The Pandemic Stalls Growth in the Global Middle Class, Pushes Poverty Up Sharply

Advanced economies also see a decrease in living standards

BY Rakesh Kochhar

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How we did this

The COVID-19 pandemic has created an economic crisis, shuttering businesses and cutting jobs around the world. This report looks at how the downturn has affected the standard of living globally and in seven major regions.

The focus is on the distribution of people across five income tiers in 2020: poor, low income, middle income, upper-middle income and high income. See the methodology and an earlier Pew Research Center report for more on the definition and meaning of these tiers in a global context.

The key data source for the analysis is the World Bank’s PovcalNet database, which provides access to household survey data on either income or consumption for more than 160 countries. At the regional level, the latest year for which comprehensive data are available ranges from 2014 for South Asia to 2018 for East Asia and the Pacific and three other regions. The global regions are as defined by the World Bank.

These benchmark estimates of income are extrapolated to 2020 using World Bank estimates of output growth through 2020. One projection is based on the World Bank’s January 2020 forecasts of economic growth in 2020, and the other is based on its January 2021 estimates of growth in 2020. The difference between these two measures is used to represent the effect of the pandemic on the income distribution in each region. Regional estimates are summed to yield estimates of the global distribution.
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The COVID-19 pandemic is having a deep effect on the global economy. In January 2020, as reports of the novel coronavirus were emerging, the World Bank forecasted that the global economy would expand by 2.5% that year. In January 2021, with the pandemic still holding much of the world in its grip, the World Bank estimated that the global economy contracted by 4.3% in 2020, a turnabout of 6.8 percentage points.

The economic downturn is likely to have diminished living standards around the world, pushing millions out of the global middle class and swelling the ranks of the poor. At the same time, the path to a recovery is clouded with uncertainties.

A new Pew Research Center analysis finds that the global middle class encompassed 54 million fewer people in 2020 than the number projected prior to the onset of the pandemic. Meanwhile, the number of poor is estimated to have been 131 million higher because of the recession.

The drop-off in the global middle class was centered in South Asia and in East Asia and the Pacific, and it stalled the expansion seen in the years preceding the pandemic. South Asia, specifically India, along with Sub-Saharan Africa, accounted for most of the increase in poverty, reversing years of progress on this front.

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**The COVID-19 downturn curbed growth in the global middle class, increased poverty sharply in 2020**

Estimated change in the number of people in each income tier due to the global recession in 2020, in millions

<table>
<thead>
<tr>
<th>Income Tier</th>
<th>Estimated Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>High income</td>
<td>-62 million</td>
</tr>
<tr>
<td>Upper-middle income</td>
<td>-36</td>
</tr>
<tr>
<td>Middle income</td>
<td>-54</td>
</tr>
<tr>
<td>Low income</td>
<td>+21</td>
</tr>
<tr>
<td>Poor</td>
<td>+131</td>
</tr>
</tbody>
</table>

Notes: The poor live on $2 or less daily, low income on $2.01-$10, middle income on $10.01-$20, upper-middle income on $20.01-$50, and high income on more than $50; figures expressed in 2011 purchasing power parities in 2011 prices. The estimates show the difference in the number of people in an income tier based on pre-pandemic projections and post-pandemic estimates. The term “post-pandemic” refers to the period since the onset of the pandemic in January 2020. It is assumed there is no change in the income distribution in a region from the benchmark year for the projection to 2020.


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As defined in this report (and in previous Pew Research Center analyses), people who are middle income live on $10.01-$20 a day, which translates to an annual income of about $14,600 to $29,200 for a family of four. This is modest by the standards of advanced economies. In fact, it straddles the official poverty line in the United States – about $23,000 for a family of four in 2020 (expressed in 2011 prices). By global standards, the poor live on $2 or less a day, or no more than $2,920 annually for a family of four.

The number of people in the global high-income tier (more than $50 daily) is estimated to have decreased by 62 million in 2020, erasing about half of the gain since 2011, with most of the change

Who is middle class (or middle income)?
This report uses the terms “middle income” and “middle class” interchangeably, a common practice among economists who tend to define the middle class in terms of income or consumption. But being middle class can connote more than income, be it a college education, white-collar work, economic security, owning a home, or having certain social and political values. Class could also simply be a matter of self-identification. The interplay among these many factors is examined in studies by Hout (2007) and Savage et al. (2013), among others.

The population in each global region is divided into five groups: poor, low income, middle income, upper-middle income and high income. The poor live on $2 or less daily, low income on $2.01-$10, middle income on $10.01-$20, upper-middle income on $20.01-$50 and high income on more than $50. All dollar figures are expressed in 2011 prices and purchasing power parity dollars, currency exchange rates adjusted for differences in the prices of goods and services across countries.

The assignment to a group, or income tier, is based on a household’s daily per capita income or consumption, a simple way of controlling for differences in household size. In the source data, some countries only report income data while others only report consumption data. The terms “income” and “consumption” are used interchangeably for the sake of convenience.

A middle-income, or middle-class, threshold of $10 follows the practice of other researchers. A similar threshold has been used by the World Bank (2007, 2015), researchers at the Organization for Economic Cooperation and Development (Kharas, 2010), the development community (Birdsall, Lustig and Meyer, 2013) and others. There is evidence that the $10 threshold, which is about five times higher than the World Bank’s global poverty line, is associated with economic security and “insulates” people from falling back into poverty. An earlier Pew Research Center report discusses the choice of income thresholds in greater detail.

The global middle-class standard is modest by the standards of advanced economies. In 2020, the official poverty line for a family of four in the U.S. stood at about $15.90 per person per day (in 2011 prices). Thus, many who are poor by the U.S. definition would meet the global middle-income standard or, conversely, many who are in the global middle class would be poor by U.S. standards.
emanating from advanced economies. Meanwhile, the upper-middle income population ($20.01-$50 daily) fell by 36 million, while the low-income population ($2.01-$10 daily) is estimated to have increased by 21 million.

These estimates are based on the Center’s analysis of World Bank data on the distribution of people by either income or consumption levels in seven major global regions. The latest available estimates of income for each region, such as for 2018 for Europe and Central Asia and 2015 for the Middle East and North Africa, are extrapolated to 2020 using two sets of growth estimates: the forecasts issued by the World Bank in January 2020, prior to the pandemic, and the estimates issued in January 2021, with the pandemic’s economic impact in plainer sight. The difference between these two measures is taken to represent the impact of the COVID-19 downturn on the standard of living of people globally.

Prior to the emergence of COVID-19, some 1.38 billion people were expected to be counted in the global middle class in 2020. But the pandemic is estimated to have driven this number down to 1.32 billion. The share of people in the middle class globally is estimated to have been 17.1% in 2020, instead of potentially 17.8%. The erosion in the middle class might have been deeper if not for the fact that China – which is home to more than one-third of the global middle class – evaded an economic contraction, even though growth there was slower than anticipated.

The number of global poor is estimated to have risen to 803 million in 2020, much greater than the 672 million initially expected. The global poverty rate, which had been in steady decline this century, is likely to have increased to

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**Globally, most are either poor or low income, and the pandemic likely drove the numbers higher in 2020**

*Estimated number of people in each income tier in 2020, before and after the global recession, in millions*

<table>
<thead>
<tr>
<th>Income Tier</th>
<th>Pre-pandemic projection</th>
<th>Post-pandemic estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>High income</td>
<td>593</td>
<td>531 million</td>
</tr>
<tr>
<td>Upper-middle income</td>
<td>1,176</td>
<td>1,140</td>
</tr>
<tr>
<td>Middle income</td>
<td>1,378</td>
<td>1,324</td>
</tr>
<tr>
<td>Low income</td>
<td>3,936</td>
<td>3,956</td>
</tr>
<tr>
<td>Poor</td>
<td>672</td>
<td>803</td>
</tr>
</tbody>
</table>

Notes: The poor live on $2 or less daily, low income on $2.01-$10, middle income on $10.01-$20, upper-middle income on $20.01-$50, and high income on more than $50; figures expressed in 2011 purchasing power parities in 2011 prices. It is assumed there is no change in the income distribution in a region from the benchmark year for the projection to 2020. The term “post-pandemic” refers to the period since the onset of the pandemic in January 2020.


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10.4%, nearly reverting to the rate in 2017, instead of sinking to a new low of 8.7%, as previously expected.

The steep rise in global poverty is driven by the fact that many who were in the low-income tier prior to the pandemic lived on the margin of poverty. In 2017, 877 million people lived on $2 to $3 a day, according to World Bank estimates. Thus, large numbers were susceptible to falling back into poverty prior to the pandemic, especially in South Asia and Sub-Saharan Africa.

At the other end of the economic spectrum, the global high-income population likely fell to 531 million in 2020 from the 593 million originally expected. Consequently, the expected share in the high-income tier is 6.8%, not 7.6%. A vast majority of the global high-income population lives in advanced economies, and this group of countries also experienced a sharp downturn in 2020. Ironically, this bolstered the global middle-income population as people in advanced economies slipped down the ladder from higher income tiers.

The reversal in global living standards in 2020 comes on the heels of notable progress earlier in the decade. From 2011 to 2019, the global middle-class population increased from 899 million to 1.34 billion, or by 54 million people annually, on average. The pandemic is estimated to have erased a year of growth, leaving the global middle-class population nearly unchanged from 2019 to 2020.

Global poverty had abated at an average rate of 49 million annually from 2011 to 2019, with the number of global poor falling from 1.10 billion to 691 million during this period. The pandemic, by adding 131 million to the ranks of the poor, has set the progress on poverty back by several years, and the poverty rate is estimated to have increased from 9.0% in 2019 to 10.4% in 2020.

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### The global middle class expanded rapidly from 2011 to 2019, and poverty fell sharply

**Number of people in each income tier, in millions**

<table>
<thead>
<tr>
<th>Income Tier</th>
<th>2011</th>
<th>2019</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>High income</td>
<td>459</td>
<td>576</td>
<td>+117</td>
</tr>
<tr>
<td>Upper-middle income</td>
<td>840</td>
<td>1,137</td>
<td>+297</td>
</tr>
<tr>
<td>Middle income</td>
<td>899</td>
<td>1,335</td>
<td>+436</td>
</tr>
<tr>
<td>Low income</td>
<td>3,724</td>
<td>3,935</td>
<td>+212</td>
</tr>
<tr>
<td>Poor</td>
<td>691</td>
<td>1,081</td>
<td>-390</td>
</tr>
</tbody>
</table>

Notes: The poor live on $2 or less daily, low income on $2.01-$10, middle income on $10.01-$20, upper-middle income on $20.01-$50, and high income on more than $50; figures expressed in 2011 purchasing power parities in 2011 prices. It is assumed there is no change in the income distribution in a region from the benchmark year for the projection to 2019.

From 2011 to 2019, the global high-income population had increased from 459 million to 576 million, growing by an average of 15 million annually. Thus, the setback of 62 million due to the pandemic in 2020 also reverses several years of growth in the high-income population. The share of the global population in the high-income tier is expected to have decreased from 7.5% in 2019 to 6.8% in 2020.

The erosion of the middle class is centered in Asia, the rise in poverty in Asia and Africa

The effect of the COVID-19 downturn on the middle class and other income tiers shows distinct regional differences. Asia is expected to have accounted for most of the shrinking of the global middle class in 2020, with the middle-class population falling by 32 million in South Asia and by 19 million in East Asia and the Pacific. Meanwhile, the middle class in advanced economies is estimated to have increased by 16 million, in part due to the drop-off in the high-income tier in those countries.

South Asia is estimated to have experienced the largest decrease in the middle class and the greatest increase in poverty due to the COVID-19 downturn in 2020

*Estimated change in the number of people in each income tier due to the global recession in 2020, in millions*

<table>
<thead>
<tr>
<th>Region</th>
<th>Poor</th>
<th>Middle income</th>
<th>High income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced economies</td>
<td>&lt;0.5 million</td>
<td>+16</td>
<td>-47</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>+5</td>
<td>-8</td>
<td>-5</td>
</tr>
<tr>
<td>East Asia and the Pacific</td>
<td>+4</td>
<td>-19</td>
<td>-5</td>
</tr>
<tr>
<td>Europe and Central Asia</td>
<td>+1</td>
<td>+1</td>
<td>-3</td>
</tr>
<tr>
<td>South Asia</td>
<td>+78</td>
<td>-32</td>
<td>-1</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>+4</td>
<td>-8</td>
<td>-1</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>+40</td>
<td>-4</td>
<td>0</td>
</tr>
</tbody>
</table>

Notes: The poor live on $2 or less daily, low income on $2.01-$10, middle income on $10.01-$20, upper-middle income on $20.01-$50, and high income on more than $50; figures expressed in 2011 purchasing power parities in 2011 prices. The estimates show the difference in the number of people expected in an income tier based on projections made before and after the onset of the pandemic in January 2020. It is assumed there is no change in the income distribution in a region from the benchmark year for the projection to 2020.


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The projected rise in global poverty in the pandemic is concentrated in South Asia (an increase of 78 million) and Sub-Saharan Africa (40 million), historically among the poorest regions in the world. The high-income population in advanced economies is estimated to have shrunk by 47 million in 2020, accounting for most of the falloff globally. It should be noted that the global cutoff for the high-income tier – more than $50 a day – is not much higher than the median income across advanced economies, as an estimated 40% of the population in these countries is in the global high-income tier. Thus, the contraction of the high-income tier in advanced economies is more a reflection of the reduction in the standard of living of the typical person in these countries than outcomes for the wealthy.

The contribution of a region to global changes overall and the shift in its own income distribution depends mostly on two factors: the sizes of income tiers in the region prior to the COVID-19 recession and the impact of the downturn on economic growth in the region.

Prior to the pandemic, nearly half of the global middle-class population – 672 million of 1.38 billion – was estimated to live in East Asia and the Pacific, a region that includes China. Latin America and the Caribbean accounted for 191 million, and Europe and Central Asia was home to 183 million. South Asia accounted for 123 million more.

In view of these magnitudes, the estimated loss (relative to pre-pandemic expectations) of 32 million people from the middle class in South Asia is notable for two reasons. First, the region contributed the most to the shrinking of the global middle class in 2020 despite having a middle-income population smaller than several other regions. Second, the percentage decrease in South Asia’s middle-income population from what was previously expected (26%) is much greater than in any other region. Although East Asia and the Pacific shed 19 million from the middle-income tier, that represented only 3% of its middle class.

Poverty is most prevalent in Sub-Saharan Africa. Some 494 million people in Sub-Saharan Africa, out of a total population of 1.14 billion, were expected to be living in poverty ahead of the pandemic in 2020. South Asia, with a total population of 1.86 billion, was expected to be home to 104 million poor. Nonetheless, South Asia is estimated to have added nearly double the amount of people to the ranks of the globally poor as Sub-Saharan Africa in the pandemic. The percentage increase in poverty in South Asia (75%) dwarfs the increase in Sub-Saharan Africa (8%).

The number of poor in other regions was smaller, estimated to range from 6 million in Europe and Central Asia to 27 million in Latin America and the Caribbean ahead of the pandemic in 2020. But, since that moment, the increase in poverty in these regions is notable. The Middle East and North Africa and East Asia and the Pacific are each estimated to have seen increases in poverty of
Prior to the pandemic, most of the global middle class lived in East Asia and the Pacific, the poor in Sub-Saharan Africa, high-income earners in advanced economies

Estimated number of people in each income tier prior to the global recession in 2020, by region, in millions

<table>
<thead>
<tr>
<th>Region</th>
<th>Poor</th>
<th>Middle Income</th>
<th>High Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced economies</td>
<td>7 million</td>
<td>88</td>
<td>489</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>27</td>
<td>191</td>
<td>33</td>
</tr>
<tr>
<td>East Asia and the Pacific</td>
<td>20</td>
<td>672</td>
<td>39</td>
</tr>
<tr>
<td>Europe and Central Asia</td>
<td>6</td>
<td>183</td>
<td>22</td>
</tr>
<tr>
<td>South Asia</td>
<td>104</td>
<td>123</td>
<td>3</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>15</td>
<td>84</td>
<td>4</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>494</td>
<td>38</td>
<td>3</td>
</tr>
</tbody>
</table>

Notes: The poor live on $2 or less daily, low income on $2.01-$10, middle income on $10.01-$20, upper-middle income on $20.01-$50, and high income on more than $50; figures expressed in 2011 purchasing power parities in 2011 prices. It is assumed there is no change in the income distribution in a region from the benchmark year for the projection to 2020.


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more than 20% due to the recession. The rise in poverty in both Europe and Central Asia and Latin America and the Caribbean is not far behind, with each experiencing a 17% increase in poverty.

A large majority of the global high-income population – 489 million of 593 million – lived in advanced economies before the global recession took hold. The estimated decrease of 47 million, or 10%, in this population in advanced economies accounts for most of the shrinking of the global high-income tier.

In proportional terms, the drop off in the high-income tier is also notable in Latin America and the Caribbean (15%), Europe and Central Asia (12%) and East Asia and the Pacific (12%). The losses in the Middle East and North Africa, South Asia and Sub-Saharan Africa are relatively small in magnitude (each less than 1 million people) but also represent double-digit shares of the high-income populations in those regions.
The relatively outsized role of South Asia in the contraction of the global middle class and the expansion of poverty is the result of it seeing the sharpest reduction in economic growth in the pandemic. In January 2020, the World Bank forecasted that South Asia would experience a 4.3% increase in gross domestic product (GDP) per capita in 2020. But, in January 2021, output in South Asia was estimated to have decreased by 7.8% in 2020, a retreat of 12.1 percentage points from potential.

The setback to economic growth in other regions is smaller, ranging from 4.7 percentage points in East Asia and the Pacific to 8.6 points in Latin America and the Caribbean. East Asia and the Pacific is the only region in which growth is estimated to have stayed positive in 2020, with GDP per capita inching up by 0.4% even after the onset of the pandemic. Otherwise, the latest estimates of the change in output per capita in 2020 ranged from -3.2% in Europe and Central Asia to -7.8% in Latin America and the Caribbean.

South Asia estimated to have seen the sharpest drop in output growth in 2020, East Asia and the Pacific the least

*Growth in real gross domestic product per capita in 2020, forecasted and estimated, in percent*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>2.5%</td>
<td>-4.3%</td>
<td>-6.8%</td>
</tr>
<tr>
<td>Advanced economies</td>
<td>1.0%</td>
<td>-5.8%</td>
<td>-6.8%</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>0.8%</td>
<td>-7.8%</td>
<td>-8.6%</td>
</tr>
<tr>
<td>East Asia and the Pacific</td>
<td>5.1%</td>
<td>0.4%</td>
<td>-4.7%</td>
</tr>
<tr>
<td>Europe and the Central Asia</td>
<td>2.3%</td>
<td>-3.2%</td>
<td>-5.5%</td>
</tr>
<tr>
<td>South Asia</td>
<td>4.3%</td>
<td>-7.8%</td>
<td>-12.1%</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>0.7%</td>
<td>-6.5%</td>
<td>-7.2%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>0.3%</td>
<td>-6.1%</td>
<td>-6.4%</td>
</tr>
</tbody>
</table>

Notes: Percentages shown are for the change in real GDP per capita at market prices. The estimate for advanced economies is computed as the percent change in GDP less the percent change in population.


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Acknowledgments

This report is a collaborative effort based on the input and analysis of the following individuals.

Rakesh Kochhar, Senior Researcher
Kim Parker, Director, Social Trends Research
Richard Wike, Director, Global Attitudes Research
James Bell, Vice President, Global Strategies
J.J. Moncus, Research Assistant
Aidan Connaughton, Research Assistant
David Kent, Senior Copy Editor
Travis Mitchell, Digital Producer
Michael Keegan, Senior Information Graphics Designer
Shannon Greenwood, Digital Producer
Methodology

The starting point for the analysis is household survey-based estimates of regional income distributions from the World Bank’s PovcalNet database. The global regions are as defined by the World Bank. In this report, “advanced economies” refers to the group of countries listed as “other high income” by the World Bank.

These data were used to estimate a benchmark distribution of the population in each of seven major global regions across five income tiers. The income tiers are defined by the daily per capita income or consumption of people in a region as follows: poor ($2 or less daily), low income ($2.01-$10), middle income ($10.01-$20), upper-middle income ($20.01-$50) and high income (more than $50). All dollar figures are expressed in 2011 prices and purchasing power parity dollars.

The year for which the benchmark estimates were drawn was the latest one in which the household surveys covered at least 75% of the region’s population. This varied across regions as follows: 2018 in advanced economies, Latin America and the Caribbean, East Asia and the Pacific, and Europe and Central Asia; 2017 in Sub-Saharan Africa; 2015 in the Middle East and North Africa; and 2014 for South Asia.

Extrapolating the benchmark estimates to 2020 required the following three steps:

1. Extrapolate benchmark-year incomes to 2020
2. Estimate income distributions in 2020 based on extrapolated incomes
3. Determine the population in each income tier in 2020

Extrapolating incomes from benchmark years to 2020

Household incomes are extrapolated to 2020 using estimates of the growth in real gross domestic product (GDP) per capita in a region. This, in turn, required several sets of data.

The first is the level of GDP per capita in the benchmark year, say 2017 for Sub-Saharan Africa, and in 2019, the latest year for which data are available in the World Bank’s World Development Indicators database. In this database, GDP per capita is expressed in constant 2017 international dollars. The result is an estimate of the percentage change in per capita income in a region from the benchmark year to 2019.

Next, the change in income from 2019 to 2020 is approximated by two measures of growth in real GDP per capita (at market prices) issued by the World Bank in its reports on global economic
The first measure of growth in 2020 is a forecast released in January 2020, prior to the emergence of the pandemic. The second measure is an estimate released in January 2021, with the economic effects of the pandemic more apparent. The result is two estimates of how much per capita income changed in each region from the benchmark year to 2020, one in a counterfactual “pre-pandemic world” and the other in a “post-pandemic” world, the period since the emergence of the coronavirus.

In a slight variation to this procedure, the change in per capita income in 2020 for advanced economies is estimated as the difference in the growth in GDP and the growth in population. This is because estimates of the change in GDP per capita in 2020 for this group of countries is not directly reported in the source data.

**Estimating income distributions in 2020 based on extrapolated incomes**

The estimated change in income from the benchmark year to 2020 is used to reset the boundaries of the income tiers. For example, based on the pre-pandemic forecast, it was estimated that per capita income in East Asia and the Pacific would have increased by 10.5% from 2018 to 2020. As a result, people living on between $1.82 to $2 a day in East Asia and the Pacific in 2018 would have seen their income increase to more than $2 a day in 2020. Thus, they would no longer be poor in 2020; only people with incomes of $1.81 or less in 2018 would still be poor in 2020. Thus, $1.81 is used as the poverty boundary to derive an estimate of the share who were poor in East Asia and the Pacific in 2020 in the hypothetical pandemic-free world.

With the emergence of the pandemic, the growth in per capita income in East Asia and the Pacific in 2020 is estimated to have been 5.6%. In this circumstance, only people with incomes from $1.90 to $2 a day in 2018 would have emerged from poverty in 2020. Thus, $1.89 is used as the poverty boundary to estimate the state of poverty in East Asia and the Pacific in 2020 in the post-pandemic scenario.

A similar procedure is used to reset the boundaries of all income tiers in all regions. The estimation of income distributions for 2020 was greatly facilitated by the “povcalnet” command in Stata developed by World Bank researchers. (Castaneda Aguilar, R.A., C. Lakner, E.B. Prydz, J.S. Lopez, R. Wu and Q. Zhao, *Estimating Global Poverty in Stata: The Povcalnet Command*, September 2019).
Determining the population in each income tier in 2020

The estimates derived from PovcalNet yield the percentages of people in a region who are poor, low income and so on. These percentages are applied to the estimated population of each region to determine the number who fall into each income tier.

The overall population in a region in 2020 is derived from two sources: World Bank data on population through 2019, as listed on PovcalNet, and United Nations forecasts of the change in population from 2019 to 2020. This exercise is conducted at the country level, some 218 in all, and the results are summed to obtain an estimate of the population in each region in 2020.

Key assumptions and potential uncertainties

As is the case with any projection, the estimates reported in this analysis are subject to a degree of uncertainty. One issue is that final end-of-year estimates of real GDP growth are not yet available for most countries, if any. Thus, the January 2021 estimates from the World Bank that are used in the analysis are likely to be revised in the coming months. In its projections of the increase in extreme poverty ($1.90 or less a day) in 2020, the World Bank assumes a global contraction of either 5% or 8%. The resulting change in extreme poverty in 2020 is estimated to range from 88 million to 115 million.

The methodology in this analysis assumes that incomes change at the same rate for all people, whether poor, low income, middle income, upper-middle income or high income. In other words, it is assumed that there is no change in inequality from the benchmark year to 2020. If the COVID-19 recession has worsened inequality, the increase in the number of poor is likely greater than estimated in this analysis, and the decrease in the number who are high income is likely less than estimated. The middle class may have shrunk by more than projected.

Although World Bank researchers have simulated the relationship between inequality and the poverty rate, more precise measures of changes in inequality in the COVID-19 era will not be forthcoming until newer household survey data become available. Also, the extent to which social spending by governments, especially in advanced economies, may have ameliorated the effects of the COVID-19 downturn is not yet clear.

Another assumption in this analysis is that personal incomes change at the same rate as GDP per capita. Empirically, it is not unusual to observe that personal income or consumption increases at a slower rate than GDP per capita. However, the relationship between the two measures varies widely across countries and it is not clear what the relative rates of growth might be at the regional or global level. The World Bank often assumes a “pass-through” rate of 0.85, i.e., only 85% of
national output growth is passed through to household income or consumption. If a pass-through rate of 0.85 is assumed for this analysis the estimated change in the number of people in each income tier is as follows: Poor (+117 million), low income (+11 million), middle income (-45 million), upper-middle income (-30 million) and high income (-53 million).

From the point of view of measuring global poverty, a key issue is that the latest available benchmark survey for India was conducted in 2011. As the second most populous country in the world, India accounts for a large share of the global population in poverty. In 2011, 969 million people lived in extreme poverty globally, on $1.90 or less daily, and 285 million of that number were from India. The World Bank has applied a variety of estimation techniques to update the poverty counts for India, but uncertainty lingers in these updates for India and, by implication, in current measures of global poverty.