

Chapter 1

Forward-looking assessment of social protection needs in Cambodia

This chapter provides a forward-looking assessment of risk and vulnerability in Cambodia. While monetary poverty has fallen rapidly since the early 2000s and inequality has also declined, a large population is vulnerable to falling back into poverty. The analysis demonstrated that deprivation levels have not declined as quickly as monetary poverty. Climate change, large-scale internal and international migration, rapid urbanisation and changes to the age structure of the population are likely to determine demand for social protection over the longer term. The extent to which Cambodia is able to diversify its economy will also be a critical factor.

Since 2000, Cambodia has posted one of the strongest and most sustained periods of economic growth of any country in the world. The rapid growth of the garment and footwear industry has transformed the economy, increasing the industrial sector and reducing agriculture's contribution to gross domestic product (GDP) and employment. This has been accompanied by a sharp drop in income poverty and improvements in human development indicators. In July 2016, Cambodia officially graduated to lower-middle income status.

However, major challenges remain. Cambodia is still classified as one of the world's least developed countries, a large proportion of the population is near poverty, and informality and vulnerable employment are widespread. At the same time, Cambodia must confront the profound threat posed by climate change, harness the potential of rapid urbanisation, further diversify its economy and prepare for the ageing of the population.

This chapter summarises the findings of a forward-looking needs analysis that forms the basis of the Cambodia Social Protection System Review. Annex 1.A1 provides an outline of this tool, which is being applied for the first time in Cambodia. By analysing the socioeconomic context for social protection today and projecting how this context is likely to change in the future, this exercise is central to understanding how well the current social protection system responds to current needs of the population and how demand is likely to evolve.

Poverty has fallen rapidly but these gains are fragile

Cambodia has experienced dramatic increases in income and reductions in poverty. Between 2000 and 2015, annual growth in Cambodia's GDP averaged 7.8%, raising GDP per capita to USD 1 225 and reducing poverty rates from over 60% to 13.5% in 2014 (Figure 1.1).

Income poverty has declined at different times in rural and urban areas. The sharpest reduction in national poverty occurred between 2007 and 2009 and took place predominantly in rural areas, driven by increases in crop prices and agricultural wages. In urban areas, the sharpest decline in poverty occurred between 2004 and 2007.

The decrease in urban poverty was associated with a significant increase in the proportion of the workforce in salaried employment, which accounted for 50.5% of total employment in 2011, up from 36.6% in 2004 (World Bank, 2014a). The poverty level in Phnom Penh has fluctuated since the global financial crisis

and, in 2012, exceeded the poverty rate in other urban areas for the first time (ADB, 2014).

Not only has the poverty rate declined but so too has the severity of poverty. The national poverty gap, which measures how far, on average, poor households are below the poverty line, fell from 21.8% in 2004 to 2.2% in 2014. According to data from the Cambodia Socio-Economic Survey (CSES)¹ for 2014, the poverty gap in rural areas was 2.2% and 2.6% in urban areas. This suggests that the majority of poor individuals are close to exiting poverty.

Box 1.1. National and international poverty measures and terms used in this Review

Monetary or income poverty: Poverty status based on either household consumption or income as household welfare metrics.

- **National poverty line (national; Royal Government of Cambodia (RGC)):** This poverty line is monetary and calculated using data from the Cambodia Socio-Economic Surveys (CSESs) for Phnom Penh, other urban areas and rural areas. It has three components: food expenditure; non-food expenditure; and spending on housing, energy and basic services. For 2014, the national monthly poverty line was equivalent to USD 46 per capita (current USD).
- **Vulnerability line (national):** The vulnerability line is equal to 1.5 times the national poverty line.
- **Food poverty line (national; RGC):** The food poverty line is the equivalent sum of money that is necessary in order to consume a minimum of 2 200 calories per person per day, averaged between those in the bottom 5th to 30th percentile groups of the population. The 2014 national monthly food poverty line in Cambodia was equivalent to USD 58 per capita (current USD).
- **Global poverty lines (international):** Poverty lines defined by the World Bank based on the 15 poorest countries in 2005. Until 2015, the poverty line was set at USD 1.25/day; in 2005 Purchasing Power Parity (PPP, computed on the basis of price data across the world), with an upper poverty line set at USD 2/day. Following an update of 2011 prices, the poverty line is now set at USD 1.90/day in 2011 PPP, with an upper poverty line set at USD 3.10/day.
- **Near poverty (RGC):** Households who are “near poor” are classified as non-poor but are located just above the poverty line, where shocks are likely to send them back under the poverty line. The term is not associated with a specific level of income or consumption.
- **Poverty rate (RGC):** The proportion of the population that lives below the national poverty line. For 2014, the national poverty rate was calculated at 13.5%, using the 2014 CSES.

Box 1.1. National and international poverty measures and terms used in this Review (cont.)

- **Poverty gap:** How far (on average) poor households are below the poverty line, expressed as a percentage of the level at which the poverty line is set.

Multi-dimensional or non-income poverty: Poverty status based on deprivations of a household in areas beyond monetary poverty.

- The Oxford Poverty and Human Development Initiative (OPHI) **Multidimensional Poverty Index (MPI)** covers three areas: education, health and standard of living through ten indicators: years of schooling, school attendance, child mortality, nutrition, electricity, sanitation, access to or cleanliness of water, conditions of the floor of their shelter, type of cooking fuel used, and assets. The indicators are weighted to create a deprivation score: a deprivation score of 33.3% indicates multi-dimensional poverty, a score of 50% or more indicates severe multi-dimensional poverty, and a score between 20-33.3% indicates near multi-dimensional poverty.
- The United Nations Development Programme (UNDP) **Human Development Index (HDI)** covers three areas: health, education and standard of living. It is a summary measure based on the geometric mean of normalised indices for each dimension (life expectancy at birth, average and expected years of schooling, gross national income per capita).

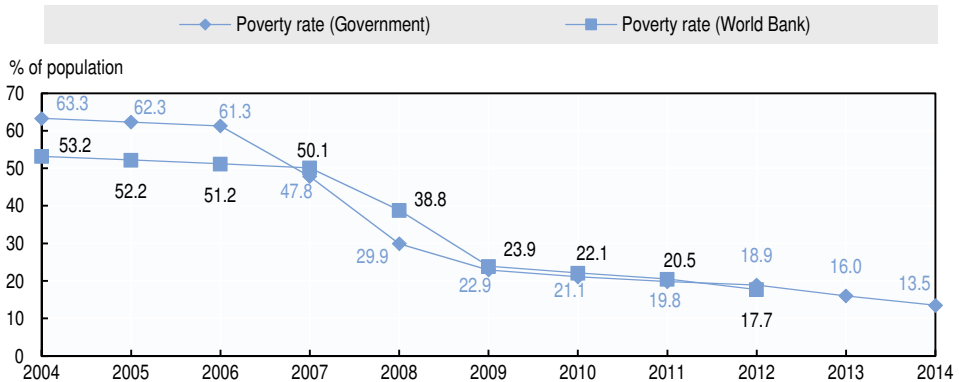
Cambodia Development Resource Institute (CDRI) wealth index: Poverty status computed in panel data through principal component analysis of five dimensions: agricultural land and livestock, demography, human capital, social capital and natural resources. Poverty lines are defined at the 40th and 60th percentile of the wealth index.

- **Transient poverty:** Households identified as poor but above the poverty line in at least one of four survey rounds.
- **Chronic poverty:** Households identified as poor and below the poverty line in each of four survey rounds.

IDPoor Programme poverty thresholds (national; RGC): The Identification of Poor Households Programme (IDPoor) classifies household income level using a proxy means test, which assigns a household “poverty score” based on a range of information, such as demographics, number of children in the house and indebtedness, to the cumulative quality and quantity of a household’s assets.

- **Non-poor:** Households classified as “non-poor” have been assigned a PMT score that ranges from 0 to 44.
- **Poor (“IDPoor 1”):** Households classified as “poor” fall within a PMT score range of 45 to 58 points.
- **Very poor (“IDPoor 2”):** Households classified as “very poor” have been assigned a PMT score greater than 58.

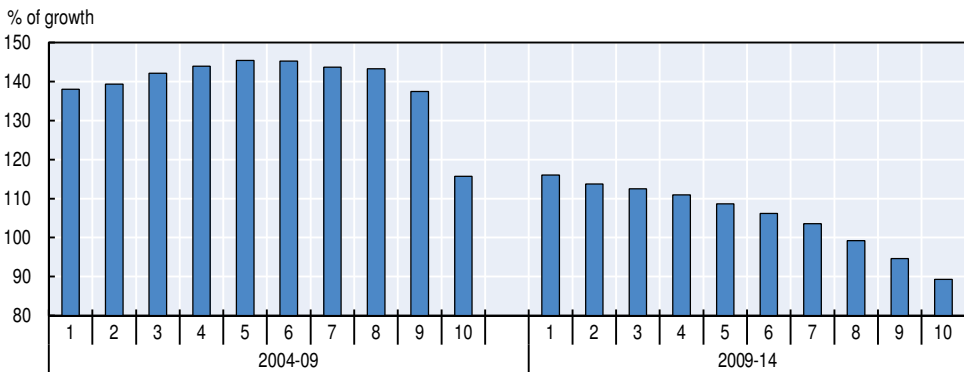
Figure 1.1. Poverty has fallen considerably over the last decade
National poverty rates, RGC and World Bank (2004-14)



Source: World Bank (2014a), *Where Have All the Poor Gone? Cambodia Poverty Assessment 2013*, documents.worldbank.org/curated/en/824341468017405577/pdf/ACS45450REVISE00English0260May02014.pdf.

According to CSES data, the Gini coefficient² fell by 22% between the 2004 and 2014 surveys, from 0.380 to 0.295. Inequality has increased up to 2009 but declined rapidly thereafter (ADB, 2014). This is reflected in household consumption growth by decile between 2004-09 and between 2009-14 (Figure 1.2).

Figure 1.2. Consumption growth has been pro-poor
Consumption growth by decile (2004-09, 2009-14)



Note: *KHR = Cambodian riel

The deciles of household consumption in 2004 Cambodian riel (KHR) are defined according to the following cut-offs: 223 336 / 287 402 / 345 023 / 399 538 / 464 581 / 548 614 / 657 613 / 831 222 / 1 222 352. The deciles of household consumption in 2009 Cambodian riel (KHR) are defined according to the following cut-offs: 305 029 / 402 916 / 491 333 / 578 654 / 676 039 / 790 107 / 947 577 / 1 174 667 / 1 610 982. The deciles of household consumption in 2014 Cambodian riel (KHR) are defined according to the following cut-offs: 350 282 / 456 077 / 549 250 / 636 399 / 729 553 / 829 604 / 961 286 / 1 137 181 / 1 495 614.

Source: Authors' calculations based on National Institute of Statistics, Cambodia (NIS) (2004, 2009, 2014), *Cambodia Socio-Economic Surveys*.

Between 2004 and 2009, consumption growth was highest for households in the middle of the distribution. Between 2009 and 2014, it was highest for households in the lowest deciles. The decline identified for consumption among the top two deciles might reflect methodological difficulties in capturing consumption at the top end of the income distribution (ADB, 2014).

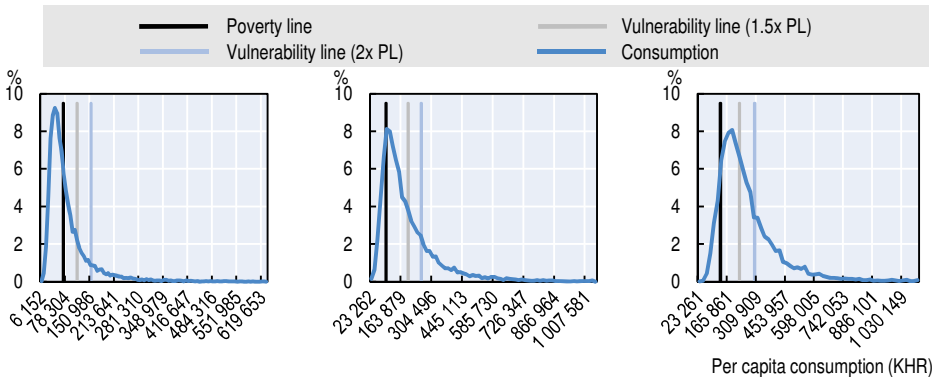
Cambodia has the lowest level of inequality in Southeast Asia. Inequality has fallen only slightly in the Philippines and Thailand, while it has risen in Viet Nam, Indonesia and Lao People’s Democratic Republic (Lao PDR) since 2004.

However, this success is fragile. A large proportion of non-poor households (based on monetary poverty lines) are at risk of falling back into poverty. Figure 1.3 shows a clear shift in the distribution of household consumption across the population for 2004, 2009 and 2014. The majority of households move out of monetary poverty and a large number of poor households are clustered just below the poverty line.

However, many non-poor households remain just above the national poverty line. Imposing a “vulnerability line” at 1.5 times the level of the poverty line shows that 55% of households were either poor or vulnerable in 2014. This is lower than in 2004 and 2009 but very high nonetheless.

Figure 1.3. **While the poverty headcount has decreased, vulnerability remains high**

Cumulative distribution of household consumption in Cambodia (2004-14)



Note: KHR = Cambodian riel.

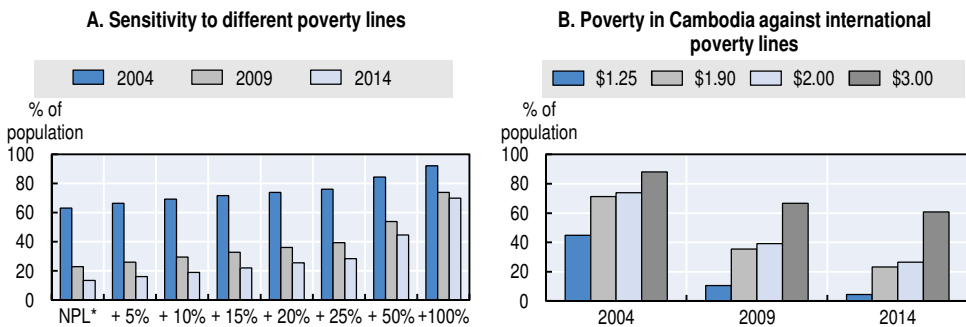
Source: Authors’ calculations based on NIS (2004, 2009, 2014), Cambodia Socio-Economic Surveys.

The left-hand panel of Figure 1.4 shows how the headcount poverty rate would have increased in previous years if the national poverty line were adjusted upwards. The sensitivity is especially pronounced in 2014, due to the number of households that moved above the poverty line but remained below

the vulnerability line. According to the 2014 CSES, an economic shock that reduced incomes uniformly by 20% would have nearly doubled the national poverty rate in that year. The right-hand panel of Figure 1.4 shows how poverty has declined according to international rather than local benchmarks. In 2014, Cambodia's national poverty rate would have been much higher if the new USD 1.90 benchmark for extreme poverty had been used instead of the national poverty line.

Figure 1.4. **Poverty rates are highly sensitive to small changes in the poverty line**

Headcount poverty rates in Cambodia, according to national and international poverty lines (2004-14)



Note: * NPL = national poverty line (Cambodia).

Source: Authors' calculations based on NIS (2004, 2009 and 2014), *Cambodia Socio-Economic Surveys*.

The Identification of Poor Households Programme (commonly called the IDPoor system) is a registry of households that the RGC uses to determine eligibility for government or donor anti-poverty programmes. The database is administered by the Ministry of Planning (MoP) and follows households at intervals of about three years.

This report is the first to analyse the data contained within the IDPoor database, which provides valuable insights into the dynamics of poverty and vulnerability in Cambodia. Figure 1.5 shows transitions in household poverty over three IDPoor waves (time periods): 2008/09, 2010/11 and 2013/14.³ Given that the IDPoor programme is principally applied in rural areas, this analysis mainly captures the dynamics of rural poverty from 2008 onwards, meaning that it covers the periods when rural poverty was declining rapidly and when this decline slowed.

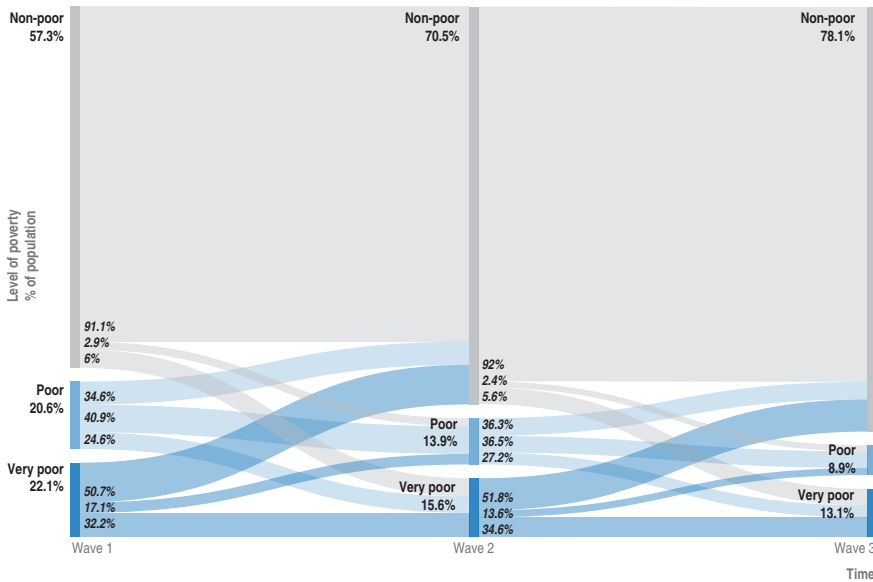
Households categorised by IDPoor as poor or very poor show significant movement in and out of poverty. Over half of the households categorised as non-poor remained out of poverty over the three waves. Among those categorised as poor in each of the first two waves, about one-third transitioned

out of poverty by the third survey, while one-third remained poor and one-third fell into extreme poverty. About half of the very poor in each of the first two waves transitioned out of poverty but about 6% fell back into extreme poverty thereafter.

These findings highlight the need for social protection mechanisms that protect the incomes of households who have emerged from poverty in the event of a shock that would otherwise send them back below the poverty line. Given the extensive clustering of households just above the poverty line, this shock would not need to be very big. Meanwhile, the existence of a cohort that remains very poor across the surveys indicates that Cambodia’s economic growth is not benefiting all households equally and thus highlights the role for social assistance in achieving further gains in reducing poverty.

Figure 1.5. Individuals frequently transition in and out of poverty

Transitions in household poverty in Cambodia
(IDPoor waves: 2008/09, 2010/11 and 2013/14)



Note: This graph shows the movement of Cambodian households between states of welfare between 2008 and 2014. The population observed in this graph belong to a restricted subset of the IDPoor panel sample. The percentages listed in black indicate the share of households that fall under each poverty category within each wave. The percentages listed in black italics indicate the share of households within each category of poverty that make a transition to the next poverty state (indicated by the direction of the flow). The direction of each transition can be identified by the origin and end point of the flow. The nomenclature of the graph is that used by the IDPoor programme. Poverty categories are assigned according to the final scores of a proxy means test, described in Annex 2.A2.

Source: Authors’ calculations based on MoP (2016), IDPoor data (2008-2014).

The poverty dynamics revealed by analysis of the IDPoor database are consistent with the findings of a four-round household panel survey conducted by the Cambodia Development Resource Institute (CDRI) between 2001 and 2011 (Tong, 2012). This study found that between 84% and 90% (depending on the poverty line applied) of households identified as poor across the surveys were above the poverty line for at least one of the four rounds, on which basis they are classified as “transient poor”. Between 4% and 10% of sample households were below the poverty line in each of the four rounds, rendering them “chronically poor”. By comparison, of the IDPoor households identified as very poor, more than one-third remained very poor across the three waves.

The composition of poverty has changed

The next step is to analyse the characteristics of the poor and non-poor households to understand which groups are most at-risk from remaining in poverty or falling into poverty. A technique called Latent Class Analysis (LCA) was applied to households identified as poor in the CSES for 2004, 2009 and 2014 to show how the characteristics of poverty have changed since 2004. LCA clusters sub-groups of poor households according to similarities in their socio-demographic profile and thus sheds light on the needs and characteristics of various groups within the poor population across the three surveys.

This exercise provides valuable insights for policy makers when considering the design and targeting of anti-poverty programmes. Figure 1.6 shows the results for each year, aggregating the poor households identified in the CSES for 2004 and 2014 into four groups, and those for 2009 into five groups. The size of the respective boxes in 2009 and 2014 reflects the size of each sub-group relative to the size of the poor population in 2004.

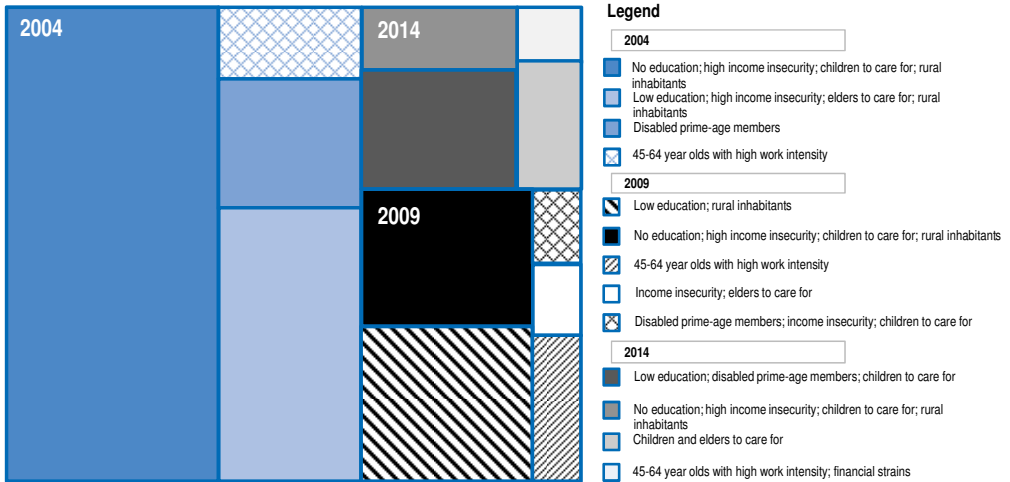
A large number of households characterised as poor across all three surveys are responsible for looking after children. The presence of persons with disabilities also placed households at higher risk of poverty across the three surveys, especially in 2014. The impoverishing effect of caregiving might reflect a reduction in household labour supply, a higher dependency ratio within a household (the proportion of those who can participate in the economy relative to those who cannot), or both.

Possessing little or no education (defined as some members having completed primary education and no educated household members, respectively) is characteristic of the two largest clusters of poor households in each year, underlining the role education plays in improving livelihoods and the value of interventions aimed at keeping children in school. Without such interventions, it will be very difficult to help households escape from the

poverty trap: poor households find it harder to send children to school or to provide them adequately with nutrition, with the result that these children are more likely to end up poor and the cycle thus continues.

Figure 1.6. The profile of poor households is changing

Latent class analysis (LCA) poverty clusters (2004-14)



Source: Authors' calculations based on NIS (2004, 2009 and 2014), Cambodia Socio-Economic Surveys, available at nada-nis.gov.kh/index.php/catalog/CSES; and MoP (2016), IDPoor data (2008-2014).

As detailed in Chapter 2, the RGC and development partners are seeking to promote the development of children through scholarship and school feeding programmes aimed at improving school attendance. However, there are presently large gaps in these schemes, which do not operate nationwide and where they do operate, don't cover all the grades. There are no public transfers linked specifically to caregiving responsibilities; although financing has been made available for a benefit for people with disabilities, this has not been implemented.

While the two largest clusters in 2004 and 2009 consisted of people living in rural areas, rural poor are less prominent in the 2014 survey. This is consistent with the rapid decline in rural poverty between 2009 and 2014 and indicates that poverty is no longer just a rural phenomenon.

Although not identified specifically in Figure 1.6, the LCA shows that female-headed and single-parent households feature prominently among poor households, underscoring the impoverishing impact of caregiving responsibilities. Larger households are also at higher risk of income poverty. According to the 2014 CSES, only 3.5% of three-member households were poor, compared with 23.4% of those with seven members.

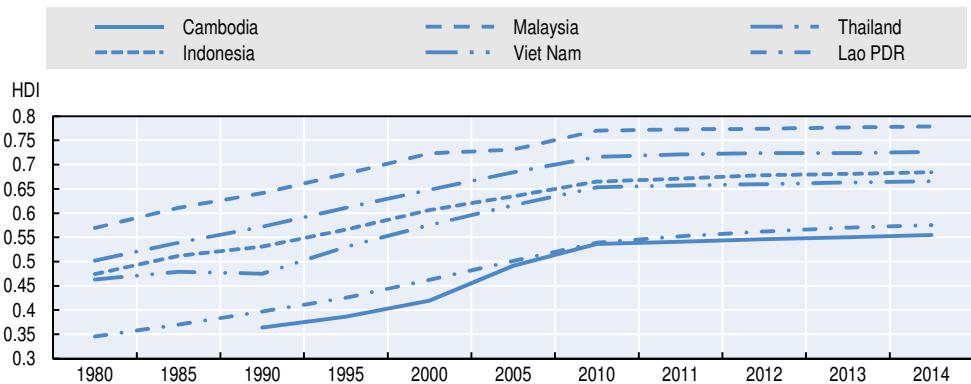
The LCA also reveals that many poor households have one or more wage-earners but employment fails to protect household members against poverty. Households reporting high levels of work intensity but exhibiting no other correlates of poverty (such as low education or financial burdens) feature across all three surveys. A minimum wage might improve this situation, though enforcement would be problematic given the high level of informality discussed later.

Deprivation has not fallen in line with monetary poverty

In 2015, Cambodia ranked 143rd in the United Nations Development Programme (UNDP) Human Development Index (HDI), with a score of 0.555, the lowest in SEA after Myanmar (Figure 1.7, which excludes Myanmar due to lack of historical data). In 2004/05, the national monetary poverty rate was 10% higher than multi-dimensional poverty; in 2014, the multi-dimensional poverty rate was 33%, more than twice the money-metric measure. In addition to the population classified as multi-dimensionally poor in 2014, a further 21.6% were considered vulnerable to poverty.

Figure 1.7. **Cambodia still lags behind its neighbours in terms of human development indicators**

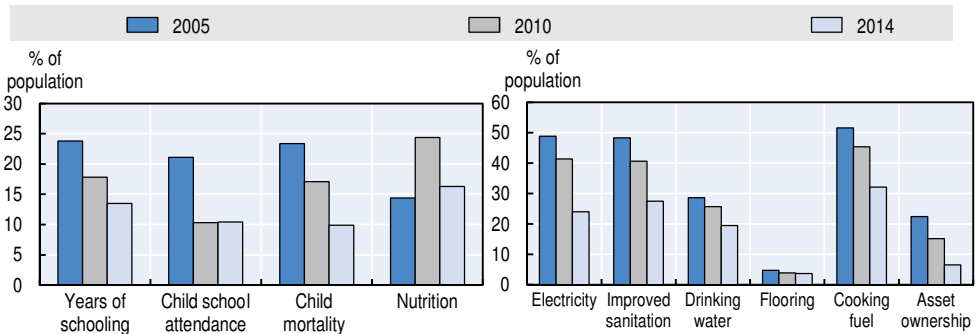
HDI in SEA (1980-2014)



Source: UNDP (2016), *Shaping the Future: How Changing Demographics Can Power Human Development*, hdr.undp.org/sites/default/files/rhdr2016-full-report-final-version1.pdf.

Demographic and Health Survey (DHS) data for 2005-14 show regular and substantial declines in almost all deprivations except nutrition, which increased between 2005 and 2010 and remained above the 2005 level in 2014 (Figure 1.8).

Figure 1.8. **Most indicators of deprivation are improving**
Multi-dimensional poverty deprivations in Cambodia (2005-14)



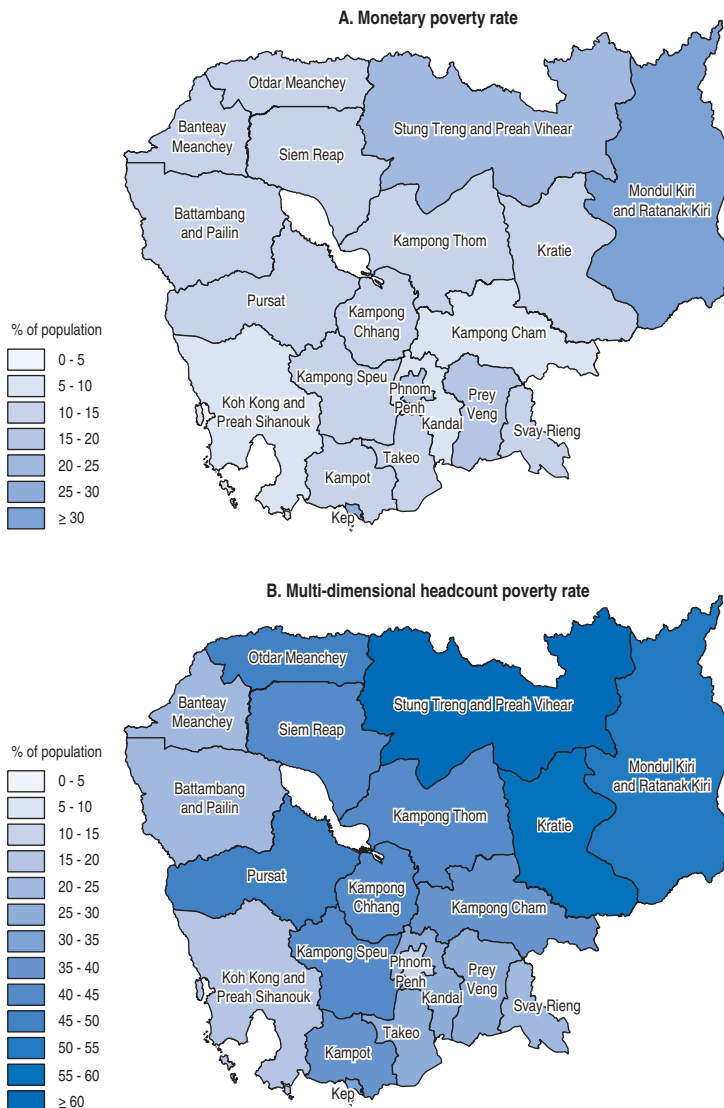
Source: Authors' own calculations based on NIS, Ministry of Health, Cambodia (MoH) and ICF International (2015), *Cambodia Demographic Health Survey 2014*, available at dhsprogram.com/publications/publication-fr312-dhs-final-reports.cfm; NIS, MoH and ICF Macro (2011), *Cambodia Demographic Health Survey 2010*, available at dhsprogram.com/publications/publication-FR249-DHS-Final-Reports.cfm; and National Institute of Public Health, NIS and Opinion Research Company Macro (2006), *Cambodia Demographic Health Survey 2005*, available at dhsprogram.com/publications/publication-FR185-DHS-Final-Reports.cfm.

Non-income poverty is concentrated in rural parts of Cambodia. The multi-dimensional poverty rate is 39% in rural parts but is one-seventh of that level in urban regions. This disparity reflects a lack of access to adequate sanitation, health and education facilities in remote parts of Cambodia, with households often deprived in all these dimensions at once. It also demonstrates that the monetary poverty reduction witnessed since 2004 has not necessarily translated into improvements in living standards or addressed some of the major life cycle risks discussed below.

The provinces with the highest poverty rate in monetary terms in 2014 did not necessarily have the highest prevalence of multi-dimensional poverty and vice versa (Figure 1.9). Households in Phnom Penh fare well relative to other regions in terms of multi-dimensional poverty, even though the rapid growth of the capital is causing severe infrastructural problems (some 34% of housing is in informal settlements). Provinces surrounding Phnom Penh also have lower poverty rates than the rest of the country. Multi-dimensional poverty rates are highest in the mountain and plateau areas in districts close to borders with Thailand and Lao PDR in the north and northeast and Viet Nam in the east.

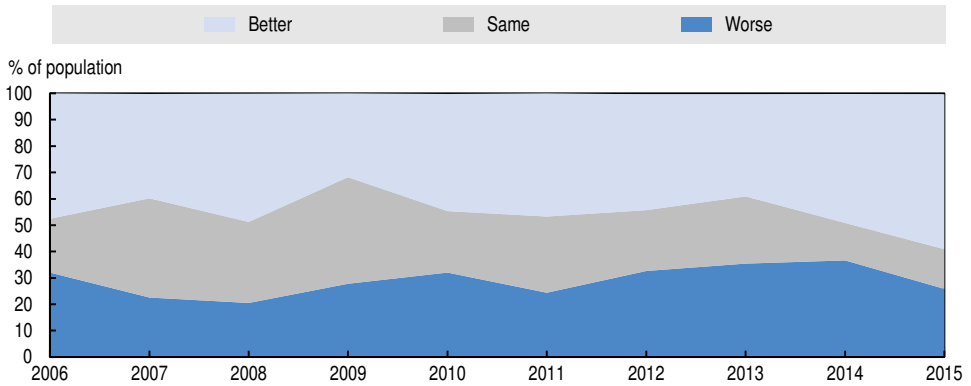
The rapid decline in monetary poverty has also not been matched by the rate at which subjective well-being indicators have improved. In 2012, Cambodia ranked worst in the world in terms of the percentage of the population thriving (3%, in comparison with a median of 20% in Asia) and third worst in the world in suffering, with 34% rating their quality of life as extremely low, up from 26% in 2011 (Gallup, 2012). More recently, however, there have been signs of improvement. Gallup data for 2015 indicated that more individuals have experienced an improvement in their life situations (Figure 1.10).

Figure 1.9. Monetary poverty has fallen but multi-dimensional poverty persists
 Monetary poverty rates and multi-dimensional headcount poverty rates by region in Cambodia (2014)



Source: NIS, MoH and ICF International (2015), *Cambodia Demographic Health Survey 2014*, available at dhsprogram.com/publications/publication-fr312-dhs-final-reports.cfm; and Oxford Poverty and Human Development Initiative [OPHI] (2016).

Figure 1.10. **A majority of Cambodians report rising living standards**
Evolution of self-reported standard of living in Cambodia (2006-15)



Note: The categories correspond to answers to the following question: "Right now, do you feel your standard of living is getting better or getting worse? Getting better/The same/Getting worse".

Source: Gallup (2016), Gallup World Poll (dataset), available at gallup.com/services/170945/world-poll.aspx.

Risks affect all stages of the lifecycle

Households confront different risks at different stages in the life cycle of its members. Understanding these risks is essential for tailoring social protection provision to the needs of population and anticipating future demands. Monitoring risks throughout the life cycle is also important, as risks experienced at one age can increase susceptibility to other risks at a later age. Childhood malnutrition, for example, increases the likelihood of low educational outcomes or poor health later in life.

Investment in social protection (and other) policies targeting life cycle stages should be appraised not only against their immediate impact but also with reference to their long-term benefits in safeguarding against risks later in life. By investing in the human capital of today's youth, the RGC not only reduces the extent to which this cohort requires support during their working years but also enhances their future contribution to the economy, thereby ensuring the current demographic dividend is sustained (Box 1.5). Figure 1.11 shows a number of risks for which information is available from the 2014 CSES, as well as their incidence at different ages.

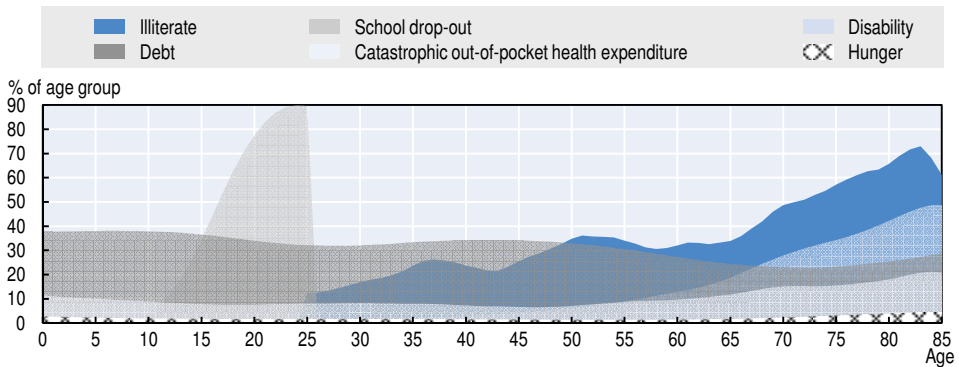
Protecting mothers and children

Maternal and child mortality remain high, despite significant improvements. The number of maternal deaths per thousand live births in Cambodia is high relative to other countries in the region, despite an almost threefold decline between 2000 and 2014 (from 484 to 167) (World Bank, 2016). The Philippines (117), Indonesia (133), Viet Nam (54) and Thailand (20) all performed better than Cambodia; only Lao PDR (197) has a higher rate. Although declining since 2000,

infant mortality was 41 deaths per 1 000 live births in 2014 – lower than Lao PDR (51) but higher than Indonesia (23), the Philippines (22), Viet Nam and Thailand (11). The child mortality rate in rural areas is more than twice that in urban areas.

Figure 1.11. **Risks are distributed across the life cycle**

Poverty risks by age in Cambodia (2014)



Source: Authors' calculations based on NIS (2004, 2009 and 2014), Cambodia Socio-Economic Surveys and Cambodia DHS databases, available at nada-nis.gov.kh/index.php/catalog/CSES and dhsprogram.com/publications/publication-fr312-dhs-final-reports.cfm.

Communicable diseases, maternal and neonatal disorders are the top causes of infant deaths, followed by water-borne and infectious diseases (Institute for Health Metrics and Evaluation [IHME], 2013). Clean water and proper sanitation, preventive measures and adequate awareness can significantly reduce the mortality burden. The RGC needs to continue efforts to expand childhood immunisation, which is low by regional standards. Basic immunisation coverage was 86% in 2014, a figure which dropped to 60.9% for the lowest household consumption quintile. Using the third dose of the polio vaccine as a proxy, Cambodia's rate of coverage in 2015 (77%) was low by regional standards (United Nations Children's Fund [UNICEF], 2015).

Children in work and out of school

Cambodia's enrolment rates have improved but completion rates remain alarmingly low at each educational level. Figure 1.12 illustrates that, while enrolment in each cycle increased from 2004 to 2014, a dramatic decline from one cycle to the next persisted. According to CSES data, net enrolment in primary school (children aged 6-11) rose from 77% in 2004 to 85% in 2014. Enrolment was 40% for lower secondary, 20% for upper secondary and 12% for tertiary in 2014. Moreover, only 40% of those enrolled in lower secondary and only 20% in upper secondary were expected to complete the respective cycle in 2014/15 (Ministry of Education, Youth and Sport [MoEYS], 2015).

Box 1.2. Nutrition levels remain a major concern

According to the International Food Policy Research Institute (IFPRI) Global Hunger Index for 2015, Cambodia achieved the largest reduction in hunger levels of any country between 2000 and 2015 (von Grebmer et al, 2015). However, IFPRI still classifies Cambodia as a country with a serious hunger situation. The indicators for children are particularly worrying: 32% of children experienced stunting in Cambodia in 2014, 24% of children were underweight, and 10% of children under age 5 experienced wasting (an increase from 2005) (NIS, MoH, and ICF International, 2015).

Poor nutritional outcomes are not associated only with poor households. DHS data for 2014 show that 20% of children under the age of 5 in the eighth decile of the income distribution are underweight, versus 35% in the first decile, while 26% of children in the same age group were stunted in the eighth decile, versus 43% in the first decile.

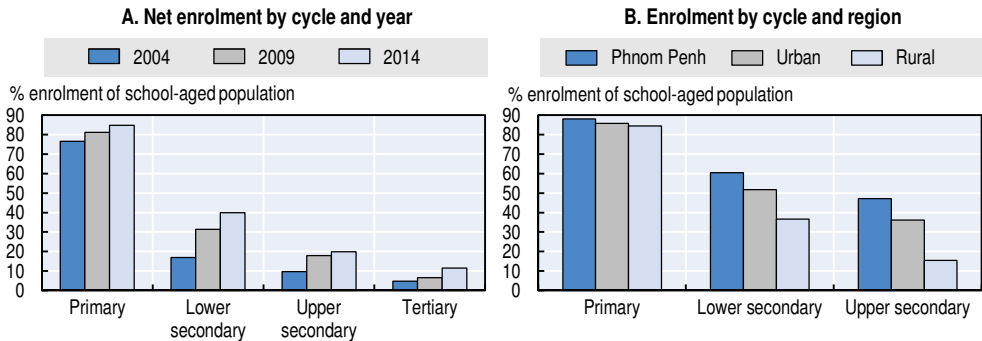
A 2013 study estimated that approximately 30% of infant deaths between 2013 and 2023 will be linked to malnutrition (Council for Agricultural and Rural Development [CARD], UNICEF and United Nations [UN] World Food Programme [WFP], 2013). Aside from the human cost, childhood malnutrition represents an economic burden today and into the future. The same study calculated that the annual losses in potential economic output associated with childhood malnutrition are equivalent to approximately USD 250-400 million or 1.5-2.6% of total annual GDP in 2013. Two-thirds of this amount will be attributable to productivity losses associated with the performance of today's children in tomorrow's labour market.

The RGC's scholarship and school food programmes are key interventions in later childhood. International evidence shows how such programmes not only encourage attendance but also improve children's learning outcomes (Adato and Bassett, 2009; ILO, 2010; Department for International Development [DFID], 2011; Grantham-McGregor et al., 2007; Martorell, 1995; Pollitt et al., 1995). Eligibility for these programmes in Cambodia is determined through the IDPoor targeting system, which means that only children in the lower deciles benefit from the programmes (assuming they are implemented in their district); the incidence of malnutrition higher up the income distribution indicates the shortcomings of targeting such interventions.

In response to the challenge of childhood malnutrition, the RGC has developed the National Strategy for Food Security and Nutrition (NSFSN) (2014-2018). The NSFSN is based on three pillars: i) more productive and diversified agriculture and livestock sectors to increase the availability of and access to food; ii) a focus on the nutrition of mothers and children; and iii) the role social protection can play in improving food security. This multisectoral approach is consistent with the challenge of malnutrition, whose causes include a lack of dietary diversity, lack of access to clean drinking water and sanitation, limited knowledge of basic nutrition, and women's long working days and absence from household decision making (WFP, forthcoming).

Figure 1.12. **Secondary enrolment rates remain low, especially in rural areas**

Net enrolment by cycle and year, and by cycle and region in Cambodia (2004-14)



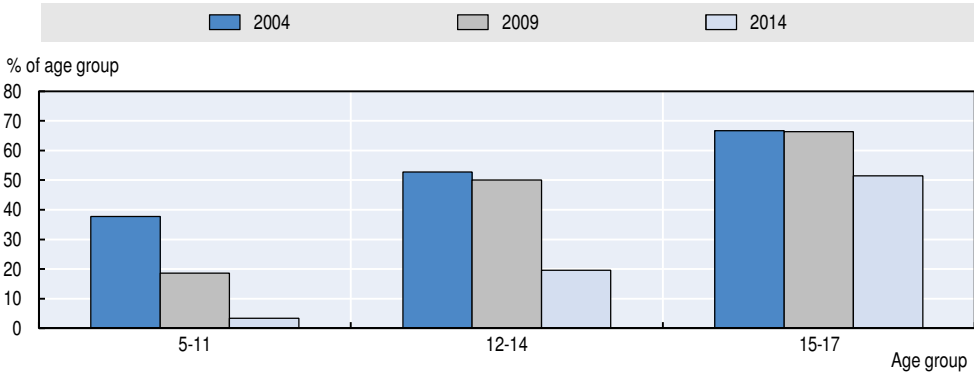
Source: Authors' calculations based on NIS (2004, 2009 and 2014), *Cambodia Socio-Economic Surveys*, available at nada-nis.gov.kh/index.php/catalog/CSES.

Primary enrolment rates are similar for rural areas, urban areas and Phnom Penh, but enrolment and completion rates for lower and upper secondary are much higher in urban areas than in rural. In 2014, rural drop-out rates were 9.1% for primary education, 22% for lower secondary and 15% for upper secondary, compared with 6.5%, 11% and 6.7% for the urban population, respectively (United States Agency for International Development [USAID], 2011). The low enrolment rates and high drop-out rates largely reflect the direct and indirect costs (such as foregone labour income) of allowing children to attend school. Cambodia's scholarship programmes can offset these costs, especially if education is perceived as a means of improving a child's long-term employment prospects.

Child employment is declining but remains commonplace. According to the 2014 CSES, 30% of individuals under 18 not in school cited the need to contribute to household income as the reason for non-attendance. Another 12.5% said they were too poor to attend and 6.6% said they were needed to help with household chores. According to the International Labour Organization (ILO) and the National Institute of Statistics, Cambodia (NIS), 19.1% of children aged 5-17 participated in the labour force in 2012, of whom 50.7% were girls, 37.0% were younger than 15 years old, and 86.7% lived in rural areas (ILO and NIS, 2013).

By the RGC's definitions, 56.9% of children participating in the labour force were classified as child labourers, among whom 31.3% were engaged in hazardous labour (ILO and NIS, 2013). Figure 1.13 shows a decline in child employment between 2004 and 2014, which was especially pronounced between 2009 and 2014 and among younger age groups. Still, among those aged 15-17, more than 50% participated in the labour force in 2014.

Figure 1.13. Child employment is decreasing
 Child employment by age group in Cambodia (2004-14)

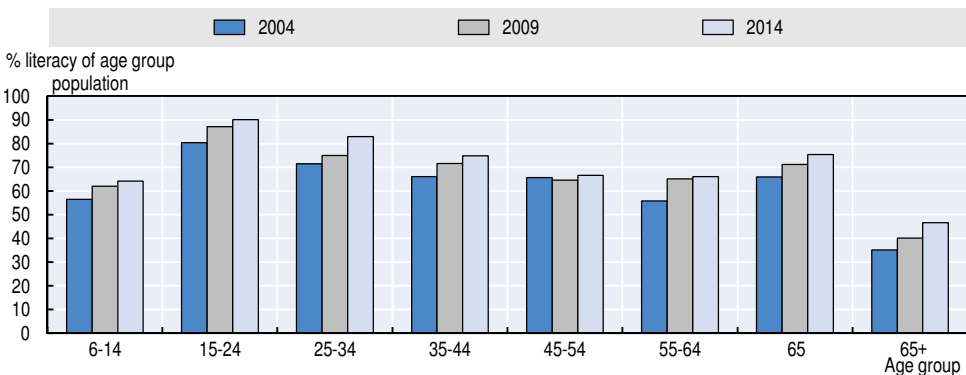


Source: Authors' calculations based on NIS (2004, 2009 and 2014), Cambodia Socio-Economic Surveys, available at nada-nis.gov.kh/index.php/catalog/CSES.

Labour force participation among youth is declining

In 2013, 74.5% of males and 68.1% of females aged 15-24 participated in the labour force, down from 77.5% and 74.2% in 2009, respectively. This suggests that young people, especially women, are staying in school longer. However, the decline may also reflect a mismatch between young people's skills and labour market requirements (ADB and ILO, 2015). Figure 1.14 shows that literacy rates have improved over the past decade yet Cambodia still has the lowest adult literacy rate in SEA (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2016).

Figure 1.14. Literacy rates are increasing
 Literacy rates by age in Cambodia (2004-14)



Source: Authors' calculations based on NIS (2004, 2009 and 2014), Cambodia Socio-Economic Surveys, available at nada-nis.gov.kh/index.php/catalog/CSES.

Low enrolment and poor educational quality, especially at the secondary level, has been cited as a possible reason as to why some 42.5% of young workers underperform in their jobs (ADB and ILO, 2015). These factors also have negative implications for Cambodia's international competitiveness. A lack of education also lowers both the quality of jobs individuals can attain and their long-term income prospects. According to the 2014 CSES, 16% of individuals with five years of education were poor, compared with 3% of those with 15 years of education.

Cambodia's technical vocational education and training programmes give a second chance to workers who did not complete secondary school. They have a key role to play in improving the productivity of such groups, who typically end up in low-skilled jobs in the informal sector. As Chapter 2 identifies, these programmes are currently not rolled out broadly enough to match the scale of the challenge.

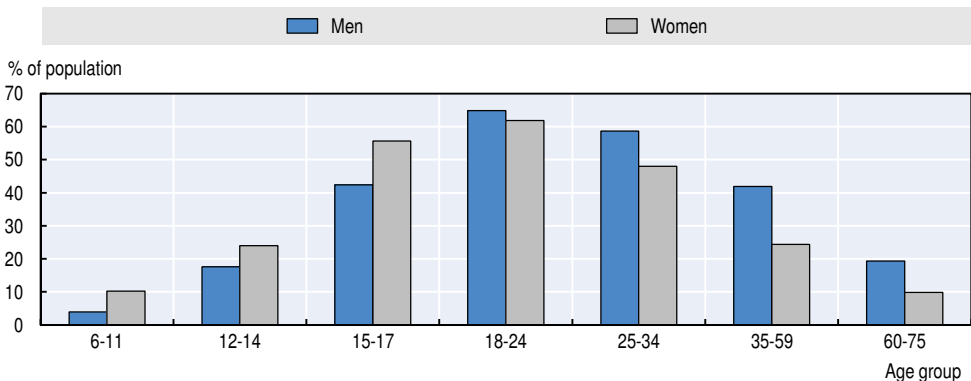
The rate of employment is high but wages are often low

Cambodia's unemployment rate was below 3% in 2015, while the level of labour force participation is among the highest in the world. According to 2014 CSES data, participation was 77.5% for women and 87.9% for men. However, Cambodia has one of the highest levels of working poor in the world. More than half of the employed population earns less than the USD 2 per day upper poverty line. The average rate of poverty by this benchmark for wage employees is 56.5%, not far below the 65.8% rate for own-account or unpaid family workers (ILO, 2013).

Low-paid work and excessive hours are prevalent in Cambodia. The rate of low-wage work (defined as earning less than two-thirds the median wage) was over 30% for the working age population (NIS, 2014). This explains the prevalence of the "working poor" in the LCA. As Figure 1.15 shows, low-wage work is most prevalent in the 18-24 age group. In addition, low-wage earners are concentrated in rural regions (15% versus only 5% in Phnom Penh).

Figure 1.15. Low-wage work is highest for women and men in the 18-24 age cohort

Low-wage work by age and gender in Cambodia (2014)

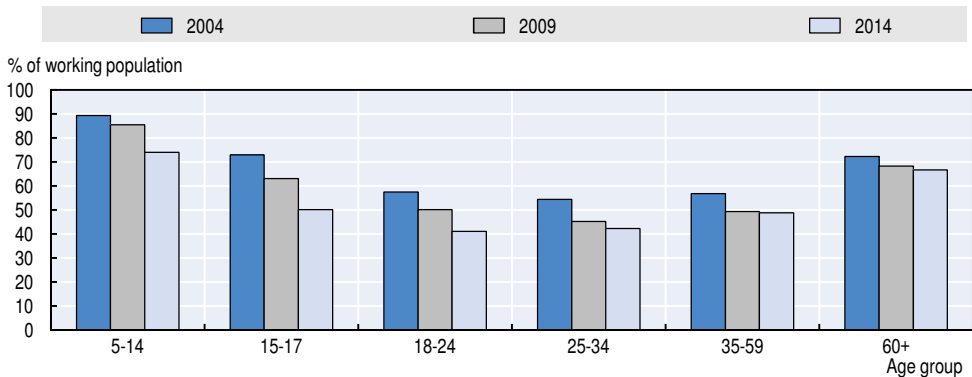


Source: Authors' calculations based on NIS (2014), Cambodia Socio-Economic Survey 2014, available at nada-nis.gov.kh/index.php/catalog/CSES.

The proportion of the labour force working excessive hours (defined by the Labour Law [1997] as more than 48 hours per week) exceeds 40% across all age groups and rises with age for cohorts aged above 24 (Figure 1.16). According to a survey conducted by the RGC and the ILO, 49.6% of Cambodia's 7.2 million employed persons worked more than 48 hours per week in 2012 (ILO and NIS, 2013). This phenomenon affected child workers and older persons more than those in middle age groups and was more common in urban regions (59%) than rural (52%).

Figure 1.16. **A majority of the workforce works excessive hours**

Excessive work hours by age in Cambodia (2004-14)



Source: Authors' calculations based on NIS (2004, 2009 and 2014), Cambodia Socio-Economic Surveys, available at nada-nis.gov.kh/index.php/catalog/CSSES.

The rate of vulnerable employment – own-account or unpaid family labour – has decreased since 2004 but 58% of labour force participation is still classified as vulnerable (NIS, 2014). The youngest and oldest workers are the groups most exposed to vulnerable labour, and rural workers are more vulnerable than those living in urban areas (70% in rural regions versus 29% in Phnom Penh). This rural contingent includes family members working in unpaid farm jobs who are highly dependent on seasonal and uncertain household income.

A 10-percentage-point difference between labour force participation among men and women has persisted since at least 1990, even though women have been at the forefront of the structural transformation of the economy and employment due to the sex-selective employment practices of the garment factories (ILO, 2012). The 2014 CSES indicates a pay gap of 35% between men and women workers. This is an improvement from a decade earlier but Cambodia remains one of the worst performers in SEA in this respect. Women are more likely to be in low-paid and vulnerable employment. Employers prefer to provide short-term contracts that do not oblige them to pay maternity benefits and are reluctant to pay for childcare services (Human Rights Watch, 2015). The unpaid work gap in Cambodia is 3.5 hours per day (ADB, 2013).

The proportion of the total workforce in wage employment (formal or informal) has more than doubled, from 15.8% in 2000 to 35.8% in 2012 (ILO, 2015). However, informal employment is still the norm across the workforce, making it difficult to expand coverage of social insurance given that existing contributory arrangements are accessible only by those in formal employment. According to the 2012 Labour Force Survey, just 8.6% of men and 4.1% of women aged 15 or over were formally employed outside the agricultural sector, while 57.6% of men and 63.2% of women worked in the informal sector (ILO and NIS, 2013).

The high level of informality relates in part to the fact that the majority of businesses are smaller (in staff terms) than the minimum threshold for registration based on the Labour Law, which is generally interpreted to be a headcount of eight. In 2011, micro, small and medium-sized enterprises accounted for 73% of all paid employment in Cambodia and 99.8% of businesses; 97% of these were unregistered (ADB and ILO, 2015). Of total informal employment in 2011, 28.2% was in manufacturing, of which around 50% was in the garment and footwear sector and 11% in construction.

Box 1.3. Improving conditions for garment workers

Employment in the garment and footwear sector has increased rapidly, from just under 200 000 people in 2000 to 605 000 in 2016 (ILO, 2017). The advancement of rights for these workers has been integral to the development of this sector, which is a cornerstone of the economy.

Through the US-Cambodia Bilateral Textile Agreement signed in 1999, the United States increased the quotas for Cambodian garments upon improved compliance with conditions related to labour market standards. The International Labour Organization (ILO) has been closely involved in monitoring these improvements since 2001 through the Better Factories Cambodia (BFC) initiative, which was maintained even after the agreement expired (Asuyama and Neou, 2012; UNDP, 2016).

The garment and footwear sector is the only sector in which the minimum wage prescribed by Cambodia's Labour Law prevails (ILO, 2016). The minimum wage has increased ad hoc since first established in accordance with the Labour Law (1997). It did not keep up with inflation between 2000 and 2012, rising from USD 45 to USD 61 per month over that period (in nominal terms), but it has increased sharply since.

The minimum wage for 2016 was set at USD 140 per month, which was marginally above the poverty line (ILO, 2016). For 2017, it was increased to USD 153 per month (ILO, 2017). With effect from January 2017, the RGC also increased the lower income tax threshold from USD 200 to USD 250 per month, which ensured that the majority of garment workers were exempt, and it also introduced allowances for transport and accommodation for workers in the sector, along with rent and utility-rate controls.

Box 1.3. Improving conditions for garment workers (cont.)

Although low wages are intrinsic to Cambodia's competitiveness, these changes have not (yet) had an adverse impact on the sector. Cambodia's share of the global market for garment and footwear exports has risen from 0.7% in 2005 to 1.5% in 2015 (ILO, 2016), while exports rose by 10.7% on-year in 2014, 14.5% in 2015 and 7.2% in 2016.

Nor are employment levels thought to have suffered as a result of increased wages. Employment in the garment and footwear sector grew by 18.6% on-year in 2013, 13.5% in 2014 and 10.4% in 2015 (ILO, 2016). Although employment then declined by 2.9% in 2016, this is thought to have been due to changes in the methodology for calculating these figures.

The growth of the garment and footwear sector is a mixed blessing for workers' rights. The rapid growth of the sector has exceeded the RGC's ability to monitor and enforce the regulations governing working conditions across the sector, as prescribed by Cambodia's Labour Law (1997) (Human Rights Watch, 2015; RGC, 1997). While the BFC initiative plays a crucial role in supporting the RGC in monitoring garment factories, it lacks enforcement powers and focuses mostly on factories for export (Human Rights Watch, 2015). Union representation in the garment sector is patchy. In 2014, 29% of factories surveyed had no union representation at all (Human Rights Watch, 2015).

However, the provision of social protection for workers in the garment and footwear sector is improving significantly. They now have access to employment injury insurance and health insurance through the National Social Security Fund (NSSF), as will be discussed in Chapter 2. Moreover, the NSSF has a mandate to inspect factories to ensure that they are complying with social security regulations and other legislations, which bolsters the RGC's overall inspection and monitoring capacity.

Disability and old age

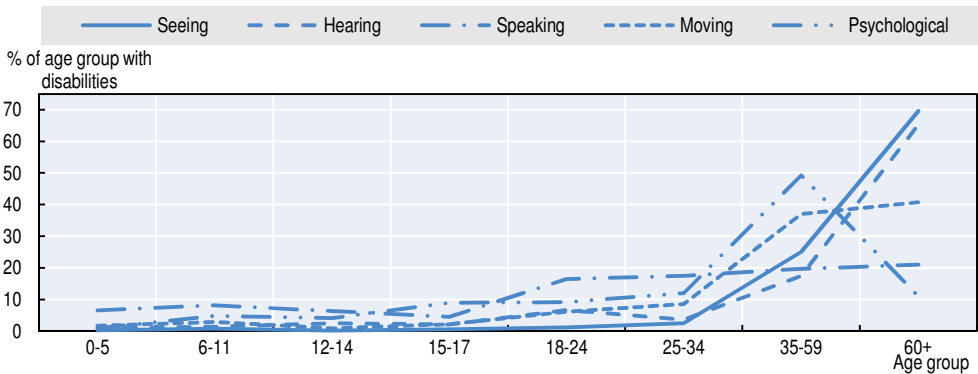
Disability affects Cambodians throughout the life cycle. According to the 2014 CSES, 4% of the population was affected by a disability in 2014,⁴ the most common being moving and hearing difficulties. The main causes of these impairments are old age, disease and congenital disorders, although 4.2% attributed their disability to land mines and 2.6% were suffering from a disability related to war. Figure 1.17 shows the incidence of different disabilities at different ages. Up to age 14, children are most likely to suffer psychological difficulties which gradually become more prominent throughout childhood and early adulthood, peaking between the ages of 35 and 59.

Living with a disability in Cambodia is associated with increased risk of poverty. For households with one or more disabled member, 18.2% were below the poverty line, compared with 12.8% for those with none (NIS, 2014). The literacy rate among the disabled is only 46%, compared with 78% nationally,

which may indicate a lack of special education services. Moreover, the lack of such skills may reduce their opportunities to enter the labour force. 60% of persons with disabilities could not perform any income-generating activity (NIS, 2014), putting them at high risk of monetary poverty. Without access to specialised education or work opportunities, persons with disabilities are dependent on other members of their households, which severely strains household resources, especially in the absence of a public disability benefit.

Figure 1.17. Types of disability vary across the lifecycle

Incidence of disability by age group in Cambodia (2014)



Source: Authors' calculations based on NIS (2014), *Cambodia Socio-Economic Survey 2014*.

The elderly population, on the other hand, appears to be at lesser risk of falling into poverty than the population as a whole. Some 10.5% of individuals aged 60-69 are living below the national monetary poverty line, rising to 13.3% for those aged 70-79 (NIS, 2014). While family support might be an important reason for this, many elderly people appear to have no option but to work: according to 2014 CSES, 27% of individuals aged 65 and over participated in the labour force, of whom 86% were engaged in vulnerable employment and 72% worked excessive hours. In both cases, these rates are higher than the working-age average. The health consequences of unsafe labour conditions can be especially acute for the elderly, for whom average health care costs are nearly four times higher than for children (Ministry of Health [MoH], 2007).

A reliance on informal assistance networks to support the elderly will be problematic as the population ages. In the absence of a social pension and with limited coverage of contributory retirement schemes (discussed in Chapter 2), the low level of poverty among elderly individuals indicates that family and other social networks make a major contribution to ensuring the well-being of those over 60. As the population ages, these informal arrangements will come under strain, since there will be fewer workers to support a greater number of elderly people. Internal migration also disrupts resource-sharing among families (OECD, 2017).

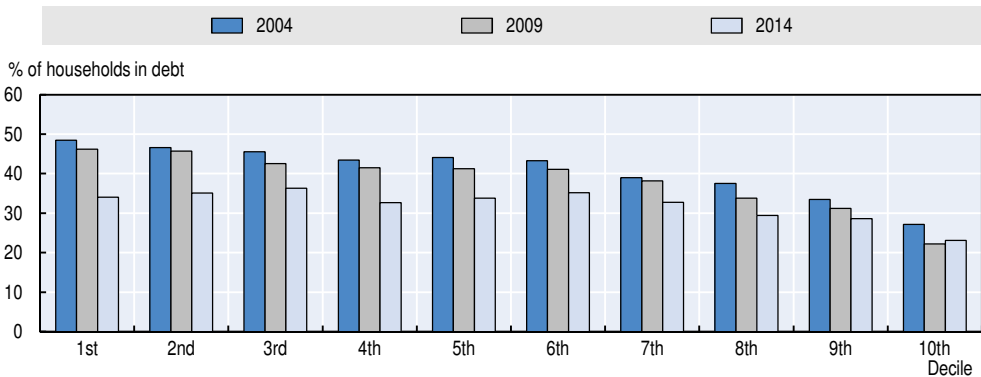
Debt

Household debt is endemic among certain populations in Cambodia. Ovesen, Trankell and Öjendal (1996) note that “indebtedness and usury have long been recognised as major problems for Cambodia’s peasants”. The nature of indebtedness has changed with the expansion of the formal financial sector, in particular microfinance institutions. The number of individuals borrowing from such institutions rose from 50 000 to 1.1 million between 1995 and 2012, over which period the amount of outstanding loans increased from USD 3 million to USD 732 million (Liv, 2013). The University of Zurich’s Over-indebtedness Index classifies Cambodia as a high-risk country due to the absence of a regulatory framework to manage the rapid expansion of the microfinance system (Kappel, Krauss and Lontzek, 2010).

Debt incidence has declined gradually since 2000 but remains high in rural areas. Figure 1.18 shows the decline in debt levels between 2004 and 2014, as well as the debt incidence. Approximately one-third of households in each of the first seven consumption deciles were in debt in 2014. Across the distribution, the number of households in debt decreased from 43% to 31% between 2004 and 2014, but the average amount of outstanding loans per household in the same period increased from KHR 993 000 to KHR 4.3 million (Kappel, Krauss and Lontzek, 2010). Multiple loans can compound indebtedness. A 2013 survey of 1 500 borrowers from microfinance institutions showed 28% had two loans, 13% had three loans, 15% had more than four loans, and only 56% were solvent (Liv, 2013). 2014 CSES data showed 35% of rural households are in debt, compared with 10% in Phnom Penh and 29% in other urban regions.

Figure 1.18. **Household debt is highest among the poor and vulnerable**

Household debt by consumption decile in Cambodia (2004-14)



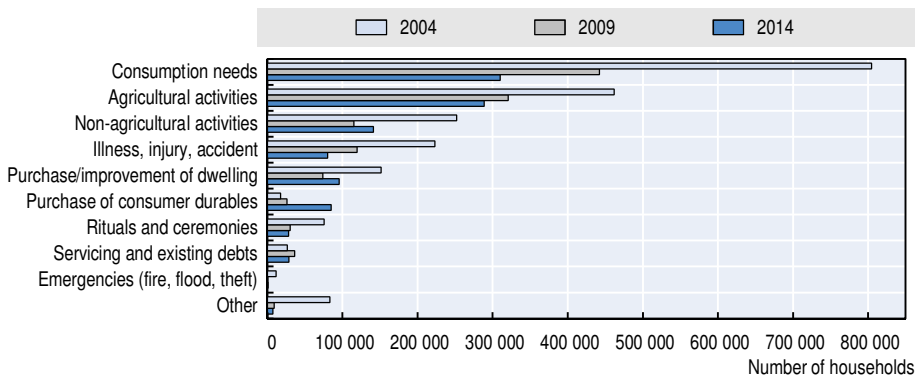
Note: The deciles of household consumption in 2014 Cambodian riel (KHR) are defined according to the following cut-offs: 350 282 / 456 077 / 549 250 / 636 399 / 729 553 / 829 604 / 961 286 / 1 137 181 / 1 495 614.

Source: Authors’ calculations based on NIS (2004, 2009 and 2014), Cambodia Socio-Economic Surveys, available at nada-nis.gov.kh/index.php/catalog/CSES.

Figure 1.19 shows how borrowing for consumption declined significantly between the 2004 and 2014 CSES but remains relatively high (NIS, 2014). Poor households are more likely to i) borrow from informal moneylenders; ii) have a high ratio of outstanding debt to average annual per capita consumption; and iii) borrow for subsistence purposes, such as consumption, medical expenses, cultural and religious ceremonies or servicing existing debts (ADB, 2014). A significant number of households who have relied on loans to increase their consumption above the poverty line risk falling back into poverty when they have to repay their debts.

Figure 1.19. **Households are borrowing less for consumption and more for asset building**

Reasons for household borrowing in Cambodia (2004-14)



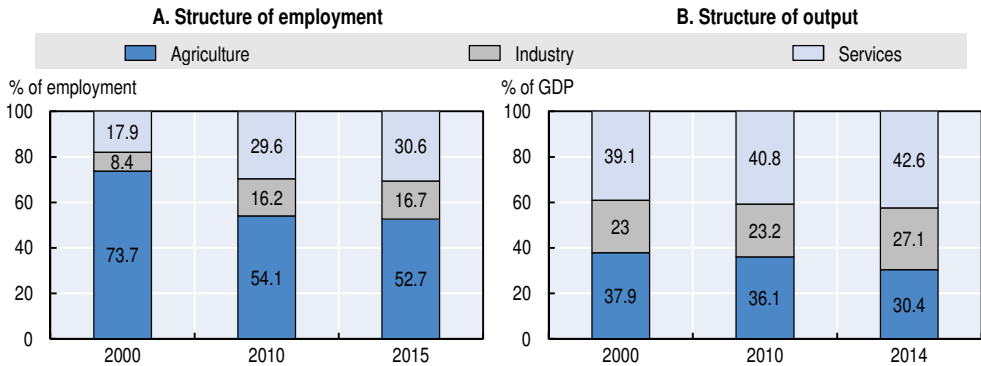
Source: Authors' calculations based on NIS (2004, 2009 and 2014), *Cambodia Socio-Economic Surveys*, available at nada-nis.gov.kh/index.php/catalog/CSES.

Cambodia's economy is in transition but needs to diversify further

The composition of GDP and employment has changed significantly since 2000 (Figure 1.20) (World Bank, 2015a). The contribution of agriculture to GDP fell from 37.8% in 2000 to 30.4% in 2014, while industry's contribution grew from 23.0% to 27.0%, reflecting not only the rapid development of the textile sector, which barely existed before the 1990s, but also growth in construction. The service sector remains the largest contributor to GDP at 42.6% in 2014 and is being sustained by strong growth in tourism. However, gains in agricultural productivity have been an important driver of growth: as the World Bank recently reported, "Cambodian agriculture is in the midst of rapidly transitioning from a traditional subsistence to a modern commercial sector" (World Bank, 2015b). From 2000 to 2015, employment in agriculture fell from 73.7% of the workforce to 52.7%; employment in the industrial sector almost doubled, from 8.4% to 16.7%; and employment in services rose from 17.9% to 30.6% (ILO, 2015).

Figure 1.20. **The structure of the economy is changing but agriculture remains dominant**

Composition of employment and economic sectors in Cambodia, % of GDP (2000-15)



Note: GDP units are in PPP constant 2011 international US dollars.

Source: World Bank (2015a), World Development Indicators (database), available at data.worldbank.org/products/wdi.

From 2000 to 2015, employment in agriculture fell from 73.7% of the workforce to 52.7%. Over the same period, employment in the industrial sector almost doubled, from 8.4% to 16.7% and employment in services rose from 17.9% to 30.6% (Figure 1.20). The movement of labour out of agriculture is typically associated with a decrease in household and own-account work into wage employment. However, as noted above, formal employment has not increased dramatically in Cambodia.

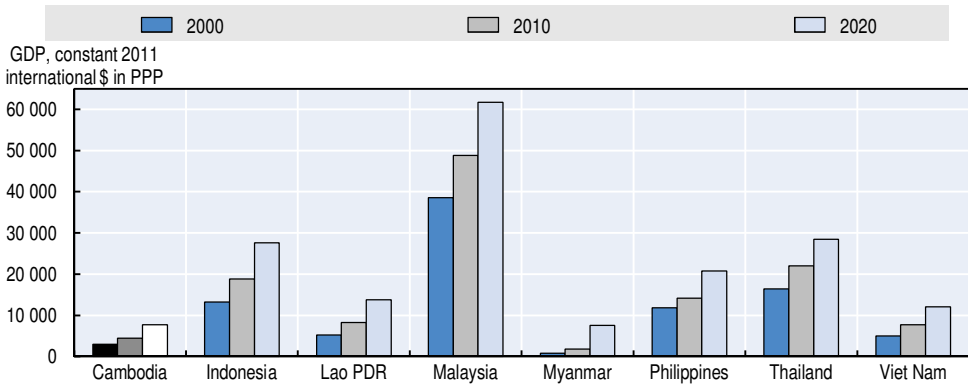
Robust growth and structural transformation are expected to continue. Long-term projections of population growth and productivity indicate an average annual growth rate of close to 6% between 2020 and 2050. Based on the economic dynamics of the past 15 years, agriculture will contribute just 15% to GDP and employ 42% of the working-age population by 2050,⁵ while industry and services combined will contribute 85% to GDP and employ 58% of the workforce (see Annex 1.A2 for a description of the methodology used to derive these forecasts).

Cambodia's output per worker is expected to increase by 261% between 2000 and 2020, the fastest growth in the region after Lao PDR and Myanmar. However, as Figure 1.21 shows, Cambodia's level of productivity lags behind that of its neighbours in SEA (ILO, 2015).

Cambodia's garment and footwear exporters face strong competition from other producers, in particular those in Bangladesh and Viet Nam. In addition, Cambodia is heavily reliant on exports to the European Union, the United States and Canada, while exports to Japan have also grown recently (ILO, 2017). A slowdown in these key markets has an immediate impact on growth in the broader economy, as occurred in 2009.

Figure 1.21. **Productivity is rising but remains low by regional standards**

Output per worker across select SEA countries (2000-20)



Source: ILO (2015), *Key Indicators of the Labour Market* (database), available at ilo.org/global/statistics-and-databases/research-and-databases/kilm/lang--en/index.htm.

Meanwhile, declining export prices have forced the sector to continually increase production with new factories and more manpower. However, this model cannot be sustained indefinitely, due to a limited supply of young (especially female) rural workers who can join the manufacturing sector (ADB and ILO, 2015). Cambodia's recent graduation to lower-middle income status could reduce access to key markets: the Everything but Arms (EBA) trade arrangement with the European Union provides preferential access to exports from lower-income and least developed countries.

Looking ahead, automation poses a huge threat to Cambodia's garment and footwear industry, in particular employment in the sector. The ILO calculates that 88% of workers in Cambodia's garment sector are at risk from automation (Chang and Huyen, 2016). Given that such workers comprise such a large share of the formal workforce, Cambodia ranks high among the countries in SEA most vulnerable to the fourth industrial revolution.

Meanwhile, resource constraints and climate change threaten the continued growth of the rural sector. Substantial increases in the area under cultivation – an important contributor to growth in the agriculture sector between 2002 and 2012 – will not be sustained into the future (World Bank, 2014b). There is also a shortage of manpower, with only 1.6 workers per hectare, a level typical in countries with highly mechanised agriculture sectors (World Bank, 2014b). While the labour shortage has driven up rural wages, it is a major concern for future productivity and underscores the need for mechanisation. Moreover, Cambodia is one of the countries at greatest risk from climate change, which directly threatens rural livelihoods and coastal tourism (Box 1.4).

Box 1.4. Climate change poses risks for Cambodia

Cambodia's agriculture sector is highly vulnerable to climate change. Research shows that a 1°C increase in minimum temperatures during the dry season reduces rice yields by 10% (Peng et al., 2004).⁷ For subsistence farmers, loss of income in the event of crop failure is compounded by food shortages.

Climate change also threatens livelihoods in coastal areas exposed to rising sea levels and increased typhoon activity (RGC, 2013). Although tourism is starting to play a greater role in the coastal economy, households in these areas derive their incomes mainly from agriculture and fisheries. These low-lying terrains are increasingly prone to climate change-related storm surges, floods and rising sea levels (Cambodia Climate Change Alliance [CCCA], 2012).

More than half of Cambodians depend on the agriculture sector for their livelihoods. Any disastrous climate effect (flooding, drought) or non-disastrous climate effect (changing rainfall patterns, cyclical droughts) can exacerbate food insecurity for these households. A lack of support in the case of non-disastrous climate-related effects can perpetuate poverty traps and increase the risk of households near poverty falling back into poverty.

A 2015 World Bank report on the impact of climate change on poverty identified the central role of micro-insurance in protecting low-income individuals (Fay et al., 2015). A report on micro-insurance in Cambodia found two principal sources of climate change-related risk: ill-health/injury and crop failure due to drought and floods (UNDP, 2013b). While Health Equity Funds cover a large number of poor households against health risks, there are no formal arrangements, public or private, insuring against crop failure.

The principal risk-mitigation strategy is for Cambodians to save against climate events; when savings are exhausted, they borrow (UNDP, 2013b). Of 390 households surveyed soon after the floods that affected 18 of 24 provinces in 2011, 48% had to take a loan as a direct consequence. Some 60% of respondents subsequently experienced difficulty in repaying their loans, with annual interest rates estimated to be as high as 65% (Bullen and Corita, 2012).

A study of SEA households found that those with higher incomes take more proactive measures in response to climate change versus the reactive responses of poorer households (Francisco et al., 2011). Ex post responses, such as evacuation or emergency support, often come at a cost to the RGC. Moreover, coping strategies involving borrowing, reduced food consumption or taking children out of school can cause households to suffer significant long-term costs. Social protection can enhance long-term resilience to climate change by providing resources for productive investments in land and diversification of agricultural activities. The cost of a social protection programme that facilitates proactive measures is more than offset in economy-wide savings (Fay et al., 2015).

Box 1.4. Climate change poses risks for Cambodia (cont.)

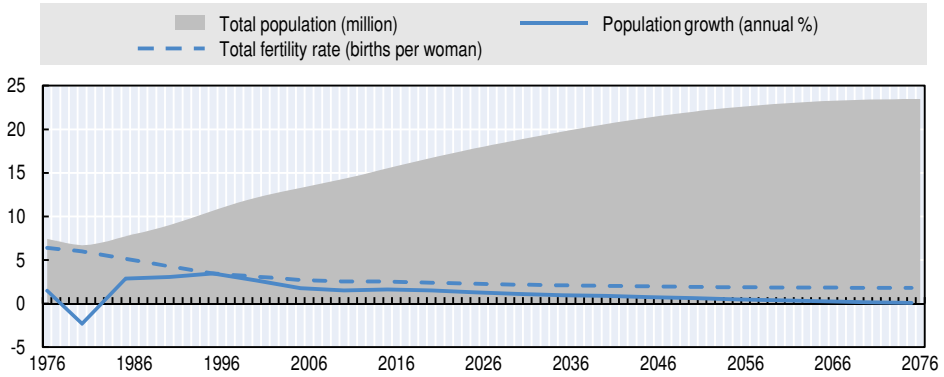
In 2013, the RGC published the Cambodia Climate Change Strategic Plan (CCCSP) for 2014-23 (RGC, 2013). The CCCSP identifies a role for adaptive social protection in mitigating the impact of climate change, but it is not yet clear what this will entail. A social protection programme that can be scaled up rapidly to mitigate anticipated impacts of climate change – be it drought or flood – is an important complement to interventions that enhance the long-term resilience of households.

Cambodia's narrow economic base, low productivity, rising real wages and ageing population could combine to constrain its long-term growth prospects. The Industrial Development Policy (2015-2025) recognises the importance of establishing a broader economic base and aims to reduce the proportion of garment and footwear exports from close to 80% of total exports to 50% by 2025, with other manufactured goods and processed agricultural products filling the gap. This process will not be straightforward. The garment industry, which is dominated by foreign-owned firms,⁶ has not generated significant linkages to other domestic producers or the technological spill-overs that might have benefited the economy as a whole (UNDP, 2014). As a result, it is not obvious which activities to promote in the industrial sector, how successful these will be in promoting sustained economic growth, or the extent to which they will absorb the continued growth in the working-age population, which is expected to increase by 25% by 2030 (UNDP, 2016).

Demographics are favourable now but the population will age fast in the future

Cambodia's rapid economic growth has coincided with strong but decelerating population growth. Its population grew from 12.2 million in 2000 to 15.7 million in 2016 (UN DESA, 2017), while the total fertility rate and rate of population growth are both declining (Figure 1.22). The total fertility rate declined from 6.9 in 1950-55 to 5.4 in 1975-80, partly as a result of the genocide inflicted by the Khmer Rouge regime between 1975 and 1979. This was followed by a spike in 1980-85, after which fertility rates continued their decline. Between 2015 and 2020, the average fertility rate is projected at 2.5, the third-highest in SEA after Lao PDR and the Philippines. Between 2035 and 2040, it is projected to drop to replacement rate and continue to fall thereafter.

Figure 1.22. **The pace of population growth is slowing**
Population growth and fertility rates (1976-2076)



Source: UN DESA (2017), World Population Prospects: The 2017 Revision, available at un.org/en/development/desa/population/publication.

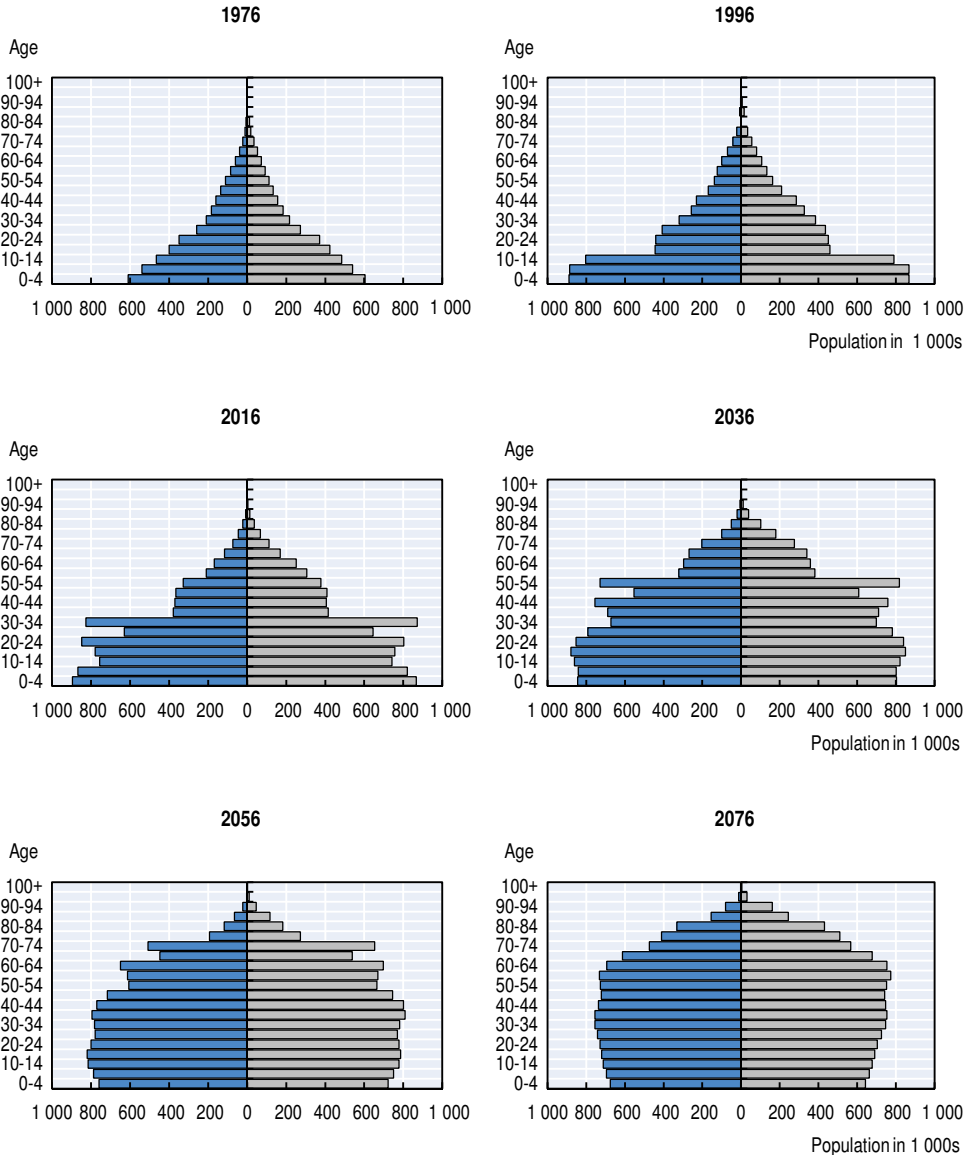
Figure 1.23 shows population pyramids from 1976 to 2076. The relatively small cohort aged 35 and above and the relatively large cohort aged 30-34 in 2016 reflect the impact of the Khmer Rouge regime and the baby boom that occurred after its demise. Today's labour force is smaller than it would have been according to the long-term population growth rate but has a sizeable youth bulge. Another legacy of the Khmer Rouge regime and conflicts of that time is an imbalance in the ratio of adult and elderly women to men; the 2008 census showed 42% of women over 60 were widowed, compared with only 10% for men.

Figure 1.24 compares Cambodia's dependency ratio with that of other countries in the region from 1980 to 2100. Up until the mid-1970s, its demographic trends were closely aligned with those of its neighbours but the impact of the Khmer Rouge regime and the subsequent baby boom created a second spike in the dependency ratio between the mid-1980s and around 2000, after which its dependency ratio has been declining to the middle of the distribution. The ratios for Lao PDR and Myanmar are more favourable than Cambodia's.⁸ Thailand's dependency ratio was the lowest in 2015 but is projected to rise rapidly to become the highest in the region by 2035 – an important factor in its demand for workers from Cambodia.

The dependency ratio fell from 98% in 2000 to 56% in 2015, when individuals aged 14 and under accounted for 32% of the total population, while those aged 65 and over accounted for 4%. The decline in the dependency ratio and the associated growth of the working-age population is the underlying basis for a demographic dividend, which in turn can lead to major short- and long-term growth benefits (Box 1.5). As fertility rates decline further, the dependency ratio will continue to fall until 2043, at which point the age cohorts born during the baby boom will reach retirement, and the dependency ratio will increase rapidly.

Figure 1.23. **Cambodia's population is beginning to age**

Population pyramids (1976-2076)



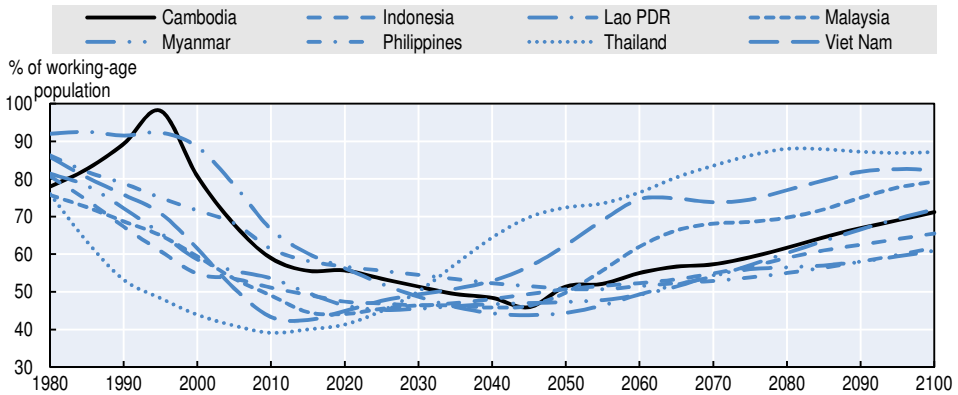
Source: UN DESA (2017), *World Population Prospects: The 2017 Revision*, available at un.org/en/development/desa/population/publication.

By 2050, the proportion of individuals aged 14 and under to the working-age population will fall to 22%, while those aged 65 and over will rise to 13%. Ageing of the population will be compounded by rising longevity: life expectancy

at birth is projected to rise from 67.6 years in 2015 to 78.8 years in 2050. As the population starts to age, so too will their health needs, with chronic conditions likely to be increasingly important relative to communicable diseases. Over the long term, these changes will have implications for the level of demand for disability benefits and pensions.

Figure 1.24. **Population dynamics will remain favourable**

Dependency ratios in SEA (1980-2100)



Source: UN DESA (2017), *World Population Prospects: The 2017 Revision*, available at un.org/en/development/desa/population/publication.

Rapid growth in international migration has major implications for the size of Cambodia's labour force. Within SEA, only Lao PDR is expected to have a higher emigration rate between 2015 and 2020 (UN DESA, 2015a). The number of Cambodians working abroad is estimated at 1.2 million, or 7.6% of the population, a sharp increase from 3.4% in 2010 (UN DESA, 2015b). According to UN data for the emigrant stock in 2015, 68% of emigrants went to Thailand, 14% to the United States and 5% to France. Less than 10% of emigrants passed through official channels. The outflow of workers has led to a significant increase in remittances, which reached an estimated USD 363 million, or 2% of GDP, in 2014 (OECD/CDRI, 2017; National Bank of Cambodia, 2015).

In absolute terms, the greatest movement of Cambodians is between rural areas within the country, which accounts for 51% of the total number of migrants (predominantly men) versus 28% attributed to rural-urban migration (NIS, 2008). This phenomenon, described as the "invisible flow" on account of the limited extent to which it is captured in survey data, is driven by migration from the central plains (Mekong Delta and Tonle Sap basin), where population density is highest, to forested areas in the northwest of the country near the Thai border, where it is easier for farmers to "acquire" their own land (Maltoni, 2007; Diepart, 2015).⁹

Box 1.5. Two stages of a demographic dividend

A demographic dividend arises from a favourable interaction of demographic and economic trends. The first phase coincides with a decline in the dependency ratio associated with falling fertility rates and thus a reduction in the number of child dependants relative to the size of the working-age population. The number of “producers” in the economy increases relative to “consumers”. This dynamic can be influenced by public policies, such as interventions to reduce fertility rates. A number of Asian governments have implemented such policies, of which China’s one-child policy is the most dramatic example.

To capitalise on the favourable age structure of the economy, there must be sufficient employment for the enlarged working-age population and growth in the capital stock to ensure that productivity does not decline on a per capita basis. Higher domestic savings – a corollary of the gap between production and consumption – can finance the investment required to ensure that output per worker does not fall as the size of the workforce grows.

This investment is also crucial in ensuring that the age structure of the population does not become a drag on the economy when the dependency ratio starts to increase due to population ageing. In this case, investment in both physical and human capital is essential to improve the productivity of the workforce. South Korea’s investment in health services and education was an essential ingredient in its rapid transition from a low- to high-income economy (Eichengreen, Park and Shin, 2013). Policies to enhance labour force participation by women can also enhance growth rates and slow the increase in the dependency ratio (Bloom et al., 2007).

The policies implemented during the first demographic dividend have the potential to generate a second demographic dividend. As life expectancies increase, there is a strong incentive for individuals to save, which can substantially increase investment rates and thus lead to further increases in output per worker (Mason and Kinugasa, 2008). The impact of introducing public pension schemes on household savings behaviour is ambiguous, although the design of such arrangements can determine the extent to which the second demographic dividend is achieved. While unfunded or pay-as-you-go arrangements represent a direct transfer from the working-age population to retirees, funded arrangements promote asset accumulation and capital market development, which can lead to productivity gains.

Cambodia's level of urbanisation is the lowest in SEA after Lao PDR, due to the dramatic decline in urban populations resulting from the policies of the Khmer Rouge. However, it is urbanising fast. Phnom Penh was home to 1.8 million people in 2014, a larger population than all other urban areas combined. The capital was home to 16.7% of the total population in 2014, up from 8.5% in 2004 (ADB, 2014a). Urban areas across the country grew 4.1% annually between 2008 and 2013 (NIS, 2014) and the population living in all Cambodian cities is projected to continue growing, from 3.2 million in 2015 to 8.2 million in 2050 (UN DESA, 2014). As a result, the level of urbanisation will rise from 20.7% to 36.2% over the same period, far below the average urbanisation level of 64.7% projected for SEA as a whole in 2050.

Notes

1. The Cambodian Socio-Economic Survey 2014 (CSES) is the eleventh survey collecting data from household and individuals in Cambodia on different areas relating to poverty. The survey is conducted by the National Institute of Statistics (NIS) of the Ministry of Planning (MoP). The first Socio-Economic Survey was conducted in 1994. Since then, the CSES has been conducted in 1996, 1997, 1999 and 2004. Since 2007, NIS has conducted the CSES annually. The 2004 CSES was the fifth survey that was conducted and was a countrywide sample survey of villages and households. The 2004 CSES was the first survey to report income and receipts; self-evaluation of daily expenditure and consumption were reported. The monthly sample size in the 2004 CSES was 1 000 households.

Since 2007, the Socio-Economic Survey has been conducted every year with a sample size of 300 households every month (3 600 households annually). The annual surveys are undertaken as part of the project, "Capacity Development for Socio-Economic Surveys and Planning" of the Royal Government of Cambodia. This project is supported and financed by the Swedish International Development Cooperation Agency. In 2009, the CSES was similar to the 2004 CSES, with a sample size of 1 000 households every month (12 000 households on an annual basis). See NIS (2013) for more information.

2. The Gini coefficient is a "measure of the deviation of the distribution of income among individuals or households within a country from a perfectly equal distribution. A value of 0 represents absolute equality, a value of 100 absolute inequality" (UNDP, 2013a). See hdr.undp.org/en/content/income-gini-coefficient (accessed 22 December 2016).
3. Note that this figure is based on a subsample of the IDPoor data. In particular, the subsample represents households included across all three waves in four provinces (Kampot, Pursat, Ratanak Kiri and Svay Rieng). Unlike other provinces, the coverage in the initial IDPoor baseline in the subsample provinces included nearly the entire rural population, thereby minimising potential bias issues. Because different regions were surveyed at different times, it is not possible to specify exact years for each wave.
4. The Law on the Protection and Promotion of the Rights of Persons with Disabilities (2009) defines individuals with a disability as "any persons who lack, lose, or damage any physical or mental functions, which result in a disturbance to their daily life or activities, such as physical, visual, hearing, intellectual impairments, mental disorders and any other types of disabilities toward the insurmountable end of the scale" (RGC, 2009). See cambodiainvestment.gov.kh/content/uploads/2011/09/Law-on-the-Protection-and-the-Promotion-of-the-Rights-of-Persons-with-Disabilities_090812.pdf.
5. The methodology used to derive these forecasts is described in Annex 1.A1.

6. In 2005, less than 9% of garment factories were owned by Cambodians, according to the Garment Manufacturers Association in Cambodia (USAID, 2005).
7. Peng et al. (2004) find that rice yields decline as a result of higher night-time temperatures caused by global warming.
8. Myanmar's population data is not comparable with the rest of the region but the UN calculates that its dependency ratio fell from 58.6% in 2000 to 49.7% in 2015 and will decline to 47.3% in 2050 before rising to 60.9% in 2100 (UN DESA, 2017).
9. Under the Land Law (2001), it is not legal to formally acquire forestland, which is classified as state public land, but this practice has continued on a de facto basis with the knowledge of local authorities (Diepart, 2015).

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ANNEX 1.A1

Methodology for the Social Protection System Review

The Social Protection System Review (SPSR) for Cambodia is the first application of the SPSR tool. The SPSR is an analytical tool that has been designed by the European Union Social Protection Systems Programme (EU-SPS) to support developing countries that are in the process of establishing or expanding a social protection system. The SPSR takes a holistic view of a country's social protection system, examining its three pillars – social assistance (including social health protection), social insurance and labour market programmes – within the country's broader policy context. The review examines questions of policy coherence within the social protection sector, as well as with other relevant policy areas.

The SPSR takes a forward-looking approach, providing not only a diagnostic of the current state of a country's social protection system but also highlighting future challenges and policy options for addressing them. The tool examines the country's demographics, poverty dynamics, labour market trends and public finance system in so far as these have implications for social protection. It also analyses how social protection expenditure is financed and its financial sustainability over the long term.

The SPSR examines the extent to which a social protection system provides effective and equitable coverage for the poor and those who are vulnerable to poverty. It analyses how far the system contributes to reducing poverty, vulnerability and inequality as well as examining the extent to which it has fostered more inclusive growth, defined as an improvement of living standards and the sharing of the benefits of increased prosperity evenly across social groups. The analysis will include non-monetary dimensions that matter for well-being, such as broader measures of deprivation, employment prospects, health outcomes, educational opportunities or vulnerability to adverse environmental factors.

Methodology

The SPSR is conducted in close collaboration with the government, development partners and local research institutes. Data on social protection coverage and related information is gathered as far as possible from official sources, including administrative data and household surveys. Key informant interviews with social protection stakeholders are also an integral part of the application of the SPSR.

The SPSR examines five dimensions of a country's social protection system:

- Need
- Coverage
- Effectiveness
- Sustainability
- Coherence

Need

The first component of the SPSR conducts forward-looking needs analysis to identify demand for social protection today and to forecast how demand is likely to change in the future. This analysis establishes a vulnerability profile by providing a diagnostic of poverty, multi-dimensional risks and vulnerabilities. Innovative techniques are applied to understand the dynamics and determinants of poverty and vulnerability, while harmonised and comparable indicators are used to benchmark across countries. New or emerging risks are included in this vulnerability profile, including economic, demographic or environmental trends.

Coverage

This component of the SPSR examines the extent to which the existing social protection system covers the needs identified by the first component through a threefold approach. First, it provides an overview of social protection provision that examines the legal and policy framework, institutions with a social protection mandate, and social protection programmes themselves. Second, it provides an overview of the system's characteristics in terms of high-level indicators as available through national data and international databases for benchmarking. Finally, it identifies gaps or mismatches between existing social protection schemes vis-à-vis the previously identified risks.

Effectiveness

The SPSR assesses the effectiveness of a country's social protection system according to the adequacy, efficiency, and equity of the key programmes identified by the coverage component. Through detailed analysis of these effectiveness dimensions, the SPSR determines the extent to which the programmes and the

social protection system as a whole alleviate poverty, reduce inequality and address risks and vulnerabilities.

Sustainability

This component of the SPSR assesses the financial sustainability of the existing social protection system and explores whether fiscal space exists to expand it according to the recommendations that might emerge from the SPSR. An important objective is to maximise the potential of the fiscal system to achieve the goals of social protection by aligning the design of different financing mechanisms to the goals of the social protection strategy.

Coherence

Coherence analysis examines the extent to which the instruments, institutions and processes that comprise the social protection system are aligned and integrated. It also analyses the interactions between social protection and other aspects of government. In so doing, it demonstrates the extent to which a systematic approach exists and the feasibility of establishing or enhancing such an approach in the future.

Output

Taken together, these five dimensions provide a diagnostic of a country's social protection system. This analysis forms the basis of recommendations to support the development the social protection system that are developed in partnership with the country itself to ensure relevance and applicability. Both the diagnostic and the recommendations form part of the SPSR, which is published jointly with the government.

Country-specific application

The SPSR is tailored to the context of each country where it is applied. As a result, the extent to which different components are analysed varies according to a number of factors, including a country's definition of social protection, the level of development of existing social protection provision, the priorities of the government and the availability of data. The SPSR also takes into account other analytical work carried out by the government or development partners, with a view to avoiding duplication of effort or contradictory results and recommendations.

The application of the SPSR relies on close consultation with government ministries and other relevant stakeholders to ensure the output reflects the needs and priorities of the social protection sector. Throughout the process, a close dialogue is maintained with government counterparts and, if requested and feasible, the analysis can be conducted jointly with government staff and/or local researchers.

The SPSR in Cambodia

The SPSR for Cambodia was carried out over a period of 18 months, between February 2016 and August 2017. The counterpart for the SPSR within the Cambodian government was the Council for Agricultural and Rural Development (CARD), though the exercise was also carried out in close collaboration with the Ministry of Economy and Finance (MoEF). Numerous missions were undertaken to Cambodia over this period and a policy workshop was held in June 2016 to discuss the diagnostic analysis and identify priorities for the SPSR. This workshop was attended by policy makers, development partners and representatives of civil society.

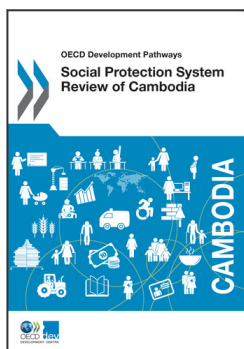
ANNEX 1.A2

Methodology for calculating long-term population growth and productivity

The calculations for the structure of output and employment in 2050 are based on an assumed rate of growth in labour productivity combined with United Nations projections for the size of the population and the level of urbanisation.

The model assumes that output per worker will grow at a constant rate of 4.5% per annum between 2020 and 2050. With growth in the working population expected to average 1.1% over this period, this would produce a rate of GDP growth between 2020 and 2050 of 5.6% per annum (assuming the productivity of capital remains constant) while per capita incomes will rise by 4.7% per annum. The rate of growth will decelerate after 2030 as the growth rate of the working-age population slows. This projection is less optimistic than the World Bank's long-term projection for the period 2015-2050, which forecasts average annual GDP growth of 6.9% (World Bank, 2015c).

To project how the structure of output is likely to change between 2020 and 2050, the model identifies productivity rates for the agricultural sector and for industry and services combined. The increase in output per worker in agriculture is assumed at 3% per annum, somewhat faster than the 2.4% between 2000 and 2014. The rate of increase in the rural population between 2015 and 2050 is projected at 0.4% per annum, and this will be assumed to be the rate of growth of agricultural employment, so the rate of increase in agricultural output is 3.4% per annum. This in turn implies a rise in industrial and services output of 6.3%. The difference between these respective growth rates generates the long-term changes in the structure of output identified in the text.



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