and deeper information on income, guarantees, loan structure and interest rates, and collateral. Cambodia does not have a deposit protection fund, and the existing insolvency framework is obsolete. The overall corporate insolvency framework to facilitate and expedite restructuring of private sector debt is

⁶⁰ "Recent Trends of Credit in Cambodia Financial Sector." Credit Bureau of Cambodia. Presentation delivered by Pascal Ly, Chief Executive Officer, on July 11, 2016.

Figure 43. Among surveyed countries, Cambodia has the largest outstanding MFI loans as a percentage of GDP, as loan sizes have increased



Source: IMF Financial Access Survey and World Bank staff calculations from CSES 2004-2014.

expensive and cumbersome (with a lengthy process in the judiciary). If bank failures occur in the future, Cambodia would face problems not only in paying back deposits but also in restructuring or resolving distressed financial institutions, a situation that might trigger systemic problems in the financial system.

5.2 Risks to social sustainability

While the benefits of economic growth have been widespread, many people remain vulnerable to exclusion and are constrained in their ability to overcome development challenges, which poses a risk to the future inclusiveness of growth.

Attainment of social inclusion and economic participation is desirable not only for individual well-being but also for economic growth and social stability.

Although a large number of women joined the workforce over the past two decades, significant gender gaps still exist

Cambodia stands out in economic participation of women. The population-to-employment ratio for

women aged 15 years or older is about 8 percentage points lower than for men, but at 79 percent in 2014, it is significantly higher than its peers. This gap has been closed among 15-24 year olds, in contrast to Cambodia's structural peers where the gap remains high, ranging from more than 14 percentage points in Bangladesh to 30 percentage points in Nicaragua and 34.5 percentage points in Guatemala in 2014 for example (WDI, 2016). Participation in the garment sector in Cambodia is high, with women accounting for 85 percent of wage employees in the sector. At 57 percent, Cambodia also stands out in terms of the percentage of firms with a female in top management according to the latest Enterprise Survey.

However, significant gender disparities can be seen in earnings, the quality of jobs, and voice and representation in leadership positions. Only 18.8 percent of non-production jobs are done by women (see Figure 44). In the garment sector, for instance, most women are engaged in assembly, while the higher-paying quality and supervision work is done by men. In terms of political representation, women account for 20 percent of lower house and 16 percent of upper-house



parliamentary seats (in the top half of countries, ranked globally), but only 7 percent of ministerial posts, placing Cambodia in the bottom 20 percent globally (Inter-Parliamentary Union, 2016).

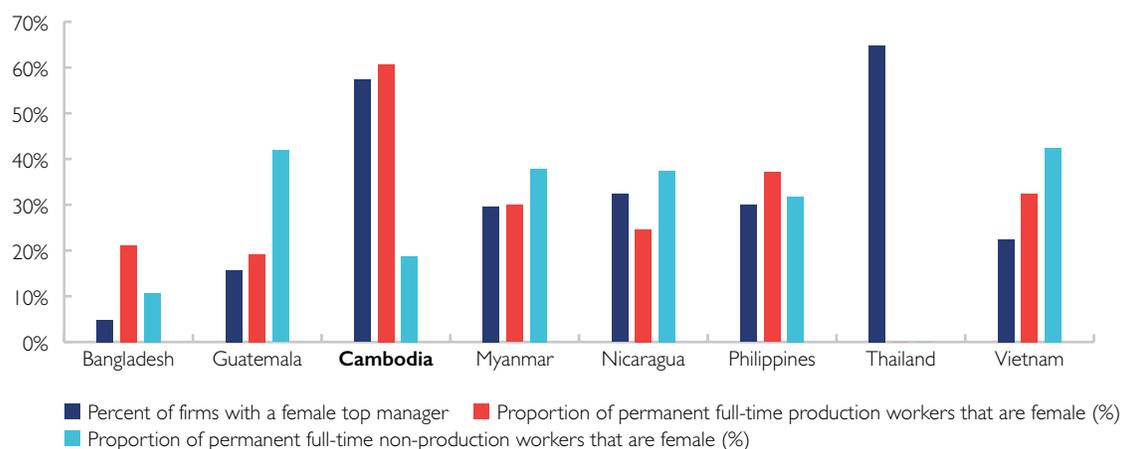
Women earn substantially less than men, but the earnings gap narrows with the attainment of upper secondary and tertiary education.

The gender earnings gap in 2014 was as high as 30 percent among those with low education and drops to 7 percent among college graduates (Figure 45). There is no evidence of same-job wage discrimination, but rather that, within the same sector, female workers have a higher share in lower-paid positions. For example, approximately 61 percent of microenterprises are female-owned (NIS, 2011), but they are generally smaller, less profitable, and less likely to be registered than male-owned businesses (ADB, 2014). Yet, women have an advantage in high skilled occupations requiring more education. Analysis of the CSES 2014 data suggests female wage workers gain 4 percent more than male for high-skill occupations such as Manager, Professionals, and Technicians and Associate Professionals, but only 3.4 and 5.4 percent of female and male wage workers are in this occupational category.

Persistent disparities in attainment, especially of upper secondary and tertiary education, perpetuate the gender earnings gap in Cambodia.

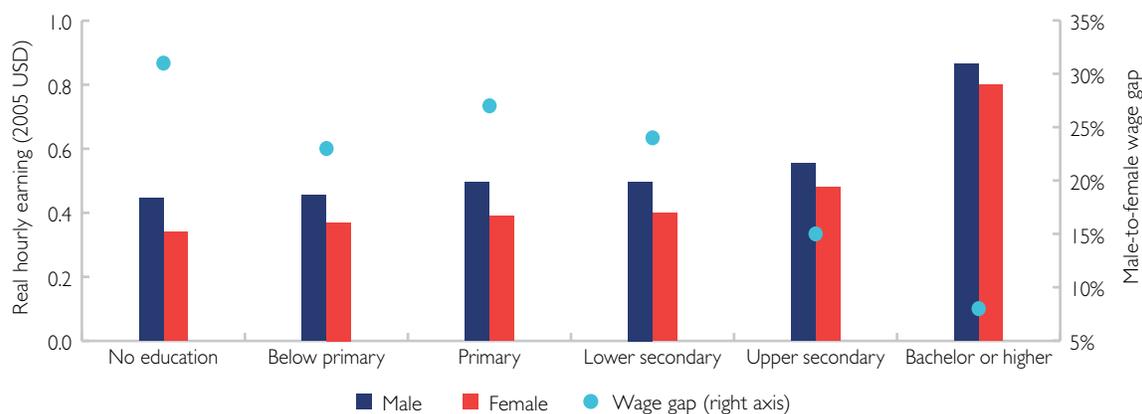
The country has achieved significant improvement in education access for the new generation of young females (e.g., ages 25-34) but they still have lower chances of completing upper secondary or higher education than males (12 percent versus 20 percent in 2014). The gap in secondary school enrolment is smaller, at 3 percentage points in 2014, with enrollment rising equally for both girls and boys between 2008 and 2014. Education increases the probability of female workers having a full-time wage job, thus it is an avenue to attaining better paid jobs. Analysis using the CSES 2014 found that upper secondary education and higher education could increase the probabilities of females having a full-time wage job by 14 and 48 percentage points, respectively. The analysis also shows that among household with non-agricultural businesses, gender gaps in revenues and profits of household businesses decrease when controlling for education. Adding years of education could increase revenue and profit by about 8 percent for each additional year, until the gender gaps in revenue and profits are eliminated. Thus closing the education achievement gap could eliminate constraints on the earnings potential of women.

Figure 44. Gender equality in the enterprise



Source: Enterprise Surveys, World Bank Group. Latest available data.

Figure 45. Conditional hourly wage and wage gap by education level



Source: Cambodia Socioeconomic Survey 2014, NIS.

Other constraints, besides low education, also place women at a disadvantage in the labor market. Women entrepreneurs continue to face additional constraints for example. These include limited access to information on business regulations and training; social norms on how women should interact with male employees, business owners, and government officials; and greater charges for unofficial fees due to their lack of knowledge and/or assertiveness (IFC, 2008; UNDP, 2014; ILO, 2013). Moreover, in spite of women's greater access to microfinance—representing 81 percent of MFI customers in Cambodia (Mekong Strategic Partners, 2015)—women still struggle to access longer-term finance due to limited collateral, low education, and the informal nature of their work. Disparities are also evident within the agricultural sector—among households headed by crop growers, the female-headed households have only 59 percent of the average land size owned by male-headed households. In addition, women's domestic and care responsibilities often reduce the amount of time they are available to work on their farm.

Rural-urban migration for employment in the garment sector, in particular, have increased the vulnerability of women to labor exploitation and poor living conditions. Women dominate employment in the garment sector where 97 percent

of workers moved to Phnom Penh for their job (World Bank, 2015d). While the income generated from this employment provides a vital flow of transfers to families across the country, it exposes women to risks to their safety and well-being. Many women opt to live in poor-quality, inadequate, or unsafe living conditions to save money to transfer to their families. In addition, forced or excessive overtime places pressure on workers, and those who are unable or unwilling to perform overtime may be subject to wage reductions or a change from a monthly to a piece-rate wage (with income dependent on the number of garments produced) (ILO and IFC, 2015).

The poor health and nutritional status of mothers perpetuates inequities, gender gaps and prevents women's full participation in economic growth. Despite the substantial improvements achieved over the past two decades, Cambodia has one of the highest maternal mortality rates in the region at 161 per 100,000 live births in 2015—almost triple that of Vietnam (54 per 100,000 live births in 2015). Consumption of key maternal health services—such as receipt of antenatal care and institutional deliveries—has rapidly increased in recent years, driven by improved geographical access to health services as well as improved financial access due to mechanisms such as Health Equity Funds. Today, more than 9 in 10 women receive antenatal care from



a skilled provider, with most (76 percent) attending at least four antenatal care visits. However, the persistent high rates of maternal mortality indicate continued challenges to be tackled with respect to the availability and quality of health services, and also broader social determinants of health. According to the CDHS 2014, maternal mortality is higher in households that are in the poorest 40 percent, are headed by an illiterate household head, have inadequate access to clean water, and have unhealthy sanitation.

The higher share of vulnerable employment gives rise to a gender gap in social protection, particularly access to social insurance. More than half of female workers are own-account workers who are less likely than wage workers to contribute to pension plans and other social insurance programs, and their workplaces are less likely to be regulated by health and safety standards or regulations on working conditions. Furthermore, women are more financially vulnerable in terms of savings levels and financial security. The Global Findex 2014 shows that women aged 15 or older in Cambodia are less likely to have savings than men, and more than one-fifth of them (23 percent) do not have access to a source of emergency funds, which can prevent them and their family from falling into extreme poverty when a calamity hits, whether the death of a family member, medical emergency, or natural disaster.

Women and men also face differences with regard to the impacts of climate change, natural disasters, and environmental degradation. Due to the gender division of labor and decision-making in households and communities as well as access to and control over resources, women often experience a greater burden from the impacts of climate change and natural disasters. For instance, when natural disasters strike, women, who are typically responsible for procuring food, water, and fuelwood for their families, must travel longer distances to acquire them. Health services, including those essential for maternal and child health, are also disrupted. Moreover, it is extremely challenging for

women to recover economically from disasters—as mentioned above, the majority of women work in small, informal enterprises and have little access to capital and credit. To begin to address these challenges, the Ministry of Women's Affairs (MoWA) has developed a Gender and Climate Change Action Plan 2014-2018 which calls for the development and piloting of gender-based climate change projects and initiatives, along with the strengthening of institutional capacity and knowledge.

Some groups in Cambodia still experience exclusion and discrimination, heightening their vulnerability

Although overall crime and violence have receded, domestic violence remains a serious threat for women, children, and LGBTI people.⁶¹ Domestic violence, particularly at a young age, is associated with a number of emotional and behavioral problems including aggression, delinquency, substance use, poor academic performance, post-traumatic stress disorder, anxiety, depression, and suicidal behavior. Exposure can also have negative consequences for cognitive development, including language deficits and reduced cognitive functioning. After some improvement in the rate of spousal abuse of women from 2000 (25 percent) to 2005 (22 percent), the rate increased in 2014 (29 percent); similarly, in 2010, 45.7 percent of women agreed that a husband is justified in hitting or beating his wife for at least one (out of 6) reasons, and this figure climbed up to 50.4 percent in 2014 (National Institute of Statistics, 2000, 2005, and 2014). The findings of a 2013 survey revealed that more than half of all Cambodian children experienced some form of physical violence prior to age 18 by an intimate partner, parent or adult relative, or community member (UNICEF, 2014). Salas

⁶¹ From a high point of 6.76 homicides per 100,000 people in 1997, the homicide rate has been declining steadily to 1.84 in 2011 (the last year for which data is available) (UN Office on Drugs and Crime's International Homicide Statistics database). The Cambodia Socio Economic Survey also found that feelings of safety from crime and violence increased from 61.2 percent in 2004 to 81 percent in 2014, with similar increases across rural and urban households.

and Srorn (2013) found that 57 percent of gay and lesbian respondents and 66 percent of transgender females reported domestic violence, including by a range of family members including parents, siblings, aunts, uncles, grandparents, and partners.

Although a policy framework is in place to address violence against women, the roots of violence are deeply embedded in social and cultural attitudes that are difficult to change.

Traditional social and cultural norms expect women to be polite and quietly spoken, and to obey and respect their husband or partner, which in some cases is used as justification for violence against women. The 2013 survey found that nearly two in five females, ages 13-17, and one in three females, ages 18-24, believed that it is acceptable for a husband to hit or beat his wife under one or more circumstances. Two in five males ages, 13-17, and more than one in three males, ages 18-24, also endorsed a husband's use of physical violence. Continuous efforts by government institutions, civil society organizations, and development partners, including implementation of the National Action Plan to Prevent Violence Against Women (2014-2018) and other measures, have had positive impacts, and more than 90 percent of adults are aware of the Domestic Violence Law. Between 2005 and 2009, fewer respondents to a survey perceived violent acts to be acceptable, demonstrating an increased awareness of women's rights (UNDP, 2014c).

While homosexuality is not illegal and Cambodia has no homophobic religious traditions, Cambodia also has no LGBTI anti-discrimination legislation. In addition, several other laws are largely silent on LGBTI issues, such as those related to marriage and related tax, inheritance, hospital visitation, and other family rights issues. Although visibility of the LGBTI community and activity by CSOs have increased over the last decade—marked by the former King's 2004 statement in support of same-sex relations and the first official registration of an LGBTI organization in 2014—

LGBTI people continue to face stigmatization by their families, communities, and the media, along with discrimination in workplaces and schools. Even though wedding ceremonies are often permitted, official certificates of marriage are rarely issued since the Constitution stipulates that marriage is between "one husband and one wife." Furthermore, traditional family values play a major role in LGBTI discrimination in Cambodia, with frequent reports of families of LGBTI people forcing the separation of same-sex partners, attempting to 'cure' them, and forcing them to marry someone of the opposite sex (UNDP, USAID, 2014).

Another highly vulnerable group in Cambodia is people with disabilities, who comprise a significant portion of the population and suffer from extreme poverty due largely to discrimination.

According to Cambodia's latest Demographic and Health Survey conducted in 2014, approximately 10 percent of the population suffers from at least one form of disability (National Institute of Statistics, 2014).⁶² Mines (in the past) and traffic accidents (more recently), together with disease and old age, are the primary reasons for a person becoming disabled (ILO, 2009). In addition, studies have found that Cambodians suffer from high rates of mental disorders, including about 14-33 percent suffering from post-traumatic stress syndrome, compared with the global average of 0.4 percent (McLaughlin, 2012). This is probably a consequence of the Khmer Rouge era. According to the 2011 Commune Database, 45 percent of adults with disabilities do not earn an income (Bailey, 2014), and household wealth for people with disabilities was about half that of non-disabled people (ILO, 2009). Globally, countries lose around 1-7 percent of their GDP due to the exclusion of persons with disabilities from work and educational opportunities (*Ibid*).

62 The prevalence of disability increases with age, from 2 percent among children age 5-14, to 13 percent among persons ages 35-59, to 44 percent among those age 60 and above (National Institute of Statistics, 2014).



While progress has been made, land disputes and displacement remain an issue in Cambodia

Although poverty incidence among ethnic minorities is not significantly higher than among the ethnic majority as noted earlier, indigenous peoples (particularly those in mountainous areas) also face significant poverty risks. Poverty incidence among ethnic minorities is only 2.5 percent higher than among the ethnic majority, compared to 51.6 percent in Vietnam and 23.5 percent in Lao PDR. Out of an estimated 140,000+ ethnic minorities, more than half (approximately 80,000) live in the province of Ratanakiri and are considered to be indigenous minorities (as distinguished from foreign residents or Chams/Khmer Islam), also known as Highlands Peoples (IFAD, 2012). Indigenous minorities have a strong social, cultural, and economic connection to traditional/communal land and as such are highly vulnerable to the loss of land from forestry development. In 2007, it was estimated that indigenous communities had lost 30 percent of their traditional land since 1989, which has resulted in rising poverty (UNDP, 2007). Civil society groups and individuals have become confrontational in defense of indigenous and other land, and this is one of the most contentious—and sometimes violent—issues in the country.

Cambodia's civil conflict resulted in displacement and loss of land records, which is constraining the ability of peasants and communities to invest in, lend, or protect these assets. Following French rule, the land administration system in the 1960s included land records and cadastral maps, but the system started deteriorating during the war in 1970-1975. In the mid-seventies, with the Khmer Rouge taking power, individual ownership of land was banned, cities emptied, and people were forced to live in communes to work on massive agriculture and irrigation projects. The infrastructure was destroyed, and land registration records were all lost. In 1979, Vietnamese forces helped overthrow the Khmer Rouge from the main parts of Cambodia, introducing

a more traditional type of communism under the People's Republic of Kampuchea. The land was cultivated in solidarity groups, but people slowly started to occupy their "own" parcels. In 1989, the State of Cambodia's Constitution was amended to recognize ownership rights for residential land and possession rights for agricultural land. In 1992, the Land Law introduced a free market economy for land.

Progress with land administration restoration accelerated after the adoption of the new Land Law in 2001. By January 2015, 3.8 million land titles (of the estimated total of 7 million properties) had been registered primarily through a participatory systematic land registration process. The systematic registration process continues today with financing retained from the property transaction registration fees. Land dispute resolution has been assisted by the Cadastral commissions, which were set up to mediate conflicts over unregistered land. The court resolves conflicts on registered land, and current conflicts on registered land are rare. More than one million hectares of state land have been reclassified to provide for the titles for poor people, including 360,000 hectares that have been taken back from Economic Land Concessions that had been improperly handed out to agri-business firms. The progress with the 2001 Land Law provision to allow registration of collective land titles to indigenous communities has been slow, but according to the ILO, the first 8 indigenous communities received titles as of September 2014.

Despite the remarkable progress in land administration, substantial challenges remain. Legal registration of land rights still does not cover all areas, leaving many poor without secure tradeable land rights, and the majority of indigenous peoples' communities have not received titles. Sustainability is also a concern, as informal land transactions remain common both for registered and non-registered land and property rights. The property valuation and property taxation system is inefficient and lacks transparency, and avoiding property transfer taxes is a common incentive for not

registering land and property transactions. Taxation valuation inaccuracies and lack of transparency lead to taxation inefficiencies that constrain local revenues. Implementation of the 2014 National Policy for Land Valuation (NPLV), which sets a base for valuation infrastructure (profession, institutions, standards), valuation services, data management and capacity building requirements, has not started.

A related area of concern is the lack of comprehensive State Land Designation and Registration, which allows inefficient and non-transparent decisions on state assets use. The core symptom of this problem is that land and mineral concessions have been made without proper location or size information and with inadequate consideration of the actual land use on the ground. This has led to numerous conflicts between the companies receiving concession rights and local people, which the RGC has had to address. The lack of a complete and consistent National Spatial Data Infrastructure (NSDI) or One Map type of geospatial tool in Cambodia contributes to the location and size problems with concessions. This negatively affects infrastructure investments in roads and transport, logistic performance, and the cost of energy, contributing to constraints on growth and also affecting the environment, as discussed in the next section. Success with land records could be accompanied with corresponding geospatial infrastructure, and these together can become the basis of the future electronic governance system in Cambodia.

5.3 Risks and opportunities for environmentally sustainable and resilient development

Unsustainable economic activities are associated with a degradation of natural capital, increasingly endangering their contribution to the economy and poverty reduction

Cambodia has rich and diverse natural capital, which contributes significantly to the GDP and

livelihoods of the poor through both products and ecosystem services that sustain other economic activities. Cambodia is endowed with extensive forests accounting for about half of its land area; significant water resources flowing from the Mekong and Cardamom Mountains with highly productive fisheries; pristine mangroves and coral reefs found along its 440-kilometer coast supporting a fast growing resource-based tourism industry; and large areas of fertile land suitable for agriculture.⁶³ Overall, around 80 percent of the rural poor depend on forests and agriculture for their livelihoods (CIFOR, 2014), and the share of agriculture in total GDP (30 percent in 2015) is significantly higher than the average for lower middle-income countries. Forests, which provide timber and fuelwood, also serve as carbon sinks, protect watersheds, reduce soil erosion and loss of soil fertility, and prevent flooding, thereby slowing the sedimentation of reservoirs and helping to shield croplands in lower areas. Meanwhile, fisheries provide primary employment for more than 0.3 million Cambodians and also provide important sources of protein and vital micronutrients that are of particular importance for poor, malnourished populations (IFReDI, 2013). In particular, the Tonle Sap Lake, with its fluctuation in size driven by seasonal flooding from the Mekong, plays a very important role in the productivity of Cambodia's agriculture and fisheries sectors, including its freshwater mangroves and flooded forests that serve as breeding grounds for more than 300 species of fish and crustaceans.

However, in pursuit of growth, Cambodia's ecosystems and natural capital have been degraded significantly due to poor practices, uninformed decision-making, and limited investments in the sustainable management of

⁶³ Altogether, Cambodia's forests, riverine, and coastal ecosystems provide habitats for diverse plant and wildlife species—around 2,550 native species of flora and fauna, including endangered species such as the Asian elephant, tiger, Irrawaddy dolphin, giant catfish, and numerous large water birds (IUCN, 2016). These diverse ecosystems are part of the larger Mekong River Basin, a landscape that supports development opportunities for the six countries through which the river flows.



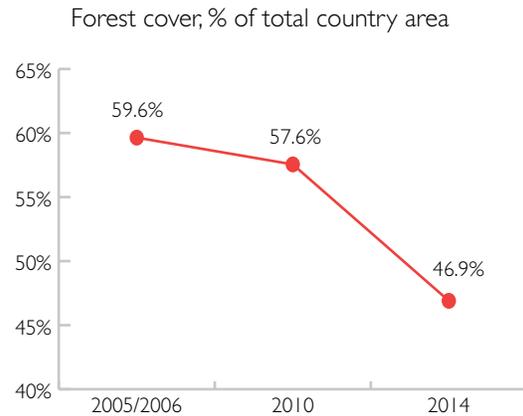
these productive assets. Land expansion has been a major factor in agricultural growth, with cultivated land for crops increasing by 50 percent between 2002 and 2012, but it has partly come at the expense of forests and wetlands (World Bank, 2015). Official estimates indicate that forest cover declined from nearly 60 percent in 2006 to less than 47 percent in 2014 (Figure 46) (MoE, 2016). This is mainly due to the conversion of forest areas within economic land concessions (ELCs) into large agriculture and rubber plantations, with the loss of forest lands in protected areas due to land concessions estimated at 14 percent (Forest Trends, 2015). Similar factors have led to loss of wetlands, which had already reached 45 percent by 2003 (MRC, 2016). Of the remaining 9 million hectares of forest cover, much has been degraded due to selective logging and unsustainable fuelwood extraction. In addition, approximately 5.5 million tons of fuelwood are used each year by households and SMEs (GERES, 2015), with 88 percent of the population still relying on traditional biomass for cooking—far higher than the regional country average of 58 percent.⁶⁴ Wood fuel is also used extensively in the industrial sector—71 percent of factories use woodfuels, amounting to 43 percent of total energy used by factories (Better Work, 2009).

Deforestation and agricultural expansion are also increasing land degradation and erosion, resulting in lower agricultural and fisheries productivity, as well as reduced resilience to floods. Cambodia is among the countries with the largest share of land degradation hotspots,⁶⁵ with about 60 percent of its population residing in such areas (World Bank, 2015). Cambodia's already low soil fertility has been further degraded in recent years due to a combination of human-induced and natural factors, including slash-and-burn land clearance, unsustainable agricultural practices that mine instead of replenish soil nutrients, and heavy rainfall.

⁶⁴ IEA, World Energy Outlook 2016.

⁶⁵ Using global information on the changes in the normalized difference vegetation index between 1982 and 2006, which serves as a proxy for land degradation (World Bank, 2015).

Figure 46. Cambodia's forest cover decreased by 21 percent between 2006 and 2014



Sources: Ministry of Environment (MoE), 2016.

Degradation has been especially high in the upland areas used for cassava production (World Bank, 2015). Whereas forests could serve as ecological buffers to natural disasters, their destruction results in increased soil erosion, deteriorating water quality, and extreme flooding.

Fisheries are essential from a food security perspective, and overfishing represents a further threat to rural communities, particularly those around the Tonle Sap. Cambodians are the world's largest consumers of freshwater fish per capita, relying mainly on fish and rice for their daily dietary energy sources. As noted above, fisheries are also critical for the direct income they provide to 0.3 million people. Aquaculture, which accounted for around 16 percent of total fisheries production in 2014, also generates employment in related businesses such as feed production (FAO, 2014). In 2012, fisheries reforms ended the leasing of large "fishing lots" in the Tonle Sap to a small number of commercial fishing operations and instead gave rural communities open access. While this likely generated nutritional and income benefits for the rural poor in the short run, it has also made fisheries management much more challenging and diminished the long-term social and economic benefits of the resource. Recognizing this, authorities have recently divided the lake into

hundreds of community co-managed fisheries, mixed with newly designated conservation areas. The success of this approach in replenishing fish stocks in the Tonle Sap to sustainable levels will require effective implementation and enforcement over time.

Cambodia also faces challenges with both water quantity and quality. In 2016, the Mekong river exhibited highly variable flows, and in some areas the water level at the end of the dry season reached record lows (IRIN, 2016), with households across the country reporting drought-related water shortages and crop losses (UNICEF, FAO, and WFP, 2016.). This lack of predictability in water availability is having a detrimental effect on small farmers throughout the country, especially given that 86 percent of rice cultivation relies mainly on rain and surface-runoff for water (FAO 2011). Water quality is also a growing problem, with declining quality due to upstream deforestation and erosion that increase turbidity and modify run-off flows, as well as to pollution from poor pollution control or treatment practices, runoff of agricultural pesticides and fertilizers, and domestic and industrial wastes (Chea et al., 2016). Both water levels and water quality are expected to be further affected by the construction of planned dams along the Mekong, and large hydropower development is also anticipated to trap around 50 percent of agricultural sediment and nutrient flows needed to nourish the Tonle Sap and replenish the delta (IUCN, 2014) as well as reduce the availability of inland fish by 6 to 34 percent (Inland Fisheries Research and Development Institute, 2013). Overall, sustainably managing Cambodia's water and associated natural resources as well as further developing their potential is becoming an increasingly difficult challenge, which is exacerbated by the country's lack of monitoring systems and infrastructure for integrated water resources management (IWRM).

Climate and disaster risks compound environmental sustainability challenges

The degradation of Cambodia's natural capital also increases its weaknesses, exposure and

vulnerability to adapting to a changing climate, and to preventing and responding to natural disasters. Although the country is regularly exposed to floods and droughts as part of its natural hydrological cycles and typhoons are a regular occurrence in the region, its mangroves and forestlands have traditionally served as both ecological buffers and social resiliency—helping to prevent soil erosion, reduce extreme flooding and protect fisheries. In recent years, however, human-induced natural resource degradation and poorly planned development in low-lying areas has occurred in concert with increased incidence and intensity of natural disasters and a changing climate, contributing to further degradation. As a result, Cambodia has witnessed significant deterioration of livelihoods and destruction of infrastructure, with average damages from disasters estimated at USD 235 million per year (Germanwatch, 2016). This has a major impact on the national budget, which is regularly diverted away from development activities toward emergency response and reconstruction of infrastructure in the face of increasing climate risks. Overall, Cambodia was ranked as the 8th most disaster-prone country in the world by the UN's World Risk Index⁶⁶ and 146th out of 180 countries on the 2016 Environmental Performance Index, due to its low levels of environmental health and vitality⁶⁷ (Figure 47).

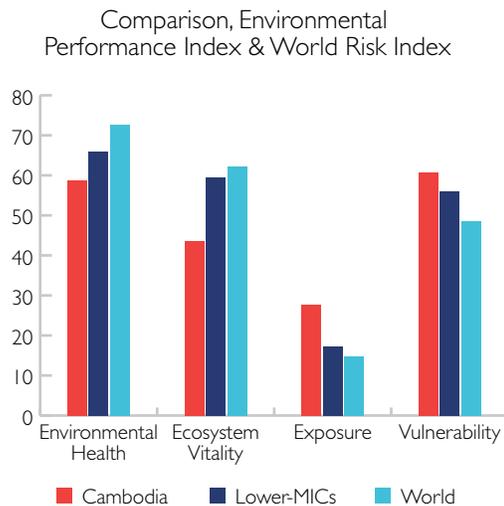
In the future, climate change is expected to further exacerbate the vulnerability to and damage from natural disasters associated with extreme weather events as well as to the fast growing impacts of slow onset events, likely leading to a slowdown in economic growth. The mean annual temperature across Cambodia has

⁶⁶ Exposure considers the number of people exposed to earthquakes, cyclones and/or flooding, number of people threatened by drought and/or sea level rise, and the country's total population. Vulnerability is based on a country's susceptibility, coping capacity, and adaptive capacity.

⁶⁷ Ecosystem vitality considers indicators on water resources, agriculture, forests, fisheries, biodiversity and habitats, and climate and energy. Environmental health considers indicators on health impacts, air quality, and water and sanitation.



Figure 47. Cambodia's environmental health and vitality are low, and its exposure and vulnerability to climate risks are high



Sources: World Risk Index (2015). United Nations University, Institute for Environment and Human Security. Environmental Performance Index (2016). Yale Center for Environmental Law and Policy.

already increased by approximately 1.2 degrees Celsius since 1960 (from 26.8 to 28.0°C),⁶⁸ and it is projected to rise by another 0.7-2.7°C by the 2060s and 1.4-4.3°C by the 2090s (IFAD, 2010). Likewise, heat stress days⁶⁹ per year are forecasted to increase from 273 in 2015 to 323 in 2045 (Maplecroft Verisk, 2015), resulting in a 16-percent reduction in labor capacity. Estimates also suggest that Cambodia's rainfall will become more variable, with a projected increase in rainfall of up to 40 percent during the rainy season and a decrease of up to 58 percent during the dry season in 2060-2080, but with a wide range of predictions from various climate models.⁷⁰ Cambodia's coastal communities will also be affected by the projected rise in sea level of between 0.18m

68 World Bank Climate Portal: The dataset is produced by the Climatic Research Unit (CRU) of University of East Anglia (UEA).

69 Heat Stress Days are defined as the number of days per year on average on which the wet bulb globe temperature (which is primarily dependent on humidity and temperature) exceeds 25 degrees Celsius, signifying unsafe levels of heat stress. Beyond this level heat stress can cause dizziness, fatigue and nausea and even death in extreme cases.

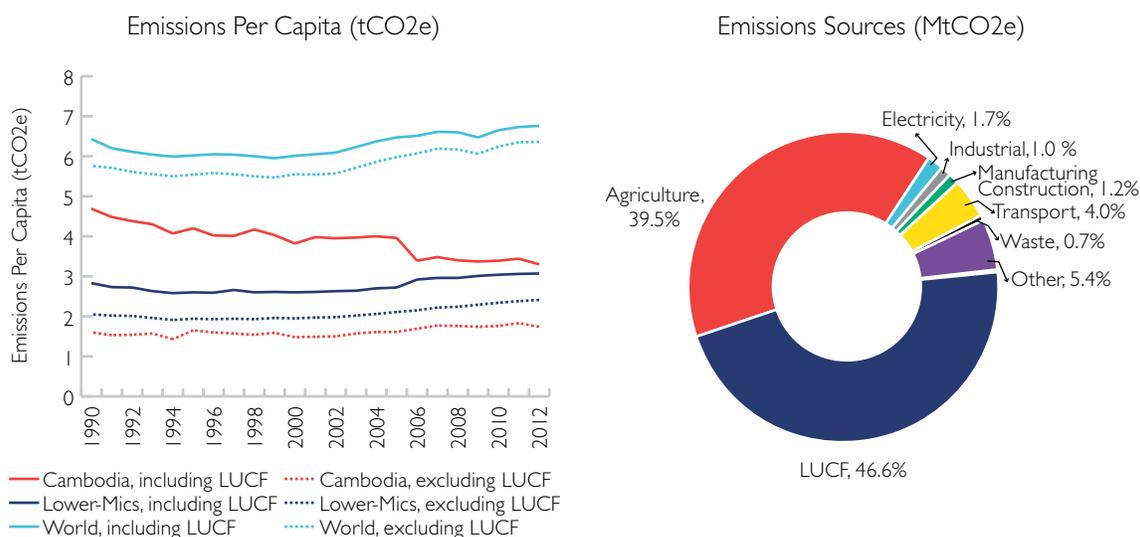
70 World Bank Climate Portal.

and 0.56m by 2100, leaving 435 kilometers of the coastline vulnerable and permanently inundating up to 25,000 hectares of coastal area (IFAD, 2010). Collectively, these impacts will result in increased uncertainty in the availability of water for domestic and productive purposes as well as a significant slowdown in economic growth. Based on the scenario of a 2°C temperature rise by 2050, initial estimates suggest that climate change will reduce Cambodia's total GDP by at least 1.5 percent in 2030 and 3.5 percent in 2050 (RGC, 2015a).⁷¹

In particular, climate change impacts will be felt severely across Cambodia's agriculture and fisheries sectors, threatening rural livelihoods and incomes, especially in the Mekong Delta region. Several studies have shown that rising temperatures have negative effects on crop cycles, reducing yields by about 10 percent for every 1°C increase in minimum temperature during the growing season (IFAD, 2010). Changes in rainfall patterns and variability are of particular concern for rice production in Cambodia, given that it is 83 percent rain-fed and makes up 70 percent of the total wet season crop area (World Bank, 2015). The Mekong Delta is among the most vulnerable regions to these climate impacts, with changes in freshwater supply caused by salinity intrusion and flooding, which are expected to lead to a decline in rice yields by 6 to 12 percent by 2050 (World Bank, 2010). Meanwhile, Cambodia's fisheries and aquatic resources, which are closely tied to the natural dynamics of the Mekong and Tonle Sap lake and floodplain, are also at risk, and Cambodia's fishers are classified as highly vulnerable to the effects of climate change (Allison et al., 2009). In addition, salinity intrusion and flooding are increasingly affecting domestic freshwater supply, particularly in the Mekong Delta.

71 The main sources of this damage are from drought and floods in agriculture (1.4 percent of GDP); increased burden of diarrhea and other climate-sensitive diseases (0.9 percent of GDP); more rapid degradation of infrastructure, including roads, irrigation, and rural water supply (0.7 percent of GDP); and flood damage to urban infrastructure (0.3% of GDP) (RGC, 2015a).

Figure 48. Cambodia's emissions per capita, including LUCF, are slightly higher than the average for Lower-MICs



Sources: CAIT Climate Data Explorer. World Resources Institute (2012).

Meanwhile, Cambodia's contribution to climate change, although relatively low globally, is increasing, with its largest share of emissions coming from agriculture and land use change and forestry (LUCF) (Figure 48). Although Cambodia's per capita emissions have declined by 30 percent since 1990, its total emissions have increased by 16 percent, owing largely to a 46 percent increase in emissions from the agriculture sector⁷² and more than doubling of energy emissions (WRI-CAIT, 2012). In addition, 47 percent of Cambodia's total emissions still come from LUCF (Forest Trends, 2015),⁷³ pushing

72 In the agricultural sector, rice cultivation and livestock represent the largest contributions to emissions, followed by soils and manure management (GSSD, 2015). Carbon emissions from the forest sector have come mainly from land clearance associated with land concessions, thereby releasing carbon stored in biomass and soils (Forest Trends, 2015).

73 This is even despite a sharp 26-percent decrease between 2005 and 2006 which roughly corresponded with the end of the timber concession system around 2004, an integral part of the forestry reform process initiated by the RGC and its international development partners in 1999. A new Forestry Law was passed in 2002, and by 2003, many concessions had been cancelled for a variety of reasons, and additional protection forests were designated by 2004. Even so, some Cambodian subcontractors linked to security forces and high-level government continued to log. Nevertheless, large-

the country's total emissions above the average for lower middle-income countries. Recently, carbon emissions from the forest sector have come mainly from land clearance associated with land concessions, thereby releasing carbon stored in biomass and soils (Forest Trends, 2015). In addition to contributing to climate change, these emissions are affecting Cambodia's indoor and outdoor air quality and thereby human health, as well as putting strong pressure on natural forests.⁷⁴

Poorly planned urban development heightens risks and may constrain growth

Cambodia is in the early stages of its urbanization process but already has a relatively high urban population density. The urban population in 2014

scale timber harvesting came to a halt with a logging and log transportation moratorium due to the absence of acceptable management plans and continued illegal logging.

74 Approximately 22 percent of wood-fuels consumed annually in Cambodia are not sustainable, as they come from forest-to-agriculture land conversion (GERES, 2015). Once this ends, the risk is that future wood-fuels will come from protected areas.



was 21 percent (UN, 2015).⁷⁵ This is considerably lower than other countries in the region, in part due to the massive reallocation of people from urban to rural areas under the Khmer Rouge regime. The constant annual urbanization growth rate, at around 2.2 percent over 2004-14, has also been lower than in most countries at a similar stage of urbanization. Meanwhile, the average population density in urban areas in Cambodia is among the highest in the region (Figure 49, left panel), and Cambodia's urban population is forecasted to increase by 2.3 to 2.8 percent per year over the next 35 years, resulting in 36 percent of the population living in urban areas by 2050. Urban growth will remain concentrated in Phnom Penh and its immediate vicinity, with the population in Phnom Penh expected to increase from 1.7 million in 2015 to nearly 2.6 million in 2030 (UN, 2015; World Bank, 2015c).

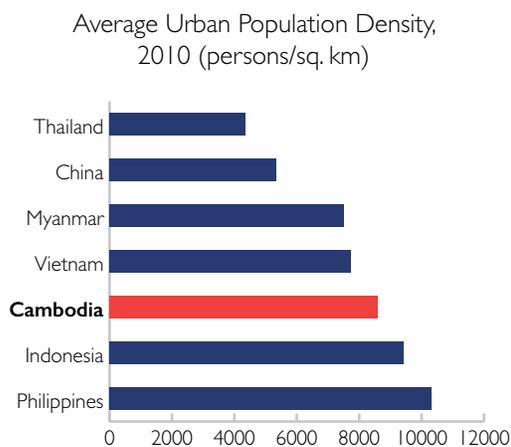
However, the provision of infrastructure and public services has not kept pace with urban growth, resulting in greater environmental degradation. Roads, drainage, sewage, wastewater treatment, and solid waste collection have been

identified as areas where service provision is limited, particularly in low-income urban areas (ADB, 2012; Sahmakum Teang Tnaut, 2014). Good progress has been made through the efforts of local authorities and international donors in both urban water supply and sanitation, with access in urban areas at 100 percent for improved water and over 80 percent for improved sanitation. However, urban sewerage and wastewater treatment in Cambodia are minimal, with drainage systems that frequently overflow and only 13 percent of the urban population with sewerage. In addition, Phnom Penh still does not have a wastewater treatment facility and is discharging its wastewater into lagoons, which affects rivers (WaterAid, 2015). Moreover, insufficient solid waste management has become a major cause of urban drain blockages, increasing the risk and severity of floods and contributing to poor hygiene conditions.

Likewise, the development of transportation networks has not kept pace with economic growth in spite of significant donor assistance. Increased motor traffic has put pressure on existing urban road systems and resulted in more traffic congestion and air pollution. The number of registered vehicles in Phnom Penh increased 3.2 times just between 2001 and 2012 (JICA, 2014), compared to a population increase of around 1.3 times. The travel speed in Phnom Penh city center decreased from 22.9 km/hour (2001) to 14.6 km/hour (2012) due to vehicle increase and limited road development. Meanwhile, the development of formal public transport systems is limited, resulting in a lack of options for commuters. Overall, the annual damage from particulate matter pollution in Cambodia is estimated as equivalent to 0.8 percent of GDP.⁷⁶

Cambodians living in urban poor settlements are disproportionately affected, given their low access to services and high flood risk. With a shortage of affordable housing options available, informal housing is often the only solution to meet the needs of the growing urban population. In

Figure 49. Cambodia has a high urban population density



Source: World Development Indicators.

⁷⁵ Urbanization rates in neighboring countries are 53 percent in Indonesia, 49 percent in Thailand, and 33 percent in Vietnam.

⁷⁶ World Development Indicators.

Cambodia more than half of the population in urban areas is living in urban poor settlements.⁷⁷ Common settlement sites are along major infrastructure and transportation lines in and out of the city. Households in informal settlements typically have low access to reliable basic services, particularly sewage, garbage collection, and social services. In some neighborhoods, residents are exposed to health risks through contaminated water supply and hazardous waste, and the informal settlements are also often located in flood-prone areas.

Cambodia's poorly planned and managed urban development also heightens its vulnerability to the impacts of natural disasters and climate change, which may pose a constraint to economic growth. In addition to cities' vulnerability due to their location in flood-prone areas along the Mekong and its tributaries, urbanization and industrialization is also contributing to the destruction of Cambodia's natural habitats that provide food resources, tourism and coastal protection. For instance, the country's remaining 78,000 hectares of mangroves, which are vital for preventing coastal erosion and minimizing the impacts of natural disasters, have come under threat from coastal development as well as unsustainable activities such as sand mining, salt pan production, and coastal aquaculture. This is at least partly attributable to weaknesses in the environmental management capacity for investment projects, which often proceed before EIAs and environmental management plans (EMPs) are completed.⁷⁸ Overall, Cambodia's weak urban planning and management capacity has resulted in fragmented urban expansion. Peri-urban areas around Phnom Penh have seen the growth of "satellite cities" that provide luxury accommodation to a small segment of the population and have no

77 UN Habitat.

78 The overall effectiveness of EIA implementation in Cambodia is considered to be low. Only a small number of projects complete the EIA process under the existing Sub-Decree. Provincial departments of environment do not have adequate capacity for effective EIA implementation. Also, due to weaknesses in legislation, it is difficult to enforce. (Baird and Frankel, 2015).

infrastructure linkages with surrounding areas. This makes cities less efficient, widens spatial and economic disparities, and increases congestion and pollution.

Sustainable growth is faced with tradeoffs for competing demands on natural capital

As Cambodia continues to grow, its already stressed environment and natural resources will be further strained due to greater demand for natural capital, including food, water, and energy.

Demand for electricity is projected to grow by 12 percent per year through 2030 (World Wildlife Fund, 2016), with Cambodia's Power Sector Development Plan 2016-2030 projecting a quadrupling of installed capacity by 2030. Indigenous coal-fired and hydro generation are projected to dominate the generation matrix, representing 50 percent and 40 percent, respectively,⁷⁹ but inadequate assessment of potential environmental and social impacts of hydro and coal projects raise the question of sustainability (World Bank, 2013b). Coal-fired power generation increases GHG emissions and PM2.5 levels, which have negative impacts for the environment and human health.⁸⁰ Although hydropower is a relatively low-emission energy alternative, it has significant impacts on the livelihoods and food security of millions of Cambodians. In addition to displacing tens of thousands of people, dams restrict the deposit of nutrients for agriculture, obstruct migratory fish breeding, fuel additional deforestation, and reduce sediment flow to the delta, thereby increasing coastal erosion and the risk of saltwater intrusion.⁸¹

79 Although the current power sector development plan does not foresee any share of sustainable energy, the first solar PV-based generation pilot project of 10 MW was tendered in October 2016.

80 In the United States, the external costs of coal-fired power (namely, its health impacts) have been estimated as being equivalent to an additional USD 0.18 / kWh.

81 Of the 85 percent of fish production comes from capture fisheries in Cambodia, compared with just 15 percent from aquaculture (Baran and Gallego, 2015), approximately 30 to 40 percent of total catch, by weight, are highly migratory and therefore at risk from hydropower development (Halls & Kshatriya, 2009).



Meanwhile, meeting Cambodia's growing demand for food—estimated to increase by 12 percent between 2009 and 2030 (World Bank, 2015)—will require the sustainable management of Cambodia's forests, watersheds, and other natural ecosystems, along with improvements in agricultural productivity.

Looking forward, Cambodia faces several critical decisions on how to balance its immediate development needs with its long-term economic and environmental sustainability goals. This will require improved short- to longer-term planning across sectors, better informed decision-making processes, greater public sector capacity, significantly increased investments in natural capital and environmental services, and coordination

among a broad range of stakeholders, including the government, private sector, civil society organizations, and Cambodian citizens. Ultimately, by investing in the sustainable management of its natural capital, Cambodia can increase socio-economic benefits, while reducing the level of investment required for cleanup and rehabilitation as well as the amount of pressure placed on competing demands for resources. This will also substantially strengthen Cambodia's ability to achieve its growth and poverty reduction objectives in the Rectangular Strategy along with its climate adaptation and mitigation commitments in its Nationally Determined Contribution (NDC), which identifies Cambodia's post-2020 national climate priorities and became binding when Cambodia ratified the Paris Agreement.⁸²

⁸² The Paris Agreement entered into force on November 4, 2016 and, as of February 24, 2017, 132 countries have ratified the agreement which aims to strengthen the global response to climate change by holding the increase in global average temperature this century to below 2°C above pre-industrial levels, and to pursue efforts to limit this increase even further to 1.5°. The Agreement also aims to strengthen countries' abilities to cope and adapt to the impacts of climate change.





Priority interventions to encourage strong, inclusive, and sustainable development in Cambodia

6.1 Determining areas for development and priority interventions

In-depth World Bank analysis and consultation with stakeholders were conducted to help pinpoint a few critical areas for ensuring strong, inclusive, and sustainable growth and shared prosperity in Cambodia going forward.

While arguments can be made for a wide range of interventions across various sectors, not all measures would have the same impact on economic growth, poverty reduction and shared prosperity. To identify areas for development and priority interventions, this SCD utilized a two-step process: first, the analysis and literature review, together with the consultation process, informed the selection of the ten areas for development; second, a two-tier methodology was applied to assess the constraints to growth and asset accumulation and to identify priorities within those ten development areas.

The extensive stakeholder consultations with government, private sector, development partners, and civil society were critical in

identifying the areas for development. In addition to drawing from comprehensive analysis and literature review, the identification of areas for development has been heavily informed by these consultations, which gave key stakeholders opportunities to directly influence the SCD. Nine meetings were held in four different regions of the country,⁸³ with 375 participants providing feedback on the key development opportunities for achieving poverty reduction and inclusive growth in a sustainable manner in Cambodia. Different tools were used during these consultation meetings to enlist local experts in helping to identify priorities for the country's development.⁸⁴ Agriculture

⁸³ In particular, between November 23 and December 14, 2016, six meetings were held in Phnom Penh, one was held in Sihanoukville, one in Siem Reap, and one in Kratie. In addition to plenary stakeholder consultations, three meetings with a technical working group led by the Ministry of Economy and Finance were held at different stages of the preparation of this SCD to discuss and validate the main storyline, findings, and proposed development areas and policies.

⁸⁴ First, all participants were given a questionnaire (in English and Khmer) which asked them to identify the top three crucial development areas for Cambodia to end poverty and share prosperity more widely. The questionnaire was completed by 322 participants. Second, participants were asked to provide



Table 8. Top areas for development from individual questionnaires and meeting discussions

Priority listed as top 3 in...	Meeting discussions	Individual Questionnaires
Agriculture modernization	67%	41%
Education and skills	56%	36%
Institutions, governance, and public service delivery	33%	23%
Cost of doing business and trade facilitation	33%	28%
Resilient infrastructure and improved connectivity	28%	33%
Health care	22%	41%
Financial sector & access to finance	22%	28%
Natural resource management & disaster risk management	17%	26%

Source: Results obtained from consultation meetings.

modernization, education and skills, governance and public service delivery, and the cost of doing business and trading emerged as part of the top three areas for development in at least three of the meetings with stakeholders, including group discussions (Table 8). Results from 322 individual questionnaires also point to a similar set of areas as being most relevant.

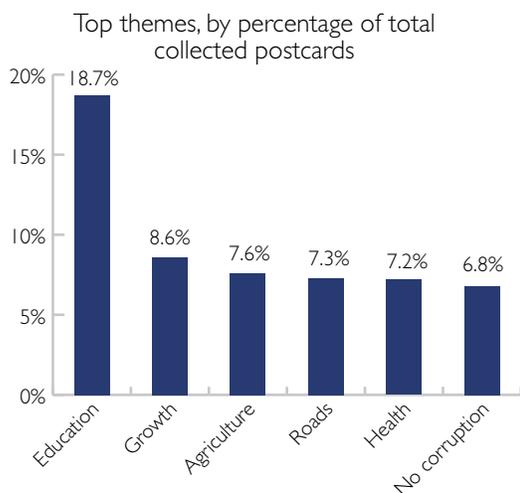
More than 1,000 postcards collected from citizen outreach interventions signaled similar areas for development. During the SCD consultation period, the World Bank team reached out to people in universities and other public spaces around the country and invited them to fill in postcards with *their dream for Cambodia in the next ten years*. Postcards were filled out by around 1,100 individuals and have been analyzed and summarized in Figure 50. Overall, the results from the postcards collected point to some of the same top priorities that emerged from the meeting discussions, namely education, agriculture, healthcare and roads.

feedback during the meetings themselves. In four of the nine meetings, groups of 8-10 participants were asked, as a group, to identify their top three areas for development—approximately 190 people in 21 groups participated in this exercise.

In addition to those areas identified during the consultations, the analysis, as well as recent research, points to other areas for development deemed important in Cambodia. As discussed earlier, there is an important need to shield households from shocks, as Cambodia has one of the highest shares of out-of-pocket health care expenditures in the world and is especially exposed to natural disasters and climate change—these shocks particularly affect the vulnerable. Also, stunting affects 32 percent of the children under age 5 in Cambodia, which is likely to hamper their cognitive development and, ultimately, much-needed human capital formation. Tackling this issue would require cross-sectoral efforts and targeted interventions. Urbanization emerged as another area for development during one of the three additional consultation meetings with the designated technical working group for this SCD, led by the Ministry of Economy and Finance; these additional meetings were aimed at validating the storyline, findings, and proposed policy options.

The priority areas identified mutually reinforce each other as part of three pathways aimed at maintaining strong and sustainable economic

Figure 50. Top areas for development in collected postcards



Source: Results obtained from postcard collection.



growth and boosting shared prosperity:

(i) increasing economic competitiveness and diversification to sustain strong growth and create jobs by reducing the costs to firm establishment and operation, boosting public and private investment in infrastructure and machinery, strengthening regulation and supervision of the financial sector to ensure its efficiency and resilience, and facilitating modernization of the agriculture sector; (ii) building the assets of the poor and the bottom 40 to facilitate economic mobility by investing in the early years to ensure adequate nutrition and brain development, boosting attainment and learning outcomes in secondary and higher education, protecting them from shocks; and (iii) investing in the maintenance and development of natural capital by adopting a spatially integrated approach and strengthening climate resilience, as well as ensuring the development of competitive, sustainable, and inclusive cities by implementing an integrated urban planning agenda. In addition, a cross-cutting area for development would focus on public financial management and public administration reform to improving quality service delivery and enhancing public sector capacity to implement other proposed reforms (see Table 9).

The relevance of the selected areas for action and proposed pathways has been endorsed during an additional round of consultations with government counterparts and donors.

On February 21, 2017, the pathways, priority areas for development, and concrete policy options in this SCD were presented in a final plenary consultation meeting at the Ministry of Economy and Finance, and convening representatives from all the line ministries and key development partners. There was agreement on the relevance of the ten proposed areas for action, and feedback received during the meeting on some of the proposed policy options has been incorporated to further tailor them to the needs of Cambodia.

These pathways are also consistent with the strategic areas identified in the authorities' ambitious and wide-ranging Rectangular Strategy Phase III but represent a more focused view of the areas that require greater policy attention. The RGC's Rectangular Strategy lays out a broad development agenda, with a framework that includes overarching support for good governance and an enabling environment, along with four "strategic rectangles"—(i) promotion of the agricultural sector, (ii) development of physical infrastructure, (iii) private sector development



Table 9. Cambodia SCD pathways and identified priority areas for development

	Areas for development	Key constraint to growth & twin goals
i. Increasing economic competitiveness and diversification to sustain strong growth and create jobs	1. Reducing the costs of firm establishment and operation (including business environment, informal fees, trade facilitation, electricity costs)	Highest
	2. Boosting public and private investment in infrastructure and machinery acquisition while developing capital markets	High
	3. Strengthening regulation and supervision of the financial sector to mitigate risks from strong credit growth, while building further financial inclusion	Moderate
	4. Fostering agricultural modernization in the aftermath of the commodity price boom	High
ii. Building human assets to facilitate economic mobility and shared prosperity	5. Endowing people with skills by boosting attainment and learning outcomes of secondary and higher education	Highest
	6. Investing in the early years (nutrition, pre-primary education)	High
	7. Protecting households from shocks (OOP in health, DRM, social protection)	Moderate
iii. Ensuring a sustainable growth pattern by investing in natural capital, climate resilience, and sustainable urban development	8. Maintaining and developing natural capital, while strengthening climate resilience	High
	9. Promoting competitive, sustainable, and inclusive cities through integrated urban planning	Moderate
iv. Cross-cutting	10. Public administration and public financial management reform for improved service delivery	High

Source: World Bank staff analysis in consultation with stakeholders.

and employment, and (iv) capacity building and human resources development. The RGC's National Strategic Development Plan (NSDP), 2014-2018, serves as a roadmap for the implementation of the Rectangular Strategy, and ensures that the programs and projects of all ministries, agencies and sub-national authorities are aligned in support of its implementation. Rather than covering all of these areas, the pathways proposed here focus on the key

areas where more attention is needed to address the most critical challenges to maintaining strong and sustainable growth with poverty reduction and shared prosperity.

Toprioritizeinterventionsamongthetenidentified areas for development, this SCD combines a growth diagnostics framework and an asset-based approach. The framework outlined in Bussolo and

Lopez Calva (2014) suggests that identifying critical challenges and priorities for achievement of the twin goals (poverty reduction and shared prosperity) requires identifying constraints to sustained economic growth, accumulation of household assets, and resilience of households (see Box 3). This section of the SCD summarizes these constraints to identify priorities for reducing poverty and boosting shared prosperity. It starts with the identification of constraints to growth using the growth diagnostics framework proposed by Hausmann, Rodrik, and Velasco (2005), followed by a summary of constraints to household assets accumulation and a discussion of constraints to sustainability and resilience to shocks. This subsection filters challenges and risks already identified in sections 4 and 5 through the lenses of these two frameworks for prioritization purposes. The results from the prioritization exercise are presented in Table 9 (see above). The following subsections go in depth through the prioritization of areas for development resulting from the application of the two frameworks. Concrete policy interventions in each of the three pathways are presented in sections 6.2, 6.3, and 6.4, respectively. The areas for development have been ranked based on the impact interventions would have on maintaining strong and sustainable growth and achieving the twin goals, in terms of creating and enhancing households' participation in better economic opportunities, the share of population affected, and complementarity with other interventions. The analysis also considered whether the identified challenges pose an immediate constraint to growth and household economic mobility or are likely to become a constraint in the future.

The areas for development identified as “highest priority” have the largest impact on the twin goals, based on their impact on firms’ ability to create more productive jobs, on sustaining growth, and on raising household income. The analysis of constraints to growth and accumulation of household assets shows that raising educational attainment, learning outcomes, and skills and reducing costs for firms in Cambodia are complementary and the most

critical for both creating better jobs and increasing household incomes. These are prerequisites for Cambodia’s next phase of growth (by maintaining competitiveness and moving to the next phase of economic transformation in production and labor outcomes), yet Cambodia performs poorly relative to its peers in these dimensions. Addressing these challenges have economy-wide effects that amplify their impact on the achievement of the twin goals.

The areas for development identified as “high priority” have a moderate immediate direct impact on the twin goals but form the building blocks for sustained growth and increasing the income-generating capacity of households.

Maintaining and building natural resource capital while strengthening capital resilience, investing in early years, and boosting public and private sector investments in infrastructure are in this category. These factors have high complementarities. Boosting public and private sector investments in infrastructure is complementary to both reducing the costs of operations for firms and modernizing agriculture, for which building natural resource capital while strengthening capital resilience is also critical. Investing in early years is critical for improving attainment and quality of secondary and higher education to build a productive workforce, which is needed both for creating and enhancing household participation in better jobs. Modernizing agriculture has high potential for boosting incomes for the poor and will serve as a foundation for linking the farm sector to non-farm sector. Finally, improving the quality of public service delivery through public administration and public financial management reforms is a key enabler for successful policy interventions in other areas for development.

The areas for development identified as “moderate priority” comprise reforms that may not yet address the most significant constraints but have consequential implications in the long-term, or those that have high but localized impacts, focusing on smaller sub-segments of the population or whose goals can be achieved by



addressing other constraints. Shielding households from shocks falls into this category. Increasing climate resilience, for example, would reduce the impact of disasters on household income, while protecting households from income shocks could also be achieved by leveraging social protection instruments like CCTs to address demand-side challenges when investing in early years or boosting secondary education attainment. At the same time, Cambodia's current demographic profile makes pension reform a moderate priority in the short term. Similarly, urbanization is still incipient in Cambodia and affects a relatively limited proportion of the population, but the building negative externalities (congestion, pollution) pose a significant risk to strong, sustainable, and inclusive growth in the long run.

More detail on the application of the two prioritization frameworks leading to this categorization of priorities, including on the identification of constraints to growth and asset accumulation, is presented in the next subsection.

Constraints to economic growth

A growth diagnostics methodology was used to identify critical constraints to Cambodia's economic growth going forward. As discussed earlier, Cambodia has been among the fastest-growing countries in the world for more than two decades, and its rapid economic growth thus far has been sustained in part by increases in labor force and productivity (from a low base). Now Cambodia is facing rising challenges as a lower middle-income economy. The pace of capital accumulation seems to have been slower than in other countries during fast-growth periods (Vietnam, China, and Thailand), and local entrepreneurship in the manufacturing sector seems to be limited. Growth projections suggest that Cambodia would need to increase its physical and human capital significantly to reach upper middle-income status by 2050. In this setting, the growth diagnostics framework proposed by Hausmann, Rodrik, and Velasco (2005) was applied

to identify key constraints to entrepreneurship and capital accumulation. According to this framework, economic growth depends on the returns to investment, the "appropriability" of such returns (the ability of private actors to actually reap the returns from their investment), and the cost of financing capital accumulation.

Returns to capital in Cambodia are higher than in other countries, but they have been on the decline. Geography seems to have been positively contributing to growth, since Cambodia is located in the fastest-growing sub-region in the world and has been benefiting from the relocation of garment suppliers from China. The focus on low-cost manufacturing has worked relatively well so far with a young and relatively unskilled labor force, but the low levels of secondary and higher education attainment are likely to become a more severe constraint to growth going forward as the economy tries to diversify its export base and move up the value chain in agriculture, manufacturing, and services.

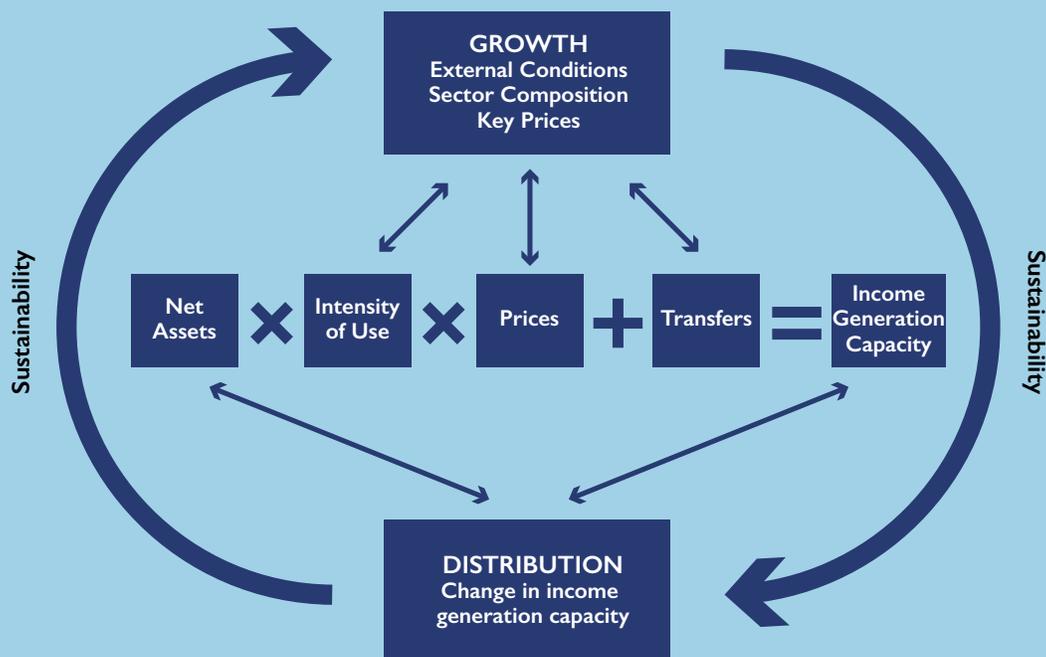
Although not significantly higher than in peer countries, Cambodia does have notable infrastructure constraints, and urbanization is still incipient. As discussed earlier, according to international indices, the transportation and connectivity infrastructure seems to be similar to those of Cambodia's structural peers and competitors but lags behind those of Vietnam and Thailand. The energy generation and transmission infrastructure has expanded noticeably, and reliability has increased in recent years. However, significant geographical differences still exist. Urbanization in Cambodia is incipient, and its pace is slower than in African countries at the same income level. If not well managed, negative agglomeration externalities (such as traffic and pollution) could pose a bottleneck to competitiveness in the future.

A series of bureaucratic hurdles and informal fees hinder the "appropriability" of returns on capital and pose the most immediate

Box 3: Asset-based framework for achieving poverty reduction and shared prosperity

Reducing poverty and improving shared prosperity depend on boosting the income-generating capacity of households. At the macro level, this is determined by how much economic growth creates productive economic opportunities for households to increase their labor income and how social policy affects the distribution of household's assets and hence their ability to partake in the economic opportunities presented by high economic growth, in addition to the transfer of non-labor incomes to poor households. Viewed from the micro level, the income-generating capacity of households is determined by the following four factors: (i) household endowments or stock of assets, including human capital, physical capital, financial assets, natural capital, and social capital; (ii) intensity of use of these assets, meaning the extent to which households are able to use their assets to generate income, including the employment of labor either in formal employment or self-employment; (iii) prices or returns to assets (e.g., interest rates and rents) and wages; and (iv) transfers from the government (social transfers) and remittances (see Bussolo and Lopez-Calva, 2014). The rate and pattern of economic growth determines employment creation and real wage growth, thus directly affecting the intensity of the use of labor assets and their returns, while government social policies also have the potential to alter household endowments or their intensity of use (e.g., by affecting labor force participation).

Figure 5 I. Asset-based framework for achieving poverty reduction and shared prosperity



Source: Adapted from Bussolo and Lopez-Calva, 2014.



bottleneck to sustaining strong economic growth. As discussed earlier, Cambodia is one of the countries in the world in which it is most costly and lengthy to start a business, and entrepreneurs report the largest bribery incidence in ASEAN. On-road informal toll and informal forwarding fees significantly increase the costs of trading across borders. The high cost of electricity adds to these micro-level challenges, significantly eroding Cambodia's external competitiveness, jeopardizing its ability to further unleash entrepreneurship, and reducing the returns on capital by private sector actors. In a moment in which firms are facing a severe reduction in profit margins due to raising salaries and large US dollar appreciation (30 percent vis-à-vis the Euro since end 2014), addressing these constraints is a priority of the highest level, in order to ensure the survival of the existing businesses and facilitate the arrival of a new generation of enterprises.

Overall macroeconomic stability has favored economic activity in Cambodia, but difficulties in scaling up public investment and U.S. dollar appreciation under dollarization could constrain growth going forward. As the economy became quickly dollarized as a result of large foreign aid and capital inflows, the stability of exchange rate of the Khmer riel vis-à-vis the U.S. Dollar has constituted a credible nominal anchor for foreign investors, helping to reduce macroeconomic volatility and maintain low levels of inflation. However, the recent appreciation of the U.S. dollar has eroded Cambodia's external competitiveness and revealed some of the limitations of dollarization: lack of exchange rate flexibility, ineffective monetary policy, and incentives for economic actors to invest in the non-tradable sector (rather than in manufacturing, for example). On the fiscal side, Cambodia has been able to attain fiscal consolidation and presents low risk of debt distress (IMF, 2016). Cambodia would thus have the fiscal space and savings for needed investments; however, severe weaknesses in public investment and asset management limit the ability of authorities to ramp up public infrastructure.

Relatively well-functioning markets in Cambodia are the result of laissez-faire policies, although a series of information failures exist. Information externalities related to the cost of discovery and innovation appear as a potential constraint to growth. Evidence suggests that firms in Cambodia, especially foreign-owned export-oriented manufacturers, undertake little innovation, which poses a challenge to economic diversification going forward.

In the agriculture sector, coordination to address market failures seems to pose a challenge. A positive example is the lack of interventionism in rice and rubber during the commodity price boom, which facilitated strong agriculture growth and faster poverty reduction than in other countries that have been relying on subsidy schemes or price controls. However, access to both inputs and markets for farmers is constrained in terms of connectivity and information. The Cambodia Rice Federation is trying to address some of these market failures, while subsector coordination policies for other emerging commodities (including rubber, cashew, soybean, and aquaculture) are yet to be developed (ADB, 2014). In other sectors, the Cambodia Garment Manufacturers Association and the Cambodia Tourism Association defend sector interests and coordinate directly with authorities on policy and regulation.

Economic growth in Cambodia has been driven by large foreign capital inflows and fast domestic credit growth, while the development of domestic capital markets has been limited. Following Hausmann et al. (2005), the cost of financing domestic investment influences economic growth. The attainment of peace and stability in Cambodia, macroeconomic stability and absence of exchange rate risk, and capital account openness and lack of restrictions have facilitated large FDI and external financing, fueling economic growth. The domestic banking and microfinance sectors have developed very significantly over the past two decades, with increased financial inclusion in terms of credit growth, while access to bank accounts and deposits remains low by international standards. The cost of

financing is not significantly higher than in other developing economies, but since most borrowing is taking place in U.S. dollars, the risk differential incorporated into interest rates is substantial (if compared to borrowing in the United States). Finally, it should be noted that the lack of developed capital markets, with just an incipient stock market and lack of a domestic bond market, means fewer portfolio alternatives for investors, which results in a propensity to invest in the real estate sector, which could result in higher macro-financial risks.

To summarize, factors hindering the “appropriability” of returns on capital, such as high costs of firm establishment and operation, and low human capital appear to be the most immediate constraints to private sector development and sustained growth. In addition, Cambodia would need to undertake a series of structural reforms to sustain strong economic growth in the long run, including fostering investment and savings through public policies and capital market development, supporting innovation, and improving market access in agriculture. While less of a current constraint to growth, there are also opportunities to enhance the resilience of the financial sector under booming credit, promote the use of the national currency to progressively regain exchange rate flexibility, and plan ahead to mitigate emerging urbanization externalities. Figure 52 summarizes the results of applying the growth diagnostics framework by Hausmann et al. (2005), based on the analysis of the different constraints discussed above.

Constraints to accumulation of household assets

In addition to the availability of better economic opportunities, poverty reduction and future upward economic mobility will depend on an increase in the asset base of the poor and near-poor and their resilience to shocks. The key household assets are (i) human capital characterized by household

demographic composition (labor), education attainment, and health status; (ii) access to land; and (iii) financial access (Box 3; Bussolo and Lopez-Calva, 2014). Shocks pose a risk to both the level and productivity of these assets, therefore the nature of risk mitigation mechanisms available to households becomes an important driver of household income-generating capacity.

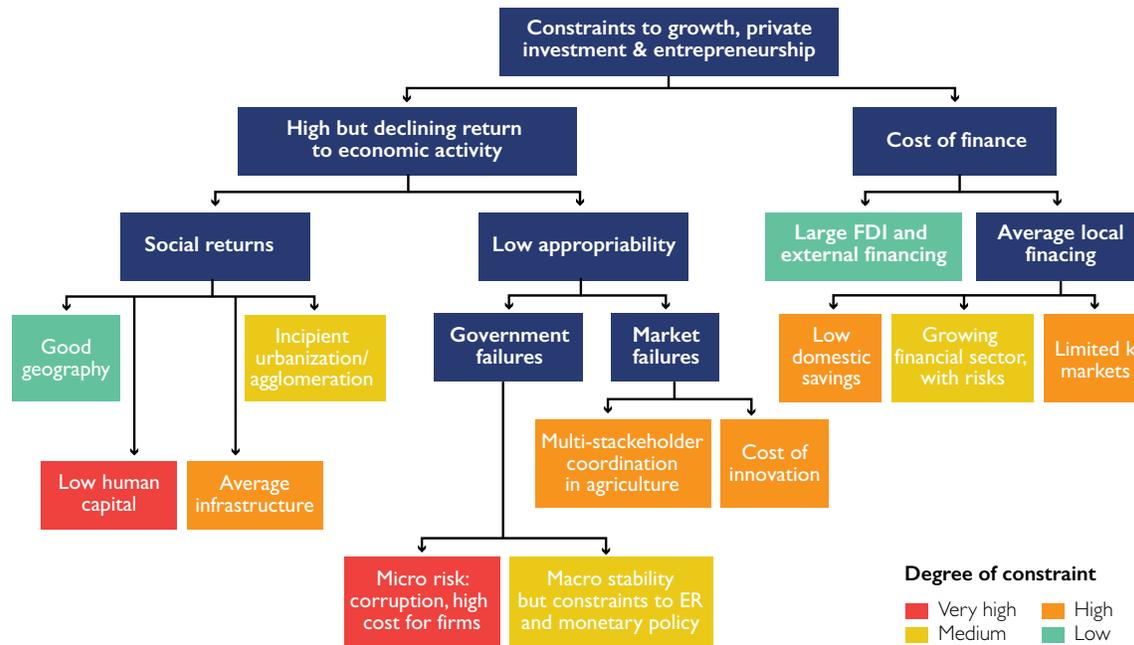
A “ladder of economic success” clearly shows how household asset endowments and low vulnerability distinguish households with high prospects for moving into economic security.

Cluster analysis of the entire welfare distribution was used to pinpoint those characteristics that distinguish the poor and near-poor from the better-off (see Annex 3). The outcomes from the cluster grouping are presented in the “ladder of economic success” for Cambodia (Table 10), which reveals four groups with a different mix of asset endowments, livelihoods, and vulnerabilities. Economic security is highest among households with more assets (mainly high human capital and land) and also with a non-farm source of income (groups 1 and 2 in Table 10). About 37 percent of Cambodians fall into the first category of high human capital and non-farm livelihood, which has the lowest likelihood of being in extreme poverty and highest likelihood of being an emerging consumer class. At the bottom end, the chances of attaining economic security are lowest (15 percent) and those of being moderately or extremely poor highest among the group of households headed by older people with no formal education and with a very small share of household members with secondary education. This group constitutes about 15 percent of the population. Somewhat better off than this group are those sharing similar characteristics but with slightly more land (average 1.6 hectares) and a smaller share of the elderly and female-headed households. These comprise the majority of the population (44 percent).

The ladder shows that low attainment of secondary and higher education is a major



Figure 52. Identification of constraints to economic growth in Cambodia



Source: adapted from Hausmann, Rodrik, and Velasco (2005).

constraint to the economic mobility of the poor and near-poor. In contrast to the most successful group, the bottom groups have much lower secondary education attainment which restricted their potential to obtain non-farm wage jobs. About 76 percent of household members in the most economically secure group have at least lower secondary education, compared to just 17 percent among the least successful group. All households in the least successful group are headed by a person with no formal education. In contrast, all household heads in the most successful group have some formal education. About 61 and 83 percent of households in the top group have a non-farm wage income and a non-farm income source in general, compared to just 35 and 44 percent in the poorest group. As shown in Table 11, the probability of having a wage job is much greater for people with higher levels of education attainment, particularly secondary, vocational, and university education. Returns to education in Cambodia are high and

increasing, particularly for tertiary education, with an additional year of schooling raising earnings by about 5.1 percent a year. Clearly, low secondary school completion among the poor remains a constraint to their economic mobility. Moreover, the gender earnings gap in Cambodia narrows significantly with the attainment of upper secondary education and above. Thus, addressing the low education attainment challenge, as well as improving learning outcomes from secondary education and above, is of highest priority.

Disadvantages in the early years of life are much larger for the poor and prevent realization of their full potential, partly contributing to their lower educational attainment and earnings. Evidence demonstrates that early life under-nutrition, lack of early stimulation and learning, and/or exposure to toxic stress at early ages has an irreversible impact on young children's brain development (Grantham, Fernald and Sethuraman, 1999). In Cambodia, 33

Table 10. Classification of households by endowments, livelihood, and vulnerability (2013)

		Young, high human capital, non-farm households (1)	Young, moderate human capital, large land (2)	Older, low human capital, moderate land owners (3)	Older, low human capital, average land holdings (4)
Economic status	Average daily consumption per capita (2011 PPP)	7.12	5.74	4.54	4.11
	Emerging consumer class (%)	52.2	39.0	20.2	15.8
	Extreme or moderately poor	6.5	15.3	23.7	31.7
Demographics	Household head age	42.4	45.2	48.3	52.9
	Dependency ratio	63.9	74.7	59.5	61.2
	Female household head	0.10	0.11	0.20	0.47
	Share of old age adults	0.16	0.28	0.24	0.34
Household endowments	Household head has no schooling	0.00	0.21	0.00	1.00
	Share of household members with at least lower secondary school	0.76	0.28	0.29	0.17
	Share without land	0.58	0.27	0.26	0.27
	Agriculture land, average among land owners	1.8	2.5	1.6	1.3
Livelihood	Has a household member engaged in non-farm wage job	0.61	0.44	0.42	0.35
	Has a non-farm income source	0.83	0.59	0.58	0.44
	Share receiving remittances	0.23	0.40	0.50	0.55
Vulnerability	At least one household member hospitalized in past 12 months	0.01	0.69	0.00	0.01
	Household borrowed to pay for health expenditures	0.00	0.43	0.00	0.00
Location	Proportion in urban (%)	0.44	0.10	0.12	0.08
Overall share	Group share	36.73	4.44	43.81	15.02

Source: World Bank staff calculations using Cambodia Socioeconomic Survey, 2013.



Table 11. Education determines avenues to better prosperity

	Effect on probability of having wage job	Effect on probability of having full-time wage job
Primary	5.9%	6.1%
Lower secondary	7.7%	7.6%
Upper secondary	20.9%	19.8%
Vocational education	33.6%	26.7%
University	54.6%	52.9%

Source: World Bank staff calculations using Cambodia Socioeconomic Survey, 2014.

percent of the children were stunted in 2014, and are likely to suffer lifelong impacts on educational attainment, productivity, and earnings. In addition, enrollment in preschools in Cambodia, at 17 percent of the relevant age cohort in 2014, remains significantly below the average for lower middle-income economies (26 percent).⁸⁵ Both dimensions define the high inequality of opportunity at the early age. Children in the poorest quintile are more than twice as likely to be stunted than those in the richest quintile (42 percent and 19 percent, respectively) for example. Because children in poor households are less likely to be enrolled in early childhood education, they miss the best opportunity to maximize their development, which dims their labor market prospects and future income-generating potential. Investing in early years as a foundation for success is thus a high priority, especially for providing equal opportunities for all.

With modest land holdings among the bottom groups, degradation of natural resources and high weather variability in the face of climate change emerge as critical constraints to income growth of the poor. Those with higher educational attainment have mostly transitioned out of agriculture so have not been constrained by lack of land, and they are in occupations that are less vulnerable to extreme weather events. However, a

large majority—especially the bottom two groups—still depend on agriculture, yet they have a modest amount of land. On average, households in the bottom group own 1.3 hectares of land, and those in the second lowest group own 1.6 hectares of land. There is limited room for further land expansion. Rather, sustainable management of the natural resources they depend on—land, forestry and water—has become more critical for their survival. The last decade’s expansion in land cultivation led to deforestation which increased soil erosion, thus lowering agricultural productivity. In addition, these households’ livelihoods are highly vulnerable to extreme weather events, and rising temperatures, changes in rainfall patterns, and increased variability have also lowered productivity. Thus, for these agriculture-dependent but land-poor households, modernizing agriculture to increase the productivity of their land and farm profitability, together with increased resilience to climate-related shocks and environmental sustainability, offer the best path to increasing incomes.

Among the asset-rich, high vulnerability to shocks—especially catastrophic health expenditures—have been a drag to achieving further economic mobility. On the cusp of economic security is a second group of people consisting mostly of land-rich households (2.5 ha per household) but with low human capital and high vulnerability to shocks. This small group (4.4 percent

85 World Development Indicators.

of households), which is non-poor but generally economically insecure, was more likely to have experienced a health shock. About 69 percent of households in this group had at least one household member who had been hospitalized in the 12 months prior to the survey, and 43 percent had to borrow to pay for health expenses. High OOP spending seems to have pulled them down. While catastrophic, the share of such people affected is limited, hence this constraint is of moderate priority.

The poorest in Cambodia are also labor-constrained, highlighting the need for strengthening social protection systems, especially for female-headed households and the elderly. The share of female-headed households in the poorest group is very high (47 percent), and one in three of the household members are 65 years of age and above. In the absence of sound social protection and a pension system, these labor- and asset-poor households are vulnerable to falling into poverty or have limited opportunities for upward mobility into economic security. Furthermore, the CSES 2014 reveals that female-headed households face higher levels of food insecurity than men, as 17 percent of them had to engage in activities such as selling household assets, reducing essential non-food expenditures, spending savings, borrowing money, selling house or land, or withdrawing children from school due to not having enough food or money to buy food in the previous 30 days. The risk of inter-generational transmission of poverty is higher in female-headed households. The population ages 16-18 in households with female heads has a lower probability of studying at school, which implies that children in female-headed households are less likely to have access to higher education. An effective pension system and social safety nets would help lift this group of people out of poverty. However, it is important to keep in mind that Cambodia is enjoying a demographic dividend at the moment and has one of the youngest populations in the region, which makes the introduction of a pension system a moderate priority.

Improving public service delivery through strengthening public administration and public financial management will be critical for building household assets, mitigating risks, and delivering agriculture services. Cambodia performs poorly on both the quality and equity of service provision as evidenced by poor learning outcomes, and significant gaps remain in access to services between rural and urban areas. An example of poor learning outcomes is that half of the children in grade 3 could not read at the level required, with the percentage being even higher in rural areas.⁸⁶ Apart from quality challenges, governance challenges are at the core of OOP spending resulting in uneven access to services. This necessitates reforms to equalize and strengthen public service delivery in order to build a strong asset base for households and increase their income-generating capacity. Beyond social sectors, public administration constraints also hamper the ability of effectively expanding access and effectively delivering economic services such as water, sanitation, and electricity. Reforms in this area are thus considered a matter of high priority.

The ladder underscores the importance of building household assets, minimizing household vulnerability, and creating opportunities for growth. There is a clear correlation between education, land holdings, non-farm income, and the likelihood of being economically secure. The profile of the four groups suggests that increasing educational attainment, and the diversification out of agriculture associated with it, offers the highest chances of transitioning into economic security. Secondary, vocational, and/or tertiary education significantly increases the probability of having a wage job. At the same time that efforts are made to foster enrollment in secondary education and above, it is important to invest in pre-primary education, nutrition, and water and sanitation to tackle stunting, an outstanding problem that challenges efforts for human capital formation. This would also require improved service delivery to reduce gaps in access

86 UNESCO, Early Grade School Assessment, 2014/15.



and ensure quality outcomes. For those households who are landowners, agriculture can also be a path to economic security if vulnerabilities are minimized, including those stemming from environmental degradation. Finally, mitigating the impact of shocks by reducing OOP expenditure in the health sector and expanding social protection would be important for supporting household income growth.

6.2 Pathway 1: Increasing economic competitiveness and diversification to sustain strong growth and create jobs

Rapid growth in exports has been an important driver of growth and employment thus far but may not be sustainable in the future unless Cambodia makes the economy more competitive and more diversified. As discussed earlier, Cambodia faces new challenges as a lower middle-income economy and is expected to see a progressive decline in preferential trade treatment and an increase in labor costs, coupled with more intense competition in garments from neighboring countries such as Vietnam and Myanmar. Moreover, under the managed float/peg, the recent U.S. dollar appreciation makes Cambodian goods relatively more expensive in the European markets and vis-à-vis other competitors. In order to sustain strong and inclusive growth, Cambodia would need to enhance its productivity further by increasing competitiveness and diversification. This could be attained through a series of measures, including introducing concerted public and private sector efforts to facilitate firm operations and reduce costs, building the legal framework and the capacity needed for more efficient public investment and asset management to provide infrastructure, facilitating domestic savings as well as investment in the tradable sector (including tourism), strengthening regulation and supervision of the financial sector to mitigate potential crises stemming from fast credit growth, and modernizing the agriculture sector to unleash its food-security and export potential (Table 12).

Reducing the costs of firm establishment and operation, including electricity costs and trade transaction costs

To regain competitiveness in the short to medium run, Cambodia has opportunities to reduce the costs of firm establishment.

First, creating a single window to streamline the procedures and costs for opening a business—which are currently conducted at the Ministry of Labor and Vocational Training, Ministry of Commerce, and tax administration—would help facilitate entrepreneurship as well as the formalization of firms. Other measures aimed at facilitating firm establishment would be reducing or eliminating the minimum capital requirement to be deposited in a bank before the company is registered; removing the obligation to conduct an initial check for uniqueness of the company name and obtain name approval at the Business Registration Department (these checks could be included as part of the back-office review of a request); and abolishing the requirement to have a company seal. Most of these proposed policy options are low-hanging fruits that, with sufficient leadership and institutional enforcement, could be relatively easy to implement in the short run. Full implementation of the online registration system launched by the Ministry of Commerce would help simplify firm establishment procedures.

In addition, improving the overall business environment by abolishing unnecessary procedures and informal fees would facilitate firm operation, including for female-owned businesses which comprise the majority of firms.

A Special Task Force could be created, aimed at reviewing, simplifying, and abolishing unnecessary procedures/licenses and reducing or removing unreasonable fees for all aspects of business operations, including dealing with construction permits, paying taxes, import-export procedures, and registering a property. For example, opening a new hotel business requires obtaining nine

Table 12. Pathway 1: policy options to increasing economic competitiveness and diversification

Pathway	Development priority areas	Selected policy option 1	Selected policy option 2	Additional policy option 3	Additional policy option 4
i. Increasing economic competitiveness and diversification to sustain strong growth and create jobs	1. Reducing the cost to firm establishment and operation, including electricity costs and trade transaction costs	Establish a special task force to improve the overall ease of doing business by abolishing unnecessary procedures and informal fees	Reduce the cost and time for trading across borders by establishing a National Single Window, reviewing Camcontrol's mandate, and establishing a National Logistics Council	Eliminate the minimum capital requirement and remove the obligation to conduct an initial check for uniqueness of company name when opening a business	Lower electricity costs by adopting downward mid-term tariffs and ensuring competitive bidding for large projects
	2. Boosting public and private investment to support the tradable sector	Improve public investment and asset management by passing a PIM Sub-decree and developing project selection and implementation manuals	Develop an internal bond market (including sovereign and private) to facilitate the financing of investment and to regain exchange rate flexibility	Streamline existing investment incentives, shifting from tax holidays into incentives that foster private investment in machinery and research	
	3. Strengthening regulation and supervision of the financial sector to mitigate risks from strong credit growth, while building further financial inclusion	Introduce a Risk-Based Supervision approach through regulation on key objectives and requirements and provision of methodology to the sector	Enhance crisis preparedness and establish a financial safety net, including by establishing an autonomous deposit protection institution	Strengthen macro-prudential regulation, data quality, and oversight measures (including loan classification, MFI guidelines, IFRS adoption)	Adopt digital finance to further increase financial inclusion and boost domestic savings
	4. Fostering agricultural modernization	Facilitate knowledge and technology adoption through farm advisory services, national research councils, PPPs, agribusiness incubator programs, and competitive grants for R&D	Enhance systems for managing quality and food safety, strengthen the linkages between farmers and agro-enterprises, and introduce a coherent approach to 'brand' Cambodian food and agriculture	Enhance the impact and sustainability of irrigation, including by applying clear procedures and adequate financing for O&M, increasing support for water user groups, and facilitating the adoption of alternative small-scale irrigation technologies	Influence the supply and demand for healthy foods, including through incentives, regulations, information, and through the introduction of fortification policies

Source: World Bank staff analysis in consultation with stakeholders.



different licenses from five institutions.⁸⁷ Further efforts to curb the informal fees and gifts expected under regular inspection and when dealing with construction permits, operation and import licenses, and transportation and logistics would also help reduce firm operation costs significantly. In particular, female-owned businesses—which comprise the majority of firms and face additional constraints as discussed earlier—are expected to benefit from a reduction in informal fees and automation of the registration process.

Further gains in trade facilitation and connectivity could be achieved by reducing the costs and time involved in trading across borders. First, potential reforms could include completing the automation of border procedures by establishing a National Single Window, following the removal of unnecessary documentation requirements, such as the Import/Export Permit for non-sensitive goods (which could be replaced with a renewable Import/Export License) and the Insurance Certificate (which is not required in many other countries). Second, Camcontrol's mandate at the border could be reviewed, and it could be established as an autonomous statutory Food Safety Authority reporting to a Ministerial Council to avoid current overlaps with the customs authority in border management. Third, a National Logistics Council (NLC) could be established, supported by a Secretariat spearheaded by the Ministry of Public Works and Transport, and working in close consultation with the relevant business organizations. The NLC could work to improve logistics in Cambodia to support the successful realization of the Industrial Development Policy (IDP) 2015-2025 and to formulate and monitor the implementation of a National Logistics Blueprint to ensure that Cambodia's hard and soft logistics infrastructure supports trade expansion.

⁸⁷ Business registration (Ministry of Commerce), hotel license (Ministry of Tourism), tax registration and VAT number, and tax on sign board (General Department of Taxation), location approval license and permit on sign board (municipality) registration for opening enterprise, establishment ledger, payroll and internal work rule (Ministry of Labor and Vocational Training).

In order to improve energy efficiency and lower electricity costs, a stronger institutional and regulatory framework is needed, including for tariff-setting. Some suggested measures include setting up a declining medium-term tariff policy, regular sharing of technical and commercial performance of energy companies, developing a medium-term system expansion plan informed by public consultation, developing a stronger water planning and licensing system, and ensuring that large projects are competitively procured, with the help of experts and quality advisors. This would help attract greater private sector investments and manage the long-term contingent liabilities associated with investments in energy infrastructure. It will be important to fully assess the environmental and social impacts and externalities of hydro and coal-fired generation, while looking closely at the potential for cost-competitive renewable energy such as solar. In addition, the introduction of smart meters at consumer ends, inter-connection points for distribution companies, as well as SCADA systems in the transmission grid, backed by a well-managed management information system, would improve the efficiency and utilization rate of power systems. Finally, given the smaller size of the power system, a comprehensive policy for expanding regional cooperation with neighboring Vietnam, Lao PDR, and Thailand would help lower system costs, reduce the generation reserve margins needed for the system, and utilize expansive large power assets.

Boosting public and private investment in infrastructure and machinery acquisition while developing capital markets

To sustain rapid growth in the long run, Cambodia needs to boost public investment and capital accumulation while at the same time making its fiscal and monetary policy more effective. Cambodia currently has fiscal space to ramp up public infrastructure projects, which could help compensate for the decline in donor-funded capital expenditure that has taken place since 2011.

However, this would first require strengthening public investment and asset management, given the current reliance on donors and lack of standards and weaknesses in the implementation of government-funded public investment projects. Cambodia could also streamline its existing investment incentives, moving away from tax holidays and into a more targeted incentive system that fosters private investment in machinery and R&D, which would support economic diversification and increased value addition while containing tax expenditure. In addition, promoting the use of the national currency and developing an internal bond market would help provide a higher degree of exchange rate flexibility in the medium run, which would help the economy regain competitiveness in the context of U.S. dollar appreciation under dollarization as well as lower the proclivity to invest in the real estate sector, which is prone to booms and busts. The proposed policy options in this area for development are reforms that need time to be implemented in order to be successful in the medium to long run, except for the investment incentives, which are more of a stroke-of-a-pen reform.

Cambodia needs to build up public investment and asset management to help boost infrastructure in an effective and sustainable way, since it has been mainly relying on donors for such investments thus far. As discussed earlier, Cambodia keeps depending on development partners to build infrastructure, and only small-scale projects are implemented through government funding. An assessment of public investment management found that Cambodia does not have formal guidelines for feasibility studies and project selection for government-funded projects. Moreover, just a handful of ministries have the capacity to build needed infrastructure, and most of them do not seem to have minimum quality standards and implementation manuals in place, as is the case for roads and canals (Minh Le et al., 2017). Strengthening public investment management (PIM) can not only ensure that such investment is allocated to high-return projects but also that these projects

are implemented more effectively. This would require enhancing the institutional framework for government-funded investment through passage of a PIM Sub-decree, the development of project selection and implementation manuals, as well as capacity building at core and line ministries. In addition, enhancing donor coordination, avoiding a piecemeal approach to project selection, and ensuring adequate operation and maintenance budgets would help ensure the effectiveness and sustainability of externally funded projects. Finally, the costs of responding to disasters could be reduced by strengthening the resilience of Cambodia's infrastructure, such as constructing flood-resilient roads, adopting minimum building standards, updating urban plans, and raising the platforms of wells and sanitation facilities to prevent flood waters from inundating them. Cambodia's road asset management system also needs to be strengthened further, which would require more precisely quantifying and justifying budget requirements; prioritizing expenditures for the national, provincial, and local networks; guiding the implementation of maintenance in a cost-effective manner; and monitoring the attainment of articulated goals.

A new Investment Law could help Cambodia adopt international best practices and reduce tax expenditures. Approximately 75 percent of the firms surveyed in the garment, footwear, and other manufacturing sectors did not consider any alternative location to Cambodia in their investment decisions, which would imply that some of the existing investment incentives could be redundant (World Bank, ADB, 2014). Tax expenditure resulting from existing exemptions and incentives is estimated to have amounted to at least 5.7 percent of GDP in 2015 (Stern et al., 2017). This would call for the streamlining of tax incentives in a new Investment Law, as envisaged in the Industrial Development Policy of the RGC. First, Cambodia could consider limiting existing corporate income tax holidays, and moving towards targeted cost-effective measures such as accelerated depreciation, tax deductions, and/or soft loans for the acquisition of machinery



and equipment, investment in R&D, and staff training—this would help increase the productivity of the physical and human capital stock and foster diversification of the economy by encouraging investment into higher value-added sectors. Second, to reduce tax evasion, VAT exemptions on imports could be replaced with tax credits as per international best practice, which would not entail any additional tax burden on investors. Third, Cambodia could consider streamlining the approval process for incentives, removing minimum capital requirements, making incentives time-bound, and granting them to firms instead of on a project-by-project basis. Fourth, further investor protection assurances could be introduced.

The development of a domestic bond market, coupled with measures aimed at promoting the use of the national currency, would help in both fostering domestic savings and progressively attaining greater exchange rate flexibility to regain external competitiveness. Investment into the tradable sector also needs to be fostered, as large capital inflows with limited investment options have contributed to rising speculation biased toward channeling private investment and credits into the non-tradable sector, fueling the construction and real estate boom. Intervention is justified by the fact that construction and real estate often do not have the same impact in terms of recurrent employment that the exporting sector has, and it would also help preserve macro-financial sustainability and prevent bubbles. Developing a domestic debt market (both public and private) and starting to issue sovereign debt can promote domestic and foreign savings mobilization, which will enable scaling up of investment and capital stock accumulation to sustain high economic growth. In the medium run, market measures aimed at fostering the use of the Khmer riel, coupled with the progressive development of capital and bond markets, could help provide sources of long-term funding for the corporate sector and establish alternatives to investment in construction and real estate. Introducing incentives to deposit and save in local currency would also support both higher

investment and progressive de-dollarization. This would ultimately help attain greater exchange rate flexibility and regain monetary policy independence.

Strengthening regulation and supervision of the financial sector to mitigate risks from strong credit growth, while building further financial inclusion

Further enhancing regulation and supervision of the financial sector would help prevent potential negative impacts from rapid credit growth on macroeconomic stability, poorer households, and the environment. While fast expansion in credit has been one of the main factors fueling strong and sustained economic growth in Cambodia, it is critically important to harness the mounting risks, especially those stemming from a potential construction bubble and over-indebtedness. Over-indebtedness is emerging for rural households, in particular, closely linked to the boom of the loosely regulated microfinance sector and other informal/unregulated lending activity such as those under shadow banking and private money lending schemes. In this regard, a set of complementary measures would be aimed at mitigating emerging risks by further strengthening banking and microfinance supervision, introducing a risk-based supervision (RBS) approach, improving data quality and oversight, strengthening macro-prudential regulation, and enhancing crisis preparedness and establishing a financial safety net. Close monitoring of shadow banking and private and non-governmental money lending activity is also important. Finally, a series of measures could be introduced to increase access to deposits and savings, which have been traditionally low in Cambodia. In support to the previous area for development, ideally savings would be channeled through the financial sector into further investment in the economy.

An RBS approach could be introduced to update the existing framework and comply with the latest

international Basel standards. This would require a series of sequential steps. First, technical committees and working groups could be established to take charge of the formulation of the RBS regime, including key country-specific objectives, requirements, and methodology. Second, a concrete road map and action plan for the development of supervisory resources and capacity building strategies could be established to ensure execution of the RBS and other related supervision and operational activities. Third, guidelines for applying a risk-based approach to anti-money laundering and combating the financing of terrorism could be adopted and implemented. Fourth, a reliable system of cross-checks could be set up to support customer feedback.

A series of macro-prudential, data quality, and oversight measures would help strengthen financial sector stability. Such measures include revising the formula for calculating banks' liquidity to capture the time dimension and ensuring consistency in loan classifications across different financial institutions; implementing stricter loan-to-value ratios for the non-productive sector, introducing limits on multiple loans, and introducing loan-size-to-income limits for household lending to prevent speculative bubbles in the construction and real estate sector and over-indebtedness in the household sector. In addition, authorities could consider developing secondary regulations specific to the microfinance sector and adopting lending guidelines to enhance the soundness of the portfolio and prevent predatory lending to households with little capacity to repay. For example, limits on loan size to income could be established, requiring greater provisioning for loans to borrowers for whom repayments represent more than 75 percent of net reported income, and coverage of guarantors and household information in the Credit Bureau of Cambodia (CBC) could be expanded. Finally, enhancing the capacity of financial institutions in accounting and auditing with the aim of full adoption of the International Finance Reporting Standards (IFRS) would strengthen inter alia financial disclosure and financial information transparency.

It will also be important to support crisis preparedness, establish a financial safety net, and strengthen financial inclusion. This would require establishing an inter-ministerial Macro-Prudential and Financial Stability Committee for collaboration among government agencies and ministries as well as strengthening the current crisis management framework in order to better anticipate and manage financial crises. It would also be beneficial to expand access to enable more people to use bank deposits, in conjunction with the development of an action plan for establishing an autonomous deposit protection institution to provide guarantees for deposit accounts in regulated financial institutions, thereby enhancing public trust in the banking system. Greater financial inclusion, together with improved regulation and supervision, would enable Cambodia to further enhance its financial stability, as banks would have a more solid and broad funding base which would reduce the likelihood of large withdrawals, particularly during times of stress (Sahay et al., 2015).

Digital finance could be a way to further increase financial inclusion and boost domestic savings. Cambodia could foster domestic savings by facilitating access to banking services and mobile banking. Authorities could partner with financial institutions to persuade borrowers to establish effective linkages between loans and deposits, particularly by opening and maintaining savings accounts at financial institutions where they borrow funds, since Cambodia has one of the largest proportions of population that borrows money but one of the lowest proportions of population that has deposit accounts at financial institutions. Digital finance is being adopted around the world as a cost-effective mechanism for banks and other financial institutions to reach out to new customers rapidly without the need to set up new physical branches. As part of strengthening the regulation and supervision of the financial sector, Cambodia could focus on enhancing the legal, regulatory, supervisory, and institutional framework that supports financial innovation while protecting consumers. This could be accompanied



by implementation of the national payment system strategy to develop a reliable and real-time payment and settlement system which supports economic development in the country. In addition, to mitigate potential shocks at the household level that would hamper the ability to save effectively, a microinsurance sub-decree could be introduced to help reach the poor and to extend insurance coverage products (life, property, and third-party liability motor insurance) to an untapped pool of people, while improving proper regulations and concrete administrative processing facilities for claims.

Fostering agricultural modernization in the aftermath of the commodity price boom

In the coming years, different sources and drivers of inclusive agricultural growth will need to be nurtured. This could involve a combination of increased irrigation, more diversified production systems, and increased value addition, which would contribute to higher productivity (of labor, land, and water), greater weather/climate resilience, and higher farm income and supply chain employment opportunities. Cambodian agriculture is expected to find it increasingly difficult to compete internationally, regionally, and locally on the basis of low-cost, high-volume production. Cambodia could strengthen the availability of core public goods while strategically aiming to differentiate its agriculture (and agro-industry) on a qualitative basis—reliably delivering higher-quality products and safer food that is more sustainably produced with credible assurances. At the same time, Cambodia's agriculture and overall food system needs to play a stronger role in improving local nutritional outcomes, ensuring that a diverse range of high-nutrient foods is readily available and affordable. Urbanization brings new opportunities yet also major challenges for fostering improved diets, and the state would need to play an active role in influencing both the supply and demand for healthy foods.

Cambodia could intensify agricultural production through irrigation. Irrigation continues to dominate

public and donor spending in agriculture, although it has thus far played only a minor role in fostering agricultural productivity or diversification and is a necessary but not sufficient part.⁸⁸ Institutional mandates and staff incentives need to be shifted from an engineering to a service delivery approach, and focus on ensuring the functioning of existing irrigation schemes. Several measures could help in this regard: better integrate water resource and soil assessments when determining the feasibility of new infrastructure investments, apply clear procedures and adequate financing for irrigation system operation and maintenance, increase technical and financial support for farmer water user groups, support in-field irrigation/drainage investments by farmers, and facilitate the adoption of a range of alternative small-scale irrigation technologies.⁸⁹ In making efforts to intensify production, Cambodia will need to promote good agricultural practices and avoid a trajectory toward excessive use of fertilizer and agro-chemicals, an unsustainable development which has occurred in some irrigated agriculture systems elsewhere in East and Southeast Asia.⁹⁰

Facilitating knowledge and technology adoption would help spur broader productivity gains in Cambodian agriculture. Small farmer knowledge

88 Dry season paddy production accounts for only 13 percent of annual national production. The bulk of Cambodia's expanded fish production has come from farms practicing rice/fish rotations based upon the ebb and flow of natural floods rather than organized irrigation systems. Very little of Cambodia's increased feed and industrial crop production has come from irrigated land.

89 In recent years, there has been a very large increase in donor (loan-financed) irrigation infrastructure investment, yet only a few schemes appear to be applying these principles or directing attention toward these types of priorities. Most irrigation projects focus on rice production, although farmers are increasingly using irrigation on fruit and vegetable farms. Drip irrigation is the fastest-growing irrigation technology in Cambodia; it reduces water and fertilizer requirements, improves yield and quality of vegetables, and reduces diseases. Sprinkler irrigation could also be a way to make better use of water (BD Link, 2017).

90 In Vietnam the effects of increased flooding downstream the Mekong Delta reduced floodplain benefits (declining sediment and nutrient load –also resulting in increased fertilizer and pesticide use), reduced groundwater recharge, and resulted in lower productivity from the third rice crop.

and technology adoption, and the delivery systems for such technologies, lag behind those of other middle-income Southeast Asian countries. Non-traditional and non-state forms of farm advisory and other technical services could be encouraged, including those applying ICT.⁹¹ This includes mixed farming, as well as agro-forestry and agro-fishery, due to their higher incomes, greater resilience, and lower environmental footprint. National quality and performance standards (and other regulations) should be applied for the import, sale, and use of farm machinery, while bottlenecks are removed for the further development of a market for agricultural mechanization services.

Public sector, private sector, and academic institutions could collaborate on applied agricultural research and innovation related to increasing yields, managing animal disease, reducing post-harvest losses, and other critical areas. To increase the availability of improved seed, authorities could introduce more streamlined procedures for plant variety registration and strengthen procedures and capacities related to seed and seedling quality control. Public research centers could focus on supplying high-quality breeder seed levels, while technical and other support could be provided to strengthen and expand seed multiplication and distribution activities by farmer groups and SMEs. A few possible ways to ensure collaboration in agriculture innovation would be: (i) national research councils to prioritize R&D needs, act as clearinghouses for information, and promote transfer of technology programs; (ii) public-private partnerships to address specific innovation challenges (e.g., crop or value chain specific, post-harvest technologies, use of agricultural wastes); (iii) an agribusiness incubator program; and (iv) a competitive grants program to finance collaborative (public/private/academic) research initiatives.

91 This is recognized in the recent Agricultural Extension Strategy released by the Ministry of Agriculture, Forestry and Fisheries.

Strategies of quality differentiation can be pursued further by enhancing systems for managing quality and food safety, strengthening the linkages between organized farmers and agro-enterprises, and introducing an overall coherent approach to ‘brand’ Cambodian food and agriculture. The latter would also have positive spillovers for tourism. Experience from elsewhere—including neighboring Thailand and more distant Chile and Kenya—illustrates that most of these areas require very close collaboration among government, the private sector, and NGOs as well as considerable investment in both hard (warehouses, cold chain logistics, food packing, processing facilities) and soft (certification and traceability, farmer organization, industry codes of practice) infrastructure. Recent Cambodian successes in implementing export strategies for specific commodities (high-quality rice and pepper) illustrate the potential of such public-private collaboration. For some commodities, the opportunity to process and add value locally may increase as output expands, yet the general and specific enabling environments for investments in those sub-sectors need to be improved (e.g., cashew nuts)⁹². To support SME agribusiness development and ensure inclusive agricultural growth, Cambodia can adapt institutional models that have worked elsewhere, including agribusiness incubation, farmer-enterprise productive alliances, and contract farming systems.

At the same time, Cambodia’s agriculture and overall food system should play a stronger role in improving local nutritional outcomes, ensuring that a diverse range of high-nutrient foods is readily available and affordable and that consumers are aware of the importance of these in their diets. Cambodia’s food security strategy has long focused on increasing rice productivity and output. This remains important, although

92 Existing cashew orchards produce an estimated 60,000 to 100,000 tons of raw cashew nuts each year, making Cambodia the tenth largest producer in the world. However, most of it is exported unprocessed to Vietnam (BDLink, 2017).



the country now enjoys a large rice surplus at the national level, and with consumption leveling off, the bulk of any increase in the future will go toward exports.⁹³ Dietary diversity and other food quality goals should be made explicit in national agricultural programs, strategies and medium-term targets. Nutritional concerns and opportunities should be mainstreamed into programs of agricultural research (e.g., bio-fortification), extension (e.g., including nutrition awareness modules in farmer training, education on the production of non-staple crops), land use programming in irrigation schemes, public procurement (e.g., for school lunches and civil servant canteens), and other spheres. In Cambodia, the mainstreaming of rice fortification policies is challenging, due to the fact that large mills only account for a small share of domestic sales and a large proportion of the poor (and malnourished) either consume their own rice or buy from local small mills. In that sense, alternatives that could be promoted would include making fortification of commercialized vegetable oil or rice noodles mandatory (where there are likely to be less dominant players), provide fortified kernels that can be combined with unfortified rice at the point of use (e.g., in schools or public hospitals), and investment in R&D and commercialization efforts for bio-fortified rice varieties. Urbanization brings new opportunities yet also major challenges for fostering improved diets. The state should play an active role in influencing both the supply and demand for healthy foods through regulations (e.g., healthy eating, street food hygiene), information campaigns (e.g., on labeling, food content, advertising), support for peri-urban and community vegetable production, and the maintenance or upgrading of marketplaces where lower-income groups buy their food.

93 For farmers growing rice predominantly for subsistence, further productivity gains—especially through use of better seeds and improved soil management—will enhance household and local community food security.

6.3 Pathway 2: Building human assets to facilitate economic mobility and shared prosperity

A second pathway is to build the assets of the poor and near-poor to facilitate their participation in the growth process while also protecting their gains. Stronger human capital is crucial not only for enabling people to take up better job opportunities in the non-farm sector but also for facilitating economic diversification and job creation. Cambodia has the opportunity to improve the quality of learning and increase educational attainment in order to boost shared prosperity and increase the chances of the poor and economically vulnerable to attain economic security. Such jobs may not be aligned with the diversification and competitiveness strategy but instead would provide economic opportunities to the large share who will remain outside the global value chains. Emerging priorities for achieving this goal are a new focus on investing in the early years of children and increasing the transition to and completion of high-quality secondary and tertiary education as well as TVET. This would also require improvements in public service delivery and could be complemented by strengthened and expanded social protection systems not only to mitigate vulnerabilities but also to equalize access to high-quality education and improve nutrition outcomes for the poor (Table 13).

Endowing people with skills by boosting attainment and learning outcomes of secondary and higher education

Attainment of higher education is a prerequisite for improving economic prospects, particularly for the land-poor whose primary asset is labor and for women. Attainment of secondary education significantly enhances one's ability to get a non-farm wage job, and those who completed at least secondary education are also more productive in agriculture. Reducing gender gaps in higher education attainment, particularly at the upper

Table 13. Pathway 2: policy options for building human assets

Pathway	Development priority areas	Selected policy option 1	Selected policy option 2	Additional policy option 3	Additional policy option 4	Additional policy option 5
ii. Building human assets to facilitate economic mobility and shared prosperity	5. Endowing people with skills by boosting attainment and learning outcomes of secondary and higher education	Effective implementation of the Lower Secondary School Effectiveness Standards (LSSES) to improve learning outcomes	Increase the autonomy of Higher Education institutions and improve accreditation and quality assurance mechanisms, introduce incentives to prioritize STEM subjects and support research activities	Change the incentives for investing in more education by the poor and make education more affordable for the poor, including by improving the existing school grants and national scholarship program	Get a baseline measurement of existing TVET training programs and the skills gap, subsidize the private development of industry-specific training centers	
	6. Investing in the early years	Ensure children are well-nourished, including by implementing the Fast Track Road Map for Improved Nutrition, leveraging social and behavior change communication, and incentivizing the consumption of early years services	Expand access to opportunities for early learning, stimulation, and child development through non-institutional modalities, including by training community preschool teachers	Use CCT as an instrument to potentially leverage Health Equity Funds to cover identified packages of nutrition services (to women, children) and improve information on nutrition provided by health professionals	Fund and implement the National Action Plan for Rural Water and Sanitation, expand piped water service in rural areas by setting up incentives for private operators	
	7. Shielding households from shocks	Reduce out-of-pocket expenditures related to health shocks by improving and further promoting Health Equity Funds and by expanding eligibility to other vulnerable population groups	Revise and strengthen the ID Poor targeting system as the platform for expansion and consolidation of a social protection system for the poor and vulnerable	Establish targeted conditional cash transfer programs to shield the vulnerable population and also foster desirable behaviors such as school attendance or improved nutrition practices	Consolidate existing pension schemes	Reduce exposure to natural disasters through risk-sensitive planning and design, enhancing risk assessment capacity, and improving disaster preparedness capability and rapid fiscal response

Source: World Bank staff analysis in consultation with stakeholders.



secondary level, is also crucial for reducing the gender disparities in earnings and job quality described earlier. Addressing both supply- and demand-side constraints to access to education is key. One demand-side priority is to change the incentives for investing in more education by the poor and to make education more affordable for them so that poor people do not have to choose between immediate survival and continuation of their children in school, which appears to be the case for the majority of children who drop out of secondary school for income reasons. Without addressing such factors, access to education will remain unequal, with the poor less likely to benefit. Sohensen et al. (2016) show that secondary education spending in Cambodia is not yet pro-poor, partly a reflection of the availability of secondary schools in better-off areas but also a reflection of inequality in access to those schools between the poor and non-poor within the same areas.

To create an equitable secondary education system, the existing school grants and national scholarship program need to be improved.

Households continue to pay large sums of money to send children to secondary school, which has led to inequalities in school resource distribution between relatively rich and relatively poor school areas and households. Ensuring equitable access to quality secondary education for those from poor households—especially for females—requires policy action. Policies should include: (i) prioritizing pro-poor school grants to narrow the school resource gap between schools and households in different socio-economic strata and (ii) revising the national scholarship program by changing the targeting methodology to be more equitable and increasing the amount and number of scholarships to maximize its impact.

In order to strengthen the system of education service delivery, effective implementation of the Lower Secondary School Effectiveness Standards (LSSES) is needed. This policy option is enhanced by providing additional school grants and

ensuring that schools have financial autonomy. The LSSES would hold schools accountable for student learning through: (i) strengthening school-based management, which engages different stakeholders at the community, district, and provincial levels who monitor and support school functions; (ii) improving teaching quality, with a focus on providing high-quality in-service teacher training, mentoring systems at the school level, and strong technical and pedagogical support to teachers; (iii) providing good teaching and learning materials based on the needs of each school, which can be accomplished through school grants; and (iv) providing conducive learning environments for students, which will increase achievement and decrease dropouts. A pilot intervention for this policy option will be implemented in select lower secondary schools through the Secondary Education Improvement Project (2017-2022). In the coming years, the challenge will be to expand the implementation of LSSES from the pilot phase to nationwide implementation.

The quality and relevance of tertiary education can be improved through strengthened accreditation and quality assurance mechanisms and by more active use of public resources to encourage STEM subjects.

First, the RGC should provide academic and non-academic autonomy to public higher education institutions (HEIs). Public HEIs should be able to set or change curricula, raise adequate revenue, and develop full-time, high-quality faculty without undergoing external approval processes. Second, in return for increased autonomy at the institutional level, the management of public HEIs should be reformed and held legally accountable through accreditation and quality assurance mechanisms. HEIs should be supported to make their management legally accountable in terms of governance, financial management, and human resource management. Institutional accreditation should begin when the RGC approves revised Accreditation Council of Cambodia (ACC) quality standards, including new guidelines and procedures. Internal Quality

Assurance capacity should also be developed at each HEI, closely supported and monitored by the Department of Higher Education. Third, public HEIs should provide the RGC with more and better information on the quality and relevance of education provided to students, which the RGC should make publicly available. This can be achieved by expanding the pilot graduate tracking survey at the Royal University of Phnom Penh to other public HEIs. Data should track employment outcomes of graduates, such as time to find job, type of job found, earnings, and career progression. Based on international experience (e.g., the National Exam of Student Performance in Brazil), standardized assessments of tertiary student achievement (e.g., Brazil, see OECD, 2013) should also be introduced to ensure the competency of graduates. Fourth, given that just 12.5 percent of registered students in HEIs in Cambodia pursue higher education studies in science, technology, engineering, and mathematics (STEM) subjects, public resources could be used to prioritize STEM fields by incentivizing both HEIs (through funding) and students (through grants and fellowships). Finally, it will be important to upgrade and expand research facilities, as well as increase the overall R&D expenditure envelope.

Better matching the supply of skills training with employer demand, including strengthening the role of intermediaries, is also priority for improving education more generally. While improving educational attainment will help develop better-educated students in 15 years' time, foreign and domestic investors currently struggling to compete and expand exports will need skilled labor—particularly mid- and high-skilled workers—over the next decade. As labor costs rise, labor productivity must increase through the development of workforce skills that are aligned with Cambodia's diversified industrial strategy. Given the discrepancies between formal skills statistics and the perceptions of businesses, getting a baseline measurement to assess the additional remediation and training programs needed at the level of private sector operators and intermediaries (such as business

associations or an SEZ) is an important first step.⁹⁴ To ensure that the skills development strategy is aligned with market demands and that the TVET offered is relevant for both students and entrepreneurs, private sector employers can play a stronger role in working with skills intermediaries such as associations and training organizations. Specifically, the professional associations and other intermediaries could serve as knowledge aggregators and implementers of training programs and professional certifications for different skill levels, based on the needs of the employer at the sector or firm level. In cases where intermediaries are weak, provision of incentives for in-house training of mid- to high-skilled workers could be another potential avenue to explore. Greater coordination among public entities is also important as the RGC aims to strengthen its human resource capacity and develops the new National TVET policy framework.

Training centers for industry-specific skills which take into account the different labor market situations facing men and women could play an important role in equipping workers with the necessary skills. The RGC and development partners could subsidize the development of industry-specific training centers to ensure that training is aligned with employers' needs and also with industry and growth trends, but with a sustainable model of cost sharing for the delivery of training with employers and workers/students. These training centers should be designed and operated with an awareness of the different situation facing men and women in the labor market and should cover the spectrum of industries, including female-dominated sectors such as garments and tourism. The training format should also address specific issues of transport and

94 The 2013 Enterprise Survey reports skills deficits across the skills spectrum, with the most serious shortages in managerial skills, despite the fact that business studies are the most demanded in tertiary education. This paradox may relate to quality issues. A range of skills are also reported missing, ranging from standard numeracy, literacy, and vocational skills to the less-recognized work attitude (low-skilled) to decision-making (semi-skilled) to analytical (high-skilled), each with serious implications for productivity and absorptive capacity.



care and the stark occupational segregation, both in terms of sectors and in terms of levels within an industry.

Investing in the early years

Investing in the early years would help prevent constraints on children's development. This requires getting children into school early and hence at the prime time for brain development, providing them with an adequate learning environment, and ensuring that they are well-nourished. The high degree of women's labor force participation and migration are critical for household income—and the country's growth more generally—but also pose challenges to reducing malnutrition and stunting, as discussed earlier. Improvements in the accessibility and quality of childcare are thus important for tackling malnutrition as well as lowering the trade-offs facing young women between childcare and work. Evidence-based nutrition-specific interventions targeting vulnerable children could include fortification, supplementation, and behavior change communication, and nutrition-sensitive interventions could support improvements in households' water supply and sanitation. This would ideally be combined with the promotion of early childhood education and other multi-sector initiatives.

Results-based mechanisms could be used to stimulate the availability and quality of the package of nutrition services outlined in the Fast Track Road Map for Improving Nutrition (FTRM).⁹⁵

⁹⁵ The Fast Track Road Map for Improving Nutrition (2014-2020) outlines five packages of nutrition interventions to be delivered at scale: (i) Nutrition counselling during antenatal care; (ii) micronutrient supplementation and deworming for mothers and newborns; (iii) treatment of severely wasted children; (iv) micronutrient supplementation for prevention and treatment strategies; and (v) behavior change communication focused on the 1,000 day window of opportunity. Three additional activities are proposed to enable the scaling up of these packages: (vi) remove financial and human resources barriers to scale up efficient interventions; (vii) leverage support through other ministries and initiatives; and (viii) improve nutrition data in existing information systems.

There has been limited progress on the series of high-impact nutrition interventions in Cambodia's strategy thus far in terms of operationalizing the FTRM, achieving high coverage, and improving the quality of these services. Authorities can leverage its existing platforms, such as HEFs and Service Delivery Grants (SDGs), to help improve health worker motivation, knowledge, and competencies to deliver nutrition services. SDGs can serve to measure and reward health worker performance on nutrition in institutional and outreach settings, while HEFs provide a results-based payment mechanism for institutional services in paying health facilities for delivery of pre-defined 'packages' of nutrition services.

Financing could be scaled up for social and behavior change communication aimed at harmonizing nutrition-relevant messages across sectors. While Cambodia has made progress in improving rates of early and exclusive breastfeeding, there are barriers to improving nutrition in the early years, such as the persistence of traditional maternal care and complementary feeding practices, the rapid rise of formula feeding, and practices related to the underlying drivers of malnutrition such as hygiene, sanitation, and responsive parenting and caregiving. Relevant ministries (e.g., Health; Rural Development; Education, Youth and Sports) have prepared the necessary strategies and action plans to promote the provision of social and behavior change communication,⁹⁶ but these remain almost exclusively delivered through external financing with very limited availability of domestic resources. Achieving improved, sustainable nutrition results will depend on the state taking over to finance the scaling up of strategic actions through mass media, community, and inter-personal mechanisms.

⁹⁶ FTRM prioritizes a national campaign for infant and young child feeding. The Ministry of Health is currently updating the Infant and Young Child Feeding Strategy to include breastfeeding. The Ministry of Rural Development has prepared the National Strategic Plan for Rural Water Supply and Sanitation 2014-25 which includes behavior change communication as a key strategy, supported by National Guidelines for Behavior Change Communication for Rural Sanitation and Hygiene and Cambodia.

Demand-side incentives can be leveraged to stimulate behavior change and consumption of essential early years services. Interventions such as early years-targeted cash transfers, transportation allowances, and community-level incentives (such as to commune councils/commune social funds) can reduce barriers to access and complement supply-side improvements in the availability and quality of services as well as provision of information. The new Social Protection Framework for Cambodia includes a cash transfer or stipend for poor pregnant women and children, although financing for the activities outlined in the framework has not yet been identified. In addition to reducing poverty and vulnerability, safety nets such as CCTs can have an impact on nutrition if interventions are designed with that objective and target group in mind. Evidence from a CCT pilot in Cambodia points to the ability of such programs to incentivize greater use of public health services, as well as HEFs, which continue to be underutilized by large numbers of eligible beneficiaries. Under HEFs, MOH has provided transport allowances for identified poor beneficiaries seeking services at referral hospitals, removing access barriers and improving utilization of hospital services. Extending the HEF transport allowance benefit to cover the receipt of identified packages of nutrition services, at either the health center or referral hospital level, would help remove both physical and economic access barriers to service utilization. Likewise, in the medium term, opportunities to utilize results-based incentives for communes to promote the achievement of early years results could be explored.

Non-institutional modalities could be used to expand access to opportunities for early learning and stimulation. The Ministry of Education, Youth and Sports (MoEYS) established minimum standards for the Home Based Care/Parental Education Program and Community Preschool, and MoEYS is implementing the standards under the Secondary Education Sector Support Project funded by the Global Partnership for Education. The challenge in the coming years is to expand the program's

implementation in rural areas. This expansion could be done by training community preschool teachers; providing community preschool facilities and teaching equipment; providing training to mothers on nutrition, caring during pregnancy, and caring of small children from 0 to 3 years old; and improving the data system for sub-sector planning and monitoring.

To improve the provision of water and sanitation services, measures could include establishment of a well-funded program for implementation of the National Action Plan for Rural Water and Sanitation (NAP), expansion of piped water service in rural areas, and capacity building for water operators to improve service performance and efficiency. Emerging evidence suggests that access to water and sanitation is an important factor for improving child nutrition. As such, jointly providing water and sanitation services in the same areas, i.e. geographical convergence where other nutrition-specific and nutrition-sensitive services are provided, will optimize nutrition outcomes. Although the Ministry of Rural Development has prepared a five-year NAP, the Plan has not been funded, so implementation largely depends on external partners. Setting up a program along with financing for implementing NAP targeting of nutritionally vulnerable areas would bring more tangible results on child development. The Ministry of Industry and Handicraft has committed to key reforms in public water utilities and put a regulatory framework in place to support and attract the private sector to the water sector. Bringing more investment to public utilities and setting up financial incentives for private operators to expand network areas would help expand access to the piped system in rural areas.

Protecting households from shocks

Measures aimed at mitigating shocks and building resilience would help shield household income and prevent households from falling into poverty. Over time, the share of near-poor and economically vulnerable households has risen



significantly even as extreme poverty has declined, with limited mobility into higher economic status where households are secure. As discussed earlier, catastrophic health expenditures are a major concern—households with more people ages 65 and above, especially female-headed ones, are much more likely to be at the bottom of the socioeconomic ladder in Cambodia, and the country has the highest number of people exposed to flooding in a year. To help reduce vulnerabilities, some policy options include significantly reducing OOP expenditures related to health, mitigating impacts of weather shocks, and fully developing a pension system to minimize old-age vulnerability and mitigate the loss of labor income, particularly among female-headed households and the population dependent on non-wage income. In addition, exposure to natural disasters could be reduced through risk-sensitive planning and design, while further efforts could aim at enhancing risk assessment capacity (including modernization of the country’s hydromet systems) and improving disaster preparedness capability and rapid fiscal response. Finally, the establishment of targeted CCT programs could both shield the vulnerable population and foster some desirable behaviors such as school attendance or feeding habits to fight stunting.

Stratified expansion of HEFs to cover more vulnerable groups—such as the disabled, elderly, children, and eventually near-poor informal sector workers—will improve financial protection against catastrophic health expenditures in the country. Over the last decade, HEFs have been the main mechanism for improved financial protection for the poorest quintile of Cambodia’s population, with major gains in access, utilization, and impoverishment indicators. As a next step, stratified expansion of the system, wherein a deeper benefit package is made available for the poor while some basic protection is also extended to other vulnerable groups, would contribute to progress toward universal health coverage and reduction of risk for impoverishing health shocks. In addition, HEFs could be leveraged to introduce

further improvements in health service delivery, such as building provider competencies and supply-side readiness for quality antenatal, emergency obstetric, and neonatal care, in order to tackle maternal mortality.

Strengthening of the ID Poor targeting system underlies any expansion of safety net coverage for the vulnerable. The ID Poor tool for rural areas, which is now several years old, should undergo a careful revision to ensure that criteria remain relevant, that community selection mechanisms are designed to avoid elite capture to the extent possible, and that grievance redress mechanisms are built into the system, with the potential for programs to supplement information to the ID Poor in addition to the surveys undertaken every three years. The ID Poor process would need to allow for “post-identification” of poor families, with a carefully designed mechanism that could be adopted by any of the numerous programs on the ground such as the HEFs, which are currently using their own identification mechanisms but have no ability to communicate those findings to the ID Poor. In the future, a strengthened ID Poor system, which includes not only a list and ranking of the poor but also of the non-poor and is linked to a civil registry system, could potentially be used as the basis for all public sector-led safety net programs including social pensions and other forms of social insurance, CCTs, and disaster response.

A CCT program would provide a valuable safety net for poor families, softening the impact of shocks, improving health and nutrition outcomes through knowledge and incentives, and leveraging supply-side investments such as the HEFs. Several vulnerable groups lack access to safety nets. For example, families with small children are not specifically targeted by any existing safety net program, but they remain one of Cambodia’s vulnerable groups as evidenced by high levels of stunting, particularly in poor, rural areas. In addition, although most safety net programs are focused on the elderly and disabled, there is scant evidence

that they actually reach their intended beneficiaries. A CCT could provide a much-needed safety net for the poor and could be used as a delivery vehicle to consolidate a number of schemes (e.g., public pensions for the elderly poor, support to the disabled, support to poor households with pregnant women and/or small children). A CCT also has the potential to be expanded to include other vulnerable groups like the near-poor, particularly in times of crisis or in response to shocks where this group is more apt to fall back into poverty. The ID Poor targeting system should be the main tool for identification of beneficiaries, but reforms to the system to make it more adaptive and responsive (i.e. to potentially include new entrants if they are identified as poor by programs such as HEFs or the CCT) are necessary.

In preparation for aging, pension reform is needed, starting with harmonization of the different ongoing schemes with the aim of achieving full portability. Cambodia faces two key challenges in its effort to establish a public pension system: (i) existing programs only cover those in the public service and uniformed forces and are highly fragmented between government agencies and departments, with weak enforcement of contribution requirements, and (ii) the National Social Security Scheme being considered is designed in a way that will be appropriate for only a fraction of Cambodians. A strategy for assessment of the public pension system could entail the following: (i) taking stock of all public service pension arrangements and developing a roadmap toward harmonization; (ii) evaluating the labor market, country demographics, and poverty prevalence against the draft National Social Security Scheme, with the objective of establishing an umbrella platform for social security provisions that accommodate the varied conditions of workers in the formal and informal sectors; and (iii) evaluating the rationale and fiscal space for a special assistance scheme for the poor elderly and building on the registry and targeting mechanisms being considered for the broader population to support it. Targeted cash transfers to the elderly living in poor households would be needed, building upon a

registry and targeting system and ideally based on the ID Poor targeting system.

A comprehensive disaster risk finance strategy or policy is needed to help systematically manage the financial impact of natural disasters and improve capacity for rapid financing responses following disasters. This would help secure adequate funding for the Cambodia Food Reserves System (already established by authorities) and the budget for immediate response to disasters instead of relying heavily on international donor assistance for response, relief, and recovery. Tapping into a strengthened ID Poor targeting system would then facilitate the delivery of relief support to those who are most vulnerable and affected by catastrophic events.

6.4 Pathway 3: Ensuring a sustainable growth pattern by investing in natural capital, climate resilience, and sustainable urban development

A third pathway is to ensure a sustainable growth pattern by investing in Cambodia's natural capital and sustainable urban development, while strengthening climate resilience. As discussed earlier, improving the sustainable management of natural resources will help maintain future economic growth and poverty reduction through both products and ecosystem services that sustain other economic activities. While urban development has contributed substantially to growth and poverty reduction, Cambodia's natural resource base has been significantly degraded over the last two decades due to unsustainable economic activities and management practices. Rapid and poorly planned urban development has contributed to increased water and air pollution and heightened cities' vulnerability to the impacts of climate change. Compounding these issues are expected changes in the water regime in Cambodia from the Mekong River, with impacts from upstream hydropower development and increased water use for agriculture



and domestic needs. Authorities therefore face several critical decisions on the tradeoffs in supporting its food, energy, and water needs in both rural and urban areas while also conserving its natural systems.

Given the interlinked nature of natural ecosystems and man-made urban environments, addressing these challenges requires spatially integrated approaches to natural resources management and urban planning. For natural resources, this means taking into account the challenges related to modernizing agriculture, improving fisheries, expanding and sustaining tourism, and developing hydropower within a specified area or landscape, in coordination with investing in managing and restoring degraded forests and aquatic ecosystems and strengthening resilience to climate change and natural disasters. For urban planning, this means developing a long-term strategy for implementing reforms across various urban sectors, including water, sanitation, transport, and disaster risk management in a specified city, covering its central urban areas, urban poor settlements, and peri-urban areas. By adopting a comprehensive rather than piecemeal approach, Cambodia will substantially strengthen its capacity to achieve its growth and poverty reduction objectives in the Rectangular Strategy along with its climate adaptation and mitigation commitments in its Nationally Determined Contribution (NDC), (Table 14).

Maintaining and developing natural capital, while strengthening climate resilience

Increased support for implementing and scaling up Cambodia's existing national-level reforms and programs on natural resources and climate change would go a long way toward preserving the country's natural capital. Cambodia has taken several steps in this regard, including submitting its NDC to the UNFCCC and ratifying the Paris Agreement, along with adopting a number of national laws and policies such as the National Strategic Plan on Green Growth and National Action Plan for Disaster Risk Reduction. However, some of these efforts are still in

the early stages of implementation and face a number of legal, institutional, technological, financial, human resources, and information challenges which now need to be addressed at a larger scale. In particular, the development of targeted public expenditure programs would help address gaps in financing the RGC's national strategies, action plans, and practices related to natural capital and environmental services management, climate change, and green growth, and to increase investment and capacity support for local authorities for implementation. To reduce the high costs of unsustainable economic activities, it is also recommended to develop a comprehensive process for information management and institutionalize the conduct of EIAs and SEAs for all public and private projects that are likely to impact the environment and livelihoods.

Specific to the forestry sector, further institutional and investment support is needed to combat deforestation and move toward sustainability. Cambodia has developed a National Forest Programme (NFP), National Protected Area Strategic Management Plan (NPASMP), and National REDD+ Strategy and recently announced that it will apply a conservation corridor approach to the management of its forest landscapes. For the conservation corridors, support will be needed to develop a strategic plan and policy framework for their management, strengthen co-management with communities and across different sectors, develop a zoning plan for land use and tenure within the corridors, implement sustainable livelihoods, improve governance and law enforcement, and create a long-term financing mechanism for forest landscape management. The establishment of partnerships with industry champions would encourage the private sector to adopt more sustainable forms of forest use in their operations. Meanwhile, in support of the NFP and NPASMP, efforts should focus on measures that improve sustainable management and conservation in protected areas and forests. Particular attention should be paid to those located in upstream watersheds critical for controlling erosion and sedimentation that have

Table 14. Pathway 3: policy options for investing in natural capital, climate resilience, and sustainable urban development

Pathway	Development priority areas	Selected policy option 1	Selected policy option 2	Additional policy option 3	Additional policy option 4	Additional policy option 5
iii. Ensuring a sustainable growth pattern by investing in natural capital, climate resilience and urban development		8. Maintaining and developing natural resources through a spatially integrated approach, while strengthening climate resilience	Integrated approach to natural resource management, considering challenges related to modernizing agriculture, improving fisheries, developing hydropower, restoring degraded forests, managing water resources, and strengthening climate resilience	Support NFP, NPASMP, and REDD+ implementation to improve sustainable management and conservation in protected areas and forests	Address gaps in financing in approved national-level plans related to natural capital and environmental services management, climate change, and green growth	Improve implementation of Integrated Water Resources Management (IWRM) through further support to information systems and capacity building
		9. Promoting competitive, sustainable, and inclusive cities through integrated urban planning	Implement an integrated urban planning agenda that brings together land use and disaster resilience plans with investments in transportation networks and water and sanitation infrastructure	Develop a centralized sanitation network along with support for decentralized and on-site sanitation solutions	Implement solid and liquid waste management solutions, including developing sanitary landfills and exploring the feasibility of constructing waste-to-energy plants	Reduce congestion and pollution through investments in transport infrastructure, services, and land use planning
						Upgrade poor urban settlements through improved service provision (drainage, trash collection, and water and electricity connections), provision of affordable housing

Source: World Bank staff analysis in consultation with stakeholders.



negative impacts on downstream users, agriculture, fisheries, and hydropower as well as weaken resilience to flooding. Proposed policy options include expanding alternative livelihood opportunities from non-timber forest products and eco-tourism, developing sustainably managed plantations for fuelwood and timber, bringing natural forests under certified sustainable forest management, carrying out environmental education activities to raise awareness on the benefits of conservation and sustainable management, and setting up payment for ecosystem services (PES) schemes to enable forest communities to be compensated for erosion prevention provided by forests. It will also be important to improve land tenure and land use rights for all rural sectors (including forestry) to support local and foreign private investment and ensure that villagers and small producers do not lose their livelihoods base.

The management of Cambodia’s water resources and highly productive fisheries also requires stronger implementation of its existing plans, policies, and practices for the Mekong River and Tonle Sap ecosystems. As a first step, it is recommended that Cambodia continue to improve the implementation of Integrated Water Resources Management (IWRM), particularly through further support for its water information systems and local government capacity building, as part of the ongoing decentralization process. Given the complexity of addressing aquatic resource challenges, a range of sectors should be engaged in IWRM, including agriculture, industry, urban development, energy, environment and governance. For instance, in managing the Tonle Sap, priority measures could include improving sustainable forest management in upstream watersheds, reducing agriculture pesticides runoff, and supporting the development of alternative livelihoods such as aquaculture and vegetable growing. Likewise, it is recommended that Cambodia develop sub-basin plans and a “Mekong Delta Plan” that takes into account trade-offs between sectors, climate and development uncertainties, and the cross-boundary impacts of national development

initiatives. Specific activities in the Mekong could include further investments in small-scale irrigation facilities, construction of hydraulic structures with effective fisheries impact mitigation features in appropriate areas for flood control and stream flow management, and improvements in upstream industrial pollution and domestic sanitation management. In particular, strategic planning for hydropower at the lower Mekong basin scale should be undertaken. Addressing water resources in this integrated manner, focusing on the country’s most critical watersheds, would not only increase the availability of clean drinking water but also improve food security, increase incomes generated from fishing and agriculture communities, and contribute to the country’s economic growth.

Moreover, given the interlinked nature of these terrestrial and aquatic landscapes, a spatially integrated approach to natural resource management is needed to ensure the effectiveness and long-term sustainability of sectoral initiatives in forest and water resources, while also strengthening climate resilience. Although a limited focus on just one sector or resource such as forests or fisheries may achieve positive outcomes, it also risks causing negative externalities in other areas or inequitable outcomes across various stakeholders due to conflicting interests. Spatially integrated planning would better identify compromises among conflicting interests and resource use plans developed by various local authorities. Selected interventions should combine both public and private sector approaches, including regulatory reform and investments in infrastructure, along with market development and community-level capacity building activities. For instance, priority interventions could include strengthening the policy basis for secure tenure in community fishing zones, implementing a cross-sectoral watershed investment planning process, developing payment for ecosystem services (PES) schemes for providers of certain services such as soil erosion prevention, and promoting the adoption of development and resource management practices

that strengthen livelihoods' climate resilience. The particular interventions selected may be targeted to specific critical landscapes, such as the Mekong Delta and Cardamom Mountains together with the Tonle Sap. In order to effectively manage these landscapes, it will also be critical to strengthen co-management, reduce fragmentation and set common targets across different sectors among both national and local governments, in support of the ongoing decentralization efforts and implementation of the policy on conservation corridors. In doing so, spatially integrated natural resources management would not only protect the area's terrestrial and aquatic resources but also help ensure that downstream communities continue to benefit from the larger watershed's environmental services, that people's livelihoods are safeguarded from the negative impacts of new economic activities, climate change and natural disasters, and that the incomes of fishing, farming, and forest communities are sustained, if not increased.

Promoting competitive, sustainable, and inclusive cities through integrated urban planning

The development of competitive, sustainable, and inclusive cities requires the implementation of an integrated urban planning agenda that brings together land use and disaster resilience plans with investments in transportation networks and infrastructure. To be competitive, cities need reliable transport infrastructure to enable firms to access local, regional, and global markets. Equally important are investments in sustainable and reliable electricity, water, sanitation, and solid waste services that are inclusive of urban poor settlements and peri-urban areas. To date, only Phnom Penh and Battambang have developed detailed urban master plans, with limited progress in their enforcement and implementation. In parallel, master plans for urban transport, solid waste management, drainage and sewage, and water supply plans have been developed for Phnom Penh. Strengthening the coordination and implementation of these plans is

important for urban development and management. In addition, stronger institutions and innovative financing mechanisms such as public-private partnerships are needed, as most municipalities lack sufficient local revenues and budgets to strengthen their institutional capacity or to make adequate investments in infrastructure. Currently, much of the financing available to municipalities are from national government grants, and since the collection of user fees and taxes are often limited, municipalities have few local revenue sources. Addressing these information and resource constraints will enable more effective and integrated urban planning across the country, which is critical since decisions and investments made today will lock in the city form for generations to come.

Priority areas for investment within these integrated plans include urban sanitation and transport, along with increased attention to the upgrading of urban poor settlements. The entire sanitation system is in need of significant investment and institutional support in all of Cambodia's cities. Although Sihanoukville, Siem Reap, and Battambang have the beginnings of a sewerage network including wastewater treatment plants, only a small share of the total urban area is connected, and the infrastructure is in disrepair due to lack of sufficient operations and maintenance. Current investments, averaging around USD 6 million annually, fall far short of what is needed. For instance, to connect half of the urban population to wastewater treatment facilities by 2025, USD 86.7 million per year in capital expenditure would be required, in addition to an estimated USD 9.5 million annually for O&M expenditures (WSP, 2015). Although increased government finance with support from development partners will be important, it will also be critical to improve cost recovery through improved collection of user tariffs and fees. In parallel with the development of a centralized sanitation system, decentralized and on-site solutions such as community-managed Decentralized Wastewater Treatment Systems (DEWATS) could be pursued to increase access to sanitation, particularly in peri-urban areas. Finally,



solid waste management is also a growing urban sanitation challenge in need of additional support. Potential solutions include developing sanitary landfills and exploring the feasibility of constructing waste-to-energy plants. Moreover, considering industry's large and growing contribution to water pollution, it will be important to go beyond end-of-pipe pollution treatment to adopt cleaner and more energy-efficient technologies.

With regard to transportation, Cambodia's cities are facing increased congestion due to a combination of increased urban populations, increased motor vehicle use, and poor zoning of road networks. In support of existing policies and plans such as the Phnom Penh Master Plan and the National Strategic Plan for Green Growth, municipalities across the country could implement a number of measures to help reduce congestion and pollution. For example, priority measures could include improving and increasing the scale of public transportation modes such as buses, introducing new modes of public transport such as commuter trains along with incentives to promote their use, adopting vehicle emissions standards and incentivizing the use of low-emissions vehicles, introducing parking regulations and zoning, constructing ring roads for through-traffic, and designating pedestrian zones. Land use planning is another useful approach that could help reduce traffic congestion in urban areas. By influencing the spatial structure of cities, land use planning can reduce the number of kilometers driven and make walking more attractive.

Finally, upgrading of poor settlements and provision of affordable housing are necessary to accommodate the needs of a population that suffers from poor public service provision and insecure land rights. Priority investments and reforms should focus on upgrading of urban poor settlements—including drainage systems, trash collection, and water and electricity connections—as well as the implementation of a transparent and coordinated land registration and titling process. In addition, neighborhoods that are lagging behind or

particularly rundown could be targeted for multi-sector interventions to revitalize activity. Together, these changes could help improve the living conditions of the urban poor dramatically.

6.5 Cross-cutting: Public administration and public financial management reforms for improved service delivery

All reform priorities identified in the SCD require significant capacity for public service delivery and implementation, which would depend on complementary decentralization, public financial management, and public administration reforms, including improved performance oversight and citizen feedback mechanisms. As a lower middle-income economy, Cambodia is considering the rebalancing of responsibilities at the national and subnational levels. Cambodia has started to pursue decentralization and deconcentration (D&D) reforms, which aim to improve public service delivery by increasing the responsibilities and decisionmaking autonomy of frontline service providers, both in the social (education, health) and economic sectors (e.g., extension for irrigation, infrastructure maintenance). The rebalancing of responsibilities requires a corresponding reallocation of funding and human resources across different levels of government. The continuation of ongoing public financial management reform, together with overarching public administration reform, would thus be key to improving capacity for public service delivery. In addition, a change management approach, together with staff monitoring and enhanced citizen feedback mechanisms, would help increase value for money in the use of public funding, limit the scope for patronage and corruption, and improve accountability and oversight.

Decentralization of public services to the subnational levels could be fostered by credible

financing, capacity building, social accountability, and line ministry support. Considerable progress has been made in implementing D&D reforms, but much of this remains unfinished business. Most functions that have been delegated to the district/municipal level have yet to be fully transferred. The transferred responsibilities would need to be accompanied by additional funds, training, policy guidance, and support from line ministries. Development investments at the subnational level are limited by escalating administrative costs, so space for meaningful development investment is needed, including enhanced own source revenue and expanded use of the newly created Sub-national Investment Fund (SNIF), a fiscal transfer mechanism to provide a conditional grant earmarked for local infrastructure and investment projects at the district level. Districts need extensive capacity building support to provide quality assurance for decentralized services and to plan and implement investments that respond to priority local needs. Finally, decentralized service delivery should be met with the expanded implementation of the Social Accountability Framework (I-SAF) to eventually cover all districts in the country. I-SAF aims at enhancing citizen's access to information on budget usage and performance of councils and other service providers by promoting the participation of citizens in both monitoring and civic engagement.

Further strengthening of public financial management, coupled with an overhaul of the public administration, would help improve public service delivery significantly. While Cambodia has been successful in expanding the provision of public services over the past two decades, quality remains a concern in some cases. For example, primary enrollment rates have improved substantially, but as the reading assessments show, the quality of primary education remains mediocre. Underlying the quality, adequacy, and efficiency of public services is the ability of government to generate sufficient revenue for important public spending and investment requirements, spend the available resources efficiently and with accountability, and maintain a well-functioning public administration staffed by competent civil servants, with adequate pay and performance management and empowerment to handle funds for specific services with integrity.

Value for money in the use of public funds could be increased by completing implementation of the FMIS and program budgeting reforms. PFM reform under the PFMRF can be deepened further, with a focus on strengthening public expenditure/resource management through the expansion of FMIS functionality to line ministries

Table 15. Cross-cutting: policy options to improve public service delivery

Public administration and public financial management reforms for improved service delivery

Selected policy option 1	Modernize human resource information management tools to introduce performance-based management
Selected policy option 2	Strengthen citizens' voice on the quality of public services delivered by improving users' feedback mechanisms (e.g., expansion of I-SAF)
Additional policy option 3	Introduce merit-based performance management for directors/managers of essential public services
Additional policy option 4	Continue implementation of the FMIS and program budgeting reforms
Additional policy option 5	Increase funding to improve the capacity of the statistical system to inform policymaking

Source: World Bank staff analysis in consultation with stakeholders.



and streamlining of required workflows/processes to facilitate budget execution and to support program budget implementation and reporting for improved linkages between budget and policy. While program budget implementation progressed rapidly in terms of the number of ministries presenting budgets in the program budget format, substantive improvements in the linkage between policy and budget are constrained by the highly centralized cash management processes/workflows, making it difficult to provide high-quality and timely services to citizens. This is coupled with inadequate discretion for budget managers to utilize the budgets at their disposal, given rigidities to reallocate funding across programs (mainly decided at the central level). The expansion of FMIS functionality to line ministries, together with the needed streamlining of existing processes, and refinement of program budgeting at the line ministry level, offers opportunities for improved funds flow and greater accountability that can have a positive impact on the delivery of essential public services.

Modernization of human resource (HR) information management tools would support the management of staff performance and overall HR management functions of the public sector. Improving HR information management means improving HR data quality (to include unique identification of civil servants), standards, and human resource information systems to facilitate better workforce planning and management of people, payroll management, organizations, and reforms. Cambodia currently has highly fragmented systems for managing human resource information, with a different set of technologies used for civil servants, contract staff, and payroll and without analytical report generation functionality, adequate system security, and unique identification of civil servants, making it difficult to manage human resources in the increasingly decentralized environment under the D&D reform effort. Duplicate efforts and labor-intensive data entries happen at the Ministry of Civil Services and other

central ministries. A modernized HR information management tool would support improved performance management and the development of a professional, performance-oriented workforce by developing and/or automating a series of functions (e.g., personal information, attendance, workforce management, payroll, career management, pension calculation, performance appraisal). This tool would also help ensure adequate deployment and monitoring of human resources at the central level to provide quality provision of services at the local level.

Finally, a change management approach would need to be introduced, along with stronger citizens' voice on the quality of public services delivered by frontline service providers. The capability of government agencies to deliver public services could be enhanced through: (i) a comprehensive and well-sequenced public service improvement program in support of the National Program for Public Administrative Reform (NPAR), with a focus on supporting broad-based reform activities that are critical to improving service delivery (including merit-based performance management for directors/managers of essential public services); (ii) increasing the autonomy in the management of essential services by frontline service providers for improved downward accountability, so citizens can directly hold service providers accountable; and (iii) introducing service users' feedback mechanisms and monitoring and evaluation of public services (e.g., through a unified call center, a gateway to public services, as well as embedded in e-services). This reform program could help improve the implementation of other measures and programs, and the enhancement of public services in terms of access, quantity, and quality. It would also be a way to pair recent salary increases with enhanced performance, to limit the scope for patronage and informal fees, and to provide non-monetary incentives, which form an important part of the incentive structure for civil servants.

6.6 Data constraints and identified knowledge gaps

Cambodia's national statistical system produces data on a number of dimensions, but coordinated efforts by different stakeholders and development partners are needed to ensure quality and consistency, increase frequency, and introduce a culture of public and open data. Cambodia has relatively recent agriculture, business, and population censuses and frequent socioeconomic surveys, as well as demographic health surveys. However, the only labor force survey dates back to 2007, and no enterprise or education quality surveys are available. While a number of macroeconomic indicators (e.g., inflation, balance of payments) are publicly available with certain frequency, national accounts and employment data are only available on an annual basis and are often delayed in publishing. Data on central government operations is released more than six months after the end of the fiscal year and has been based on fragmented and often inconsistent records across departments—in this sense, the implementation of a new FMIS constitutes an opportunity to improve data quality. Overall, Cambodia does well in terms of availability of censuses and surveys but lags behind in terms of the methodology used, which in most cases is not up to par with the latest international standards, and in terms of openness and dissemination practices (Figure 53).

The identified weaknesses in statistical capacity indicators call for a series of actions aimed at improving the capacity of the statistical system to inform an evidence-based decision making process, as well as to monitor and evaluate progress in development in the coming years. First, by improving its standards and subscribing to the Special Data Dissemination Standard of the IMF, Cambodia could significantly strengthen its methodology and procedures for collecting and producing data. Second, improving the frequency of agriculture, labor force, health and demographic,

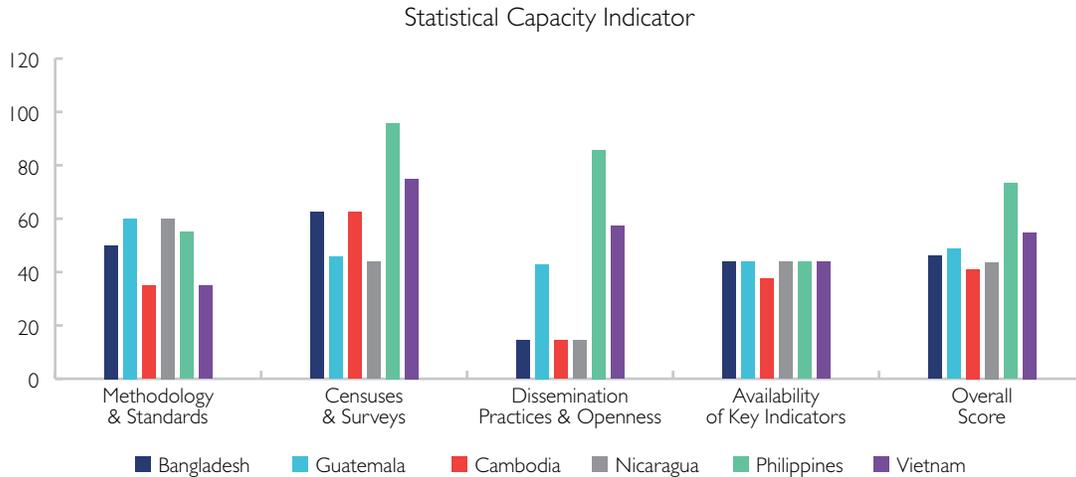
and business surveys would help to generate richer and more updated information for decision-making. Third, a user satisfaction survey would help the National Institute for Statistics (NIS) collect feedback on the performance of its website and improve offered services. Improvements to the NIS website would ideally include an Advance Release Calendar to inform users on the scheduled releases of key data, as well as a data portal to enable users to download time series data or browse metadata of Cambodia's key socio-economic indicators.

Limited funding and capacity hampers the production of relevant and good-quality data in a timely manner and often discourages institutions from sharing collected data publicly. This leads to informal networks playing a role in data access, which limits the scope for rigorous research on relevant development matters. In addition, the sustainability of data collection programs and capacity building introduced by donors is often hampered by personnel rotation and lack of funding. For example, following technical assistance from the IMF, the NIS started to produce quarterly national accounts, but this effort was soon discontinued. Adequately funding the NIS and revamping the organizational structure to enable it to fully accomplish its mandate and become the central institution for statistical production, quality control, and data sharing in Cambodia are desirable, especially now that the country has become a lower middle-income economy and needs more sophisticated and well-informed policymaking.

This SCD has been informed by country sources, complemented with international sources and secondary information when required, but some data gaps exist. The main country sources of information for this SCD were the national accounts, the Cambodia Socioeconomic Survey, and other macroeconomic indicators. In terms of exports, Cambodia has reliable customs data thanks to the progressive introduction of the ASYCUDA system starting in 2008. The analysis also drew from mirror data analysis to double check and try



Figure 53. Cambodia lags behind other peers in data standards and openness



Source: Development Economics Data Group, the World Bank Group.

to capture informal exports, as well. World Bank Group Enterprise Surveys were used to describe firm concerns and dynamics. A series of identified knowledge gaps signal potential directions for future research, as they go beyond the scope of this SCD:

- Conducting additional work on skills from the point of view of the firm to gain a better understanding of the extent to which the lack of skill supply is inhibiting investments in process and technology improvements (or vice versa). The analysis could also look at how specifically the private sector is dealing with the lack of higher skills, which demand-led models can be considered for scaling up, and what specific dimensions of SME capabilities are the least developed (e.g., production management, sales and marketing, personnel management).
- Conducting more regular labor force surveys, especially given the large share of wage employment (on which labor force surveys are well-equipped to capture information).
- Analyzing migration trends and the profile of migrants, as well as the impact of remittances on household income and behavior.
- Carrying out additional analyses around urbanization needs in Cambodia, as structural transformation is expected to accelerate.
- Analyzing environmental and social externalities, as well as contingent liabilities from PPPs in the energy generation sector, to help understand the sustainability of current policies. Assessing to what extent relatively high electricity costs relate to the current energy mix, and identifying renewable low-cost alternatives for the future.
- Elaborating an updated Investment Climate Assessment aimed at shedding further light on implementable reforms that can help improve the business environment and reduce the costs for firm establishment and operation in Cambodia.
- Conducting an assessment of Information and Telecommunication Technologies and platforms in Cambodia.
- Assessing the main constraints to tourism development and identifying sustainability linkages, potential for eco-tourism and economic assessment of areas for development, and scope for institutional reform.
- Gaining a better understanding of Cambodia's potential to raise domestic savings and private investment by conducting a survey. Data on levels of domestic savings and investment in Cambodia is scanty and of poor quality. The

widening investment-savings gap makes strong growth in investment increasingly vulnerable to the external environment. In addition, at the moment, domestic investors have limited choices of savings and investment due to the relatively large interest wage differential, lack of a domestic debt market, incipient and inactive stock market, and lack of pension funds and investment funds.

- Carrying out household indebtedness surveys to gain a better understanding of the impact of both formal and informal micro-borrowing on poor households.
- Conducting an assessment of physical capital, financial assets, natural capital, and social capital by gender, in order to deepen the understanding of existing gaps.

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Annexes

Annex I: Benchmarking Cambodia's Development

Table 16. Benchmarking Cambodia's Development in a snapshot

Variable	Latest value (unless specified)	Percentile	Source
Shared prosperity			
Poverty headcount ratio at USD 1.90 a day (2011 PPP) (% of population)	6.20%	53	WDI
GINI index	30.8	83	World Bank estimate
Income share held by the bottom decile	3.90%	94	World Bank
Average growth of mean consumption per capita, bottom 40 percent	8.50%	95	World Bank
Labor force participation		94	
Employment to population ratio, 15+, total (%)	82.20%	97	WDI, modeled ILO estimate
Labor force, female (% of total)	49.90%	94	WDI, modeled ILO estimate
Human development			
Human development index rank (2014)	145	25	
Hospital beds (per 1,000 people)	0.7	10	WDI
Health expenditure, public (% of GDP)	1.50%	11	WDI
% complete secondary schooling attained (% pop. Aged 15+)	4.51%	4	Barro and Lee School Attainment Dataset, 2010
Years of school attained (% pop. aged 15+)	4.72	15	Barro and Lee School Attainment Dataset, 2010
Macro and fiscal statistics in 2013-15			
Real GDP growth (annual percentage)	7.10%	92	WEO, IMF
Government revenue excluding grants (% of GDP)	13.10%	2	Government Revenue Statistics, IMF
Total investment (% of GDP)	21.70%	48	WEO, IMF
General government total consumption expenditure (% of GDP)	21%	14	WEO, IMF
Broad money growth (annual %)	22.80%	97	WEO, IMF
Agriculture value added (% of GDP)	30.40%	90	WDI
Rural population (% of total)	79.50%	93	WDI

Table 16. *continued*

Variable	Latest value (unless specified)	Percentile	Source
External sector			
Foreign direct investment, net inflows (% of GDP)	9.50%	87	WEO, IMF
Import of intermediate goods (share of exports)	38.50%	93	WITS
Export of intermediate goods (share of exports)	2%	12	WITS
Economic complexity rank (2009-11)	111	16	
Merchandise trade as % of GDP	144%	95	WDI
Tourism receipts to total exports	28.90%	80	WDI
Net ODA received, % of GDP	5.20%	68	WDI
Remittance inflows to GDP (%)	1.20%	43	
Financial inclusion			
Borrowed money from a financial institution (% age 15+)	27.70%	95	Global Financial Inclusion Database
Received government transfers in the past year (% age 15+)	3.10%	10	Global Financial Inclusion Database
Saved at a financial institution (% age 15+)	3.60%	9	Global Financial Inclusion Database
Withdrawal in the past year (% with an account, age 15+)	44.30%	2	Global Financial Inclusion Database
Business environment			
Global Competitiveness Index, Infrastructure, 1-7 (best)	3.2	31	GCI, World Economic Forum
Average time to clear customs (days)	2	95	WDI
Days required to start a business	101.3	4	Doing Business survey
Getting credit (country rank)	12th	95	Doing Business survey
Cost of business start-up (% of GNI per capita)	122.90%	5	
Days to obtain an import license	5.9	93	Enterprise Survey, World Bank Group
If a generator is used, average proportion of electricity from a generator (%)	36.20%	85	Enterprise Survey, World Bank Group
% of firms expected to give gifts to secure government contracts	77%	2	Enterprise Survey, World Bank Group

Table 16. *continued*

Variable	Latest value (unless specified)	Percentile	Source
Environmental sustainability			
Climate Risk index (rank for 1996-2015)	13	7	Germanwatch
Natural Disaster Risk index	165	5	
Environmental Protection Index	36.2	18	
Institutions			
Global Competitiveness Index, Institutions, 1-7 (best)	2.4	28	GCI, World Economic Forum
Control of corruption, -2.5 to +2.5 (best)	-1	14	World Governance Indicators
Government effectiveness, -2.5 to +2.5 (best)	-0.8	21	World Governance Indicators
Citizen Engagement in rulemaking score	0.4	26	

Source: Find Your Friend tool using multiple sources.

Table 17: Cambodia's progress towards the Millennium Development Goals

CMDG	Indicators	Baseline		Latest Year		% Change	2015 Target	Achievement
		Value	Year	Value	Year			
1. Eradicate extreme poverty and hunger								
Reduce extreme poverty by half	Proportion of population living below US\$1.25/day (%)	44.5	1994	10.1	2011	-77%	19.5	Achieved
Reduce hunger by half	Proportion of population below minimum level of dietary energy consumption (%)	32.1	1991	14.2	2015	-56%	NA	No Target, Significant Progress
2. Achieve Universal Primary Education								
Universal Primary Schooling	Net enrolment ratio in primary education (enrollees/100 children)	82	1997	94.7	2015	15%	100	Partially Achieved
3. Promote gender equality and empower women								
Equal girls enrolment in primary school	Ratio of girls to boys in primary education	0.84	1994	0.97	2014	15%	1	Partially Achieved
Women's share of paid employment	Share of women in wage employment in nonagricultural sector	41.1	2000	40.9	2012	0%	50	Not Achieved
Women's equal representation in national parliaments	Proportion of seats held by women in national parliament (single or lower house only)	5.8	1997	20.3	2015	250%	NA	No Target, Significant Progress
4. Reduce child mortality								
Reduce mortality of under 5 year old by two thirds	Under 5 Mortality rate (deaths of children/1000 births)	117.3	1990	28.7	2015	-76%	65	Achieved
5. Improve maternal health								
Reduce maternal mortality by three quarters	Maternal mortality ratio (maternal deaths/100,000 births)	1,020	1990	161	2015	-84%	250	Achieved
Access universal reproductive health	Contraceptive prevalence rate (% of women 15-49, married or in union, using contraception)	12.6	1995	56.3	2014	347%	60	Partially Achieved
	Unmet need for family planning (% of women aged 15-49, married or in union with unmet need for family planning)	33	2000	12.5	2014	-62%	NA	No Target, Significant Progress

Table 17: *continued*

CMDG	Indicators	Baseline		Latest Year		% Change	2015 Target	Achievement
		Value	Year	Value	Year			
6. Combat HIV/AIDS, malaria and other diseases								
Halt and begin to reverse the spread of HIV/AIDS	HIV incidence rate (no. of new HIV infections/year 100 people aged 15-49)	0.08	2001	0.01	2013	-82%	0.4	Achieved
Halt and reverse spread of TB	Incidence rate and death rate associated with TB (no. of new cases/100,000 population)	584	1990	400	2013	-32%	NA	No Target, Some Progress
	Incidence rate and death rate associated with TB (no. of deaths/100,000 population)	207	1990	58	2014	-72%	50	Partially Achieved
7. Ensure environment sustainability								
Reverse loss of forests	Proportion of land area covered by forest (%)	73.3	1990	57.2	2010	-22%	60	Partially Achieved
Halve proportion without drinking water	Proportion of population using an improved drinking water source (%)	23.4	1990	75.5	2015	223%	50	Achieved
Halve proportion without sanitation	Proportion of population using an improved sanitation facility (%)	2.9	1990	42.4	2015	1,362%	30	Achieved
Improve lives of slum dwellers	Proportion of urban population living in slums (%)	78.9	2005	55.1	2014	-30%	NA	No Target, Some Progress
8. Develop global partnership for development								
Internet Users	Internet users per 100 inhabitants	0	1990	9	2014	-	NA	No Target, Some Progress
9. Demining								
Annual number of civilian casualties reported due to mines	Annual number of civilian casualties reported due to mines	1691	1993	241	2009		0	Not Achieved
ERW contaminated area	Percentage of contaminated area cleared	11	2000	45	2009		100	Not Achieved

Sources: United Nations MDG Country Progress Snapshot - Cambodia (August 2015) (<http://mdgs.un.org/unsd/mdg/Data.aspx>), Annual Progress Report on MDGs, RGC (December 2013), WHO/UNICEF Joint Monitoring Program-Cambodia (June 2015), and World Development Indicators (2015).

Annex 2: Insights into poverty measurement in Cambodia

Poverty estimates in Cambodia are generated from the Cambodia Socio-Economic Survey (CSES), which the NIS conducts annually. The methodology for measuring poverty, developed jointly with the World Bank, was the basis for poverty estimation for all rounds of the CSES until 2008. The government departed from this methodology after the Ministry of Planning (MoP), working under the oversight of an Inter-Ministerial Working Group, re-estimated the poverty line using a different methodology starting with the CSES 2009. Although poverty is still measured using the cost of basic needs approach with consumption per capita as a proxy of welfare, three key changes were made in the computation of the poverty line and consumption aggregate—(i) the estimation of the non-food component of the poverty line uses the average expenditures on 14 items consumed by the 20th – 30th percentile instead of the non-food share in total expenditures for a reference population; (ii) estimation of the non-food poverty line is done separately for Phnom Penh, other urban areas, and rural areas based on the average expenditures in each strata;⁹⁷ and (iii) imputed values of durables and housing were dropped from the consumption aggregate. In addition, the minimum calorie requirement increased from 2,100 to 2,200 calories per person.

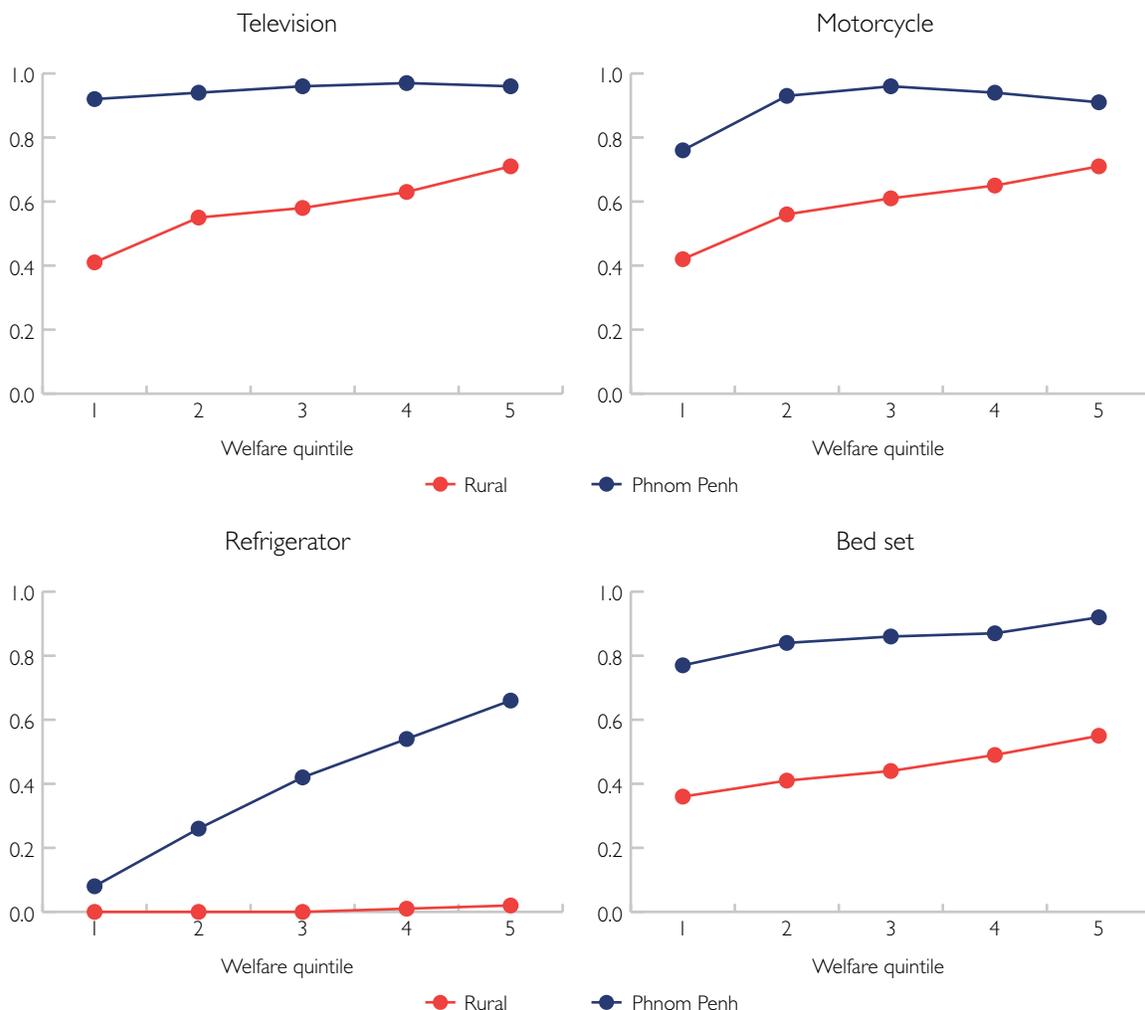
The impact of these changes on the poverty headcount rates and trends are ambiguous, but sensitivity analysis support the qualitative conclusion that Cambodia made significant progress on poverty reduction and shared prosperity. The poverty line is always pegged to the consumption aggregate, so that changes that

decrease (increase) the consumption aggregate can also be mirrored in a decrease (increase) in the poverty line, which offset each other. Whether the resultant estimate in the poverty headcount is lower (higher) than it should have been without the methodological changes depends on whether the poverty line becomes disproportionately understated (overstated) than the consumption aggregate. The estimated pace of poverty reduction then depends on the growth in consumption and the position of the poverty line relative to the distribution of the consumption aggregate. For the same growth rates, poverty would decline faster if the majority of the population is concentrated around the poverty line. Thus the level of the poverty line and the distribution pattern of the revised consumption aggregate matter for determining the pace of poverty reduction. Measures of inequality are sensitive to the consumption aggregate too, but are independent of the poverty line. Changes that underestimate consumption of the well-off, like excluding imputed values of housing and durables for example, tend to underestimate inequality. The World Bank's sensitivity checks on these issues following international best practice methodology (Deaton and Zaidi, 2002) suggest the strong trend in the decline in poverty and relatively low levels of inequality. The qualitative conclusion of progress in poverty reduction and shared prosperity are thus broadly similar to those based on the national poverty estimates. However, other data issues pertaining to the survey described below, pose a challenge to make an indicative statement on the level of the poverty headcount rates themselves.

Changes to the methodology have an unambiguous upward bias of poverty in urban areas and downward bias of rural poverty. Urban households in Cambodia own more durable

97 The official poverty line in 2014 was 7,924 riel per person per capita a day in Phnom Penh, 5,434 in other urban areas, and 4,374 in rural areas. As of December 30, 2014,

Figure 54. Urban households are more likely than rural households to own durables



Source: World Bank staff estimates from CSES (2014).

assets (Figure 54), live in better dwellings and generally spend more on non-food expenditures. The methodological changes thus penalized urban households in two ways. One is by raising the non-food poverty line beyond the price differences between urban and rural areas, since average non-food expenditures of the households in the 20-30th percentiles in urban areas are higher and thus inherently reflect a higher level of utility or welfare. The poverty lines for rural areas and other urban areas respectively, are 81 and 46 percent lower than the poverty line for Phnom Penh – a difference that

more than reflects spatial price differences. Data from the provincial CPI shows regional price variation of less than 5 percent, for example. Evidence from other countries (see case for Indonesia in Ravallion and Bidani, 1994 and Mozambique in Arndt and Simler, 2010) shows that separately computing “regional” poverty lines without corresponding adjustment for utility consistency as done for Cambodia, distorts the poverty profile. In some cases urban households with much higher consumption can be deemed poorer than rural households with much lower levels of consumption (Alfani, et al., 2012). This appears to

be the case in Cambodia too. Estimates based on the official consumption aggregate suggest that the poverty headcount in Phnom Penh in 2014 was 7 percentage points higher than rural poverty for example, yet other indicators of living conditions like assets owned suggest that living conditions are better in Phnom Penh. Furthermore, by owning more durables which reflect higher comfort in living, welfare of urban households is understated more than in rural areas from the exclusion of use of value of such durables. This is not reflected in a proportionately lower poverty line for urban areas, since the poverty line is estimated using average consumption of specific goods rather than the non-food share in total consumption. At the same time, the non-food poverty line in rural areas is inherently calculated from a lower average expenditure on non-food items, thus underestimating rural poverty than when national average expenditure on non-food items is used instead.

Going forward, the government can potentially improve the way it measures poverty. There is room for improvement in both the choice and design of the instruments for measuring consumption and the methodology for calculating poverty. Currently,

the consumption aggregate is calculated from data collected in the CSES using a recall instrument. This asks for consumption for a broad group of items, for example consumption of cereals in the past 30 days, instead of separately reporting consumption of each of the items in this group. The quantity of items consumed is not recorded. Therefore the diary, concurrently implemented with the recall instrument in most years (except in 2012, 2013, 2015 and 2016), has been used to estimate the poverty line instead. Our analysis finds that food consumption measured from the diary is consistently lower than food consumption measured from the recall instrument by between 18 to 40 percent across all the years where both instruments were used. The poverty line generated using diary information likely underestimates the poverty line implied from recall-based consumption measures. The World Bank could also deepen its engagement in this area to extend to data generation activities of the NIS in addition to cooperation of the poverty measurement methodology with the MoP, which is currently reviewing the measurement of poverty in the country taking into account the factors raised above.

Annex 3: Using Cluster analysis to inform prioritization in Cambodia

Cluster analysis is a descriptive and multivariate statistical technique used to segment a population into groups that are homogenous but distinct from each other. Profiling these groups reveals what makes them different and the differences can be exploited to customize interventions targeting each group. This can be used to prioritize such interventions or identify the biggest, most critical gaps across groups. This SCD in particular, exploits this technique at the household level using the CSES 2013 data to identify those key determinants of poverty and welfare, which the poor and near poor are most lacking relative to the better off. The identified gaps thus inform which are the most critical constraints not only for the poor and near poor, but for the specific sub-groups within them.

Clusters are formed by placing observations into groups so as to minimize within group variance and maximize between groups variance. The analysis involves four steps – selecting cluster variables, choosing the clustering procedure and the number of clusters, and validating and interpreting the results by defining and labelling the obtained clusters. The variables used in the cluster analysis fall into the following categories – (i) household endowments in terms of physical assets (i.e. ownership of land and other productive assets) and human capital (mainly education attainment - share of working age household members who attained no formal education, primary and at least secondary education, and health – measured by recent exposure to health shocks), (ii) opportunities as measured by household livelihoods (i.e. having a non-farm wage income, having a non-farm business), and (iii) access to services (i.e. having improved water, improved toilet, and an electricity connection). Because the clustering variables are a mix of metric and categorical

data measured in multiple scales, the clustering is performed on factor scores from the principal component analysis of the variables specified above. Of the three most common clustering procedures, the hierarchical procedure is chosen over the other two – partitioning methods (mainly kmeans) and two step-clustering (a combination of the first two). The hierarchical procedure is preferred because the number of clusters is not known a-priori. For this SCD, finding out rather than assuming the number of clusters, helps inform the degree of segmentation within the population, in addition to analyzing the profile of the different groups.

The hierarchical and partitioning methods apply different concepts to segmentation of the population. In partitioning methods, the number of clusters (k) is predetermined, so the clustering solution is formed by first randomly assigning observations to the fixed number of k clusters, before reassigning the observations between the k clusters until the within cluster variation is minimized. In the hierarchical procedure, observations are grouped on the basis of a measure of similarity (or distance) in a multidimensional space. In this case, the Euclidian distance function is used. Based on this, clusters are built from bottom up, starting with as many clusters as the number of observations, assigning additional observations at higher levels of aggregation, with a single cluster comprising all observations at the highest level or top of the hierarchy. Various clustering algorithms can be used, but we base the analysis on results obtained using the wards linkage clustering algorithm, which forms clusters by combining observations or smaller clusters whose merger increases the overall within cluster variance to the smallest extent possible. This algorithm is both less influenced by outliers and the chaining effect whereby the cluster solution results

in one large cluster and other clusters comprising of a few observations. The optimal number of clusters is identified by inspection using a dendrogram complemented by quantitative criteria, the Calinski and Harabasz pseudo F-Index or the Duda-Hart $Je(2)/Je(1)$ index. Four clusters emerge as the optimal number for segmenting the households in Cambodia by their socio-economic characteristics.

Once the clusters are identified, a profile of the clusters was created, which is presented in Table 10 in the main text. A profile for four groups clustered using the k-means was also reviewed for robustness checks. The profile includes both variables directly used in the cluster analysis and those not included – such as consumption per capita, poverty rates, and the share of economically secure. The profile reveals a socio-economic ladder for Cambodia, which we refer to as the ladder of success. Groups from the cluster solution can be clearly ranked in accordance to their economic status with daily consumption per capita ranging from \$7.1 PPP 2011 dollars to an average of \$4.1 PPP 2011 dollars at the bottom. Only 6.5 percent of the population in the highest ranked group is poor or near poor and 55 percent of people in this group can be considered to be an emerging consumer class. In contrast nearly 32 percent of the bottom group is considered poor or near poor and less than 16 percent are considered an emerging class. So there is a clear hierarchy in terms of the probability of success between groups. At the top are (i) young, high human capital non-farm households, followed by (ii) young moderate capital, larger land owning households, then (iii) older, low human capital, moderate land owning households and at the bottom of the ladder are (iv) older, many of them female headed, households with low human capital and lowest land ownership.

Having established a clear hierarchy between the groups, we ask from the point of view of the asset based framework, which (i) endowments – human and physical, (ii) opportunities – types of economic activities, and (iii) risks are lacking or most prevalent among the poorer groups. We consider those assets most lacking among the poor but abundant among the better-off groups to be the most binding constraints the poor face. We also look at the asset portfolio of the poor and near poor to evaluate their risk factors, and take into account the size of the individual groups to determine the importance of particular constraints or risk factors at the national level. Greater weight is thus given to those factors affecting a larger group of people and where the gap between the poorest and richest groups are largest. Note that the inference is not causal, but rather provides a way of identifying which factors among the known determinants of household welfare are lacking or more abundant in one group as opposed to another.

The results show that success is more likely among those who have transitioned out of agriculture and have more education, while among agricultural households large land holders are more likely to belong to the top group but health shocks are a big risk factor. Education attainment clearly emerges as one of the defining gaps, while inadequate labor (old age) is another emerging constraint for the poor. Though they still own smaller than average land holdings, land still constitutes the main asset of the bottom two groups so both their potential and risk factors are concentrated in this area. This means improving productivity and resilience and reducing risks in agriculture remain key priorities for improving livelihoods of the poor and near poor.

Annex 4: Cambodia SCD engagement with stakeholders

The Systematic Country Diagnostic (SCD) was conducted by the World Bank Group (WBG) in close consultation with national authorities and other stakeholders. On top of drawing from the best possible analysis and available evidence, it also sought to consider the views of a wide range of stakeholders in Cambodia. Public engagements around the SCD aimed to identify key development challenges and priorities to accelerate progress in ending extreme poverty and sharing prosperity widely in the next five to ten years.

Engagement format

The engagement included face-to-face meetings as well as an online platform to enable participation by a wide range of stakeholders. The **face-to-face meetings** had a mix of plenary workshops, roundtable meetings, and small group discussions. The **online engagement** gathered views through an **online survey**, in Khmer and English.

All the meetings held in Phnom Penh were conducted in English with simultaneous translation, while those in the provinces were conducted in both English and Khmer. The meetings took around 3-4 hours, including breakout group discussions, when needed. All meetings commenced with a video that captured the views of Cambodians from diverse backgrounds, and a slide presentation which presented preliminary ideas with regard to the main pathways to reduce extreme poverty and boost shared prosperity in Cambodia.

After the presentation, discussions were held around the following questions:

- How do you see Cambodia's development achievements to date, its development

challenges, and goals for the future?

- What are the three most important areas for development in Cambodia, to focus on and address over the next 5-10 years?

Key stakeholders and meeting locations

For over three weeks in November to December 2016, extensive public engagement meetings were held with a broad range of stakeholders (central and sub-national government, National Assembly, private sector, development partners, and civil society, including academia) to identify critical areas for development to be addressed to ensure strong, inclusive, and sustainable growth and shared prosperity in Cambodia. Nine meetings were held in four different regions of the country: six meetings in Phnom Penh, one in Sihanoukville, one in Siem Reap, and one in Kratie. In total, 375 participants from 13 provinces provided feedback on identifying and prioritizing the key development priorities to achieve sustainable poverty reduction and inclusive growth in Cambodia.

Engagement meetings were conducted with a wide range of stakeholders, including:

- **Government:** Officials from the Ministry of Economy and Finance and line ministries
- **National Assembly:** Parliamentarians
- **Sub-national Government:** Elected members of provincial, district and commune councils of Takeo, Kampot, Sihanouk and Koh Kong provinces
- **Development Partners:** Representatives from UN agencies and other development partners
- **Private Sector:** Representatives of domestic

and international private sector companies and provincial chambers of commerce

- **Civil Society Organizations:** Representatives of community-based organizations, service delivery NGOs, advocacy NGOs, think tanks, research institutions, academics, labor unions, youth, and LGBT people

financial management reforms, in order to enhance service delivery.

- **Cost of doing business and trade facilitation:** reducing the cost to firm establishment and operation, including through an improved business environment as well as a reduction of informal fees and electricity costs.

Summary of priorities from the consultations

A clear list of priorities emerged from the consultations, with little variation across the regions of Cambodia where consultations were held. These were:

- **Agriculture modernization:** increasing productivity and incomes in agriculture, including through improved irrigation and access to markets.
- **Education and skills:** investing in pre-primary, primary, and secondary education as well as in technical and vocational education and training.
- **Institutions, governance, and public service delivery:** improving government efficiency through public administration and public

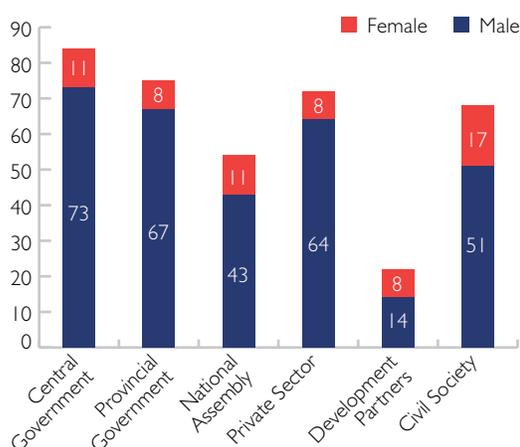
These priorities identified by the consultation participants are embedded in all three pathways of the SCD, all aimed at maintaining strong and sustainable economic growth and boosting shared prosperity in Cambodia going forward. Summaries of discussions from all the nine meetings are posted, in English and Khmer, on the consultation website for Cambodia.

<https://consultations.worldbank.org/consultation/systematic-country-diagnostic-cambodia>

Tools for engagement

Different tools were used to help identify priorities for the country's development. First, all participants were given a survey questionnaire (in English and Khmer; English version available, below) which asked them to identify the top three crucial development areas for Cambodia to end poverty and share prosperity more widely. The survey was completed by 322 participants and their priorities are shown in Table 18. Results from these questionnaires also point to a similar set of priority areas as identified during the face-to-face discussions, with no significant differences in replies across genders found. Second, participants were asked to provide feedback during the meetings themselves. In four of the nine meetings, groups of 8-10 participants were asked, as a group, to identify their top three areas for development. Approximately 190 people in 21 groups participated in this exercise and their results are also summarized in Table 18.

Figure 55. Participants in consultations, by gender and stakeholder type



Source: Consultation meetings.

The World Bank team also reached out to other Cambodians around the country through colorful

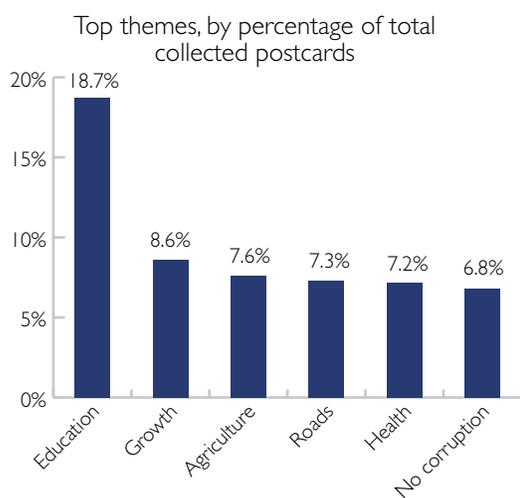
postcards that asked them about the future of Cambodia. More than 1,000 individuals filled up these postcards and the results are summarized in Figure 56.

Table 18. Top areas for development from individual questionnaires and meeting discussions

Priority	Meeting discussions	Survey
Agriculture modernization	67%	41%
Education and skills	56%	36%
Institutions, governance, and public service delivery	33%	23%
Cost of doing business and trade facilitation	33%	28%
Resilient infrastructure and improved connectivity	28%	33%
Healthcare	22%	41%
Financial sector and access to finance	22%	28%
Natural resource management and disaster risk management	17%	26%

Source: Results obtained from consultation meetings.

Figure 56. Top areas for development in collected postcards



Source: Results obtained from postcard collection.

Survey questionnaire

Share your views!

Cambodia: How to End Poverty and Share Prosperity More Widely?

The World Bank Group (WBG) is undertaking engagements with stakeholders in Cambodia on the country's development opportunities, and what can be done to end poverty and share prosperity more widely. The schedule of these meetings is posted on the World Bank Cambodia website. We are using this survey to get feedback from as many stakeholders as possible. Please take a few minutes to fill out this short survey. The feedback we get will not be attributed to any individual but will be consolidated, and a summary will be posted in the website.

Type of organization you work for:

Gender: male female

1. Government Agency
2. Civil Society
3. Academia
4. Private Sector
5. Development Partner
6. Other:

Province: _____

Cambodia's drivers and upcoming challenges

- What do you think have been the main drivers of strong growth and poverty reduction in Cambodia over the past two decades? What have been the main factors?
- Thanks to sustained economic growth, Cambodia became a lower-middle income economy in 2015. What do you think are the main challenges to sustain growth and poverty reduction Cambodia faces going forward (over the next decade or so)?

Cambodia, areas for development

In your view, what are the crucial development areas for Cambodia to focus actions aimed at ending poverty and share prosperity throughout the country over the next decade? (Please, circle with your pen your top 3 priorities).

- Improving water resource management, protecting households that depend on fisheries
- Improving public investment management to boost infrastructure
- Reducing the cost to firm establishment and operation, including improving the doing business, and tackling corruption
- Moving towards a cheaper and more reliable electricity supply
- Facilitating domestic savings and private investment
- Strengthening the regulation and supervision of the financial sector
- Improving access to financial services – bank accounts, credits for individuals or firms, mobile financial services, investment products, consumer financial education

- Improving macroeconomic management and reducing dollarization
- Investing in infrastructure and connectivity for growth and inclusion, including roads and better logistics
- Improving forest management to reduce/stop degradation
- Modernizing agriculture through investing in irrigation and facilitating machinery acquisition to improve productivity
- Public administration reform for public service delivery
- Reducing malnutrition to unlock children's potential and to promote growth and inclusion
- Investing in pre-primary education
- Fostering attainment of secondary education and above
- Improving access to and quality of health services and protecting households from financial shocks related to health spending
- Consolidating and expanding social protection and social safety nets
- Putting in a place a strengthened disaster risk management system to protect against the impact of floods, droughts, earthquakes, etc.
- Equality and no discrimination among genders, including LGBTI (Lesbian, Gay, Bisexual, Transgender and Intersex people)
- Supporting information and communication technology adoption, as well as innovation
- Enhancing the allocation and effectiveness of public expenditure and overall fiscal and debt management
- Investing in a well-planned urbanization process to accommodate economic transformation
- Other: _____
- Other: _____
- Other: _____



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