

EMPLOYMENT AND POVERTY IMPACT ASSESSMENT: CAMBODIA

A. Summary

1. This employment and poverty impact assessment provides a preliminary assessment of the impact of the coronavirus disease (COVID-19) pandemic on the Cambodian economy, employment, and livelihoods. The analysis of the employment impact is based on the forecast released recently by the International Monetary Fund (IMF) for Cambodia's gross domestic product (GDP) growth in 2020, as well as a recent joint modelling exercise between the Asian Development Bank (ADB) and the Ministry of Economy and Finance (MEF) to forecast and estimate sectoral employment elasticities. Specifically, the IMF and ADB-MEF joint scenarios of respectively -1.6% and -5.5% decline in real GDP in 2020 are used to represent an upper and lower bound (best case and worse case scenarios).¹ Results from the two scenarios show that some 390,000–570,000 jobs may be lost in 2020, compared to previous projections for this year.² The sectors most at risk in terms of decline in employment are construction, manufacturing, hotels and restaurants, transport, storage and communications, financial intermediation, real estate, and business activities. While nearly 60% of those who lose their jobs would become unemployed, raising the unemployment rate from 0.7% in 2019 to 3.2% in 2020 under the IMF scenario and 4.4% under the ADB-MEF joint scenario, a relatively small number (18,000 – 25,000, or 5%) would drop out of the labor force, while the remaining 35% (140,000 – 200,000) would shift to lower productivity sectors with low wages and poor working conditions (mainly in agriculture and to a lesser extent in wholesale and retail trade).

2. Due to the lack of recent poverty estimates, this note uses working poverty estimates as a proxy, with time series obtained from the ILOSTAT database. While poverty rates refer to the overall population, working poverty rates refer to the employed population, which in Cambodia represented approximately 82% of the working-age population in 2019. In countries with high labor force participation rates (LFPR) and employment to population ratio like Cambodia, where relatively few people are inactive or unemployed, a large share of the poor are working poor, earning labor incomes that are too low to lift them and their families out of poverty. ADB's analysis shows that under the two growth scenarios (-1.6% from the IMF and -5.5% from the joint ADB-MEF scenario) an additional 130,000–205,000 additional workers will fall into extreme poverty (earning less than \$1.9 per day), and another 800,000 to 1.1 million workers into moderately poor category (earning between \$1.9 – \$3.2 per day) in 2020. Workers in this latter category are especially vulnerable as many of these workers will slip into extreme poverty if the labor market situation continues to worsen through prolonged impact of the pandemic and sluggish recovery. In terms of the rate, COVID-19 will increase the share of working poor (extreme and moderate) from 28% in 2019 to around 40% (range of 38.8 – 43.6%) in 2020. This analysis suggests that considerable progress made by Cambodia in reducing poverty in the last two decades is at risk of being setback as COVID-19 crisis unfolds.

B. Overview

3. **Cambodia's high economic growth rates since 2000 were accompanied by welfare improvements in terms of rising per capita GDP and poverty reduction.** These improvements

¹ Ministry of Economy and Finance's -5.5% forecast for GDP growth for 2020 is based on their internal modelling exercise in consultation with the Cambodia Resident Mission of the ADB.

² These are rough gross estimates, including foregone employment creation i.e. jobs that would have been created had the pandemic not occurred, based on the pre-COVID growth forecast, and excluding net job gains in sectors that absorb displaced workers.

were associated with rapid growth in garments manufacturing, which led to an increase in the share of wage and salaried workers in urban areas, as well as rising crop prices and agricultural wages in rural areas.³ However, the country remains highly vulnerable to economic shocks. Despite the significant decline in poverty incidence (poverty rates fell from 60% in 2000 to 13.5% in 2015) and depth (decline in poverty gap from 21.8% in 2004 to 2.2% in 2014), a large share of the population still live just above the national poverty line and are at a high risk of falling back into poverty.⁴ The Government of Cambodia estimates that the total number of individuals who are eligible to receive government support through IDPoor (the Identification of Poor Households Programme) at 2.4 million, which is likely to rise in light of COVID-19.⁵

4. Cambodia's labor market remains characterized by widespread working poverty and informality, which are likely to worsen due to COVID-19. While poverty rates refer to the overall population, working poverty rates refer to the employed population, which in Cambodia represented approximately 82% of the working-age population in 2019. According to this measure of poverty, in 2019, 8.3% of workers were extremely poor (earning less than \$1.9 per day) and another 28.6% were moderately poor (earning less than \$3.2 per day but more than \$1.9). Meanwhile, the overall informality rate was estimated at 93% of employment in 2012 (91% for men and 96% for women), and an estimated 90% informal employment in non-agricultural employment.⁶ The high informality rate means that a very limited share of the population is covered by social protection which remains at nascent stages of development. Cambodia was third from the bottom in a ranking of 25 Asian countries with respect to the depth and breadth of its social protection system in 2012.⁷ The main labor market component of its social protection system consists of technical and vocational education and training schemes for informal sector workers, but its coverage is very low in relation to its informal sector size (footnote 3). COVID-19 is expected to result in major job and income losses in Cambodia, affecting workers across the board, and particularly vulnerable groups including women, informal, and own-account workers who have very limited access to social protection, many of whom either live in poverty or run a serious risk of falling into poverty.

C. COVID-19 labor market impact

5. Results show that some 390,000 to 570,000 jobs may be lost in 2020, compared to previous projections for this year, exacerbating informality and vulnerability. Both directly through lockdown measures resulting in firm closures and work stoppage, and indirectly through aggregate demand drops and supply chain disruptions, the COVID-19 pandemic is having unprecedented impacts on the Cambodian labor market, similar to other countries in Southeast Asia. Economic activity has already slowed down considerably, which will translate into weak labor market performance. Indeed, revised IMF estimates for Cambodia show negative real GDP growth (-1.6%) in 2020 (Figure 1). This decline in output is far worse than what the country experienced during the Great Recession, when growth had nearly come to a halt but remained positive at 0.1 % in 2009. The joint ADB-MEF modelling exercise forecasts an even greater decline in real GDP (-5.5%) in 2020. Preliminary ADB estimates, using sectoral point employment

³ OECD. 2017. *Social Protection System Review of Cambodia*. OECD Development Pathways. OECD Publishing Paris.

⁴ World Bank data also show the poverty headcount ratio at the national poverty line declining steadily from 50.2% in 2003 to 17.7% in 2012.

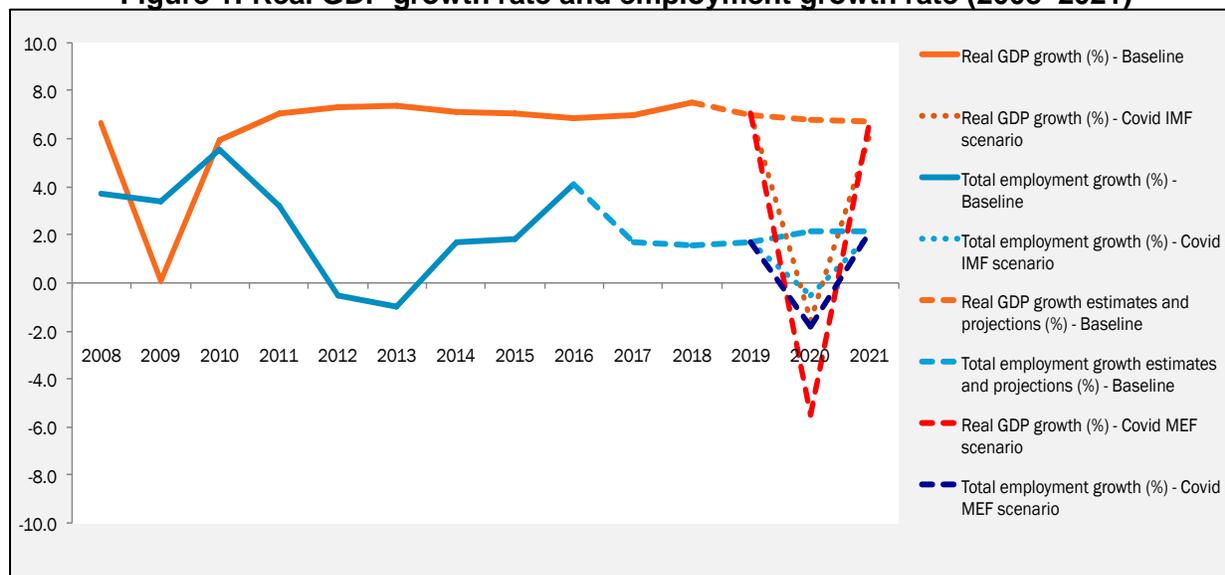
⁵ IDPoor entitles the poor individuals and households to obtain free healthcare and also allows them to receive social services such as cash transfers.

⁶ ILO. 2018. *Women and men in the informal economy: a statistical picture* (third edition). International Labour Office: Geneva.

⁷ ADB. 2016. *The Social Protection Indicator: Assessing Results for Asia*. Manila.

elasticities of growth⁸ show a 0.5% to 1.8% decline in employment in 2020 compared to 2019, based on the new IMF and ADB-MEF joint forecasts, respectively (Figure 1). This represents a -2.6% to -3.9% deviation from the baseline forecast for 2020, or some 248,000 to 370,000 net job losses (Table 1).

Figure 1: Real GDP growth rate and employment growth rate (2008–2021)



Source: ADB staff estimates for employment using IMF's WEO Data (April 2020) for GDP growth.

6. **The sectors most affected in terms of projected employment losses are construction, manufacturing, hotels and restaurants, transport, storage and communications.** These sectors, categorized as having either a medium or high risk in terms of the potential COVID-19 impact, as per the monitoring update of the International Labour Organization (ILO)⁹, accounted for approximately 60% of value added and nearly 45% of employment in Cambodia in 2019 (Figure 2). For example, tourism industry (which cuts across different sectors) accounts for 750,000 workers, while garment sector (included within manufacturing) includes 800,000 workers. Both tourism and garment are vulnerable to external demand shocks stemming from the global pandemic and this is becoming evident in 2020. For the tourism sector, nearly half of the 6.6 million visitors to Cambodia were tourists from People's Republic of China (PRC), and with the outbreak of COVID-19, arrivals from PRC dropped sharply. ADB estimates for the overall employment impact shows that in comparison with the baseline estimate for 2020, employment levels would be lower by about 63,000-69,000 in manufacturing, 26,000-37,000 in hotels and restaurants, 24,000-35,000 in transport, storage and communications, over 54,000-78,000 in real estate and business activities, and 19,000-27,000 in financial intermediation (Table 1). The construction sector, which had high employment growth rates in previous years, would also have major job losses of 194,000-287,000 from changes in investor sentiment potentially impacting investments in the sector (including forgone new jobs that would have been created under the baseline projection).

⁸ See Annex for the description of the data and methodology used for all estimates.

⁹ ILO. 2020. [ILO Monitor: COVID-19 and the world of work. Updated estimates and analysis](#). 7 April 2020.

Table 1: Employment Impact of COVID-19 in Cambodia (by Sector)

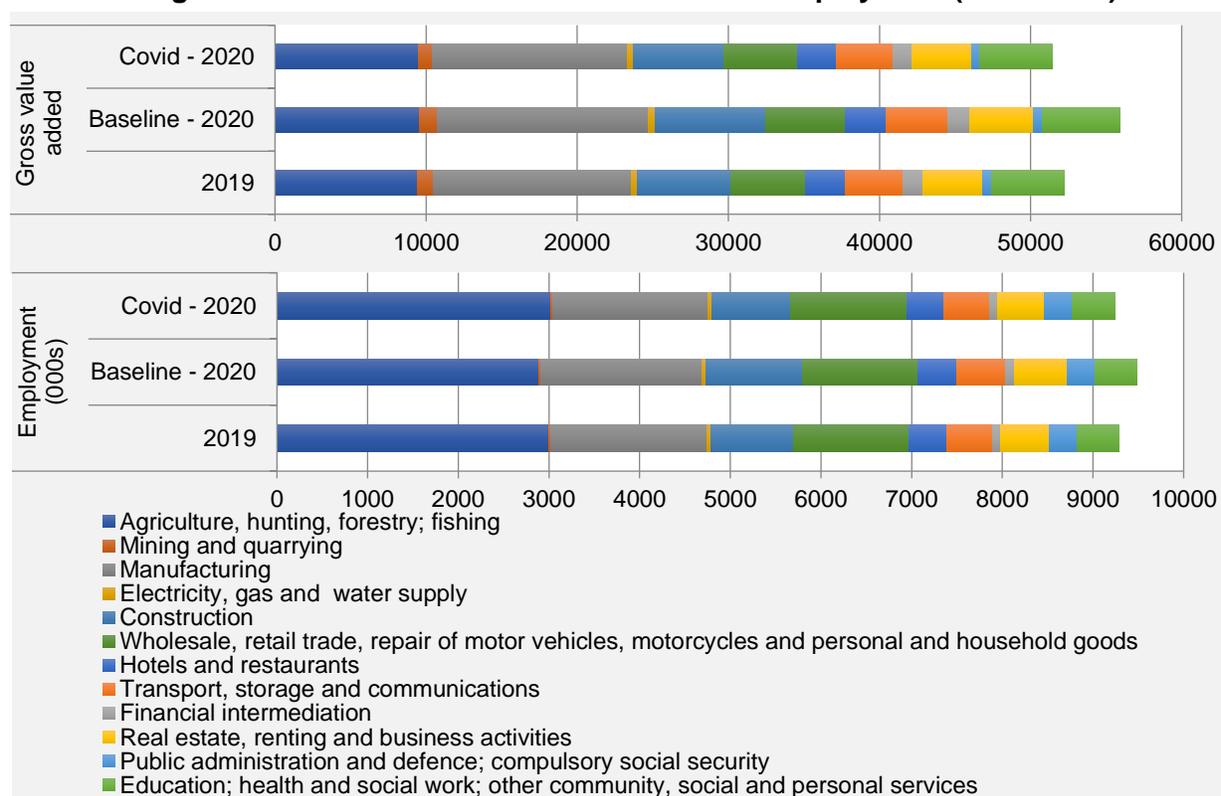
SECTOR	Employment estimate (000s)–2019	Net change 2019–2020 (000s)			Net change - COVID-19 relative to baseline forecast in 2020			
		Baseline	COVID		(000s)		% Deviation	
			IMF	MEF	IMF	MEF	IMF	MEF
Agriculture, hunting, forestry; fishing	2,999	-107	19	67	126	174	4.3	6.0
Mining and quarrying	22	1	0	-1	-1	-2	-4.4	-6.8
Manufacturing	1,719	52	-11	-38	-63	-90	-3.5	-5.1
Electricity, gas, and water supply	50	-2	1	2	3	5	6.3	9.7
Construction	902	157	-37	-130	-194	-287	-18.3	-27.1
Wholesale, retail trade, repair of motor vehicles, motorcycles, and personal and household goods	1,278	-6	3	9	9	15	0.7	1.2
Hotels and restaurants	415	22	-5	-16	-26	-37	-6.0	-8.6
Transport, storage, and communications	511	20	-4	-15	-24	-35	-4.5	-6.6
Financial intermediation	88	16	-3	-12	-19	-27	-18.3	-26.4
Real estate, renting and business activities	532	44	-10	-34	-54	-78	-9.4	-13.6
Public administration, defense, compulsory social security	308	8	-2	-6	-10	-14	-3.1	-4.4
Education; health and social work; other community, social and personal services	463	-3	1	4	4	7	0.9	1.5
Total or average	9,287	200	-48	-169	-248	-370	-2.6	-3.9
		<i>Gross job losses*</i>			-390	-570		

Sources: ADB Staff Estimates using National Accounts (UNSD) and ILO modelled estimates of sectoral employment.

* Total gross job losses obtained by adding up negative elements of the net change column.

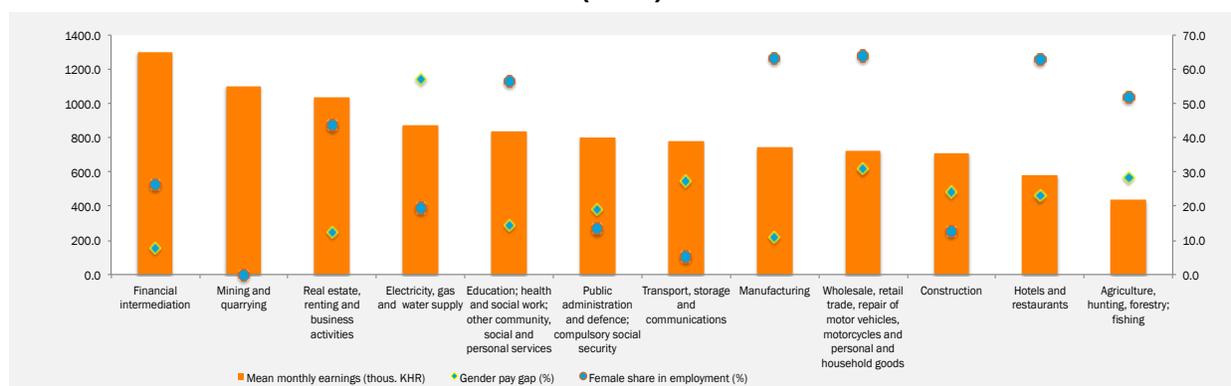
7. **Among the sectors most at risk, hotels and restaurants are sectors where women in Cambodia account for the largest share of employment (63–64%) (Figure 3).** These sectors are characterized by high vulnerable employment and informality, as well as lower pay, and a disproportionate representation of women among low skilled workers, who face a greater risk of losing their jobs. While job losses are expected to be particularly high for women in these sectors, men would be more affected by the decline in construction, transport, storage and communications, finance, and real estate and business activities. Within manufacturing sector, garment sector accounts for 800,000 workers and close to 80% of these workers are women. Most of the low-value and low paid jobs within garment are done by women, while the managers tend to be men. In fact, gender pay gap for overall manufacturing sector is at 10.8%, which means that women on average earn 10.8% less than men. Similarly, another sector that is included within broader tourism industry – hotels and restaurants – women earn 23.1% less than men in this sector.

Figure 2: Sectoral shares in value added and employment (2019–2020)



Sources: ADB Staff Estimates using National Accounts (UNSD) and ILO modelled estimates of sectoral employment and GVA.

Figure 3: Mean earnings, female share in employment and gender pay gap by sector (2016)



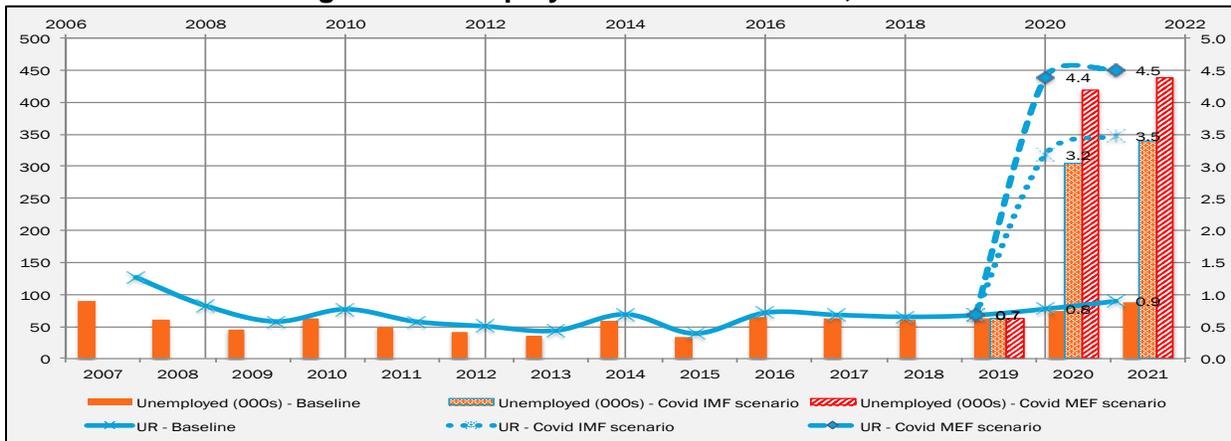
Note: gender pay gap (%) refers to how much less women earn compared to men in that sector. For example, in manufacturing, women earn 10.8% less than men, similarly in hotels and restaurants women earn 23.1% less than men.

Sources: ADB Staff Estimates using ILO modelled estimates of earnings by sex and sector.

8. On the other hand, low productivity and low wage sectors such as agriculture and wholesale and retail trade in Cambodia could have an overall net gain in employment in 2020 compared to the baseline, due to absorbing displaced workers from other sectors, and those returning to rural areas, including migrant workers returning from Thailand or other effected countries. These workers would primarily be absorbed into informal employment, often as own-

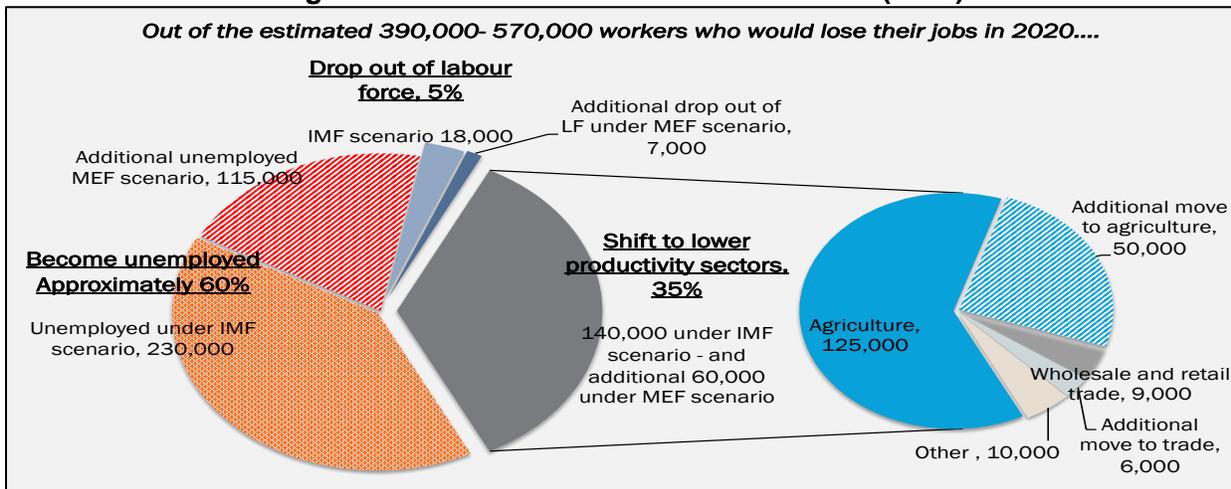
account workers or contributing (unpaid) family workers. Because of the offsetting effect of employment growth in these sectors, the net change in employment from Table 1 underestimates the labor market impact of the pandemic in Cambodia, where many workers who lose their jobs cannot afford to be unemployed or economically inactive. Indeed, out of the 390,000–570,000 workers who would lose their jobs in 2020 due the COVID-19 pandemic,¹⁰ approximately 230,000–345,000 would become unemployed raising the unemployment rate from 0.7% in 2019 to 3.2%–4.4% in 2020 (Figure 4). An additional 18,000-25,000 workers, or 5%, would drop out of the labor force altogether, while 140,000–200,000 or approximately 35% would shift to lower productivity, lower pay sectors, mainly in agriculture, but also in wholesale and retail trade and other sectors (Table 1, Figure 5).

Figure 4: Unemployment levels and rate, 2010-2021



Note: Under the IMF forecast-based scenario, COVID-19 leads to the following changes relative to the baseline in 2020: LFPR would drop by 0.2 p.p.; employment to population ratio (EPR) would drop by 2.1 p.p.; and the UR would increase by 2.4 p.p. Under the MEF-forecast based scenario, the LFPR would drop by 0.2 p.p., EPR by 3.2 p.p. and the UR would increase by as much as 3.6 p.p. relative to the baseline. In both cases, unemployment would remain elevated in 2021 despite the projected resumption of economic growth.

Figure 5: Job losses and labor reallocation (2020)



Source: ADB estimates using National Accounts (UNSD) and ILO modelled estimates of labor market aggregates and indicators

¹⁰ Includes losses of existing jobs and of jobs that would have been created in baseline scenario.

D. Poverty impact

9. **Even before the COVID-19 pandemic, over one-third of Cambodia's workers were either extremely or moderately poor.** Despite significant poverty reduction over the last decade, in 2019, 8.3% of Cambodia's workers were extremely poor (earning less than \$1.9 per day) and another 28.6% were moderately poor (earning less than \$3.2 per day but more than \$1.9).¹¹ Considering that the largest source of income for expenditure of Cambodian households is derived from employment earnings (95% in 2017, specifically 53% from wages and salaries and 42% from self-employment, with only 5% coming from transfers),¹² they are vulnerable to shocks that disrupt livelihood earnings. With the forced closedown of economic activities and decline in global demand, working poor in Cambodia are likely to become more impoverished due to economic shocks. Many are at high risk of falling back into extreme and moderate poverty. During times of economic hardship, households that are near poor may sell assets to meet daily needs, which in turn extends the time necessary to recover from external shocks such as COVID-19. Empirical analysis conducted for this assessment shows that COVID-19 is likely to exacerbate the vulnerability of the poor due to limited diversification of income and lack of access to social protection.

10. **Preliminary estimates show that 130,000 to 205,000 additional workers could fall into extreme poverty and over 800,000 to 1.1 million near poor could fall into the moderately poor category in comparison with the baseline projection.**¹³ Given the lack of recent poverty data,¹⁴ this analysis uses the ILO's working poverty estimates as a proxy to examine the likely impact of COVID-19 on poverty in Cambodia. According to the ILO, the working poverty rate measures the proportion of employed population living in poverty despite being employed, meaning that their employment-related incomes are not sufficient to lift them and their families out of poverty.¹⁵ This analysis shows that the COVID-19 pandemic's impact on Cambodia's labor market could result in an additional 130,000 to 205,000 workers falling below the extreme poverty line in 2020, and 800,000 to 1.1 million additional workers falling into moderate poverty (Figure 6). This is an increase in the working poverty rate at the extreme poverty line from an estimated 7.0% in the baseline scenario to 8.6% in 2020 under the IMF scenario, and the 9.5% under the ADB-MEF joint scenario, and at the moderate poverty line from 21.0% to 30.2% under the IMF scenario, and to 34.1% under the ADB-MEF joint scenario. Overall the impact of the pandemic would therefore be an increase in the estimated share of workers in extreme and moderate poverty in 2020 from an estimated 28% under the baseline scenario, to nearly 40% under the IMF scenario, and 44% under the ADB-MEF joint estimates scenario, reversing important achievements in terms of poverty reduction over the past decade (Figure 7).

¹¹ Although the share of workers living in extreme poverty (< \$1.90 a day) declined significantly from 56.6% in 2007 to 8.3% in 2019, the share of workers living in moderate poverty (between \$1.90 and \$3.20 a day) and in near poverty (between \$3.20 and \$5.50) remained high, at 28.6% and 33% respectively.

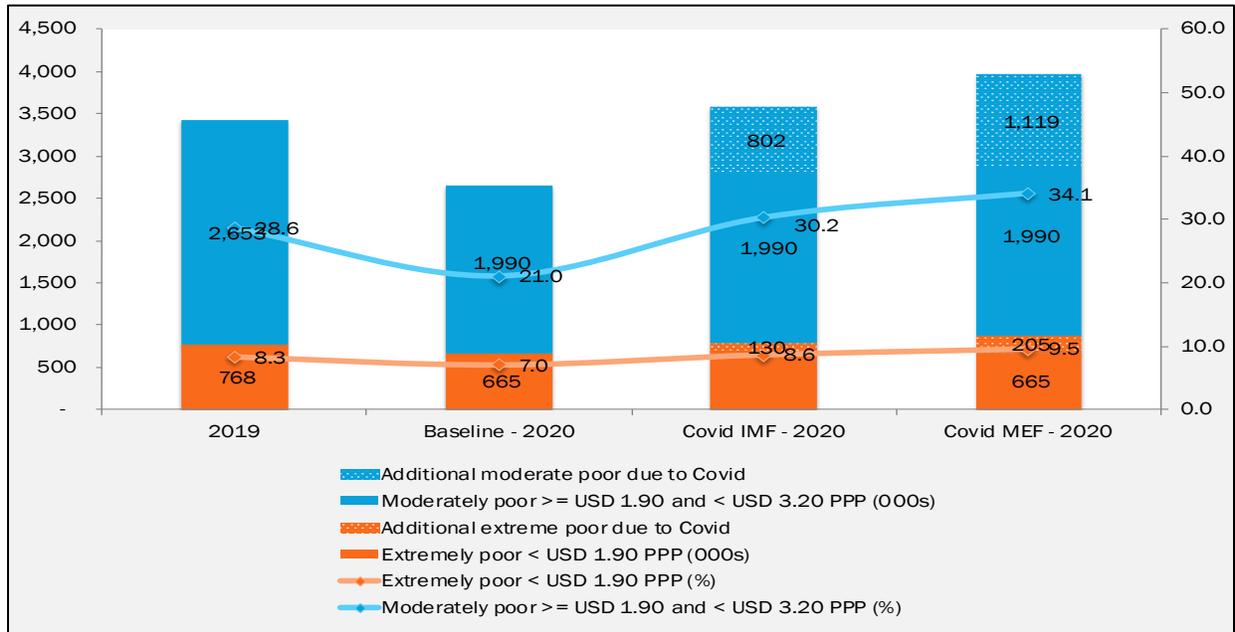
¹² National Institute of Statistics, Ministry of Planning, 2018. *Cambodia Socio-Economic Survey, 2017*.

¹³ See Annex for methodology employed.

¹⁴ Latest official poverty data is from 2014 when 13.5% of households had income below the national poverty line, down from 47.8% in 2007.

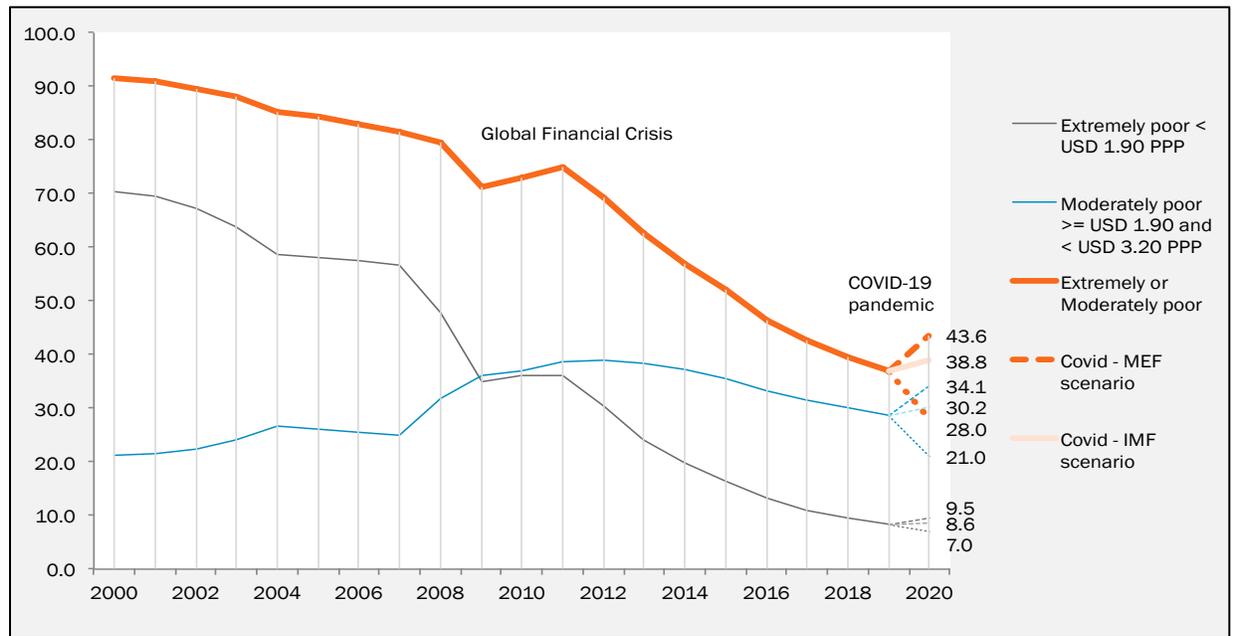
¹⁵ ILO. 2019. [ILOSTAT. Spotlight on Work Statistics. No. 6, April 2019.](#)

Figure 6. Working poverty levels and rates (2019–2020)



Source: ADB estimates using ILO modeled estimates of working poverty rates

Figure 7. Extreme and moderate working poverty rate (2006–2020)



Source: ADB estimates using ILO modeled estimates of working poverty rates

ANNEX: DATA AND METHODOLOGY

I. Data

1. The real gross domestic product (GDP) figures are obtained from the World Bank, World Development Indicators database, extended over the forecast period using the International Monetary Fund's (IMF) World Economic Outlook and projections from the Ministry of Economy and Finance in Cambodia. The gross value added (GVA) series by sector are obtained from the Ministry of Planning (National Institute of Statistics). Labor market aggregates and indicators are obtained from the ILOSTAT database. Specifically, due to breaks in the series from national labor force and household socio-economic surveys over the period of 2007 to present, as well as incomplete information and inconsistencies for some years, this assessment employs the International Labour Organization's (ILO) modelled statistics from 2007–2019. The labor market projections for 2020–2021, take into account the pandemic and are extrapolated using different assumptions as described in the methodology below.

II. Methodology

A. Sectoral GVA projections (2019–2021)

2. The sectoral GVA series were used along with sectoral employment estimates from the ILO, to derive the sectoral employment elasticities. The GVA series were extrapolated for the 2019–2021 period, using the real GDP for baseline and COVID-19 scenarios.¹ The GVA projections were then used with the derived elasticities to obtain sectoral employment projections.

B. Sectoral employment elasticities

3. Sectoral employment data are obtained from ILOSTAT database (ILO modelled estimates), and GVA data from the Ministry of Planning (National Institute of Statistics). Point elasticities are obtained as follows:

$$\ln(\text{Emp}_i) = \alpha_i + \beta_i \ln(\text{GVA}) + \varepsilon_i$$

4. For each sector $i = 1, \dots, 12$. The time period is constrained by the availability of national labor force data², and the sector aggregation is constrained by national accounts data. The estimated elasticities (coefficients β_i) are used to obtain the projected impact of COVID-19 on employment by sector, based on the revised IMF growth estimates.³ Annex Table 1 presents the computed point elasticities. These are then adjusted to total employment projections for both baseline and pandemic scenarios, obtained using the aggregate (total) employment elasticity, which measures the percentage change in total employment with respect to percentage change in GDP, also calculated over the 2007–2016 period.

¹ Only for agriculture, the GVA series was extrapolated using a growth rate derived from the GVA series from the UNSD national accounts, as extrapolation with revised data resulted in unrealistic growth projections for the sector for both scenarios.

² Even if modeled ILO estimates are available for a longer period, the estimates for the 2007-2016 period are based on real data from LFS or SES, adjusted for inconsistencies, and are therefore deemed more reliable. However, for some sectors with very high employment elasticities over the 2007-2016 period, namely construction, hotels and restaurants and financial intermediation, the 2007-2019 period was used instead.

³ S. Kapsos. 2015. ILO. [The employment intensity of growth: Trends and macroeconomic determinants](#). Employment Trends Unit Employment Strategy Department.

Table 1. Sectoral employment point elasticities

Industry	2007–2016
Agriculture, hunting, forestry; fishing	-0.60
Mining and quarrying	0.26
Manufacturing	0.89
Electricity, gas and water supply	-0.30
Construction*	0.97
Wholesale, retail trade, repair of motor vehicles, motorcycles and personal and household goods	0.38
Hotels and restaurants*	2.26
Transport, storage and communications	0.82
Financial intermediation*	2.09
Real estate, renting and business activities	1.57
Public administration and defense; compulsory social security	0.94
Education; health and social work; other community, social and personal services	0.48
<i>Total employment</i>	<i>0.32</i>

* Sectors for which point elasticities were computed over the 2007–2019 period instead of the 2007–2016 period, as very high elasticities over the 2007–2016 period resulted in overestimating both baseline growth and COVID-19 impact for these industries. Note that for real estate and business activities, which also has a high elasticity, the elasticity was the same over both time periods.

Source: ADB estimates using log-linear regressions.

C. Labor market statistics

5. **Working age population:** This is assumed to be unaffected by the pandemic.⁴

6. **Labor force:** The number of individuals part of the labor force for 2020 and 2021 are obtained by extrapolating the LFPR series from 2007-2019, using the real GDP series, and applying the extrapolated rates to the working age population. The values are computed for both the baseline and pandemic scenarios.

7. Other indicators (unemployed, unemployment rate, employment participation rate) are derived from the employment and labor force estimates using standard definitions.

D. Job losses and labor reallocation

8. Using the observed and predicted changes for each labor market indicator (working age population, labor force, employed and unemployed) and the sectoral job changes (from the sectoral employment point elasticities) in the two scenarios, estimated shifts of workers across different employment outcomes (out of the labor force, unemployed and employed in different sectors) are derived.

E. Working poor and poverty rates

9. To obtain the number of working poor in 2020 and 2021 for the two scenarios, the following equation is estimated:

$$\ln(WP_{ij}) = \alpha_{ij} + \beta_{ij} \ln(GDP_j) + \varepsilon_{ij}$$

⁴ Note that should there be significant reverse migration from affected countries, the working age population could increase.

10. For each working poor category i ={non-poor, near poor, extremely poor) and scenario j ={baseline, COVID-19}. The category of moderately poor is used as the residual. The first difference of the predicted values is then added to each lagged value of WP_i to compute for the number of working poor in each category i and scenario j in 2020 and 2021. The number of moderately working poor individuals for the two years and the two scenarios is then obtained by subtracting the number of working poor in all categories i from the previously estimated total number of employed.

11. The working poverty rates for each category i are then computed as the proportion of working poor in each category relative to the total number of employed.