South Asia Economic Focus | Fall 2020

BEATEN OR BROKEN?

Informality and COVID-19

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This report is a joint product of the Office of the Chief Economist for the South Asia Region (SARCE) and the Macroeconomics, Trade and Investment (MTI) Global Practice. Its preparation was led by Robert C. M. Beyer (Economist, SARCE), Valerie Anne Mercer Blackman (Senior Economist, SARCE), and Maurizio Bussolo (Lead Economist, SARCE) under the oversight of Hans Timmer (Chief Economist, South Asia Region), in close collaboration with Manuela Francisco (Practice Manager, MTI) and Zoubida Kherous Allaoua (EFI South Asia Regional Director).

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South Asia as used in this report includes Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

The cutoff date for this report was September 30, 2020.

South Asia Chief Economist Office
Macroeconomics, Trade and Investment Global Practice

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Chapter 1

Recent economic developments

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Summary

The COVID-19 pandemic is not yet under control in South Asia, despite early containment measures. In March, South Asian countries quickly imposed lockdowns and travel restrictions, but not all countries were able to contain the domestic spread of COVID-19. Due to low testing, social stigma, and a young population, the actual extent of COVID-19 infections is highly uncertain, but likely much higher than recorded numbers suggest.

The crisis brought South Asia to a near standstill. Travel restrictions prevented travelers from reaching South Asia and lockdown measures triggered massive supply disruptions. Information from high-frequency variables, combined in activity indicators, show an unprecedented contraction. In April, activity dropped by 40 percent in Pakistan and by around two thirds in the other countries. Activity recovered subsequently across the region, but it remained below pre-COVID levels in August. High-frequency approximations of GDP suggest year-over-year contractions during the second quarter of this year in all countries and a subsequent gradual recovery.

The collapse in activity was widespread. The economic disruption is even visible from space: South Asia has darkened since March. Between March and August, nighttime light intensity declined in more than three quarters of South Asia's districts. In August, the average nighttime light intensity across districts was still 10 percent below its level a year earlier. Mobility declined strongly in nearly all districts, as a result both of national containment measures and local COVID-19 infections. Some of the observed heterogeneity across districts can be explained by voluntary reductions in mobility due to higher local prevalence of COVID-19. During the national lockdown in India, districts with more recorded COVID-19 infections per capita experienced larger declines in mobility and nighttime lights.

South Asian governments proactively stabilized economic activity through monetary easing, fiscal stimulus, and supportive financial regulation. For now, macro-financial stability has been preserved. However, the situation is fragile amid weak buffers and exhausted policy tools in some countries. Regulatory adjustments to the COVID-19 pandemic have exacerbated financial sector vulnerabilities, and fiscal stimulus despite large revenue shortfalls have resulted in rising fiscal deficits. Public debt, already high in Sri Lanka and Maldives before the pandemic, has risen further.

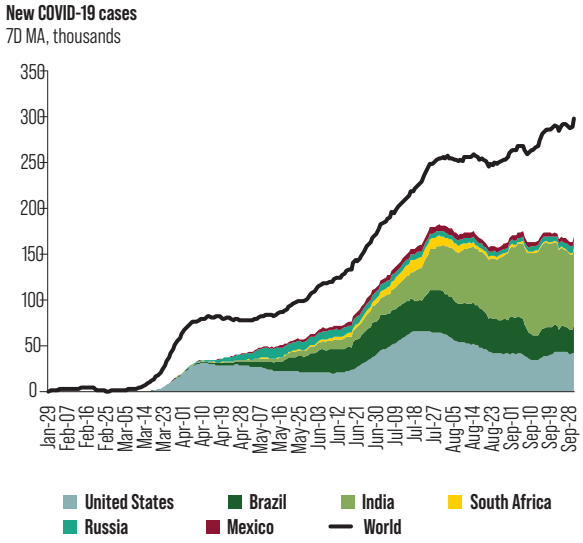
From dire straits to gradual recovery

The world is in an unprecedented crisis. The global pandemic of coronavirus disease 2019 (COVID-19) is still worsening, with around a quarter million new cases registered every day (Figure 1.1.A). As of September 30, over 34 million cases of COVID-19 (of which 7.7 million were active cases) and over 1 million deaths have been reported across more than 180 countries. On September 30, India alone recorded over 80,000 new cases. The pandemic and measures to contain its spread have disrupted economic activity across the world, resulting in a severe global recession. All countries that already reported official GDP figures for the first half of this year recorded a contraction. The impact was especially large during the second quarter, with economic activity contracting by double digits in most countries (Figure 1.1.B), and with more severe impacts in those with higher infection rates and stricter containment measures (see Box 1.1).

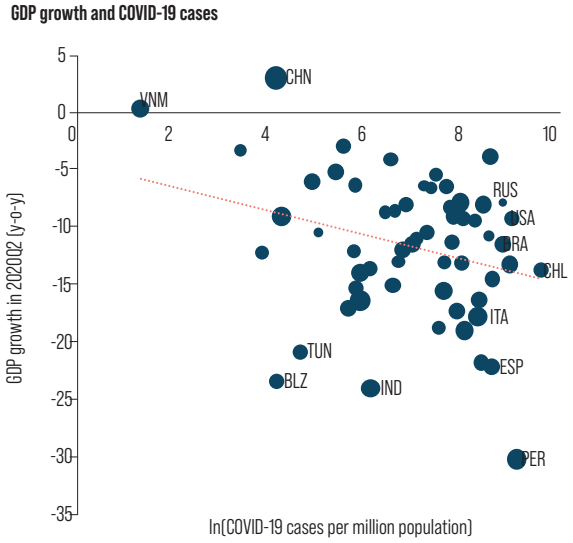
On average, countries contracted by more than 10 percent and the contraction was particularly deep in India. Of the 60 countries that have published quarterly gross domestic product (GDP) data for the second quarter of this year, only China and Vietnam saw positive growth. On average, countries lost 11.6 percent of

Figure 1.1: COVID-19 infections are still rising and economic activity has collapsed, but growth is rebounding and financing conditions for EMDEs remain benign.

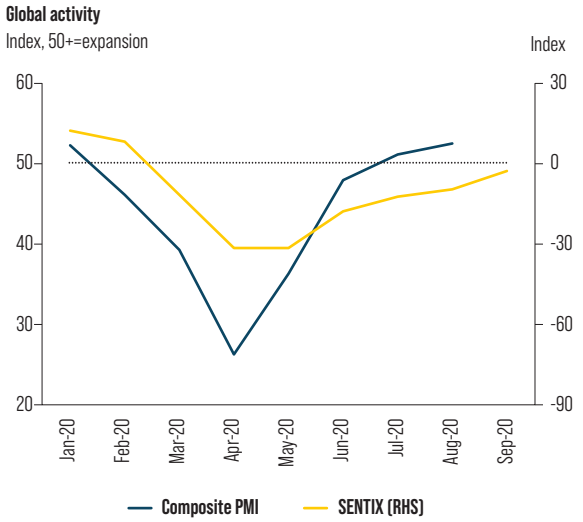
A. COVID-19 infections are still growing.



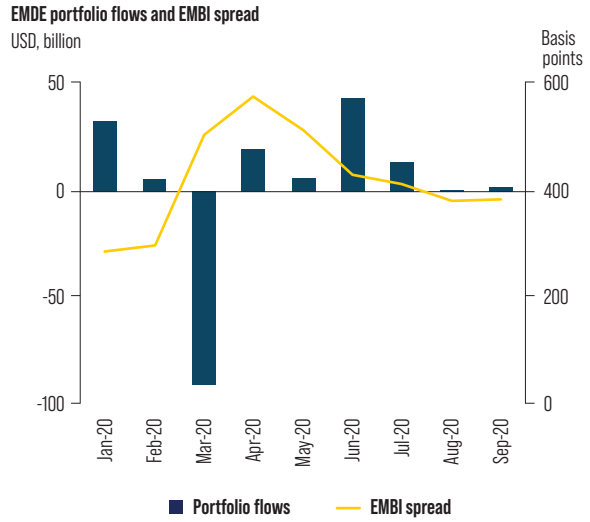
B. GDP collapsed in most countries in 2020 Q2.



C. Monthly indicators suggest a rebound from an unprecedented low base.



D. Financing conditions for EMDEs remain benign.



Notes: A. The new cases are shown as seven-day moving average; B. The GDP growth was calculated using local currency units and the size of the bubbles is the average of the stringency index in Q2.
Sources: A. Johns Hopkins University; B. World Bank; Johns Hopkins University; Hale *et al.* (2020); C. JPMorgan/IHS Markit and Haver Analytics; D. IIF, JP Morgan, Haver Analytics, and staff calculations

Box 1.1 Both the spread of COVID-19 and related containment measures contributed to GDP losses

The second quarter of 2020 was shaped by rising COVID-19 infections and lockdowns. During this quarter, COVID-19 infections picked up across the globe and most countries enacted stringent containment measures to control its domestic spread. The stringency of containment measures across countries can be compared with an index based on school closings, workplace closings, cancelation of public events, restrictions on gatherings, public transport closings, stay at home requirements, restrictions on internal movement, and international travel controls (Hale, Webster, Petherick, Phillips, and Kira 2020). Because of COVID-19 and the lockdowns, among 60 countries that already reported official GDP growth for the second quarter of this year, all but China's and Vietnam's economies contracted relative to the same quarter in 2019. For many it was the worst contraction ever recorded.

Both COVID-19 infections and the stringency of the containment measures have had an impact. The decline in economic activity is correlated both with higher COVID-19 infections and more stringent containment measures (Table 1.1 Column 1). The decline in GDP – given the COVID-19 infection rate, the stringency of containment measures, and country characteristics – was smaller in more developed countries (Table 1.1 Column 2). One reason could be that those countries were able to adjust more smoothly to the pandemic and the containment measures, for example because in those countries more jobs can be done from home (see Chapter 3). Different from typical macroeconomic crises, services were hit badly. Consequently, countries with a larger share of their GDP generated by services had to deal with larger losses in GDP. A country generating 10 percent more of its GDP with services experienced a 3.3 percent larger contraction. Due to border closures, one may have expected that countries usually exporting more also contracted more, but there is no evidence for that. These results also hold when the growth rate in the quarter before is included as a control (Table 1.1 Column 3). The global collapse of economic activity is hence not just a consequence of the "great lockdown" but also of the faster spread of COVID-19 during this quarter. This has important implications for current activity and the recovery. Containment measures have been relaxed, which will support the economic rebound. However, COVID-19 is still spreading rapidly in many countries and there will be economic impacts so long as the pandemic is not under control (see Chapter 2). The stringency of containment measures, COVID-19 infections, and country characteristics together explain between 37 and 50 percent of the variation across countries' growth rates in the second quarter. Despite this quarter being shaped by COVID-19 and lockdowns, there is hence still a lot of unexplained variation, showing that countries' vulnerability to the pandemic was very heterogeneous.

Table 1.1: COVID-19 infections, containment measures, and country characteristics determined output in 2020 Q2.

	GDP growth, y-o-y		
	(1)	(2)	(3)
Log (COVID-19 cases in Q2 per mill. pop)	-0.982** (0.378)	-1.073** (0.505)	-1.455*** (0.468)
Stringency of containment measures in Q2	-0.205*** (0.0634)	-0.137* (0.0757)	-0.125* (0.0683)
Log GDP *per capita* (2017 USD PPP)		3.441** (1.692)	3.693** (1.528)
Share of services in GDP		-0.331** (0.135)	-0.260** (0.123)
Share of manufacturing in GDP		0.00796 (0.153)	-0.0496 (0.139)
Share of exports in GDP		-0.00589 (0.0268)	-0.01 (0.0242)
GDP growth Q1 2020			0.802*** (0.225)
Constant	9.149* (4.791)	-10.02 (14.36)	-13.67 (12.99)
Observations	59	58	58
R-squared	0.265	0.371	0.499

Notes: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1
Sources: Johns Hopkins University, Hale *et al.* (2020), World Bank, and staff calculations.

their output compared to the year before. In South Asia, only a few countries publish quarterly GDP figures, and apart from India publication lags are significant. In the region, quarterly GDP from April to June is only available for India, where gross domestic product (GDP) declined by 23.9 percent year-on-year. Private sector activity in manufacturing and services fell by almost 30 percent. The only other country reporting a similar decline was Peru, which has one of the highest per capita infection cases in the world.

Recent monthly economic indicators suggest a gradual recovery. Purchasing Manager Indexes (PMIs) are monthly economic indicators based on surveys of private companies that enquire, among other things, about the status of new orders, output, and employment. A value above 50 indicates an improvement; a value below 50 a deterioration. The global composite indicator was above 50 at the beginning of the year but collapsed subsequently. It troughed in April, with a never recorded low of 26 (Figure 1.1.C), when many countries enacted very strict containment measures, and substantial parts of the world were under lockdown. With the restrictions eased subsequently, the composite index bounced back and surpassed 50 in July, suggesting that the situation is improving, albeit very gradually. The SENTIX, a monthly economic indicator based on investor confidence, dropped with the onset of the pandemic and troughed in April as well.

Benign financing conditions for EMDEs provide a silver lining. When the COVID-19 pandemic spread to more and more EMDEs in March, capital flows reversed and interest rates for EMDE bonds increased, as reflected in a rising Emerging Markets Bond Index (EMBI) spread (Figure 1.1.D). However, concerns about an imminent EMDE crisis unwound in April and financing conditions improved again. Significant quantitative easing in advanced economies, combined with an expectation that the economic fallout from the pandemic will be controlled, translates into relatively benign financing conditions for EMDEs so far. However, capital flows are inherently volatile, and a future reversal remains a major risk (see Chapter 2). Investor sentiments can be erratic, and a wider and longer than expected spread of COVID-19 in EMDEs could trigger a reassessment. In the medium-run, if the economic recovery between advanced economies and EMDEs is not synchronized, for example because advanced economies are accessing a vaccine for COVID-19 first, monetary policy normalization in advanced economies could reverse capital flows again.

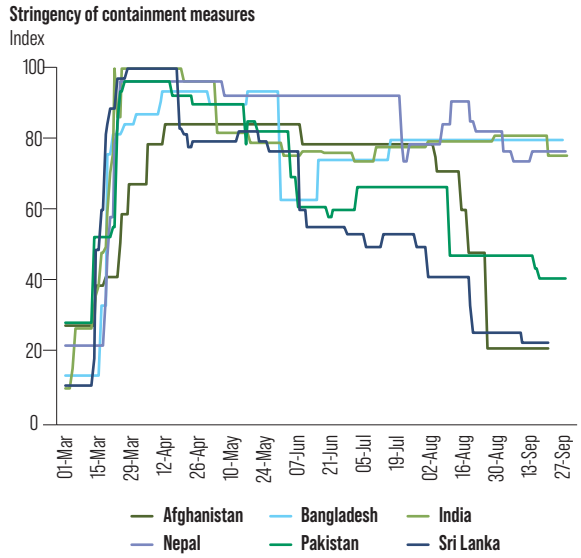
COVID-19 hit South Asia late but hard

Governments across South Asia reacted resolutely to contain the pandemic. When the first cases of COVID-19 were detected in South Asia, countries quickly enacted strict measures to contain the domestic spread of COVID-19 (Figure 1.2.A). Following the example of many advanced economies, countries implemented travel restrictions, border closures, and lockdowns. The travel restrictions have halted tourism and labor outmigration. In addition, border closures severely disrupted supply chains and trade throughout the region. In some countries related logistical difficulties and repatriations of foreign workers impacted construction. The lockdowns depressed domestic supply and demand, as businesses were unable to operate and consumers curbed expenditures, triggering a massive contraction in output and imposing significant social hardship on poor and vulnerable households – specifically urban migrants and workers in the informal economy (see Chapter 3). The lockdowns had far-reaching consequences in other areas of life as well. For example, education came to a standstill and efforts to teach children during school closures proved challenging. The estimated costs of the school closures in terms of learning and earning losses are substantial (see Box 1.2).

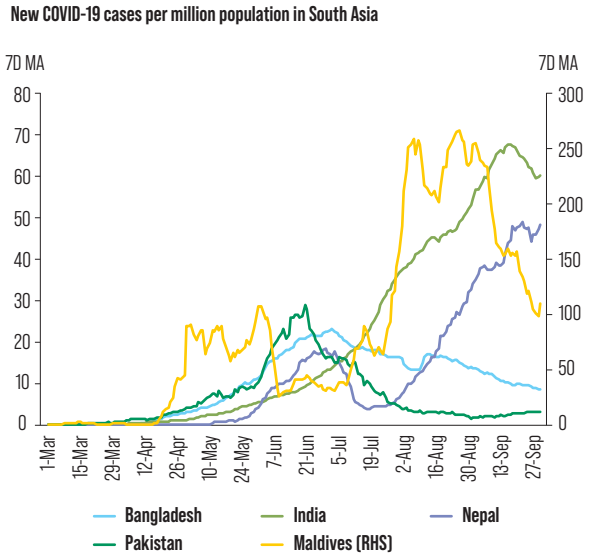
The spread of COVID-19 infections in South Asia has been heterogeneous across countries. It is not clear whether lockdowns can effectively mitigate a pandemic in countries with a large share of urban poor and densely populated cities. In some cases, they may even be counterproductive. While some countries were successful in controlling the pandemic, others were not. Bhutan and Sri Lanka avoided large-scale domestic transmission and experienced only very small numbers of infections *per capita*. Despite comparable measures, cases surged in Bangladesh and Pakistan. However, after spiking between June and July, they have fallen subsequently. In Bangladesh, where recorded infections declined slower than in Pakistan, the government has now decided to gradually suspend COVID-19 treatment in the dedicated COVID-19 public hospitals because of a shift to home-based care and a declining number of hospitalized patients. In India, Maldives and Nepal, however, the number of recorded cases is still rising rapidly (Figure 1.2.B). While cases in India were initially concentrated in

Figure 1.2: All countries enacted strict measures to contain the spread of COVID-19; some succeeded, but cases are still surging in India and Nepal.

A. All governments enacted strong containment measures.



B. Covid-19 infections declined in some countries but are still rising in India and again in Nepal.



Notes: A. The index is based on school closings, workplace closings, cancelation of public events, restrictions on gatherings, public transport closings, stay at home requirements, restrictions on internal movement, and international travel controls.; B. The new cases are shown as seven-day moving average.
Sources: A. Hale *et al.* (2020); B. Johns Hopkins University and staff calculations.

Table 1.2: Not all South Asian countries were hit equally strong; in all of them the death rate is relatively low, but so is testing.

	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka	China	United States
Total confirmed cases	39,268	363,479	282	6,312,584	10,291	77,817	312,806	3,380	90,528	7,233,043
Total cases per million people	1,008.7	2,207.1	365.5	4,574.3	19,038.3	2,670.7	1,416.1	157.8	62.9	21,851.9
Active cases	4,985	82,637	60	942,164	1,142	21,830	8,825	134	370	3,256,873
Death rate	3.7	1.4	0.0	1.6	0.3	0.6	2.1	0.4	5.2	2.9
Test per infected	2.8	5.4	485.6	12.0	14.9	13.1	11.3	85.7		15.7
Test per infected (in last 7 days)		9.7		14.1	25.5	7.7	52.7	250.0		20.6

Notes: The death rate is the ratio of recorded death due to COVID-19 to all recorded infections. Data as of September 30.
Sources: National health ministries.

a few large and densely populated cities, COVID-19 is now spreading in almost every state and across smaller towns, villages, and rural areas as well. In some states with high infections, health care system capacity constraints are becoming a concern, especially in more rural areas. Maldives has the highest number of confirmed cases *per capita*, and new infections are still high. In Nepal, cases were initially restricted to areas bordering India but later surged also in urban areas. After peaking in June, new infections declined to very low levels in July. However, Nepal has entered a second wave that is much more severe than the first.

Due to supply constraints, social stigma, and a young population (more likely to exhibit asymptomatic infections), testing is low and the actual extent of COVID-19 infections is highly uncertain. Most South Asian countries fare poorly on testing for COVID-19. The benchmark range for adequate testing set by the World Health Organization (WHO) is between 10 and 30 per confirmed case. In South Asia, only Bhutan and Sri Lanka, which have very few cases *per capita*, have tested far above that range since March. Maldives and India are within the range, though at its lower end. In Pakistan, testing was low initially, but it increased and was

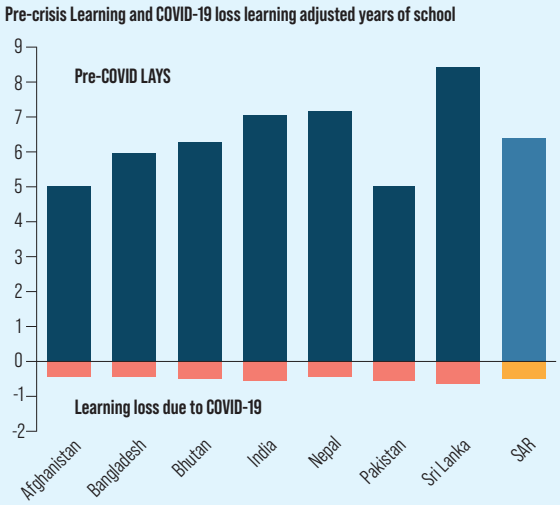
Box 1.2 Learning and related income losses due to school closures in South Asia are huge

Temporary school closures in all South Asian countries have had major implications for students. They have kept 391 million students out of school in primary and secondary education, further complicating efforts to resolve the learning crisis. While most governments have made enormous efforts to mitigate the impact of school closures, it has been difficult to engage children through remote learning initiatives. This is resulting in enormous dropouts and substantial learning losses, which will have a lifetime impact on the productivity of a generation of students.

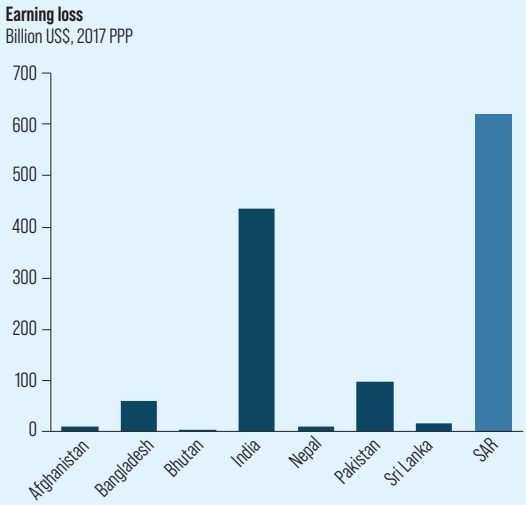
The pandemic may cause up to 5.5 million students to drop out from the education system. The impact on learning is equally enormous. Most school systems closed in March, and—though there are important exceptions—countries are starting to reopen or have already opened their schools. Children have been out of school for approximately 5 months. Being out of school for that long means that children not only stop learning new things, they also forget some of what they have learned. The projected learning loss for the region is 0.5 years of learning-adjusted years of schooling (LAYS), falling from 6.5 LAYS to 6.0 LAYS, an enormous setback from recent advances in schooling (Figure 1.3.A). This figure already takes mitigation into account, including the likely effect of remote learning.

Figure 1.3: School closures across South Asia will result in learning and lifetime earning losses.

A. South Asia has lost 0.5 years of learning...



B. ... and may lose 5 percent in lifetime earnings.



Notes: No data available for Maldives. Learning-adjusted years of school are calculated by multiplying the estimates of expected years of school by the ratio of most recent harmonized test scores to 625. The wage calculation is based on lifetime income, using an annual return to an additional year of schooling of 8 percent, correcting for labor force participation and adult mortality.
Source: Updated regional estimates from Azevedo, J.P. *et al.* (2020).

Future earning losses related to the learning setback are substantial. To estimate the long-term economic impact of these learning losses, one can project the effect of this learning loss on future earnings. Based on country data on household labor incomes, the average child in South Asia may lose USD 4,400 in lifetime earnings once having entered the labor market, equivalent to 5 percent of total earnings. These projections are based on what we currently know about returns to schooling, using the reduced level of learning caused by the crisis. Summing these numbers for all children in South Asia (and correcting for current labor force participation and adult survival rates for each country), the region stands to lose USD 622 billion from the school closures in the present scenario, or up to USD 880 billion in a more pessimistic scenario. While the regional loss is largely driven by India, all countries will lose substantial shares of their GDP (Figure 1.3.B). For reference, note that South Asian governments spend only USD 400 billion per year in total on primary and secondary education. The total loss in economic output from the current closures is hence substantially higher than what countries currently spend on education.

adequate in September. Afghanistan and Bangladesh are testing far below the range, which makes their recorded numbers particularly uncertain. Low testing is both a result of supply constraints and subdued demand for testing. Due to the social stigma associated with an infection, many prefer not to get tested in the first place and only seek medical attention when the symptoms are severe. And since South Asia's population is on average very young, infections are more likely to cause no or only mild symptoms. Moreover, testing fees and distrust in the testing facilities result in subdued demand in some places. Recent surveys based on testing random samples of the population for coronavirus antibodies suggest that official numbers are grossly understating the actual spread of COVID-19. In Afghanistan, a survey conducted by the government and the WHO suggests that more than a third of the population could have been already infected and more than a half of the residents of Kabul. In Pakistan, a government survey concludes that 300,000 people may have been infected in Islamabad alone (a prevalence of 14.5 percent). In Delhi, a study showed that 22 percent of the people have coronavirus antibodies, and a national survey conducted between May 11 and June 4 suggests that the ratio of infections to registered cases may have been around 82. In Dhaka city, one in every 10 people may have been infected already. Even if the actual infections are much higher than the registered cases, however, it seems unlikely that South Asian countries are already close to the levels that would trigger herd immunity. In addition, the evidence that those who recover from COVID-19 develop long-term immunity is not very solid. Hence, there is significant uncertainty about the future development of the pandemic in South Asia, and the only relative certainty is that it is unlikely to pass anytime soon.

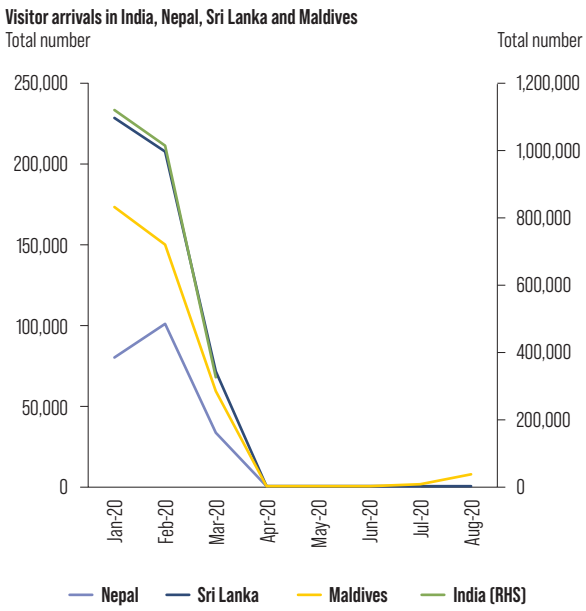
The economic impact was sudden and steep

The pandemic and related containment measures brought South Asia to a standstill. Travel restrictions prevented travelers from reaching South Asia, with immense consequences for tourism and related services. After lockdown measures were implemented mobility declined sharply, triggering unprecedented supply disruptions. These in turn impacted incomes and amplified risk aversion, which reduced demand. Services and manufacturing consequently collapsed. In countries with fiscal years ending in the summer months, official GDP growth has decelerated significantly.

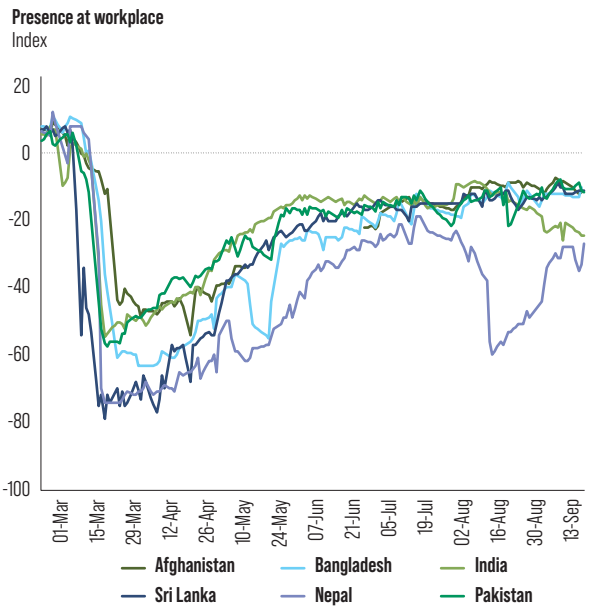
- *Visitor arrivals:* With travel restrictions in place across the world, visitor arrivals have fallen to almost zero since the end of March (Figure 1.4.A), impacting significantly the smaller countries with large tourism sectors (see Box 1.2). Tourism inflows in Maldives, the country most dependent on tourism, remained anemic even after borders reopened in mid-July. Only 13,787 tourists visited between July 15 and September 15, a 95 percent year-on-year decline. There are only very few international commercial flights compared to before the pandemic, and half of all resorts remain shut.
- *Mobility:* With the enactment of lockdowns, mobility declined sharply across South Asia. Presence at workplaces declined steeply (Figure 1.4.B) as people stayed more at home. At the end of March, presence at the workplace was between 40 percent to 80 percent lower than normal. It dropped the least in Afghanistan and the most in Sri Lanka and Nepal. It recovered subsequently across the region, but it is still around 20 percent below normal levels in most countries, and nearly 40 percent below in Nepal due to new containment measures.
- *Services:* Following the stringent containment measures, activities in tourism, travel, trade and transport have been severely disrupted, resulting in a near collapse in certain services such as hotels, restaurants, aviation, and trade. The Services PMI, which is available only for India and Sri Lanka, fell to unprecedented levels (Figure 1.4.C). While it recovered subsequently to 56 in Sri Lanka in August, it was still far below 50 in India.
- *Industrial production:* In April, industrial production collapsed to around 40 percent of its pre-COVID-19 level in India, to 50 percent in Sri Lanka, to 60 percent in Pakistan, and to 70 percent in Bangladesh (Figure 1.4.D). When restrictions were eased, industrial production firmed, but it remained subdued in July in India.
- *GDP growth:* Among South Asian countries, only India already published GDP data for the second quarter of this year. With a decline of 23.9 percent (y-o-y), India's contraction is one of the largest among all countries in the world (see above). In Bangladesh, Bhutan, and Pakistan, the

Figure 1.4 Economic activity in South Asia came to a near stand-still.

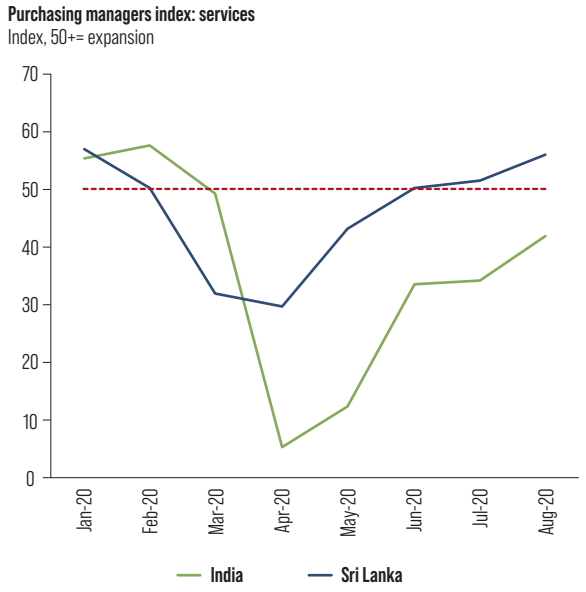
A. Visitor arrivals in South Asia dropped to zero.



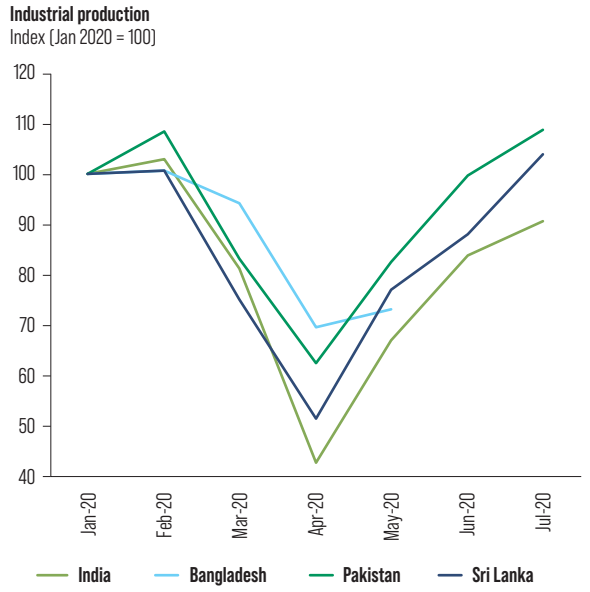
B. Presence at the workplace declined massively.



C. Services PMI indicators were at record lows.



D. Industrial production plummeted.



Notes: B. The decline refers to the change of visits and length of stay, compared to a baseline period. The baseline period is defined as the median value for the corresponding day of the week, during the 5-week period from January 3 to February 6. Holidays and weekends are linearly interpolated. For Afghanistan, data from May 19 to July 2 is missing.
Sources: A. Ministry of Tourism of India and Maldives; Ministry of Culture, Tourism and Civil Aviation of Nepal; Sri Lanka Tourism Development Authority; B. Google COVID-19 Community Mobility Reports; C. IHS Markit, Central Bank of Sri Lanka and CEIC; D. World Bank.

last fiscal year ended at the end of June and in Nepal it ended July 15. In all of them the final months dragged down growth. In Bangladesh, real GDP growth fell to an estimated 2.0 percent in FY19/20. On the demand side, exports declined by 18.5 percent as external demand for readymade garments (RMG) plummeted. In Bhutan and Nepal, real GDP growth is estimated to have decelerated to 1.5 percent and 0.2 percent, respectively. Tourist arrivals dried-up and reduced foreign demand; shortages in critical inputs (including foreign labor) and temporary export restrictions disrupted industrial activity. In Pakistan, real GDP growth (at factor cost) is estimated to have declined from 1.9 percent in FY18/19 to -1.5 percent in FY19/20, reflecting the effects of COVID-19 containment measures that followed monetary and fiscal tightening prior to the outbreak.

Activity indicators can be built by combining information from different high-frequency variables. Since the onset of COVID-19, many different high-frequency indicators have been used to assess

Box 1.3 Tourism in South Asia has been shattered but there are opportunities

Figure 1.5: Tourism contributes significantly to GDP and employment in South Asia.

Note: The contribution to GDP includes direct as well as indirect contributions.
Source: World Travel and Tourism Council.

Over the last two decades, South Asia has emerged as an attractive tourist destination due to its price competitiveness and diverse natural and cultural resources. Tourism has been an important driver of economic growth and job creation. According to the World Travel and Tourism Council (WTTC), tourism in South Asia contributed USD 234 billion (6.6 percent of the region's GDP) in 2019. In Maldives, tourism contributed 56.6 percent of GDP (directly and indirectly) and 59.6 percent of employment (Figure 1.5). The tourism industry in Bhutan generated USD 88.63 million in 2019, contributing significantly to socio-economic development through revenue and foreign currency generation, as well as through job creation. In Sri Lanka, the tourism sector has grown rapidly in past decade, especially as a generator of jobs. From 2009 to 2019, the direct and indirect tourism employment has more than doubled. Eight out of ten tourism jobs were in hotels and restaurants. In India, tourism's share in GDP has been declining over the last ten years, but the contribution of tourism to employment increased somewhat, from 10 percent in FY09/10 to 13 percent in FY18/19.

The COVID-19 pandemic has triggered an unprecedented crisis in South Asia's tourism economy. The WTTC estimates losses to amount to over USD 50 billion in the travel and tourism sector and that about 47.7 million jobs—many held by women and vulnerable groups working in the informal sector—are at risk due to the COVID-19 pandemic. The strict local containment measures and the pandemic's impact on global travel have resulted in a significant decline in tourist arrivals in Bhutan, India, Nepal, Sri Lanka, and Maldives (Figure 1.4.A). The adverse impact on Maldives' tourist inflows remains significant even after borders reopened in mid-July as international commercial flights have been slow to resume.

Governments are providing support to the tourism sectors. In Bhutan, the Economic Contingency Plan (ECP) – aimed at helping priority sectors – provides support to tourism. Tax payments for tourism and related sectors (hotel, airlines and tour operators) are deferred until the end of the year, and waivers for rent payments and other charges for tourism related businesses leasing government properties (from April to December 2020) and free electricity and wi-fi charges for hotels (from July to September 2020) are provided. In Maldives, the Economic Recovery Plan includes offers financing to tourist resorts and guesthouses through loans from the Bank of Maldives, and in Nepal measures include a lending program for the tourism sector. In Sri Lanka, a six-month moratorium on bank loans for the tourism sectors was established.

Recovery measures need to restore confidence and stimulate demand. As a first step, different forms of "tourism bubbles" have been proposed in Bhutan, India and Maldives. Building these safe zones bilaterally or among a group of countries with similar recovery trajectories could enhance regional collaboration and strengthen countries' capabilities to safely manage the flow of tourists. In Maldives, the unique "one island, one resort" concept facilitates socially distanced vacations, but difficulties in resuming commercial flights and recent increases in domestic transmission pose challenges to attracting more visitors. Specific measures to mitigate health risks are crucial to keep travelers and workers safe and to reopen effectively. These may

include hygiene protocols for hotels, restaurants, taxis and other tourism sector related public infrastructure and transportation, as well as requirements for regular cleaning of transportation, health screening and temperature checks at borders.

South Asia offers multiple nature-based or ecotourism opportunities, including protected areas, culture tourism, nature resorts, adventure sports, and religious tourism. These could be promoted further through use of digital applications especially to promote intra-regional tourism. A regional effort could be undertaken to create a more enabling environment to support its growth. Interventions may include guidelines on designing and implementing safeguards and safety mechanisms, marketing, development of information and booking portals, and working with national and sub-national governments for appropriate policy changes. Due to new investment in the physical and technological infrastructure, greener value chains, and greater collaboration within destination management and regional partners, the COVID-19 pandemic could be a catalyst for the diversification of tourism products and services and a shift towards a more resilient and sustainable tourism industry in the longer term.

the evolution of economic output compared to pre-COVID levels. In India, for example, electricity consumption is strongly correlated with economic activity and available at daily frequency. It was almost 30 percent below normal levels at the end of March and remained below normal levels in August (see Box 1.3). While some of the variables have been studied for a long time, others like the mobility data discussed above are new and directly related to the pandemic. Information from different variables can be combined in a simple activity indicator with a statistical procedure that extracts their maximum common variance and combines them into a common score. For each country two such indicators are computed: one with a selection of variables that seem important for activity in that country, and one with a reduced number of variables to enhance comparability of the indicators across countries.

Across the region, activity indicators troughed in April. When travel restrictions took effect and countries enacted domestic containment measures, activity started to decline. In March, activity in South Asia was only 80 percent of its January level (Figure 1.7.A). It fell the most in Sri Lanka, which introduced strict stay-home-orders and suffered particularly from the stop of tourist arrivals. Daily mobility and electricity consumption data suggest a collapse after lockdown measures were enacted during the last week in March. In line, average monthly activity fell further in April, to only 40 percent of the pre-COVID level. It fell to levels between 30 and 40 percent of the pre-COVID level in all countries except Pakistan, where activity was nearly 60 percent as high as before COVID-19. Activity recovered across the board subsequently. But it remained 40 percent below pre-COVID levels in May, a quarter below in June, and 15 percent below in July. Sri Lanka experienced the largest drop of all countries in April but recovered faster than the others thereafter, as a widespread domestic contagion was avoided. In July, activity was lowest in Nepal, followed by India. The indicators based on fewer variables, to enhance comparability across countries, show a similar picture, although they suggest activity was somewhat higher in India and Bangladesh (Figure 1.7.B). The speed of the recovery has notably slowed in August across the region.

The relationship with GDP growth has not yet been established for all high-frequency variables entering the activity indicators. The activity indicators presented above have the crucial advantage that they include recently available variables that presumably have a strong relationship with economic activity during the pandemic. However, they have three drawbacks: first, this relationship cannot be properly estimated, as the time period for which some of the high-frequency indicators are available is too short; second, the high-frequency variables selected to enter the indicators can hence not be chosen based on their past relationship with economic activity; and, third, the indicators above just extract common variance and hence ignore the relationship of included variables with economic activity conditional on the other variables included (different variables may all contain the same information). Hence, they are complemented with formal Quarterly Economic Indicators based on a simple econometric model that provides an estimate of current economic activity. It is constructed in three steps: first, many monthly indicators covering a reasonably long time period for South Asian countries are collected; second, a statistical procedure is used to select a limited number of variables that together explain past GDP growth; and third,

Box 1.4: Assessing India's economic activity with daily electricity consumption

In India, electricity consumption is strongly related to overall economic activity. Electricity is an input to activities throughout the economy, from industrial production to commerce and household activity, and changes in its consumption thus reveal information about these activities. It has a strong monthly relationship with other high-frequency indicators after detrending and seasonally adjusting them. Electricity consumption is strongly related to trade (both to exports and imports), to industrial production and similar activities, to traffic (whether from freight, cargo, or passengers) and even to tourist arrivals (Table 1.3).

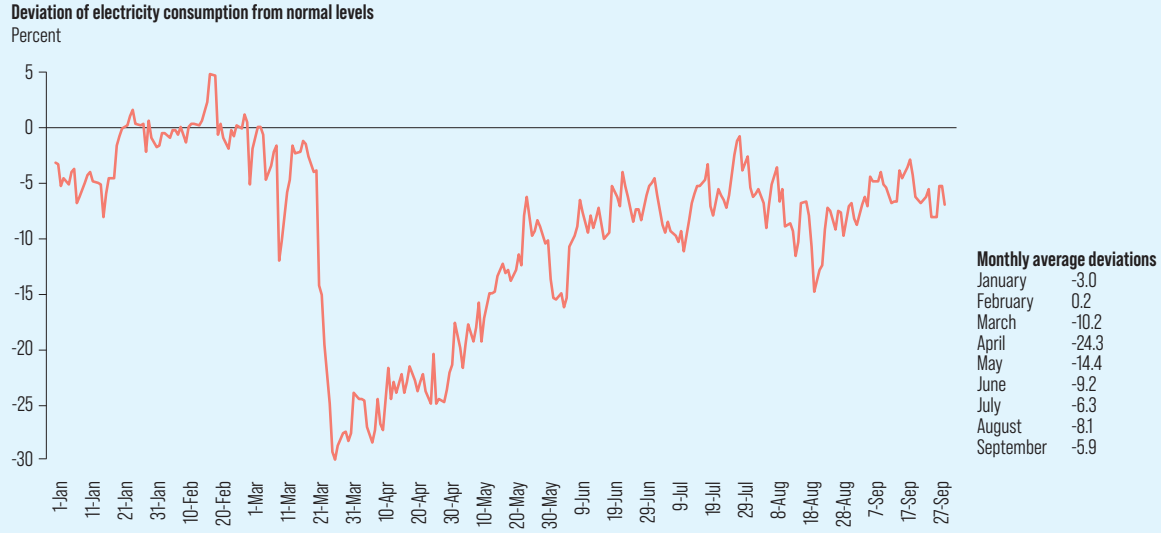
Table 1.3: Electricity consumption in India is strongly correlated with economic activity.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Trade		Generation/production				Traffic			Tourism
	Exports	Imports	IP	Auto	Steel	Textile	Freight	Cargo	Passenger	Foreign Arrivals
Coefficient	0.182***	0.227***	0.432***	0.241***	0.313***	0.216*	0.705***	1.165***	0.0413***	0.188***
N	85	85	85	84	85	66	85	85	85	84
R2	0.85	0.89	0.93	0.93	0.91	0.96	0.92	0.91	0.89	0.93

Note: All regressions are in logs and include a time trend and month fixed effects. * p<.10, ** p<.05 and *** p<.01
Source: World Bank (2020a).

Electricity consumption may vary for other reasons than seasonal patterns and changes in economic activity. For example, it tends to be lower at holidays and higher at very high temperatures. A recent World Bank Policy Research Paper estimates a daily electricity consumption model that takes these factors into account and can explain 90 percent of the daily variation in electricity consumption in India (Beyer, Franco-Bedoya, and Galdo 2020).

Figure 1.6: Electricity consumption dropped strongly in March and is still below normal levels.

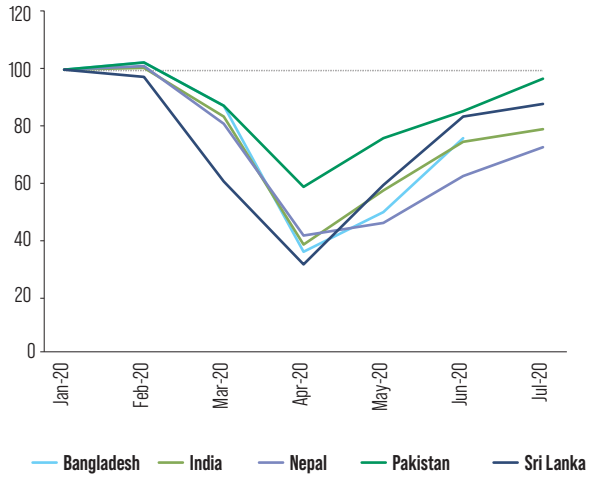


Notes: The line plots deviations of electricity consumption from the predictions of a model based on seasonal patterns, holidays, and temperature. The last observation is October 15.
Source: Updated estimates of Beyer, Franco-Bedoya, and Galdo (2020).

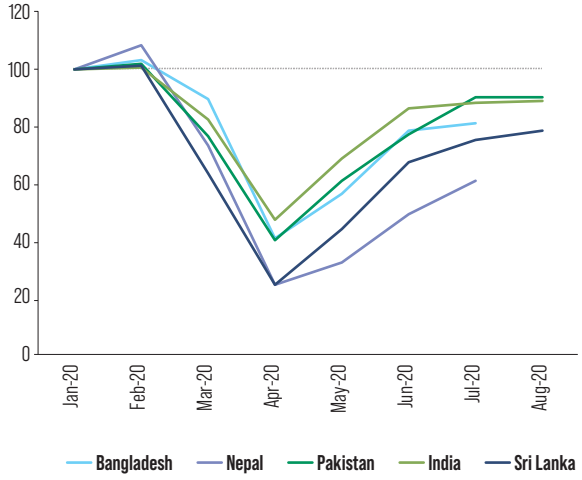
The deviation of actual electricity consumption from normal levels (i.e. the model predictions) is a measure for the economic drag due to the COVID-19 pandemic. The first meaningful deviation from normal levels was on March 22, when India observed a 14-hour long curfew that the Government of India implemented in all major cities and 75 districts with COVID-19 cases (Figure 1.6). Electricity consumption dropped further over the next few days and especially after the national lockdown was implemented on March 25. It was nearly 30 percent below normal levels at the end of March and remained a quarter below normal levels in April. When some restrictions were eased in May, electricity consumption recovered, but it remained below normal levels. On average, it was 14 percent below normal levels in May. Since then, the monthly averages fluctuate around 6 and 9 percent below normal, suggesting a lingering drag on the economy.

Figure 1.7: Activity indicators troughed in April, but recovery has been gradual; levels are still below pre-COVID times in all countries.

A. Activity indicators co-move strongly.



B. Restricted indicators give similar results.



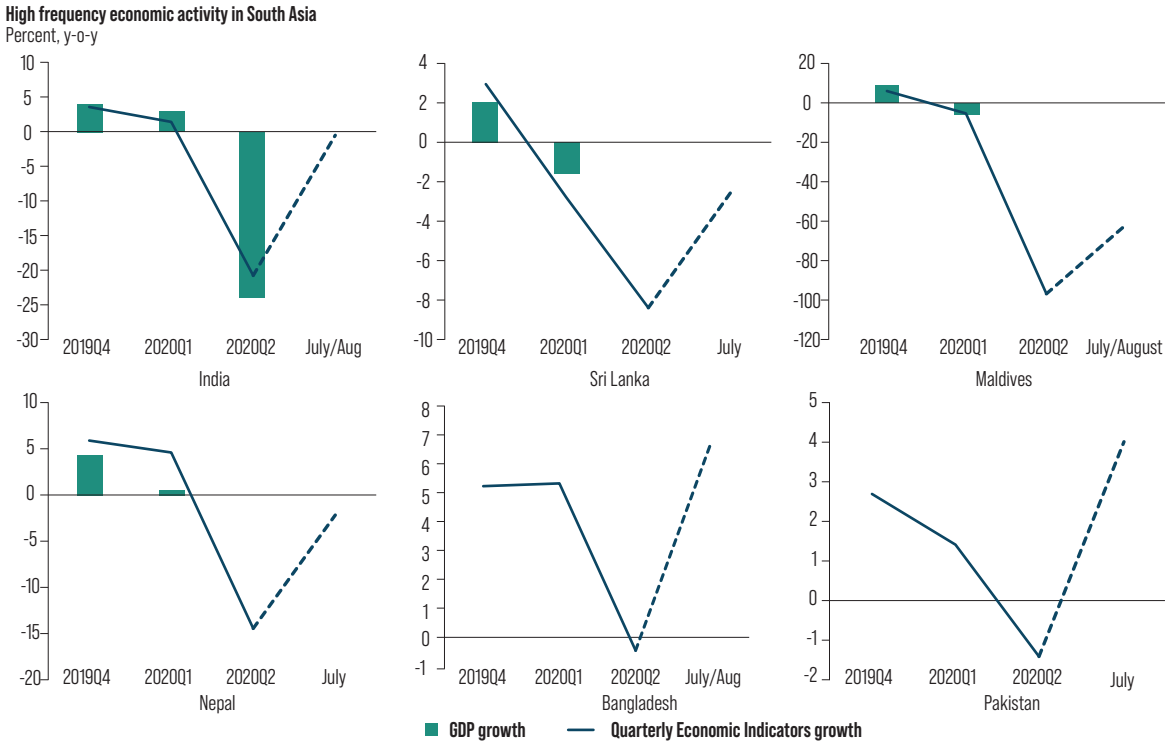
Variables included in the Activity Indicators					
Type of analysis	**Bangladesh**	**India**	**Nepal**	**Pakistan**	**Sri Lanka**
Reduced analysis variables	• Google Mobility: Grocery and pharmacy • Google Mobility: Retail and recreation • Google Mobility: Workplaces • Electricity generation • Government tax revenue, USD mln	• Google Mobility: Grocery and pharmacy • Google Mobility: Retail and recreation • Google Mobility: Workplaces • Electricity generation • E-way bill	• Google Mobility: Grocery and pharmacy • Google Mobility: Retail and recreation • Google Mobility: Workplaces • Visitor arrivals	• Google Mobility: Grocery and pharmacy • Google Mobility: Retail and recreation • Google Mobility: Workplaces • Passenger vehicle sales	• Google Mobility: Grocery and pharmacy • Google Mobility: Retail and recreation • Google Mobility: Workplaces • Tourism receipts
Additional variables in extended analysis	• Government tax revenue • Ready Made Garment exports • Imports vehicles	• Car registrations • Exports non oil • Industrial Production • IPI: Infrastructure & Construction Goods • Manufacturing PMI • Services PMI • Petroleum consumption • Port cargo traffic • Rail freight	• Domestic credit • Exports	• Crude steel production • Domestic credit • Exports • Industrial Production	• New car registrations • Manufacturing PMI • Services PMI • Industrial Production

Notes: To construct the activity indicators, meaningful high-frequency indicators were selected and indexed to January; the loadings from a principal component analysis were used as weights to compute a common score (the activity indicator).
Sources: Google COVID-19 Community Mobility Reports, CEIC, and staff calculations.

the model and up-to-date high-frequency are used to project the current trajectory of economic activity (see Appendix A). The Quarterly Economic Indicators allow an assessment of growth in those countries with long publication delays or no quarterly GDP data at all, and to nowcast the economic dynamics during the third quarter of this year.

The Quarterly Economic Indicators of all countries suggest a contraction of output in the second quarter of this year and a subsequent rebound (Figure 1.8). An interpretation of the decline and especially a comparison across countries needs to consider potential biases related to the selected variables (see Appendix A). That said, the indicators suggest a steep drop in output and year-on-year contraction in the second quarter of this year in all countries. The decline was the largest in Maldives, where tourism halted, and COVID-19 spread fast. The Quarterly Economic Indicators for India,

Figure 1.8: Quarterly Economic Indicators suggest that all countries have contracted in Q2 and are now bouncing back.



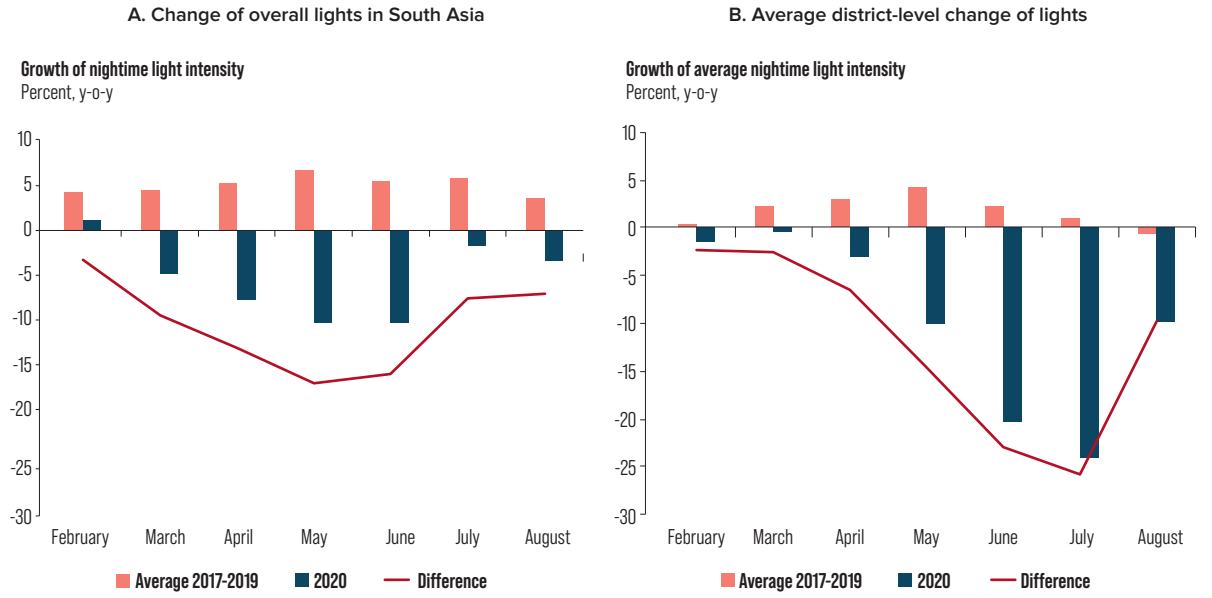
Notes: 2020Q1, 2020Q2 and 2020Q3 are out-of-sample predictions. For Bangladesh and Pakistan, the model is first estimated with annual GDP data and then the coefficients are used to predict quarterly GDP.
Sources: CEIC, Haver Analytics, World Bank, national sources, and staff calculations.

Sri Lanka, and Nepal fell by double-digits as well. In India, the contraction of the Quarterly Indicator was 20.6 percent, nearly identical to the fall in officially reported GDP, which was 23.9 percent lower than a year before. In Nepal and Sri Lanka, the Quarterly Economic Indicators fell by 14.5 percent and 10.3 percent, respectively. In Bangladesh and Pakistan, the declines seem much smaller. However, since for them the models are based on annual GDP, the fall of economic output may be underestimated. For July and August, the Quarterly Economic Indicators point to a rebound across all countries, but the implied output is still lower than last year in India, Maldives, Nepal, and Sri Lanka.

Spatially heterogeneous COVID-19 impacts

Nighttime lights observed from space can be used to assess the economic impacts of COVID-19. While luminosity during evening hours has been increasing consistently in the past, the COVID-19 pandemic has darkened South Asia since March. Nighttime lights are detected by satellites, and changes are strongly correlated with economic activity. In March, the sum of made-made lights emitted by South Asia was 5 percent lower than a year earlier (Figure 1.9.A). It was 7.5 percent lower in April, more than 10 percent lower in May and June, and rebounded after that. Changes in nighttime light growth suggest an even larger impact of the COVID-19 pandemic. In May, for example, growth in nighttime lights was 17 percentage points lower compared to the average growth in May over the last three years. Since urban areas emit much more lights than rural areas, changes in overall lights are mainly driven by developments in cities. Since nighttime light data are available at high spatial granularity, they can be used to examine the effects of COVID-19 at the district level. As an alternative measure to the growth of overall lights, one can average the growth of lights across districts in South Asia. In this case, each district has the same weight in the aggregate measure, which allows for a better tracking of developments in more rural districts. In line with the COVID-19 pandemic first hitting urban areas in most countries, this measure declined and troughed later (Figure 1.9.B). In July and August, when activity in many cities recovered, the average nighttime light intensity across districts in South Asia was still 22 percent and

Figure 1.9: South Asia has become darker since March; initially cities were impacted, later rural areas also.



Note: The raw data is cleaned to minimize temporary lights and background noise following Beyer, Franco-Bedoya, and Galdo (2020).
Sources: VIIRS-DNB Cloud Free Monthly Composites (version 1) made available by the Earth Observation Group at the National Geophysical Data Center of the National Oceanic and Atmospheric Administration (NOAA), World Bank, and staff calculations.

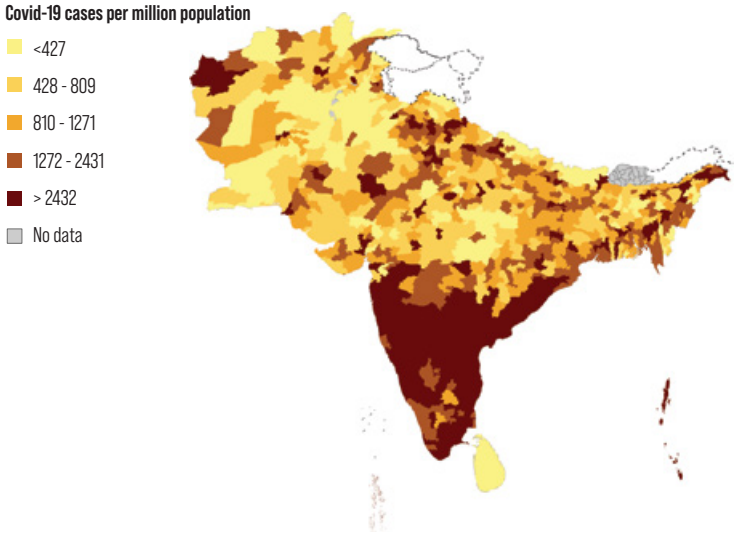
10 percent below its level a year earlier, respectively. This shows that the severe impact of the COVID-19 pandemic was felt across districts in the region and not just in urban centers. In India, nighttime lights declined less in districts with higher previous out-migration, presumably because it predicts the extent of return migration. Early in the pandemic, millions of migrant workers moved back from cities to their home villages.

While the impact of the COVID-19 pandemic is being felt across districts in South Asia, some districts are hit much harder than others. The COVID-19 infection rate varies both across and within countries. While mobility declined in nearly all districts, the extent depends both on national containment measures and local COVID-19 infections. Average nighttime light intensity between March and August declined in more than three quarters of South Asia's districts.

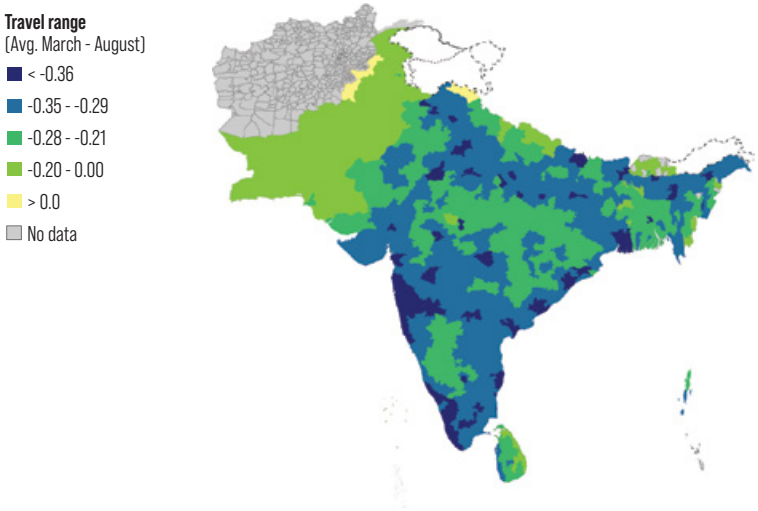
- *COVID-19 infections:* Despite limited testing especially in rural areas, most districts in South Asia have confirmed COVID-19 infections (Figure 1.10.A). While the number of infections per million people varies strongly at the national level, nearly all countries have districts with less than 50 cases per 100,000 people and districts with more than 250 cases per 100,000. In Bangladesh and India, less than 10 percent of the districts have less than 50 cases per 100,000 people. In Nepal and Pakistan this is true for around a third of the districts, and in Sri Lanka, which has very low total numbers, all districts have less than that.
- *Changes in mobility:* From "Facebook Data for Good", which utilizes information about Facebook usage in specific areas, one can assess changes in mobility during the COVID-19 pandemic at high spatial granularity. In South Asia, apart from a very few districts, average mobility between March and August declined strongly (Figure 1.10.B). In most districts in Bhutan and Pakistan, mobility declined by less than 20 percent (92 percent and 85 percent of the districts, respectively). In Nepal and Bangladesh, which enacted much stricter lockdowns, mobility declined more than 20 percent in nine out of ten districts. In India, mobility declined strongly nearly everywhere: for around a third of the total districts the average decline was between 20 and 30 percent, for half of them it declined between 30 and 35 percent, and for 15 percent it declined even more. This heterogeneity can be explained both with country fixed effects capturing national lockdowns and differences in overall infections, as well as by local COVID-19 infections capturing higher infection risks and local restrictions.
- *Changes in nighttime light intensity:* In more than three quarters of districts, the average nighttime light intensity between March and August was lower in absolute terms compared to last year (Figure 1.10.C). In a fifth of the districts, nighttime lights declined by more than 15 percent during this period. Districts with such a large decline are found in all countries and their share is highest in Bhutan, Bangladesh, and India.

Figure 1.10 The pandemic is not concentrated locally but impacts most areas in South Asia

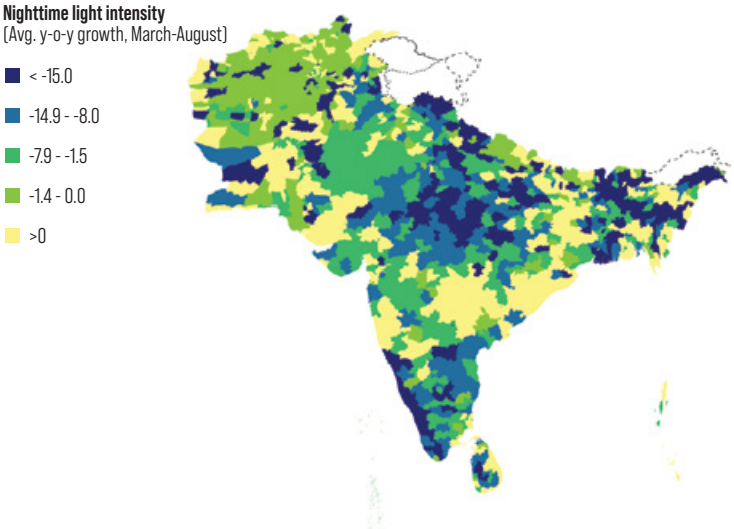
A. COVID-19 hit most areas



B. Mobility declined strongly



C. Most districts became darker



Notes: A. COVID-19 infections are the number of recorded infectious cases at the end of August standardized by population; B. mobility is measured as the average number of Bing tiles (0.6 km x 0.6 km) a Facebook user was present in during a 24-hour period compared to pre-COVID levels; C. nighttime light intensity is defined as the sum of lights standardized by area. The raw data is cleaned to minimize temporary lights and background noise following Beyer, Franco-Bedoya, and Galdo (2020).
Sources: Health Ministries and Disease Control Centers, Facebook Data for Good (//dataforgood.fb.com) movement range maps, VIIRS-DNB Cloud Free Monthly Composites (version 1) made available by the Earth Observation Group at the National Geophysical Data Center of the National Oceanic and Atmospheric Administration (NOAA), and staff calculations.

Table 1.4: Indian districts with higher COVID-19 infections experienced larger declines in mobility and nighttime light intensity during the national lockdown.

	Nighttime light intensity		Mobility: movement range	
	(1)	(2)	(3)	(4)
Log COVID-19 cases per population	-2.409*** (0.397)	-2.592*** (0.458)	-2.933*** (0.194)	-1.803*** (0.203)
Socio-economic controls	NO	YES	NO	YES
Observations	624	623	619	618
R-squared	0.056	0.070	0.271	0.408

Notes: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; estimation is for April 2020; socio-economic controls include the manufacturing and service shares as well as previous in- and out-migration.
Sources: All those mentioned for Figure 1.10, Yi *et al.* (2015), World Bank, and staff calculations.

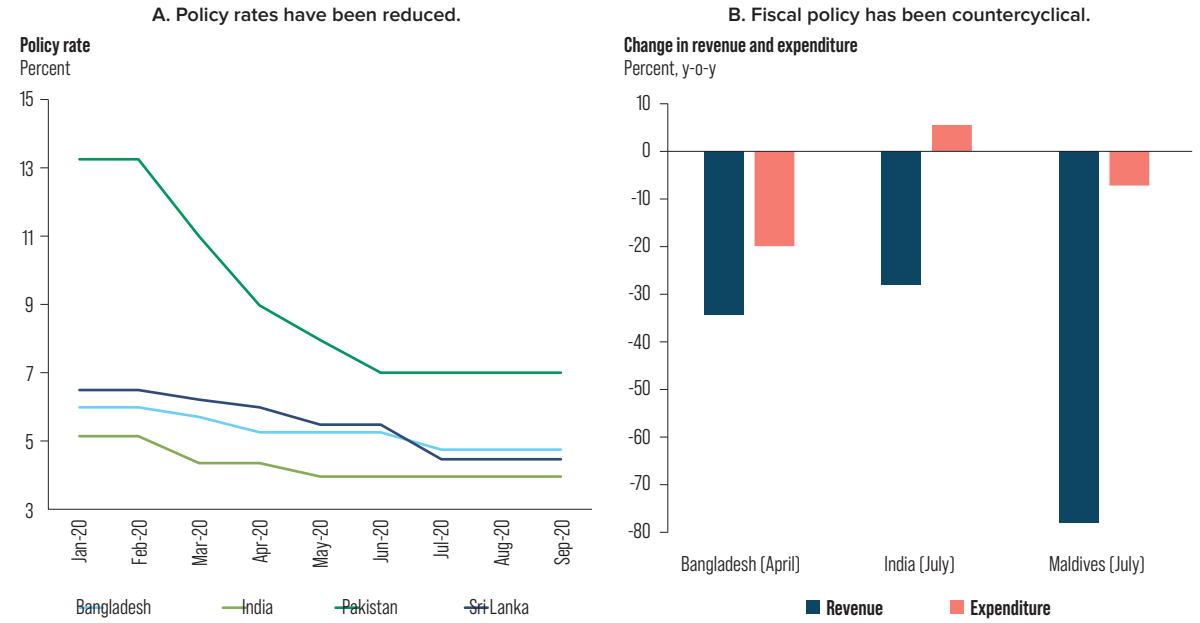
Some of the observed heterogeneity in nighttime light changes across districts can be explained with voluntary reductions in mobility due to higher local prevalence of COVID-19. With more registered cases of COVID-19, the perceived local infection risk rises and in response risk-aversion may prompt people to either follow the containment measures more strictly or voluntarily change their behavior beyond the measures (e.g. reduce their mobility completely). One may hence expect the economic impact in districts with a higher prevalence of COVID-19 to be larger, even if the restrictions are the same. To test this hypothesis, one can study Indian districts during the national lockdown, when restrictions were uniform across the country. As expected, districts with more COVID-19 cases *per capita* experienced larger declines in mobility and nighttime light intensity (Table 1.4). While less than 10 COVID-19 cases per million residents were associated with a 3.7 percent points larger decline in light intensity compared to districts without any cases, more than 50 COVID-19 cases per million residents were associated with a 12.6 percentage points larger decline. This has strong implications for the rebound of the economy. Without effectively reducing the risk of a COVID-19 infection, voluntary reductions of mobility make it unlikely that the economy will return to full potential even when restrictions are relaxed. This may explain why the recovery has recently slowed in some parts of South Asia.

Strong policy measures preserved macro-financial stability ...

In response to the economic turmoil, South Asian countries proactively stabilized economic activity through monetary easing, fiscal stimulus, and supportive financial regulation. Across the region, central banks lowered their policy rate to support credit growth (Figure 1.11.A). In Pakistan, the policy rate was reduced from 13.25 percent in February to 7.0 percent at the time of writing. In India, the policy repo rate has been reduced from 5.15 percent to 4.0 percent. In addition, fiscal policy has been countercyclical. Despite sharply declining tax revenue, spending has either increased or only fallen minimally (Figure 1.11.B). All countries authorized significant fiscal support measures quickly. In Afghanistan, authorities are spending an additional 2.9 percent of GDP toward pandemic-related measures, including for a relief package benefitting 90 percent of Afghan households. India's initial fiscal support measures included higher direct spending (about 1.7 percent of GDP), foregone or deferred revenue (about 0.3 percent of GDP), and measures unrelated to expenditures and revenue designed to support businesses and shore-up credit provision (about 4.9 percent of GDP). Additional support was provided through changes to financial regulation. All countries introduced mandatory credit repayment moratoria and relaxed provisioning rules for non-performing exposures. In addition, all countries engaged in some form of liquidity support. Some also put in place restrictions on the use of profits and resources (Bangladesh, India, Sri Lanka) and eased limits on large exposures (India, Pakistan). In India, the risk weights for credit with public guarantees have been lowered. To support borrowers, countries provided loans (often through state-owned banks) to affected companies and sectors (Bangladesh, Bhutan, India, Maldives, Pakistan, Sri Lanka), subsidies to borrowers to facilitate repayments (India), and state guarantees on private-sector loans (Bangladesh, India, Pakistan, Sri Lanka).

Confronted with a shock of unprecedented scale, South Asian countries have preserved macro-financial stability thus far. After large outflows in March, capital flows were positive over the last

Figure 1.11: Monetary and fiscal stimulus have supported economic activity.



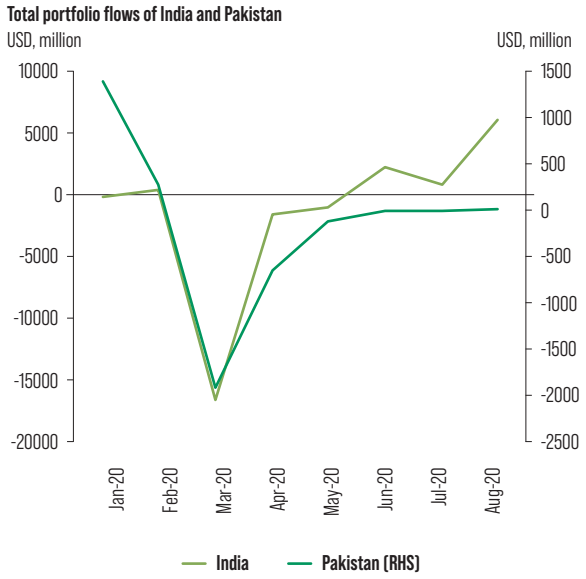
Sources: A. Haver Analytics and national sources; B. CEIC and staff calculations.

months. With imports declining faster than exports, given weak domestic demand and low oil and commodity prices, South Asia's terms of trade improved, and current account deficits narrowed or turned to surpluses. As a result, international reserves rose, which contributed to external stability. Government bond yields remained constant or declined following monetary easing by central banks. While stock prices plummeted in March and early April, they regained ground subsequently.

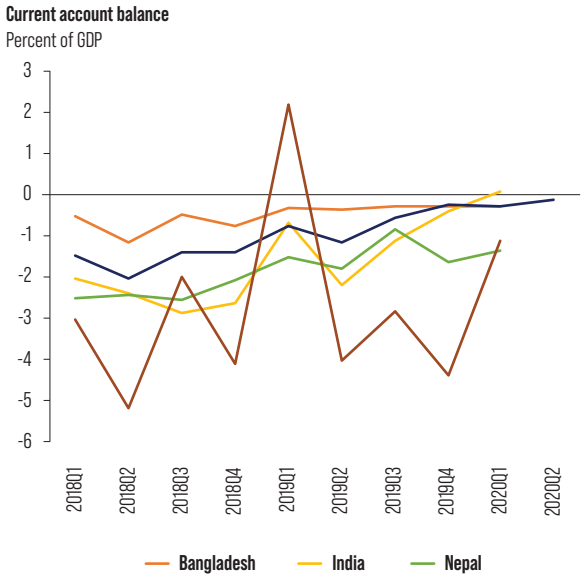
- *Capital flows:* Capital flows to India and Pakistan were positive over the last months (Figure 1.12.A). As in many other EMDEs, India and Pakistan saw capital outflows in March, amid high uncertainty about the COVID-19 pandemic and its economic implications. However, following massive quantitative easing in advanced economies, and especially in the United States, capital inflows quickly resumed. In India, strong net foreign investment inflows increased foreign reserves to reach a record high of USD 545 billion in the week that ended September 18.
- *Current accounts:* Current account deficits narrowed or turned into surpluses across the region (Figure 1.12.B). In India, a large decline in imports (both volume and prices) more than offset a drop in exports, so that the current account turned to a surplus in the first half of FY20/21. Similarly, the current account deficit shrunk from 4.8 percent of GDP in FY18/19 to 1.1 percent of GDP in FY19/20 in Pakistan, driven mainly by import values falling 19.3 percent. In Bangladesh, the current account deficit narrowed from 1.7 percent of GDP in FY18/19 to 1.5 percent in FY19/20, as a sharp decline in exports was offset by a – likely temporary – surge in remittance inflows. In Sri Lanka the current account deficit is estimated to have narrowed in the first half of 2020 despite reduced receipts from remittances and tourism, as stringent import restrictions curbed imports. Trade disruptions in Nepal led to a 19.7 percent drop in imports, significantly narrowing the current account deficit in FY19/20. The sharp drop in imports outweighed both a contraction in exports and a decline in remittance inflows. In Bhutan, imports fell more than exports as well, which reduced the current account deficit to an estimated 14 percent of GDP in FY19/20 (down from 22.5 in FY18/19).
- *Government bond yields:* Due to strongly declining interest rates in Pakistan, the yield of Pakistan's 3-year investment bond nearly halved, from 12.0 percent in February to 7.2 percent in July (Figure 1.12.C). Yields also declined somewhat in Bangladesh and have been stable in the other countries.
- *Stock prices:* Stock prices started falling in early March, in line with stock markets in advanced economies and before domestic containment measures were enacted (Figure 1.12.D). Most stock indices troughed in mid-April. They fell most strongly in India (losing 30 percent of their value compared to the beginning of March), and the least in Bangladesh, where they "only" lost 15 percent. They recovered subsequently: in Sri Lanka they are now 7.8 percent below their levels at the beginning of March

Figure 1.12: Portfolio flows have recovered, and current accounts improved; government bond yields are stable or declining and stock prices rebounded after large losses.

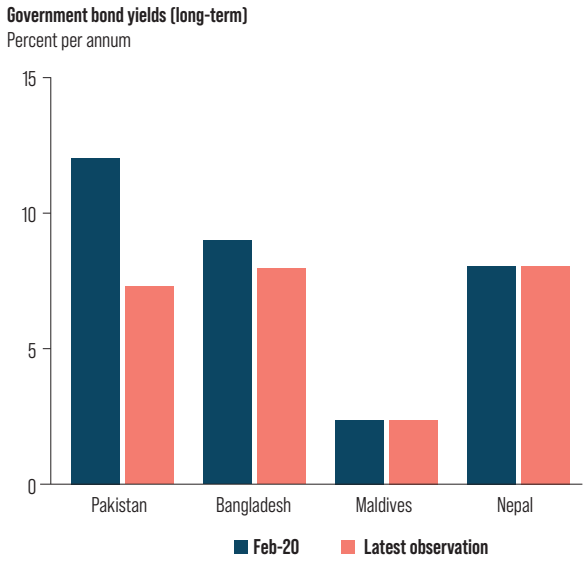
A. Capital flows are positive again.



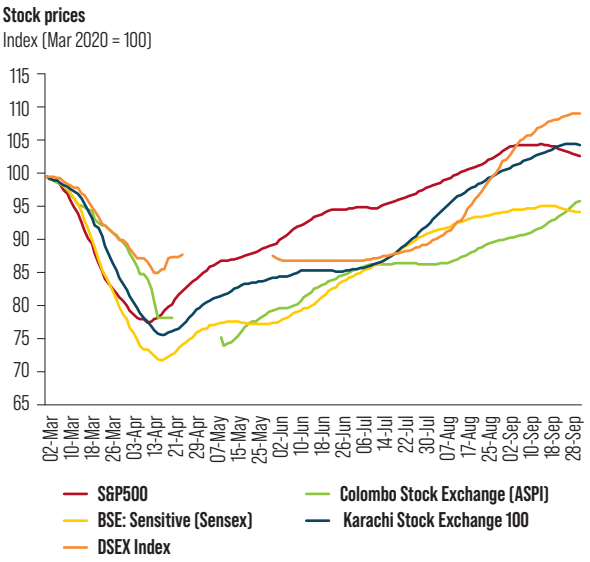
B. Current accounts improved.



C. Government bond yields are stable or declining.



D. After falling strongly, stock prices regained ground.



Notes: B. Quarterly GDP for Bangladesh, Pakistan and Nepal were derived from annual GDP and assumed to be constant for all four quarters; D. Gaps in stock prices are due to market closures.
Sources: A. IIF; B. Trading Economics, Haver Analytics and staff calculations; C. CEIC; D. Haver Analytics.

and in India they are 4.6 percent lower. In Pakistan and Bangladesh, they are now even above their early Match levels, by 3.4 percent and 7.6 percent, respectively.

... but the situation is fragile, and policy tools have been exhausted

The COVID-19 pandemic has exacerbated financial sector vulnerabilities. In some countries, recent economic difficulties and relaxed prudential regulation threaten financial stability. Due to loan moratoria introduced across the region, the share of reported non-performing loans may remain stable for now; but these "bad loans" will eventually erode capital buffers and are already impeding lending. The resolution of non-performing assets to foster credit growth, while limiting moral hazard and containing fiscal risks, will be difficult and require substantial policy dialogue. Financial sector challenges are particularly severe in Bangladesh due to deviations from

international regulatory and supervisory standards, the absence of a bank resolution framework, the introduction of interest rate caps, and weak governance in state-owned banks. Public banks can be used to support private credit in crises, but across the region public banks entered the crisis with weak balance sheets and severe governance issues (World Bank 2020b).

Rising inflation constrains future monetary easing. In India, after reaching 4.8 percent in FY19/20, headline inflation averaged 6.7 percent during April-July 2020 due to strong supply-chain disruptions. After cutting the repo rate by a cumulative 115 bps between March and May and maintaining significant excess liquidity in the market, the Reserve Bank of India (RBI) paused further monetary easing in August. In Bhutan, headline inflation accelerated to 7.6 percent in July 2020, driven by food prices and reflective of similar trends in India, Bhutan's largest trading partner. Despite weak activity, inflation rose also in Pakistan (mostly due to rising food prices), so that the State Bank of Pakistan halted its determined easing cycle and kept the policy rate unchanged in September 2020. Food prices increased due to supply chain disruptions also in Bangladesh, though non-food prices declined due to lower demand. In Nepal, food prices increased first due to an export ban on onions by India and later because of localized food shortages resulting from transport disruptions. In Afghanistan, panic buying and import disruptions in March and April also triggered a significant spike in food prices. As the government adopted administrative measures to prevent price gouging and distributed emergency wheat supplies, food inflation moderated to 12.8 percent year-on-year as of end-June. The rising food prices had large distributional impacts and hit South Asia's poor the hardest (see Chapter 3).

Fiscal deficits are rising across the region amid collapsing revenue. In Afghanistan, with the onset of the COVID-19 crisis, revenue performance deteriorated significantly and revenue estimates for 2020 were revised downward. Total domestic revenue collection at end-June was 20 percent lower than the initial budget target. In Bangladesh, the fiscal deficit in FY19/20 was estimated at 8.2 percent of GDP, exceeding the budget target amid depressed revenue, along with higher expenditures on social protection programs and healthcare. In Bhutan and Nepal, the fiscal deficit also increased. Additional COVID-19 related expenditure contributed to the higher estimated fiscal deficit in Bhutan. In Nepal, lower revenues were partly offset by reduced budget execution rates following disruptions associated with the pandemic. In Pakistan, the fiscal deficit narrowed somewhat, but less than planned at the beginning of the year due to a fiscal stimulus to fight the pandemic. The situation is most problematic in Sri Lanka and Maldives. In Sri Lanka, the fiscal accounts deteriorated in the first four months of 2020. Tax revenues fell short due to the fiscal stimulus package implemented in November 2019, which included a reduction of the VAT rate and an increase of the registration threshold, and severe disruptions in economic activity. As a result, despite a moderation in public investment, the overall budget deficit increased. Approximately 40 percent of the deficit was financed by central bank credit. In Maldives, fiscal imbalances have widened significantly as well, as revenues and grants collected between January and July halved compared to the corresponding period in 2019 while spending remained mostly constant (see Box 1.5).

Since the global financial crisis, there has been an increase in the share of debt from private financing through bond markets. Since 2010, debt financing through bond markets and commercial banks has increased, while the share of official financing has declined (Figure 1.14.A). For middle-income countries like India, relying more on international bond markets is a sign of healthy finances. For lower-income countries that access concessional financing through the International Development Association, however, official creditors have discouraged the use of commercial debt and even set exposure limits. One concern is that debt reduction initiatives could *de facto* lead to more lending on commercial terms, effectively creating a transfer from official creditors to private creditors.

Debt vulnerability is increasing in many countries and especially in Sri Lanka and Maldives. In Sri Lanka, the central government debt-to-GDP ratio rose to over 90 percent as of end-April 2020 (from 86.8 percent at the end of last year), with more than half of the debt denominated in foreign currency (Figure 1.14.B). Citing limited fiscal buffers and external vulnerabilities, Fitch and S&P downgraded the sovereign rating to B-. In Maldives, the total public and publicly guaranteed debt rose significantly as well and is forecast to rise quickly (see Chapter 2). In both countries low international reserves are not providing an adequate buffer. In Sri Lanka, despite a swap facility of USD 400 million with the RBI, a

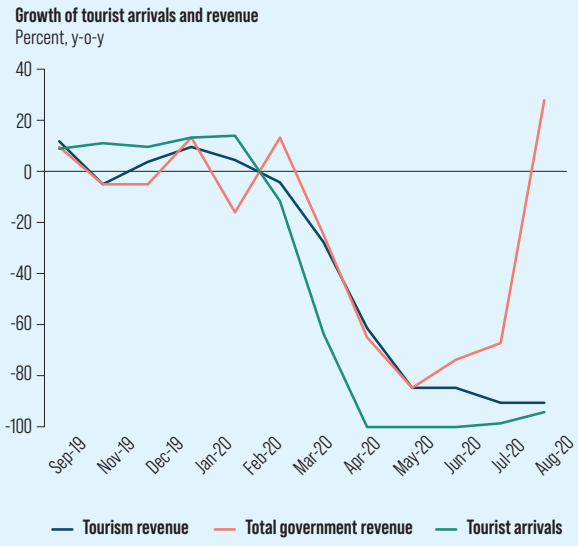
Box 1.5 Worrying fiscal implications of shuttered tourism in Maldives

Tourism is the main driver of Maldives' government revenues. With the number of tourists increasing almost four times between 2000 and 2019, tourism-related revenues rose steadily from USD 65 million to USD 690 million and contributed 48.5 percent of total government revenues (excluding grants) last year. The main bulk of tourist-related revenues comes from the Tourism Goods and Services Tax (GST), as well as duties from imported food and fuel for tourist consumption. The introduction of new revenue sources such as green taxes (in 2015) and airport development fees (in 2017) have also contributed.

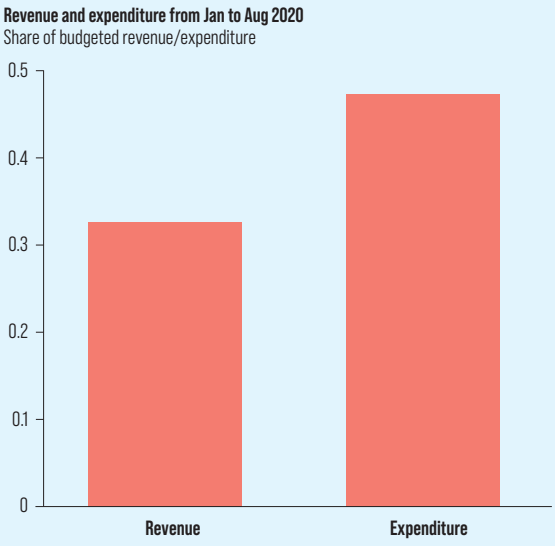
The standstill of tourism has triggered a devastating impact on revenues. The COVID-19 pandemic led the Maldives to close its borders on March 27 and for the entire second quarter of 2020. As a result, tourism-related revenues fell by 77.3 percent (y-o-y) and total revenues excluding grants plummeted by 75.6 percent in the second quarter (Figure 1.13.A), making it impossible to meet the government's revenue target of USD 1,900 million. However, even before COVID-19, the growth of tourism revenue had slowed. In 2019, even though visitor arrivals grew by 14.7 percent, revenue from the tourism GST remained nearly constant, which slowed overall revenue growth from 7.5 percent in 2018 to 2.8 percent in 2019. Given the record number of tourists, the stagnant revenue from the tourism GST could indicate some under-collection of taxes due to the use of online booking companies located offshore (IMF 2019).

Figure 1.13: The collapse of tourism has led to a large revenue shortfall.

A. Revenue plummeted due to the collapse in tourism.



B. The revenue shortfall exceeds expenditure cuts.

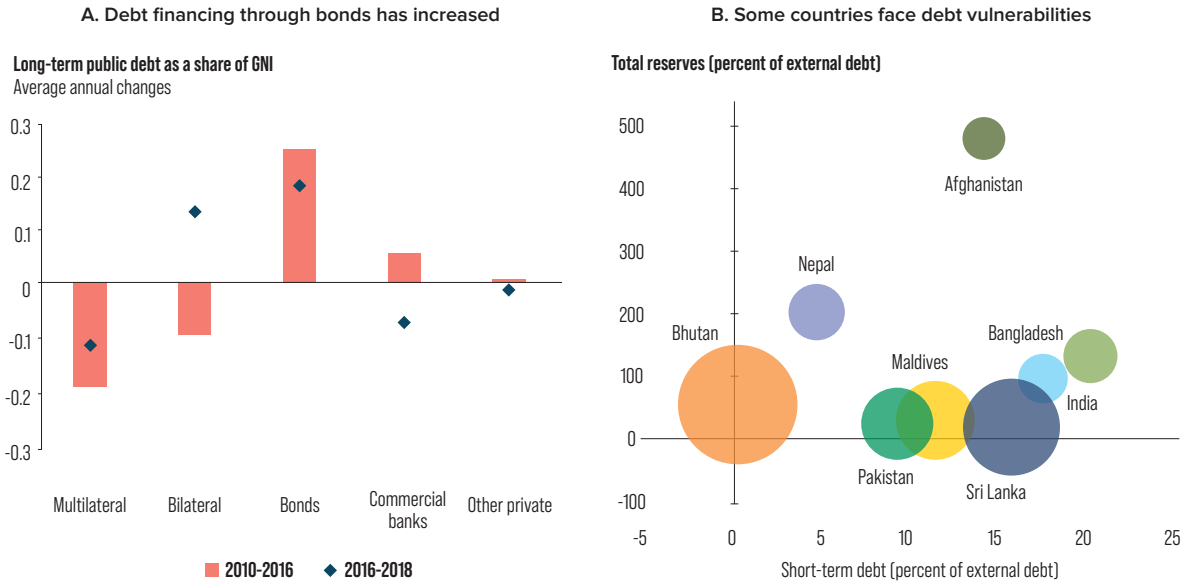


Notes: A. Tourism revenue is the sum of tourism goods and services tax, green tax, airport service charge, airport development fee, rents from resorts, and an estimate of tourism-linked import duties. B. The budgeted revenue and expenditure is for the entire year.
Sources: Maldives' Ministry of Finance, Haver Analytics, and staff calculations.

Measures to mitigate the impact on fiscal and debt sustainability may be insufficient. The government has taken some steps to reprioritize public expenditure. In mid-March, the government announced cuts to recurrent and capital expenditures amounting to USD 65 million and provided a further USD 90 million in support to households and firms suffering from the effects of the pandemic. However, expenditures have not adjusted in line with the large shortfall in revenues. From January to August of this year, Maldives spent almost half of its planned expenditure for the year, which was 2 percent more than the same period in 2019. At the same time, it collected only a third of budgeted revenue, only 60 percent of the amount in the corresponding period of 2019. As a result, the overall fiscal deficit is estimated to widen significantly from 6.4 percent of GDP in 2019 to 20.5 percent of GDP in 2020. Moreover, Maldives remains at high risk of debt distress. Exacerbated by the current shock, total public and publicly guaranteed debt rose to USD 4.8 billion as of end-June 2020, a significant increase from USD 4.4 billion as of end-2019.

Given the prolonged and uncertain nature of the COVID-19 shock, further adjustments to government expenditures may be necessary to mitigate fiscal and debt sustainability risks. Although borders have reopened to tourists since July 15, tourism has far from returned to normalcy. Only 13,787 tourists visited between July 15 and September 15, a 95 percent decline compared to last year. Capital spending increased by 16.7 percent y-o-y in the first half of the year, mainly due to land reclamation and harbor reconstruction projects. Larger reductions in spending, for example by delaying large public infrastructure investments that are not urgently needed, could help Maldives manage its mounting debt and fiscal challenges.

Figure 1.14: The share of debt financed through bond markets has increased and debt vulnerability is high in some countries.



Notes: B. The bubble size shows total external debt-to-GDP ratio in 2018 for Bhutan, Maldives, and 2019 for the rest.
Sources: International Debt Statistics, World Bank, and staff calculation.

loan of USD 500 million from the China Development Bank, and a repo facility with the New York Federal Reserve Bank for USD 1.0 billion, official reserves remain low relative to short-term external liabilities. In Maldives, as foreign exchange earnings from tourism plummeted, usable reserves fell from USD 311 million at end-January to USD 122 million as of end-August, equivalent to only 0.5 months of 2019 goods imports. To help maintain exchange rate stability, the Maldives Monetary Authority already activated a USD 150 million foreign currency swap with the RBI.

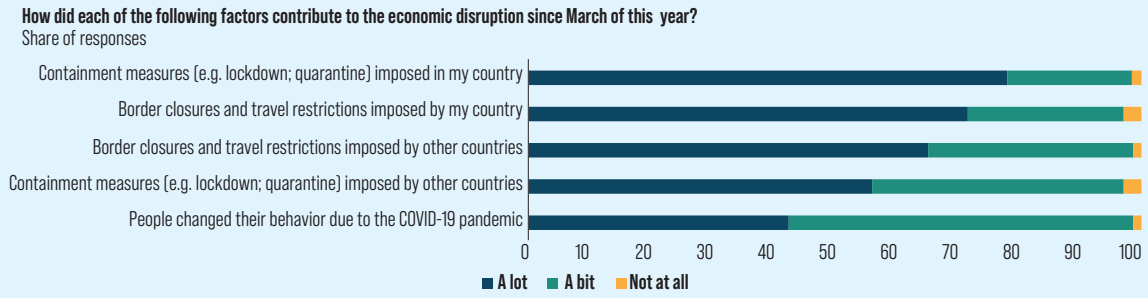
Conclusion

Amid a sudden and steep economic impact from the COVID-19 pandemic, governments enacted strong policy measures to preserve macro-financial stability, but the situation is fragile. The COVID-19 pandemic is not yet under control in South Asia, despite early containment measures. The crisis brought South Asia to a near standstill. Travel restrictions prevented travelers from reaching South Asia and lockdown measures triggered massive supply disruptions. Information from high-frequency variables, combined in activity indicators, show an unprecedented contraction in March and April. Activity recovered subsequently across the region, but it remained below pre-COVID levels in August. High-frequency approximations of GDP suggest year-over-year contractions during the second quarter of this year in all countries and a subsequent gradual recovery. The collapse in activity was widespread within countries. Between March and August, nighttime light intensity declined in more than three quarters of South Asia's districts and in August, the average nighttime light intensity was still 10 percent below its level a year earlier. Amid the economic turmoil, South Asian governments proactively stabilized economic activity through monetary easing, fiscal stimulus, and supportive financial regulation. For now, macro-financial stability has been preserved. However, the situation is fragile amid weak buffers and exhausted policy tools in some countries. Regulatory adjustments to the COVID-19 pandemic have exacerbated financial sector vulnerabilities, and fiscal stimulus despite large revenue shortfalls have resulted in rising fiscal deficits.

Box 1.6 Views from the South Asia Economic Policy Network

The South Asia Economic Policy Network represents an attempt to engage more strongly with thinkers and doers across South Asia, to nurture the exchange of ideas and to foster learning from colleagues and counterparts in the region. Consisting of nearly 500 members, the Network includes researchers and experts from seven South Asian countries, selected based on peer recognition, recent conference presentations, and research outputs. Many of them are academics at renowned universities, others are researchers in central banks and think tanks, and some are affiliated with policy-making units. As in the last four editions of this report, a short opinion survey of Network members was conducted. The objective was to take the pulse of informed and dedicated experts about the economic developments in their countries. We also used this opportunity to understand their assessment of the COVID-19 pandemic, and how it impacts the informal economy. We received 70 completed questionnaires from 6 countries. Almost all respondents identified themselves as academics, around 85 percent as macroeconomists, two-thirds as policy advisors, and around 15 percent as policy makers.

Figure 1.15: Network members maintain that containment measures and border closures had the largest economic impact.

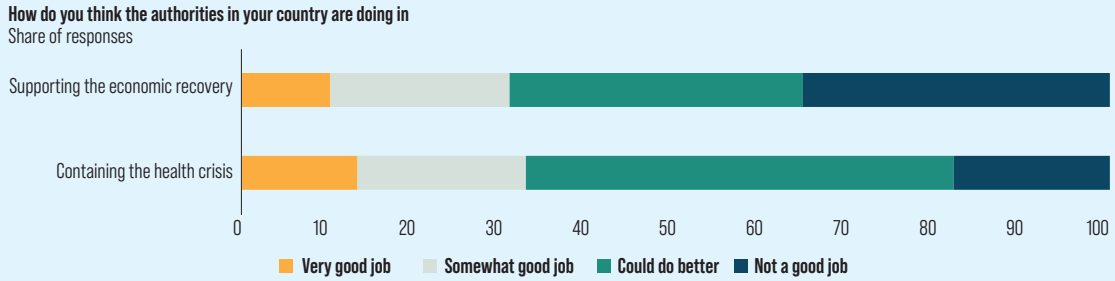


Source: South Asia Economic Policy Network, survey conducted for this report.

The economic disruption documented in this chapter is mostly attributed to lockdowns and border closures and many disapprove the authorities' management of the crisis. This chapter discussed the stringent containment measures that South Asian countries imposed to control the domestic spread of COVID-19 (Figure 1.2). Over 75 percent of the respondents maintain that lockdowns and quarantine measures have strongly contributed to the economic disruption and the rest acknowledges some impact (Figure 1.15). Over

half of the respondents assert strong impacts also of the travel restrictions, both for those imposed by their own country and those imposed by other countries. Somewhat contrary to the evidence presented in this chapter (Box 1.1 and Table 1.4), only 40 percent appreciate strong effects from behavioral changes, though nearly everyone agrees that they matter somewhat. Around two-thirds of the respondents believe that their respective governments are not doing the best at supporting economic recovery or containing the health crisis (Figure 1.16). The experts rate the management of the health crisis somewhat better than the management of the economic turmoil.

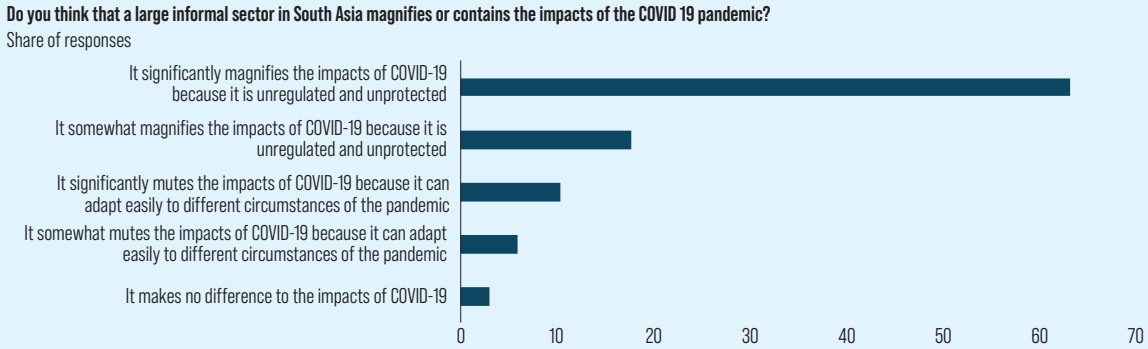
Figure 1.16: Around two-thirds of the respondents feel that the governments aren't doing their best to contain the economic and health crisis.



Source: South Asia Economic Policy Network, survey conducted for this report.

Respondents are concerned about the role of the informal sector but seem upbeat about the future opportunities of the digital economy. Very much in line with Chapter 3 of this report, most respondents contend that the large informal sectors in South Asia magnify the impact of COVID-19. Eight out of ten expect informality to either significantly or somewhat significantly amplify the economic costs of the pandemic as the informal sector is largely unregulated and unprotected (Figure 1.17). In addition, there is a strong sense that the current crisis will increase the size of the informal economy. In line, Chapter 3 documents that jobs created now are even more likely than before to be informal. Experts are upbeat about the opportunities of the digital economy but see challenges in the short run. Eight out of ten allege that digitalization already helps weathering the current crisis, but also that too few people have the skills to operate in the digital economy, which hence is increasing inequality. More than nine out of ten call for more investment to expand the digital infrastructure and emphasize the need to support education transferring the skills needed in the digital economy.

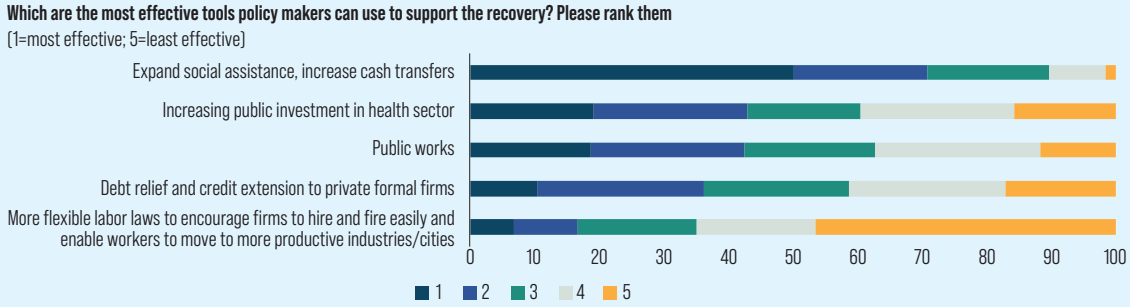
Figure 1.17: There is a strong consensus that a large informal sector in South Asia magnifies the impacts of COVID-19.



Source: South Asia Economic Policy Network, survey conducted for this report.

Experts rank an expansion of social assistance and higher cash-transfers as by far the most effective policy tools (Figure 1.18). It is followed by higher investment in health and public work programs, which more than four out of ten rank as either the highest or second-highest priority. Not too far behind, experts see merit in debt relief and credit extension to private formal firms. Very few of the experts rank more flexible labor laws a priority. In line with the top priority of South Asian experts, Chapter 3 highlights the need for providing better social protection to the 'missing middle'.

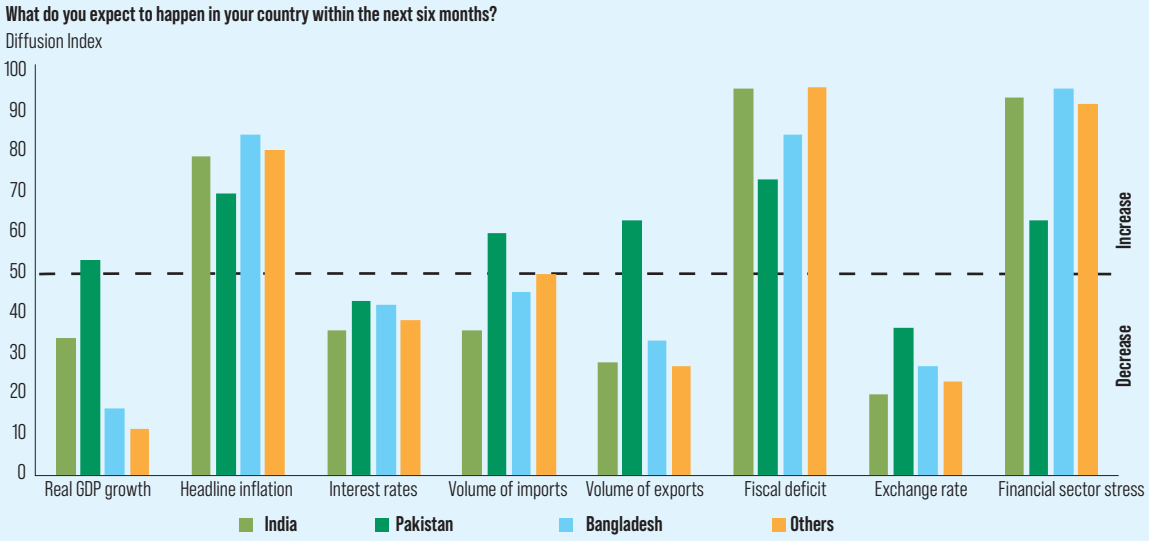
Figure 1.18: Expansion of social assistance is ranked the most effective policy tool for recovery, while more flexible labor laws are ranked lowest among South Asians.



Source: South Asia Economic Policy Network, survey conducted for this report.

Over the next six months, experts expect rising fiscal deficits and financial sector stress. The expectations of Network members regarding economic developments over the next six months are summarized in a single number, using so-called diffusion indices. For any indicator, a value above 50 indicates that an increase is expected, whereas a value below 50 corresponds to an expected decrease. The farther away the number is from 50, the greater the consensus among Network members that an important change is under way. Across all countries respondents strongly anticipate a continuation of the monetary policy easing with even lower interest rates and even higher inflation (Figure 1.19). Apart from Pakistan, they also expect a further deterioration of trade. Network members strongly agree that fiscal deficits will increase over the next six months and that financial sector stress will increase, which is line with the projections in Chapter 2. However, there is a silver lining. Compared to the expectations six months ago, when the COVID-19 outbreak had just hit the region, experts now seem a bit less pessimistic about the economic outlook. In line, around two thirds of respondents expect tourism to return in 2021. The survey also offered room to express general views on the current situation. In line with the focus of Chapter 3, experts across all countries are worried about the impact of the pandemic on livelihoods and inequality. Experts from India and Bangladesh, for example, expressed concerns regarding the rising inequalities in access to health, social safety and education.

Figure 1.19: Experts expect a continuation of the policy support and economic disruption.



Sources: South Asia Economic Policy Network and staff calculations.
Note: The index is calculated as follows: Index=(P1*100) + (P2*50) + (P3*0), where P1 is the proportion of responses that report that the variable will increase, P2 is the proportion of responses that report that the variable will remain unchanged, and P3 is the proportion of responses that report that the variable will decline. The lines above the bars indicate the responses from six months ago.

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Appendix

A. Quarterly Economic Indicators based on LASSO regressions

With many variables at hand to track the GDP dynamics, it becomes an increasingly difficult task to select those that do a better job in explaining these dynamics in the short term. Fortunately, machine learning techniques can facilitate the model selection for GDP nowcasting. The Least Absolute Shrinkage Selection Operator or LASSO regression (Tibshirani 1996) is well suited for building simple nowcasting models and Quarterly Economic Indicators when the number of potential explanatory variables is large and the number of observations small.

LASSO regression is a shrinkage method that aims to reduce the values of some coefficients of an ordinary least squares (OLS) regression toward 0. In other words, the LASSO regression reduces the number of explanatory variables included in the regression model, i.e. it drops variables containing little additional information. The advantage of this shrinkage method is that the estimated models exhibit more precise out-of-sample predictions than least squares estimates (since it does not overfit the training data).

LASSO regression is based on a loss function that starts by minimizing the squared errors as an OLS regression but adds a penalty term that penalizes the sum of absolute values of the coefficients. The importance of the latter is controlled by a penalty parameter λ. The LASSO regression loss function is defined as follows:

$$L_{lasso}(\hat{\beta}) = \sum_{i=1}^{n}\left(y_i - x_i'\hat{\beta}\right)^2 + \lambda\sum_{j=1}^{m}\left|\hat{\beta}_j\right|,$$

where $\hat{\beta}$ is the vector of coefficients, y_i is the dependent variable and x_i the set of potential explanatory variables. The LASSO regression carries out the variable selection and parameter estimation simultaneously while keeping computational costs low (Hastie, Tibshirani, and Friedman, 2009).

The parameter λ specifies the weight applied to the penalty term. When λ=0, the linear LASSO reduces to the OLS estimator. As λ increases, the magnitude of all the estimated coefficients is shrunk toward zero. This shrinkage occurs because the cost of each nonzero $\hat{\beta}$ increases with higher penalty terms.

The optimal penalty parameter λ is determined by cross-validation, which is a resampling technique. The method divides the data set randomly into *k* different subsets (*k* is typically 10). Keeping one of the subsets as the validation set, the model is trained over the remaining *k*-1 sets for a range of values for λ. It selects the parameter that minimizes the average mean squared error (MSE), where the MSE is computed using each of the *k* subsets as a validation set for each possible value of λ.

The non-zero coefficients of the LASSO regression are biased because they are shirked towards zero. Hence, after the variables have been selected using the LASSO regression, the selected covariates are included in a linear model estimated by OLS, in line with the method known as relaxed LASSO (Meinshausen 2007).

For India, Maldives, Nepal, and Sri Lanka, we use quarterly GDP series to select variables. Many monthly and daily variables that potentially predict GDP are collected and aggregated to quarterly frequency. In the case of Bangladesh and Pakistan, the selection is based on annual GDP series, since no quarterly series are available. For Afghanistan and Bhutan, the procedure is unable to identify meaningful high-frequency indicators. While in normal times it may be useful to consider both contemporaneous and lagged relationships, in an economic crisis like the current one a model considering only the former is more helpful.

Both the number of variables considered as well as the number of variables selected vary across countries (Table 1.4). For example, 65 variables are considered for India, but only 19 for Maldives. The number of selected variables ranges from six for Sri Lanka to three for Maldives. The country-specific models have a reasonably good fit, with R squares ranging from 0.52 in the case of Nepal to 0.79 for India. In order to assess the current economic activity, the model is estimated until the last quarter of 2019 for those countries reporting quarterly GDP and until the last fiscal year for the others. The quarterly trajectory for 2020 is then projected out-of-sample based on these estimates and up-to-date high-frequency indicators.

The underlying assumption is that the structural relationship between the explanatory variables and GDP growth did not change significantly during the COVID-19 pandemic. However, since the economic contractions were associated with unprecedented containment measures and larger than usual business cycle fluctuations, the results should be interpreted with caution. On the one hand, the Quarterly Economic Indicator may fall more than GDP, for example in countries depending a lot on tourism. For them, the estimated relationship between tourist arrivals and GDP in the past may exaggerate the effect from a complete collapse in tourist arrivals, which is unprecedented. On the other hand, the Quarterly Economic Indicator may understate the effect, for example because the estimated impact of changes in high-frequency indicators is relatively weak. This is a concern especially for Bangladesh and Pakistan, where the relationships are based on annual GDP. For India, the Quarterly Economic Indicator in the second quarter of this year dropped nearly as much as GDP. The former contracted by 20.6 percent (y-o-y), compared to 23.9 percent contraction of officially reported GDP.

The most recent projection is for either July or July/August depending on the availability of the selected high-frequency indicators. If for one of these months only some variables are available, the missing ones are predicted based on those available.

Table A.1.1: Economic indicator models for South Asian countries

	Countries with quarterly GDP data				Countries with annual GDP data	
	India	Maldives	Nepal	Sri Lanka	Bangladesh	Pakistan
# variables considered	65	19	22	33	33	37
Variables selected by LASSO	• Cash on hand • Crude steel prod. • Industrial production • Pass. vehicle sales • Petrol. consumption • Rail freight	• "Exports • Imports • Visitor arrivals"	• Broad money • Exchange rate • Exports • Imports • Foreign reserves	• Electricity • Exports • Industrial production • Policy rate • Remittances • Visitor arrivals	• Industrial Production	• Industrial production • Exports • Remittances
R2	0.79	0.70	0.52	0.72	0.59	0.65
Time	2008Q1 - 2020Q2	2012Q3 - 2020Q2	2005Q2 - 2020Q2	2011Q1 - 2020Q2	1997 - 2019	1996 - 2019

Chapter 2

With a new world, a changing outlook

PHOTO BY: TIBY CHERIAN / SHUTTERSTOCK.COM

Summary

South Asia's GDP is expected to contract 7.7 percent this year, by far the largest decline on record. All countries in the region find themselves in a dire situation. Maldives, heavily dependent on tourism, is expected to experience a contraction of 19.5 percent. India's GDP is expected to contract 9.6 percent in the fiscal year that started in March. Even with the baseline forecast of a rebound next year, South Asia's per-capita GDP in 2021 would still be 6 percent below its level in 2019. The forecast of the region's GDP in 2021 is now 15 percent below what we forecast in the Fall of 2019, before the spread of COVID-19. This change in the forecast illustrates higher global contagion than expected earlier and the devastating economic impact of the pandemic.

The impact on livelihoods will even be larger than the GDP forecast suggests. Unlike earlier recessions in which investment and exports led the downturn, consumption, traditionally the most stable component of demand, has been repressed. Private consumption in the region is expected to decline 10.1 percent this year and it is unlikely to recover quickly, even in a scenario of no further lockdowns. Livelihoods are further affected by a decline in remittances. This implies that the region will experience a sharp increase in the poverty rate.

Uncertainty around the forecast is substantial. The pandemic is still not under control and the spread of COVID-19 could even accelerate in South Asia. External demand for the region's exports is still volatile, as is the flow of workers' remittances into the region. These all imply risks to the forecast, but the main risks lie in financing. Simulations presented in this chapter indicate that a sudden stop in external finance due to an increase in risk aversion by foreign investors could sharply cut governments' ability to spend the money required to stimulate the economy, leading to a 5.2 percent average annual fall in output on top of the decline induced by the pandemic. A domestic debt crisis driven by the already fragile banking sectors with high levels of non-performing loans could also have quite severe effects on GDP, driving an additional 3.4 percent of GDP fall by 2025. The complicated balancing act for governments is to stimulate the economy and to keep debt sustainable. In such an environment effective spending, in terms of creating jobs and preventing financial distress, becomes even more important than under normal circumstances and leads to a much faster recovery.

In the long term, labor productivity is likely to have deeper scars the longer the crisis lasts. It will be increasingly difficult for large and small companies alike to avoid insolvencies and bankruptcies. A permanent loss of jobs will lead to a loss in skills. But there is a silver lining: the pandemic could spur innovations that improve South Asia's future participation in global value chains, as its comparative advantage in tech services and niche tourism will likely be in higher demand as the global economy becomes more digital. Governments need to keep a close eye on these long-term trends so as to not lose the opportunity to build back better.

Introduction

The COVID-19 crisis is not only a health crisis, but also an economic one. The pandemic has had a devastating effect on economies and workers across South Asia. The 7.7 percent fall in regional GDP forecast for 2020 would be by far the largest decline on record. Unlike earlier recessions in which investment and exports led the downturn, consumption, traditionally the most stable component of demand, has been artificially repressed and will take much longer to recover, even in a scenario of no further lockdowns. The sharp decline in consumption is likely to drive an even greater increase in poverty than suggested by the forecast of GDP. The global extreme poverty rate is expected to rise for the first time in over 23 years, and more people will be added to the ranks of the extreme poor in South Asia than in any other region in 2020.

A first wave of the epidemic is still affecting South Asia, so there is great uncertainty regarding when the pandemic will be controlled, and demand and productive capacity will face more normal conditions. Neither a decline nor an improvement in external demand for the region's exports is likely to have a major impact on growth in the region, because trade is a relatively small share of GDP in the two largest economies. Also, depressed energy prices tend to benefit these economies when global demand falls, while higher energy prices if the global recovery is stronger than expected tend to offset the gains. A decline in remittances would not have a major impact on the regional aggregates, but the decline in private consumption in some of the remittance-dependent economies could be severe.

The main sources of risk to the forecast lie in a lack of financing shackling a fiscal stimulus. Simulations suggest that a sudden stop in external finance due to an increase in risk aversion by foreign investors could sharply cut governments' ability to spend the money required to stimulate the economy in some countries, leading to a large fall in output on top of the decline induced by the pandemic. A domestic debt crisis driven by the already fragile banking sectors with high levels of non-performing loans also could have quite severe effects on GDP growth and poverty levels. However, the adoption of a larger fiscal stimulus owing to the greater availability of financing, if devoted to supporting viable economic activities, would speed recovery.

The pandemic could spur innovations that improve South Asia's future participation in global value chains, as its comparative advantage in tech services and niche tourism will likely be in higher demand as the world economy becomes more digital. In the long term, labor productivity is likely to have deeper scars the longer the health crisis lasts and the greater the share of output and employment in each country that depends on sectors requiring high social interaction.

The importance of sound policies has become even more evident during the crisis. Governments in the region are challenged with trying to decide how to allocate their scarce resources (across sectors, across large and small firms, and whether to spend early or hold on for when firms can rebuild). At the same time, they must carefully manage their budgets, as external financing availability is subject to uncertainties.

The first section below describes the baseline forecast. The second section presents simulations to assess the risks to this forecast. The third section analyzes potential long-term impacts of the current crisis. The chapter concludes with a section that discusses policy options.

Growth in the region downgraded

Compared to the early months of the health crisis, there is now a better understanding of the impact of the COVID-19 virus, but continued uncertainty about the economic outlook. With little understanding of the epidemiological nature of the pandemic spread and the effectiveness of specific policies, many believed that an early and strict lockdown would be enough to contain the virus within a 1 to 3-month period. Since then, it has become clear that the fight against the pandemic will take much longer. Countries have tried to strike a delicate balance between opening the economy for business, taking care of livelihoods and getting a handle on the contagion rate, an effort hampered by the scarcity of rapid and effective COVID-19 tests. These challenges are more difficult in South Asia, given weak public health care systems and most households living on subsistence wages, than in most other regions. Nonetheless, there have been laudable examples of effective containment in the region, such as Bhutan (with zero deaths from COVID-19), Sri Lanka and specific regions in the larger countries. Still, the economic impact has been and will be more severe in all countries than initially anticipated.

The forecasts for GDP for the region have been downgraded since June 2020, due in part to the effect of the lockdowns imposed in South Asia and across many trade partners, including high-income countries and the large downgrade of growth in India (Table 2.1). Restrictions on air transport, international travel and mobility will hamper a full recovery in 2020 in key export sectors, such as information technology and business process management (IT-BPM), foreign-led construction projects, tourism and remittances. The spread of the virus outside urban areas in India will make future containment efforts more difficult. Both private consumption and investment will contribute to GDP decline in 2020 (Figure 2.1). Regional GDP is expected to fall by 7.7 percent in 2020--after growing over 6 percent a year in the previous 5 years. As a result, by 2021 per-capita income will only be 94 percent of its level in 2019. (Figure 2.2).

For countries that report GDP figures in calendar year--Afghanistan, Maldives and Sri Lanka—the forecasts have been revised down significantly for the latter two economies since June (World Bank, 2020a).

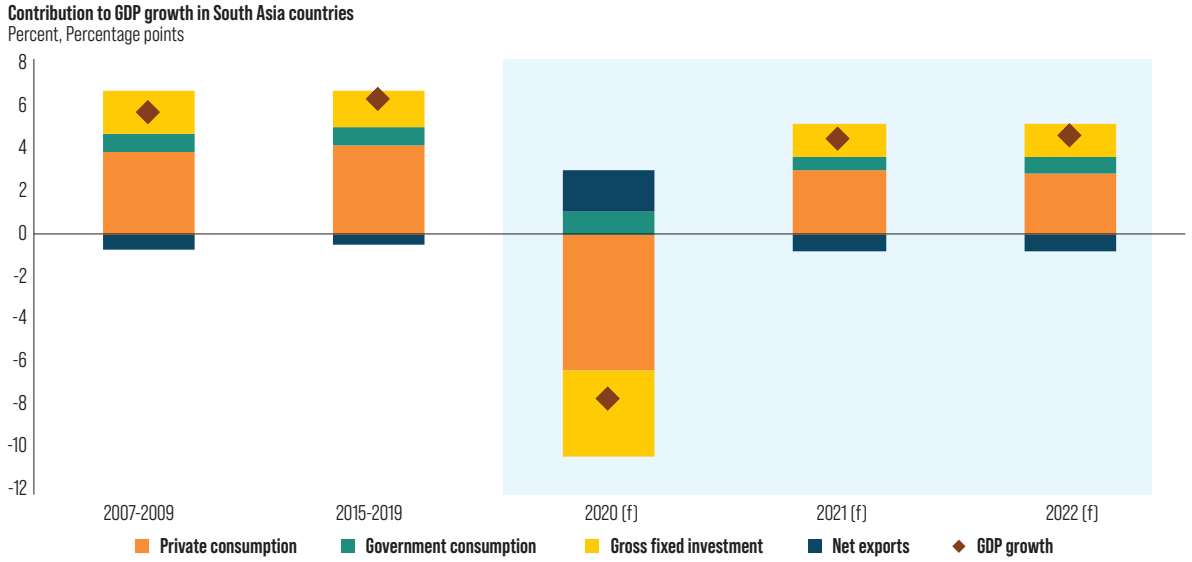
- In Afghanistan, real GDP is still expected to contract by 5.5 percent in 2020, largely due to the impacts of the COVID-19 crisis on consumption, with a protracted recovery amid continued insecurity and uncertainty about the peace talks' outcome.
- The most devastating effects of COVID-19 in the region will be borne by Maldives, where GDP is projected to shrink by 19.5 percent in 2020 due to the complete paralysis of the tourism sector in Q2 2020 and the slow resumption of tourism since borders reopened in mid-July. The forecast is for a rebound of 9.5 percent in 2021 under a scenario in which borders remain open and tourists gradually return, assuming a virus containment strategy that enables the return of some tourists in 2021 is successful (Box 1.3). Although medium- and long-term tourism prospects remain strong, visitor arrivals are not projected to return to pre-pandemic levels until 2023.

Table 2.1: The economic impact on South Asia will be more severe than initially estimated

Real GDP growth at constant market prices, 2019 and forecasts (percent)								
	Fiscal year	2019	2020(e)	2021(f)	2022(f)	Revision to forecasts from June 2020 (percentage points)	Revision to forecasts from October 2019 (percentage points)	
						2020(f)	2020(f)	2021(f)
Calendar year basis								
South Asia region	January to December	4.1	-7.7	4.5	4.6	-5.0	-14.0	-2.2
Afghanistan	December to December	3.9	-5.5	2.5	3.3	0.0	-8.5	-1.0
Maldives	January to December	5.9	-19.5	9.5	12.5	-6.5	-25.0	3.9
Sri Lanka	January to December	2.3	-6.7	3.3	2.0	-3.5	-10.0	-0.4
Fiscal year basis		**FY2018/19**	**FY2019/20(e)**	**FY2020/21(f)**	**FY2021/22(F)**	**FY2019/20(f)**	**FY2019/20(f)**	**FY2020/21(f)**
Bangladesh	July to June	8.1	2.0	1.6	3.4	0.4	-5.2	-5.7
Bhutan	July to June	3.8	1.5	1.8	2.0	0.0	-5.9	-4.1
Nepal	mid-July to mid-July	7.0	0.2	0.6	2.5	-1.6	-6.2	-5.9
Pakistan	July to June	1.9	-1.5	0.5	2.0	1.1	-3.9	-2.5
		FY2019/20	**FY2020/21(f)**	**FY2021/22(f)**	**FY2022/23(f)**	**FY2020/21(f)**	**FY2020/21(f)**	**FY2021/22(f)**
India	April to March	4.2	-9.6	5.4	5.2	-6.4	-16.5	-1.8

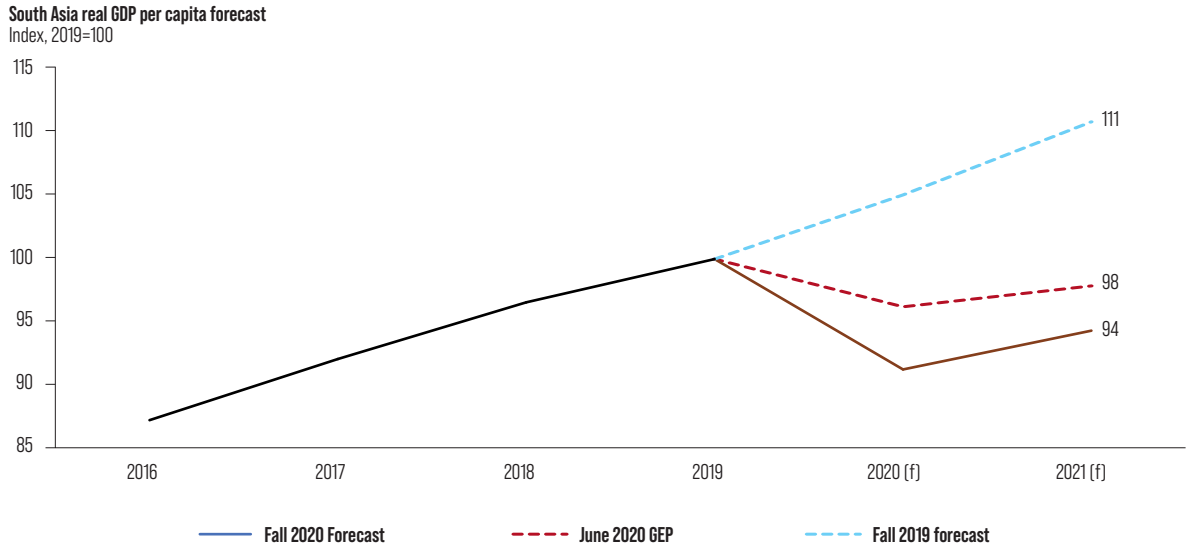
Note: (e)=estimate, (f)=forecast. For India, FY2020/21(e) runs from April 2020 through March 2021. June 2020 forecasts are from World Bank (2020e) and October 2019 are from October 2019 South Asia Economic Focus, World Bank. Pakistan was reported at factor cost.
Source: World Bank

Figure 2.1: South Asia's per capita growth will fall amid a sizeable private consumption and investment-led downturn in 2020.



Note: (f)=forecast. South Asia aggregates are converted to calendar year. The value of stacked bars for historical figures does not exactly sum to GDP growth due to inventory changes and statistical discrepancies. The blue shaded area is the baseline forecast.
Source: World Bank and staff calculations

Figure 2.2: Income-per-capita in 2021 will remain 6 percent below 2019 estimates, reversing the trend gains made before COVID-19.



Note: South Asia aggregates are converted to calendar year.
Source: World Bank and staff calculations

- Sri Lanka's GDP will decline by 6.7 percent, with the crisis affecting all key drivers of demand: exports, private consumption and investment. The current account deficit is expected to remain low (at 2.2 percent of GDP in 2020) thanks to low oil prices and strict import restrictions amid large foreign exchange shortages.

Bangladesh, Bhutan and Pakistan report GDP in fiscal years that run from July 1 to June 30, while Nepal reports from mid-July to mid-July of the following year. These four countries already have better forecast estimates of the initial impact of the shock in the recently ending fiscal year, but the economic downturn will continue to be reflected in the forecasts for the fiscal year ending in 2021.

- In Bangladesh, which had been one of the fastest-growing economies in the world, GDP growth is projected to decelerate to 1.6 percent in FY21. Private consumption growth is likely to remain subdued amid a projected decline in remittances and depressed wage income in manufacturing and construction. Investment

and exports will suffer amid major uncertainty about the resumption of demand for ready-made garments; demand in Europe and the United States is stabilizing, but the recovery is fragile. Moreover, while remittance inflows have surged over the past three months, this may be the result of repatriated savings by returning overseas workers. Remittances are forecast to decline in FY21 with weaker demand from migrant-receiving countries such as the oil-producing Gulf states.

- In Bhutan, economic growth is projected to slow markedly, averaging 2.5 percent a year over the medium term, well below the pre-COVID five-year average of 5.5 percent amid languishing services. The growth deceleration in 2020 would have been steeper had new hydropower capacity not come onstream in August 2019. The slowdown in India is expected to depress manufacturing and exporting industries, and the construction sector (which relies on Indian migrant workers) is also likely to experience a protracted slowdown due to a limited pipeline of public sector infrastructure projects.
- In Nepal, GDP is projected to expand by only 0.6 percent in FY21, from an estimated 0.2 percent in FY20, as periodic and localized lockdowns continue, and disruptions to tourism are expected to persist well into FY21. Remittance inflows will remain close to FY20 levels due to lower outmigration and weak economic activity in migrant-receiving countries. A few key hydropower projects are expected to support industrial growth.
- In Pakistan, economic growth is projected to remain below potential, at 0.5 percent for FY21 compared to over 4 percent annual average in the three years to FY2019. This projection, which is highly uncertain, is predicated on the absence of significant infection flare ups or subsequent waves that would require further widespread lockdowns.

Finally, India's current (FY21) fiscal year runs from April 1, 2020 to March 31, 2021. That means that the most severe effects of the pandemic will be felt in this fiscal year.

India's GDP is forecast to plunge in FY21 by 9.6 percent (revised down since June from a 3.2 percent drop), reflecting the impact of the national lockdown and the income shock experienced by households and small urban service firms. Growth is forecast to return to 5.4 percent in FY22, assuming COVID-related restrictions are completely lifted by 2022, but mostly reflecting base effects.

The forecast calls for a short-term improvement in current account balances, while capital inflows are forecasted to remain positive in the baseline, barring any unexpected events. In 2020, most South Asian countries will see an improvement in their current account balance as a result of dried up demand for imports, which are projected to fall by 18.7 percent in real terms compared to a 13 percent export decline (Table 2.2). An exchange rate depreciation in 2019 in Pakistan (which raised import costs) and scarce foreign exchange in Sri Lanka led to effective import compression even before COVID-19. For both countries, this effect is forecasted to continue throughout 2020. More favorable terms of trade due to lower commodity prices, as well as higher than earlier expected temporary remittance inflows in mid-2020 for Nepal, Pakistan, Bangladesh and Sri Lanka, lead to a more favorable outlook for the current account. Once the recovery of demand leads to import growth, there will be an inflection point as the current account balance deteriorates, depending on the speed of recovery of export demand. The baseline forecast also assumes that remittances will fall slightly in 2021 as returning migrants have trouble finding employment abroad, which will reduce the current account further.

Most countries will see slightly higher consumer price inflation in 2020 relative to 2019. Some of this relates to sporadic shortages and bottlenecks that were created at the start of lockdown, but food prices have not seen abnormal spikes since July. Agricultural production is expected to continue holding up well, although there is a risk of crop damage from the locust infestations in the northwestern part of the South Asian region. The downward pressure from fuel prices as oil and commodity prices remain low amid weak demand will help create room for monetary policy support going forward.

Poverty is expected to rise, a reflection of the loss of livelihoods and employment that has devastated the region, which may not be fully reflected in the GDP numbers. Urban non-traded services were

disproportionately affected: these sectors do not have as high labor productivity as manufacturing and export sectors do, although they employ the vast amount of informal subsistence workers. This

Table 2.2: All demand components are projected to decline in 2020 except government consumption, while imports fall faster than exports.

South Asia forecast of real growth of GDP and demand components (percent)				
	2019	2020(f)	2021(f)	2020(f)
GDP	4.1	-7.7	4.5	4.7
Private consumption	4.7	-10.1	4.9	4.7
Government consumption	10.4	9.9	4.8	5.3
Gross fixed investment	-2.3	-14.9	6.2	6.2
Exports goods and services	-1.4	-13	5.9	8.2
Imports goods and services	-5.1	-18.7	9	10.4

Note: (f)=forecast South Asia aggregates are converted to calendar year. Maldives was excluded from the analysis because it does not publish demand-side national accounts.
Source: Staff calculations

impact on informal workers also explains why a recovery in GDP will not immediately translate into a recovery in livelihoods, so that the recession will undo at least three years of gains made in poverty reduction in the region (World Bank, 2020b). The number of people in extreme poverty in 2020 in South Asia (with less than $1.90 a day in PPP international dollars) was estimated to comprise 15.5 percent of the total global extreme poor before COVID-19. Now South Asia's new extreme poor due to COVID-19 will comprise more than half of the new global poor. This may be a conservative figure given the recent downward revision to the growth forecast of India, the largest country in the region (see Chapter 4).

Simulating the risks to the forecast outlook

The forecasts are extraordinarily uncertain. The forecasts presented in the previous section are based on extrapolations of high-frequency information, modeling exercises and assessments of policies in the pipeline to bring together all available knowledge. However, there are still many unknowns. With a chronic lack of on-the-spot, freely available testing, and little understanding of the rate of asymptomatic transmitters in the population and the share of the population that has antibodies, it is impossible to predict the exact course of the virus (Stock, 2020; Baldwin and Di Mauro, 2020). Even if we could make an accurate forecast of the extent to which the virus would spread, it would remain difficult to predict what that rate of contagion implies for economic activity. The impact on economic activity will depend on various factors: (i) the type of economic activities and the extent to which they require social interaction; (ii) how restrictive and effective containment policies are; and (iii) whether the population is able or willing to follow the lockdown rules[1]. Even if South Asian countries are successful in containing the pandemic in 2020, they may be heavily dependent—through trade, remittances or external financing—on economies that are not recovering as quickly.

Given this level of uncertainty, it is particularly important to explore alternative scenarios with differing assumptions for potential drivers of economic activity in the region. Our goal is to construct alternative scenarios that trace the impact of changes in exogenous drivers of growth (for example, changes in export demand or a shift in investors' appetite for risk) on the outlook. To do this, we need to impose these exogenous changes into a model (we use a version of World Bank's Macroeconomic and Fiscal Model-MFMod[2]), that takes account of how such changes would influence our official forecasts. We first construct a baseline scenario, which is consistent with the model relationships, with results as close as possible to the baseline forecast given above. Then the alternative scenarios can be calculated by altering exogenous elements of the model or the input data. The main elements are as follows (see Apendix A for details):

1 While there is some evidence from US states that those with stringent measures were eventually more successful in bringing the number of new cases down and keeping them that way, it was also evident that complete containment was going to be impossible with inter-state mobility (Hale et.al., 2020).
2 MFMod is a collection of standardized country models used for the Macro Poverty Outlooks at the Word Bank (see Burns et.al., 2019). Models are classic Keynesian (IS-LM) models with supply side, and well-defined cross-country trade, remittances and commodity interlinkages. The version used in the present analysis has been tailored to the South Asia region specifically.

- We first project the number of COVID-19 (henceforth denoted 'COVID') cases for each country based on an econometric model described in Box A2.1. Depending on the number of projected COVID cases (Figure A2.1), a non-linear rule is applied to each country to denote the country-level impact of COVID on economic activity.
- We then forecast the reduced domestic production in each sector that directly results from COVID. We know from high-frequency-data that some sectors, such as those that require frequent face-to-face interactions, are affected more than others. Each of the 9 sectors' end-July value is calculated based on high-frequency data using the principal components methodology employed for the monthly activity indicators in Chapter 1. The rate at which each sector is projected to return to normal depends on the country-level COVID effect.
- The domestic production estimates are adjusted for the extent to which value added is produced for domestic demand or for export. The decline in export demand will depend on the course of external demand, which itself depends on how well trading partners have been able to control the epidemic. We also adjust the shock for a few country-specific effects that cannot be captured by the model. The COVID shock is assumed to lose steam in 2021 but still affect GDP and disappear by 2022. The COVID shock is inputted to MFMod, which then distributes this now lower GDP into demand components according to input-output relationships.
- The baseline forecast roughly emulates the resulting modeled GDP with three adjustments (Figure A2.2). First, the modeled GDP forecast for each country is converted to calendar year. Second, the effective fiscal impulse in the forecasts is removed because we would like to model changes in the fiscal impulse. Finally, the baseline forecast is extended to 2025 for the purposes of the simulation.

This generates the baseline scenario used in the simulations. Then the alternative scenarios can be calculated by altering exogenous elements of the model or the input data. The baseline from the model approach follows the forecast almost perfectly for 2020 and 2021 (Figure 2.3, red squares against blue line). We then construct a series of scenarios with different assumptions for the evolution of external and domestic variables (see Table 2.3). Maldives is excluded from the simulation because it does not have national accounts on the demand side.

The simulation results reflect the depth of the recession, which lasts into the medium-term. The blue line in the left-hand panel of Figure 2.3 shows the growth rate for South Asia under the baseline: there is a 13.4 percentage points drop in GDP compared to the black line, which represents growth in a no-COVID world (also simulated using the model, assuming a COVID shock value of zero). Although GDP growth itself returns to similar levels in 2022 and slightly surpasses the historic rate, this is just a recovery from a very low base; it reflects the assumption that the direct effects of COVID disappear (but not the knock-on effects). The right panel shows the same simulation results but measures the GDP gap compared to the counterfactual of no-COVID. It shows that by 2025, the region will have lost and still not regained an equivalent of 6.6 percentage points of pre-COVID GDP.

Risks around the recovery in the external environment cloud the outlook. Given the uncertainty around the timing of the recovery, we simulate the possibility that the assumptions about the external environment are too optimistic or pessimistic relative to the baseline. A worse-than-forecasted international downturn assumes that the recovery in other regions is delayed by one year compared to the baseline, perhaps because repeated COVID outbreaks further dampen consumer and business confidence and economic activity in major exporting countries outside the region. Oil and commodity prices are assumed to remain depressed: Brent oil prices average USD 35/barrel in 2020 and $42 in 2021 before recovering in 2022. In addition, remittance income is affected. We assume that 20% percent of migrants are unable to go back to the host countries because of slow recoveries in oil-producing states as well as anti-migrant policies in high-income countries.

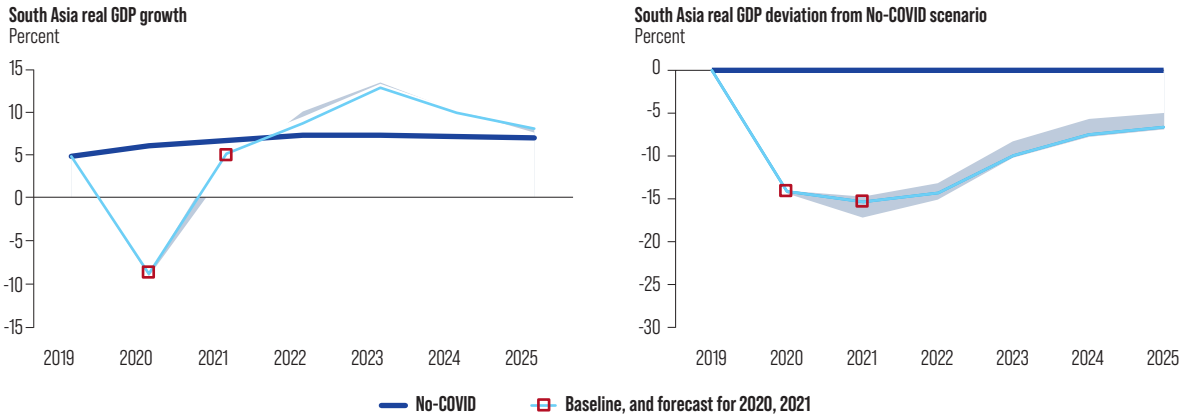
The impact on the forecast for regional GDP of a more depressed external environment is limited (Figures 2.3, lower bounds). For South Asia as a whole, the impact is small because the largest countries, India and Pakistan, are not very open so that most of the risk to the outlook comes from differences in the growth of domestic demand (including investment demand). Moreover, all regional countries are importers of energy products, so depressed commodity prices improve the terms of trade, partly offsetting the decline in demand for the region's products.

Table 2.3: Risks to the forecast and changes in circumstances are analyzed by simulating 6 scenarios

Description of scenarios		
Scenario	**Assumption behind scenario**	**Details of scenario construction**
No-COVID	No-COVID counterfactual scenario	Uses World Bank Global Economic Prospects January 2020 forecast to 2021 (no COVID). Output gap is assumed to close after 2025.
Baseline	Forecast assuming health-related effects disappear and stringency measures are removed by 2022.	Constructed scenario using COVID shock, which approximates to forecast once converted to calendar year (Apendix A). COVID-related shocks progressively vanish in 2021 and 2022 with the magnitude being 25 percent of that of 2020.
Risks to the outlook: alternative scenarios assuming changes to the external environment		
Worse international downturn	A protracted recovery: trading partner growth stalls amid uncontrolled pandemic abroad.	Extend baseline, but assumes postponed recovery in the rest of the world (0 percent growth in 2021 and similar recovery pattern starting 2022). Additional fall in commodity prices: oil price fall by 20 percent in 2020 and 5 percent in 2021 compared to baseline. Other commodities fall by 10 percent in 2020 and 2.5 percent in 2021 compared to baseline.
Worse international downturn and depressed remittances	In addition to the scenario above, remittances decline in line with lower oil prices and falling GDP in migrant host countries, while policies to reduce migrants reduces the stock of returning migrants by 10 percent in 2021. Inward-looking policies in advanced economies dry up grants for Afghanistan.	Worse international scenario for 2020 and 2021 and additional impact on remittance income. Secondary income and public transfers fall further for Afghanistan. Beyond 2021, the growth rate for remittances returns to baseline levels, but by a 20 percent lower base amid non-returning migrants (to oil-producing Gulf States, United States and Europe).
Faster international recovery	Trading partners are able to control the pandemic by 2021 (fast availability of vaccine, quick testing and improved COVID treatments).	Full return of world demand to no-Covid levels over 3 years starting 2021. Gap with respect to no-COVID situation is assumed to decline much more rapidly for export partners and migrant host countries, by 75 percent in2021 and continue to 2025)
Active scenarios: Simulated fiscal and financial shocks.		
Financial crisis	Despite progress in containing the virus, bankruptcies amid pre-existing vulnerabilities in the banking sector and high levels of non-performing loans lead to a financial crisis. With no credit to the private sector, private investment drops precipitously.	Extend baseline with an additional reduction in private investment and higher interest rates. The private investment shock in each country is calculated by applying the investment-to-GDP elasticity observed in India during the 2008 financial crisis--when private investment fell by 10 percent. The size of the fall is scaled by the share of non-performing loans to total loans to the one observed in India in 2008, i.e. 2.4 percent. The shock is assumed to occur at end of 2021 and disappear in 2023.
Sudden stop of external financing	In addition to slow recovery in trading partner economies, vulnerabilities in the global financial system manifest and external creditors become highly risk averse. No new external financing available for South Asia except bilateral and multilateral creditors cover enough for debt service payments.	Extend worse international downturn scenario. Add limits on deficit financing (calibrated so that net financing is limited to baseline net domestic financing). Government expenditure cuts as a result allocated 60 percent to capital expenditures and 40 percent to expenditures on goods and services.
Fiscal stimulus	With available external financing, significant increased spending on health and revival-related programs.	Extend baseline, but with an additional fiscal stimulus of 5 percent of baseline GDP in 2020, 2021 and 2022. 60 percent of new fiscal expenditures are allocated to capital expenditures and 40 percent to related goods and services. The deficits are financed from domestic and external sources in the same proportionn as they have been historically.

Source: Staff calculations

Figure 2.3: South Asia's GDP growth is forecasted to plunge in 2020. Compared to a no-COVID counterfactual, the region is unable to completely recoup the loss over the medium-term (right figure).



Note: The blue shade confidence band refers to worse international downturn and depressed remittances and faster international recovery scenarios. Excludes Maldives.
Source: Staff calculations using MFMod.

If a depressed international environment is accompanied by lower remittance receipts, the impact on some of the countries would be significant. The impact on the region as a whole is small because remittances comprise only 2.8 percent of Indian GDP. However, private consumption falls precipitously in Nepal, Pakistan, Sri Lanka and Bangladesh, where remittances are a large share of income (Table 2.4). Relative to baseline, GDP would see an additional 2 percentage point decline in Bangladesh, 3.3 percentage points in Pakistan—with some persistence as GDP does not revert over the 2023-2025 period---and 3.9 percentage points in Nepal. This also adds to the expected fall in baseline private consumption, which is such an unusual and devastating aspect of this crisis. There are negative but insignificant additional impacts on the rest of the countries.

A front-loaded negative effect in 2021, just as economies are on the way to recovery, can also have devastating consequences for welfare in the long-term. A measure of welfare loss is the cumulative change in private consumption over the 2020-2025 period (in net present value terms). Compared to the baseline, a 'worse external environment scenario with reduced remittances' leads to a relatively small but negative loss in private consumption over the medium-term in Nepal, Pakistan and Bangladesh (Figure 2.4). This would also add to poverty since remittances are well targeted in terms of reaching poor households (Ratha, 2020). The loss is negligible for other countries (slightly positive for Sr Lanka).

On the other hand, an optimistic scenario could materialize amid faster international recovery. We assume external demand recovers twice as fast as in the baseline and then gradually thereafter up to 2024 (details in Table 2.3). Progressively smaller waves of the pandemic outbreak and improved treatments lead to a faster lifting of restrictions, improving consumer confidence and investment sentiment abroad. Oil and commodity prices bounce back to levels before the crisis by the end of 2021 and remain there in the outer years. The results are shown in the upper band around the baseline (Figure 2.3). Again, the impact on the region is limited, particularly as the rise in commodity prices offsets part of the gain from higher export demand. However, more favorable international conditions in 2021 provide enough of an impulse such that the difference between the level of GDP in the simulation and the level if the COVID pandemic had not occurred (the GDP gap) improves permanently by about 2 percentage points of GDP to 2025. This happens because the scenario assumes full return of export demand to the no-COVID levels. A more favorable external environment also would improve external demand from India to the smaller countries such as Bhutan, which could have additional second-order spillover effects (Box 2.1, World Bank 2020b). Nevertheless, in the current harsh economic context, the scale of the impact of changes to assumptions about the international environment appears to be of second order and temporary compared to the COVID shock impact.

Financial Shocks, Fiscal Effects, and External Indebtedness

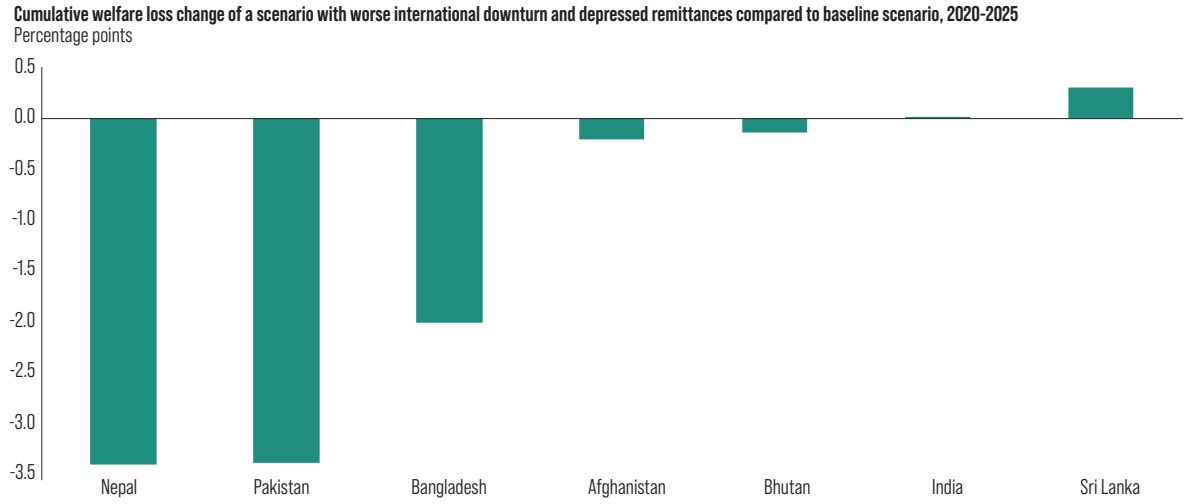
Even before COVID hit there were concerns that non-performing loans (NPLs) and contingent liabilities in the region were stubbornly high, increasing the risk of a negative domestic financial shock.

Table 2.4: Private consumption will fall by more in a scenario with depressed remittance inflows. In contrast, consumption held steady in the last global crisis.

		Change in private consumption, calendar year (%)		
South Asian countries	Remittances to GDP in 2019 (%)	Annual change in 2008 during global financial crisis	2020 baseline scenario	2020 worse international decline and depressed remittances scenario
Nepal	27.3	3.5	-20.9	-24.3
Pakistan	7.9	1.5	-8.8	-11.1
Sri Lanka	7.8	7.5	-16.7	-17.2
Bangladesh	5.8	3.1	-14.2	-15.5
Afghanistan	4.6	-7.9	-7.1	-7.6
India	2.8	5.2	-19.0	-19.1
Bhutan	1.7	21.3	-2.2	-2.3
Maldives	0.1			

Note: Last two columns are the result of simulation exercises described in Table 2.3
Source: World Bank and staff calculations using MFMod.

Figure 2.4: If remittance inflows dry up, Nepal, Pakistan and Bangladesh see slightly worse welfare effects compared to baseline.



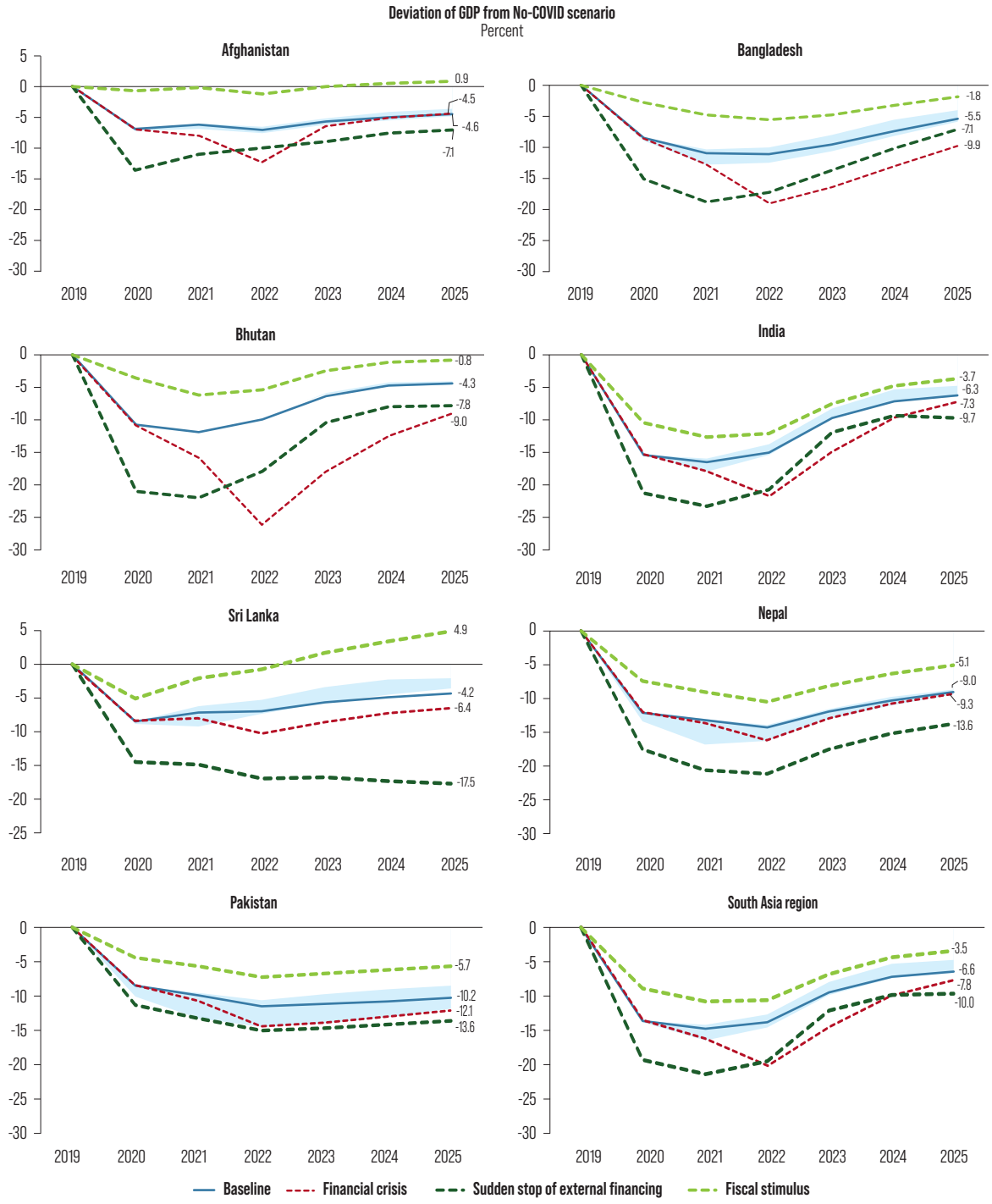
Note: Difference between cumulative private consumption change between 2020 and 2025 of the depressed remittances scenario, and the baseline scenario.
Source: Staff calculations using MFMod

Hidden debts are also prominent in the region (World Bank. 2020d). The financial system will be depending on the swift recovery of large firms, particularly exporting firms. Rising NPLs could create a cascading effect, reducing lending to other businesses and further jeopardizing the recovery. Smaller, informal sector activities would also suffer indirectly through the dry-up of micro-credit[3]. Liquidity injections from the central banks could counteract the cascading effect but cannot fully remedy the decline in credit supply.

We simulate a financial crisis in which private investment collapses, which affects countries with preexisting vulnerabilities. Private investment falls by an amount proportional to the level of non-performing loans (NPLs) for each country at the start of the COVID crisis, but calibrated to mimic the effect observed in India during the 2008 financial crisis.[4] We also assume that scarce private credit leads to higher interest rates. The hypothetical financial crisis hits in late 2021, so the largest impact comes in 2022. Most countries experience a double

3 There is already early evidence that micro loans and loans to SMEs, which are outside of the formal system and go in large part to consumption, are having higher default rates than before the pandemic (Rahman, 2020, Malik et.al., 2020). If these types of lending markets are also indirectly affected—say, because the monetary and fiscal authorities turn their attention to propping up the formal financial sector—the effect could be much worse because consumption recovery would be more protracted.
4 In 2008, the share of non-performing loans to total loans in India was 2.4 percent, less than a third of the share at end-2019. Yet private investment fell by almost 10 percent. Another difference of this simulated crisis to the 2008 global financial crisis is that the latter was externally induced and not domestic.

Figure 2.5: Simulating risks: the ability of policymakers to manage the recession and cooperation of external financiers can make a significant difference in South Asia's speed of recovery from the COVID-19 crisis.



Note: The blue shade confidence band around baseline refers to worse international downturn and depressed remittances and faster international recovery scenarios. Maldives was excluded from simulations because it does not publish demand-side of national accounts.
Source: Staff calculations using MFMod.

dip recession (Figure 2.5, red dotted line). Overall, this is almost as sharp a fall of GDP as the COVID shock effect in 2020 for South Asia, although many countries close the gap with the baseline scenario by 2025.[5] There are exceptions though: for Bhutan and Bangladesh the effect persists into 2025, suggesting a more permanent effect on productivity due to higher NPLs. Bhutan, India and Bangladesh

5 Laeven and Valencia (IMF WP/18/206) find that the fiscal cost in low- and middle-income countries of a financial crisis (the median) is about 10% of GDP, and on average they happened when NPLs to total loans spiked to over 14.4%. Most of them have continued effects that last up to 5 years from onset, and median output loss of 14%. We used these results to calibrate the shock.

experience important dips in growth: relative to baseline, GDP in 2022 would be 16.8, 8.0 and 6.8 percentage points lower, respectively.

In the forecast for 2020 it is assumed that, faced with shrinking fiscal space amid dwindling tax revenues, governments are re-prioritizing spending. In 2020 budgets will be reoriented to spend on immediate health crisis needs, including increased transfers to households, while maintaining prior levels of non-discretionary expenditures such as public sector wages stable. In the baseline scenario, the assumption is that governments will be able to reorient spending starting in 2021 and towards rebuilding and recovery of capital expenditures. But this may not happen unless there is early and careful planning.

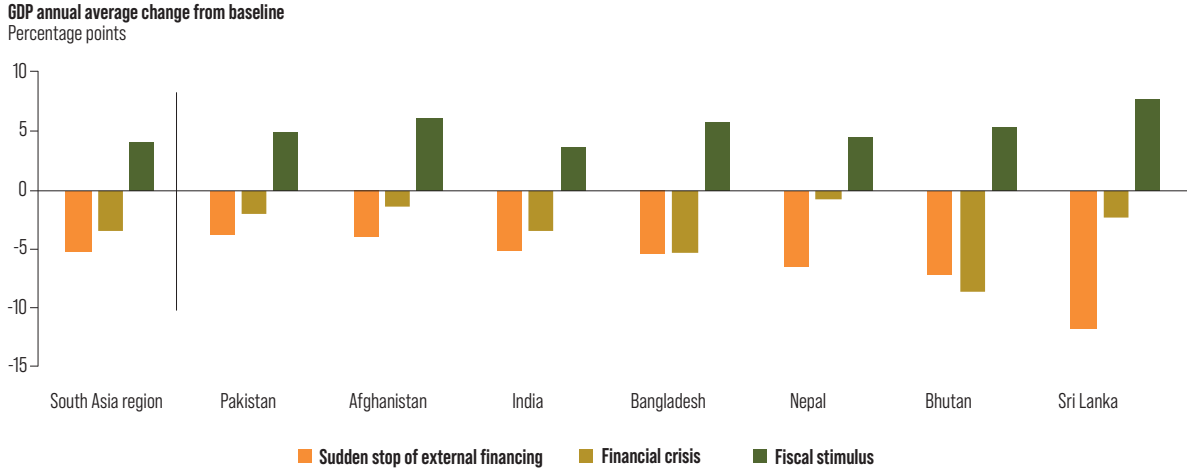
The possibility of insufficient external financing for this increased spending is a major risk. Domestic financing should be available, as most central banks in the region have already provided and should continue to provide generous lines of credit to the government, with the view that the risk of inflationary public spending amid the pandemic is small. However, a greater risk for many governments in the region is the reliance on external financing. Most governments in the region understand that expansionary fiscal policy is the right remedy during this crisis but are weighing this against the risk that already scarce financing could completely dry up. This would create another risk: that postponement of capital expenditures could lead to exactly the kind of procyclical policies that have hampered recoveries in the past (World Bank, 2020c).

We simulate a sudden stop scenario in which South Asian governments are only able to finance external debt service—either from multilateral sources or rollovers of other debt—but no new external financing is available. As a result, spending is limited to what can be financed from depressed tax revenues and some financing from the domestic banking system. External capital markets have so far functioned normally (Figure 1.1D). However, investors could become highly risk averse amid a protracted recession in their own countries or due to excess market volatility, which could lead to a sudden stop. Moreover, rising budget pressures have been accompanied by a new wave of sovereign debt downgrades, surpassing peaks during prior crises (Bulow et.al., 2020).

A negative external financing shock could have a devastating effect on the region. The fall in GDP in 2020 almost doubles in some countries compared to the baseline scenario (Figure 2.5, dark green line). In Afghanistan, the scenario assumes that inward-looking policies in grant-giving countries lead to a sharp drop in donor assistance in addition to the already forecasted drop in 2021. Given the country's dependence on external grants and concessional loans, the level of GDP would barely recover to its baseline level over the 5-year period. India's growth in 2020 would be 7 percent lower than the baseline: although the gap would narrow slightly compared to baseline, it would still be 1.2 percent lower by 2025. Sri Lanka and Pakistan would see growth in 2020 fall by an additional 11.4 percent and 9 percent compared to the baseline scenario. Sri Lanka, Nepal and Pakistan's GDP gap compared to baseline would persist over the forecast period. In the baseline scenario, Sri Lanka and Pakistan already see a deviation from a no-COVID world as an 'L'-shape, suggesting that their pre-existing external financing challenges and high debt burden continue to play out in a post-COVID world. While this scenario is clearly a lower-bound extreme case unlikely to materialize, it does bring to light how much international financial cooperation and expansionary monetary policies of advanced and developing economies will matter for external liquidity in South Asia. Prudent policymaking in India, whose share of South Asia's economy is more than three-quarters, can also provide important spillovers and financing to the rest of the region, particularly its small neighbors such as Bhutan, Nepal and Maldives.

Early, proactive spending by governments combined with the possibility of full access to international markets at reasonable rates could catalyze a faster recovery. This scenario assumes that governments undertake a faster expenditure switch from current transfers and supporting consumption (see Chapter 4) to activities that can help revive the economy, such as temporary work programs. Moreover, it assumes that external financing will be forthcoming at historical rates and terms (Table 2.3). Under these assumptions, the recession would be much more muted than in the baseline scenario for all countries (Figure 2.5, light green line). Afghanistan and Sri Lanka would be able to more than recover GDP losses under the pandemic by 2025, and Bhutan's activity would be barely affected compared to a no-COVID scenario. India and Bangladesh would experience a fall but would recover quickly (a 'U-shaped' recovery). These simulation results suggest that the multiplier effect of public investment

Figure 2.6: Prudent fiscal policies amid ample external financing significantly mitigate GDP loss.



Source: Staff calculations using MFMOD

on economic growth would be particularly strong in the first two years of the forecast period, as documented by Beyer and Milivojevic (2020).

The simulations suggest that prudent fiscal and financial policies are important, but the availability of external financing makes a critical difference in the rate of economic recovery in the region and in minimizing the income loss. Figure 2.6 shows the average annual loss of GDP over the period in net present value terms. It shows that a sudden stop would be devastating for most countries, but especially Sri Lanka. For the region, a sudden stop would lead to annual average GDP growing 5.2 percentage points slower than in the baseline (compared to 3.4 percentage points slower than baseline in the financial crisis scenario). However, a fiscal stimulus amid accessible external financing could have a very big impact in the medium-term, leading to growth of 4.1 percentage points faster every year on average. (Figure 2.5).

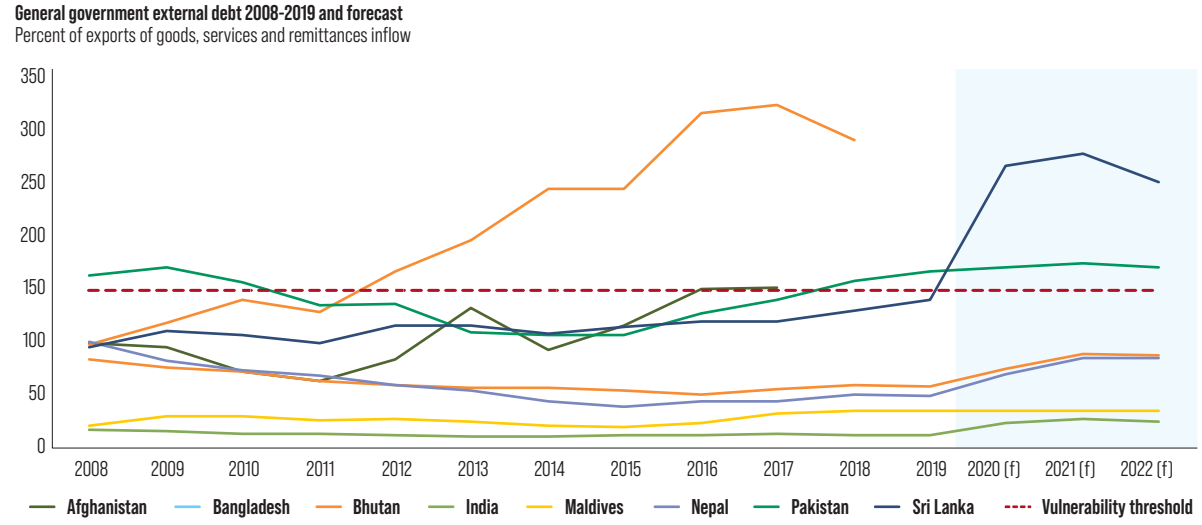
Managing debt well will be paramount in the short-term.

There is great uncertainty about the flows of capital over the 2020-21 period, particularly for India which is more exposed to international markets. Generally during a crisis, creditors will become more risk-averse, impacting the emerging market premium and inciting capital outflows. For example, the currency crisis in Turkey and Argentina in mid-2018 reverberated across emerging markets, including India (ADB, 2018). There is evidence that during the current crisis credit rating agencies are procyclical in that they rate all countries more strictly during a downturn (Bulow et.al. 2020). In the last few months rating agencies downgraded India, Sri Lanka and Maldives on COVID-related concerns. On the other hand, since the COVID crisis is global, investors may be less likely to discriminate across international markets. Central banks need to be vigilant to the possibility of sudden changes in external investor sentiments leading to reversals of inflows that quickly create a sudden stop (Al-Amine and Willens, 2020).

The baseline forecasts suggest that at least three countries are at high risk of debt distress, despite double-digit growth in external receipts in the five years ending 2018 (Figure 2.7). Looking at public external debt in comparison to exports and remittance earnings, Pakistan and Sri Lanka had already crossed a major threshold before the crisis and were already significantly vulnerable (see Chapter 1).[6] The baseline forecast suggests that Sri Lanka's external debt will become very high compared to exports and remittance receipts. Pakistan will continue to stay slightly above the threshold. Risks of debt distress are believed to remain moderate in Bhutan because most of the debt is linked to hydropower projects financed by the Government of India and backed by intergovernmental agreements. For Maldives this number is low as a share of exports, but the forecast is for a dramatic rise of public debt to GDP, while repayment issues may arise given dwindling government revenues from tourism. (Box 1.5).

6 The IMF-World Bank Debt Sustainability Analysis framework has established an approximate threshold for the share of external debt to exports and primary income of 150 percent, over which debt of low-income countries is considered vulnerable (https://www.worldbank.org/en/programs/debt-toolkit/dsa)

Figure 2.7: External debt affordability has steadily deteriorated since the global financial crisis, which is expected to continue post-COVID



Note: (f)=forecast. The blue shaded area is forecasted
Source: International Debt Statistics, Macro Poverty Outlook, World Bank

There are two vulnerabilities to watch for:

(i) Despite important efforts to account for external debt, domestic debt, particularly 'hidden' or contingent debt, is always harder to track. Domestic debt is also expected to grow in most countries (Figure 2.8 in the baseline). This could be a vulnerability: Reinhart and Rogoff (2009) show that in the five-year run-up to default in almost 90 episodes studied between 1827 and 2003, domestic debt was growing faster than external debt, and that often the increase in domestic debt was 'hidden'. On the positive side, according to the 'fiscal stimulus' scenario (lines in Figure 2.8) the debt to GDP ratio would not change much in Nepal and Sri Lanka. This is because the growth of GDP would be faster than the growth in indebtedness. It also assumes that Sri Lanka, would be able to access reasonable terms on new financing.

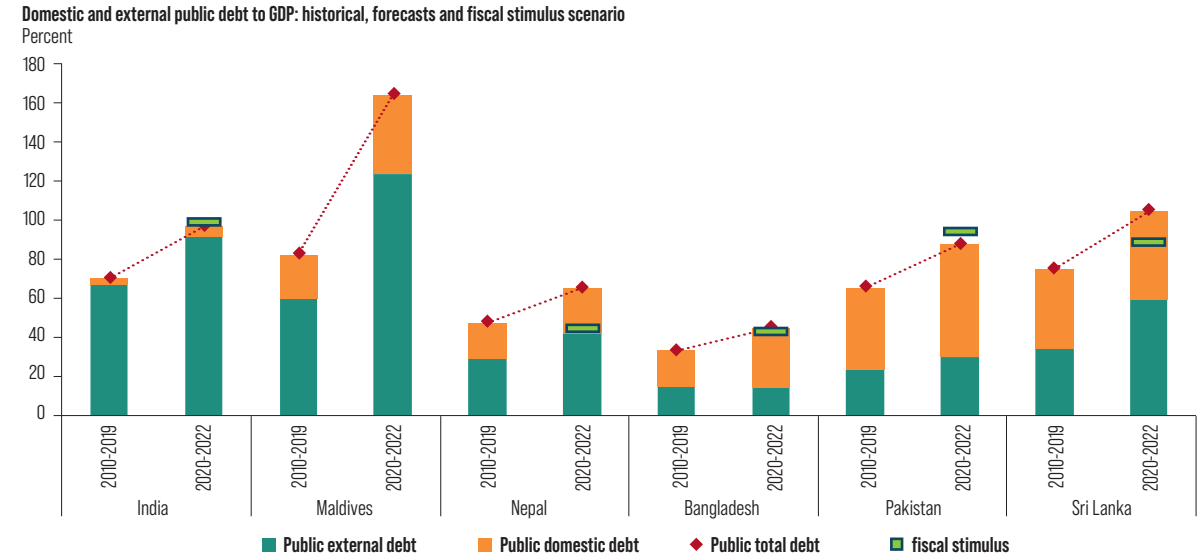
Other kinds of domestic financial stress can arise in crisis times, which can quickly exacerbate fiscal problems. Even if a buildup in external debt does not materialize, many countries with low debt-to-GDP levels have domestic vulnerabilities that could transform into a public debt problem in the form of contingent liabilities. Bangladesh, Pakistan and Sri Lanka are expected to see a rise in domestic debt in the baseline forecast (Figure 2.8). Moreover, rising non-performing loans in the domestic sector have been cited as an issue in Bangladesh, Bhutan, India and Pakistan. Most will see a rise in arrears of unpaid loans in state-owned enterprises. Also, it is possible that arrears may be created between different levels of government, but this information is generally not reported (World Bank, 2020d). These problems may be exacerbated by the fact that many firms and banks were given moratoria to help them through the crisis—in some cases the banks involved already had high non-performing loans as happened in India and Bangladesh in 2018.

Longer-term effects: a preliminary assessment

There is no doubt that the pandemic will leave deep scars in South Asia's economy in the long-term, but it is too soon to assess how deep. COVID-19 is an epidemiological disaster that will reduce the stock of human and physical capital in South Asia, and therefore potential output, in the same way that wars and natural disasters do.[7] For every closure of a business, reduced education or training opportunity, or unused machine, the productive capacity of the economy is being eroded by the virus. Bankrupt firms and loss of installed capital will have a lasting effect on productive capacity. The depth of those scars will depend on the length of the health pandemic, but also the way in which governments and societies deal with it. Despite the huge uncertainty, we estimate the average growth of potential output comparing the baseline against

7 Potential output is defined as the maximum growth an economy can reach in each period in a sustained basis without creating inflation. This is associated with a level of value added per worker (labor productivity) and a more theoretically broad but difficult to measure concept: total factor productivity (TFP).

Figure 2.8: Except for India and Maldives, domestic indebtedness is driving forecasted debt increases. Assuming no barriers in access to finance, debt ratios would improve.



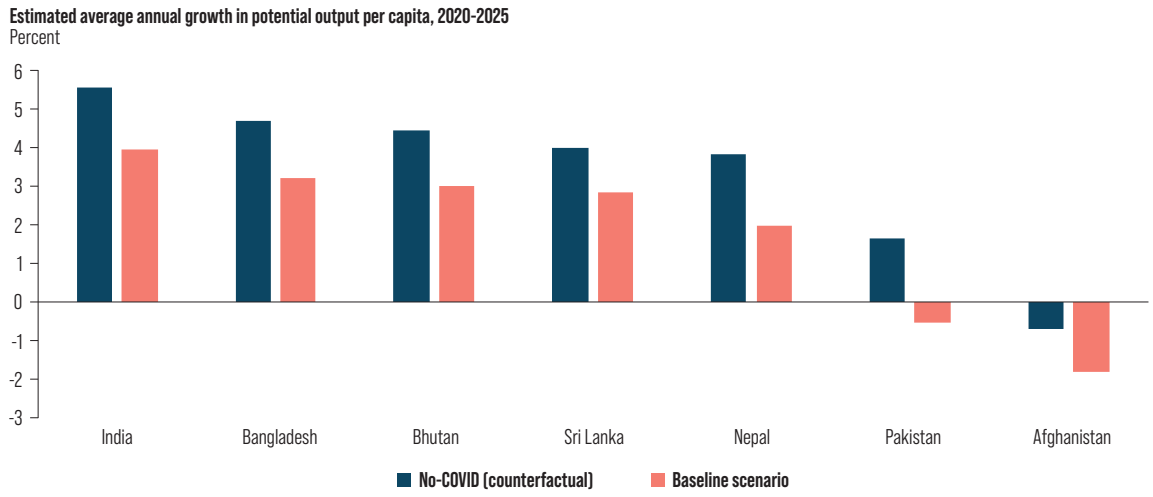
Source: Macro Poverty Outlook and staff calculations using MFMod.

a no-COVID counterfactual for all South Asian countries over the medium-term (except Maldives) using the results of MFmod.[8]

We find that on average, most countries in the region lose over 1 percentage points potential output growth per capita as a result of the loss of productive capacity between 2020 and 2025 (Figure 2.9). While per-capita GDP begins to bounce back in 2021 (Figure 2.2), productive capacity is affected for much longer. Bangladesh could have an estimated output gap 3 percentage points of GDP lower in per-capita terms due to COVID. Pakistan has a sharp dip and recuperates its losses due to COVID by 2023 but does not grow sufficiently in the outer years to gain back all its per-capita productive capacity. Afghanistan is unable to completely recuperate from the long-term damage (as its productive capacity per capita was already very low). Human capital loss is not accounted for here, but estimates suggest there is already a loss in South Asia (Box 1.2).

In the long-term, labor productivity also suffers important losses in a pandemic. The direct COVID shock for 2021-2025 is assumed to be dependent on the length and intensity of the COVID cases. A recent World Bank productivity study (Dieppe et. al. 2020), using a local projections methodology

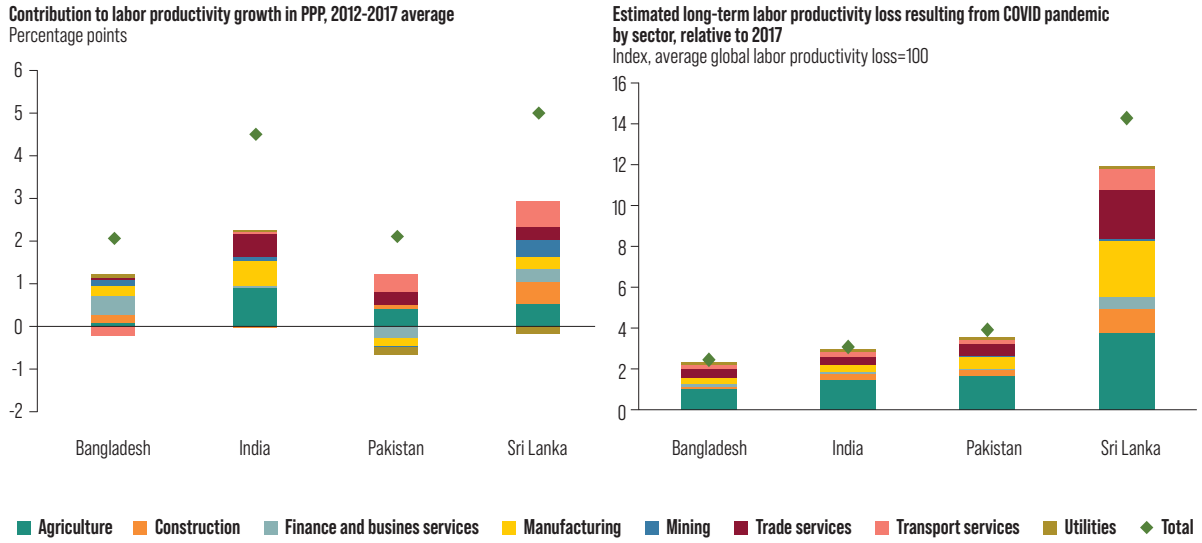
Figure 2.9: Potential output growth per person will be 1 percent lower on average over the medium-term.



Note: Baseline scenario as described in Table 2.3 using change in TFP estimates due to COVID from World Bank (2020a).
Source: Staff calculations using MFMod.

8 To estimate TFP and capital deepening, aggregation is done through a standard Cobb-Douglas production function. The stock of capital evolves according to the usual law of capital accumulation and therefore progressively reflects changes in total investment. In the baseline simulations, TFP is assumed to be exogenous while structural employment is assumed to be unchanged, since COVID-related deaths represent an extremely low fraction of the labor force. As such, changes in potential output solely reflect the adverse investment shock induced by the COVID crisis.

Figure 2.10: Labor productivity was higher in India and Sri Lanka before COVID struck, but COVID-19 is likely to negatively impact longer-term labor productivity in Sri Lanka the most.



Note: The labor productivity loss for each South Asian country is indexed by the total global labor productivity loss. The latter is set equal to 19.2 percent (6.4*3, equivalent to the cumulative effect on labor productivity of pre-COVID epidemics, but the effect lasts three times longer). This is multiplied by each country's 2017 labor productivity (latest available number). The distribution of the loss across sectors in each country is calculated by multiplying the country's labor productivity loss by each sector's employment share of total. Other services, comprising mostly public services, are excluded from the totals.
Source: Staff estimates using Dieppe et. al. (2020) dataset.

over horizons based on Jordà (2005), calculates that pre-COVID epidemics since 2000 have lowered labor productivity by a cumulative 6.4 percent after 5 years. Although the longevity of epidemics since 2000 has been 1 year on average, labor productivity itself can continue to fall over a longer horizon mainly through the adverse effects on investment and the labor force as well as delayed human capital accumulation and loss of skills from extended unemployment. As the authors admit, they have a very small sample of four epidemics, which makes the comparison difficult given that COVID-19 has been described as "the crisis of the century" (Reinhart and Reinhart, 2020). Our baseline scenario assumes that the brunt of the pandemic will be over in 2021 with lingering effects in 2022. In that case, the epidemic lasts 3 years (between 2020 and 2022), which is three times longer than the average duration of the sample of epidemics in the above-mentioned study. That means that with lingering effects, the impact could be felt almost 15 years from now: it makes sense to assume that the impact on labor productivity will be higher the longer the epidemic.

We apply this factor to each sector but weighted by the impact of the COVID shock. Not surprisingly, the impact of the epidemic on labor productivity at the sector level will be proportional to the labor productivity before COVID. Figure 2.10 (left panel) shows the contribution of each main sector to labor productivity growth in the large four South Asian countries in the years leading up the pandemic. Services are important contributors, in large part due to their large share in total production. The COVID-19 pandemic would have a negative but different effect on labor productivity in each of the sectors, as we know that sectors where social interaction is needed will be the last ones to come back to normal. As skills are unused, many cannot come back to the labor market and collaboration is impacted; it is as if every worker became 6.4 percent less productive over time. We find that Sri Lanka, with the highest labor productivity according to the most recent data before COVID, would consequently suffer the largest losses in the long term (Figure 2.10b). Weighted by the COVID shock in each sector and employment, agriculture (in all countries) and manufacturing in Sri Lanka would contribute the most to the total loss.

The COVID-19 pandemic may well have a significantly worse impact on labor productivity than most previous natural disasters. There are three main reasons. First, the increased integration of the global economy will amplify the adverse impact of COVID-19. Second, contagion prevention and physical distancing may render some activities, for example the hospitality sector, unviable unless they are radically transformed, which will take time. Even in less directly affected sectors like manufacturing, banking and business, severe capacity underutilization lowers TFP while restrictions to stem the spread of the pandemic remain in place. There-may be intra-sectorial shifts into low-productivity agriculture. Finally, disruptions

Box 2.1. The Silver Lining: Can global value chains thrive in South Asia post-COVID?

South Asia is not as integrated into global value chains (GVCs) as its East Asian neighbors and many other developing economies. GVC participation, a measure of trade integration in value-added terms, has consistently been lower than the global average and mainly driven by India's participation (Figure 2.11, top left panel). Intraregional trade is very low, with the share of imported intermediates embodied in exports originating from South Asian partners as low as 3 percent (compared to *55* percent in ASEAN). Second, the overall *trade restrictiveness index* for South Asia countries, which captures the trade policy distortions that each country imposes on its import bundle, shows South Asia with the greatest effective protection compared to any other region (World Bank, 2019). The question then is whether the post-COVID world will provide an opportunity for South Asia to reorient its trade paradigm.

GVCs are transforming as a consequence of the COVID-19 pandemic. While the continuing protectionist tendencies in some advanced economies and the trade redirection that began in 2019 because of the US-China trade and investment disputes are unrelated to COVID, they do make it difficult to predict the direction of the transformation of GVCs in the post-pandemic era. Nevertheless, over the medium-term experts have noted three accelerating trends post-COVID (UNCTAD 2020). First, participation in GVCs in advanced economies may weaken, and reshoring accelerate, because professionals cannot travel as freely as before COVID. In theory this could lead to less fragmented supply chains and more concentrated production--especially in higher-technology GVC-intensive industries catering to specialized consumers-- and set in motion increasing foreign divestment from developing countries[1]. On the other hand, replication capabilities that lead to a reallocation of manufacturing located closer to final consumers--which could accelerate as a result of COVID because of a desire to re-shore--could benefit highly populous economies such as India, Pakistan, and Bangladesh as well, precisely because their consumer market is growing much faster than in advanced economies. Second, diversification of suppliers to minimize supply interruptions given different and uncertain breakouts of the pandemic globally may affect some GVC-intensive industries. The garment sector already diversifies by making multiple orders of the same design from firms in different countries, and this trend is likely to increase post-COVID because buyers can ensure that interruptions due to a disaster in one location are hedged by having identical products sourced from other locations. Third, reduced air transport capacity may strengthen regional and local GVCs, affecting for example, perishables such as food processing industries and domestic tourism in South Asia. Finally, digitalization is likely to accelerate post-COVID, which will improve firms' ability to coordinate supply chains and logistics from anywhere.

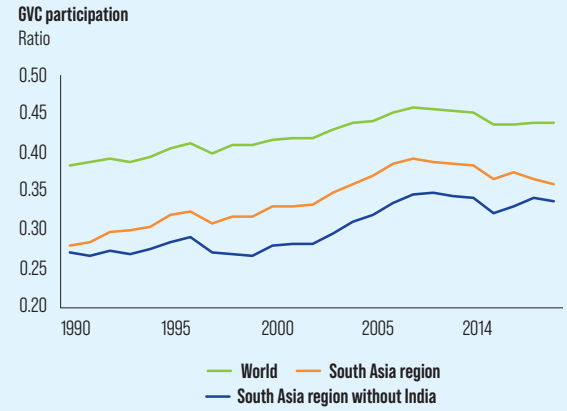
History suggests that international production-sharing is unlikely to disappear, although global supply chains witnessed short-term interruptions at the height of the COVID-19 breakout. Some argue that producers will become more risk-averse and consider breaking with long-term international relationships (Javorcik, 2020), but this presumes that specialized suppliers can be found locally at comparable cost, an unlikely situation for complex production processes[2]. Not only might self-sufficiency not diversify risks for future global and local shocks, but could have the opposite effect (Miroudot, 2020). Moreover, sectors with high GVC participation were no less likely than others to suffer from production bottlenecks, reinforcing the global nature of the shock (Maliszewska et al., 2020). This is also true for South Asian exports (Figure 2.11, top right panel). What might be revisited by multinational firms is the "just-in-time" production system which enables firms to minimize holdings of inventory due to sophisticated logistics networks. Now firms will need to build buffers against future shocks. There are no previous examples of such a global shock. Still, the available evidence of localized disasters suggests that firms have found ways to adjust and become more resilient. The Japan's 2011 earthquake and the Thailand floods in 2011 led to short-term interruptions in supplies (Cavalho et.al. 2020), but firms adjusted by temporarily diversifying their suppliers (Matous and Todo, 2017). In the case of Thailand, multinational firms have since increased their production capacity in the country (Nakata et al, 2020; Cassar et al, 2017; Haraguchi et al, 2014).

This GVC transformation that is likely to occur post-COVID, more regionalization, and the growing importance of services relative to manufactures, will provide a major opportunity for South Asia. Digitization and changes in working patterns in a post-COVID world will increase opportunities for countries with a comparative advantage in services provision. This bodes well for South Asian economies, as they have some of the highest rates of domestic value added of services embodied in total exports—in some countries, services like tourism and

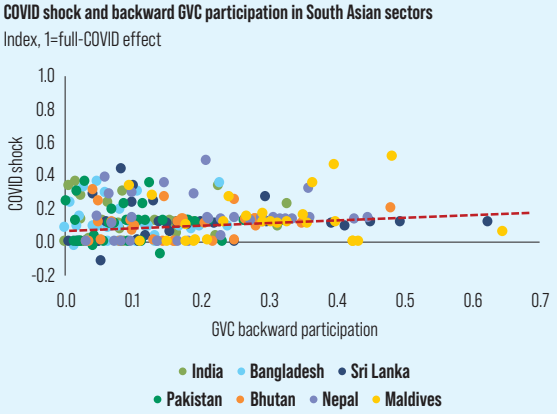
1 3D printing is an example of such technology, as the same production process can be replicated in many locations through digital orders while allowing for some customization. However, large-scale production units of a uniform good are still cheaper to locate offshore.
2 The case for protecting the export of Personal Protective Equipment (PPE) like face masks continues to be at the heart of this debate. However, shortages were not due to supply chain malfunctioning but to a surge in demand that outweighed the global production capacity (Miroudot, 2020). Certainly, there is a case for governments maintaining stockpiles for future pandemics.

IT are directly and indirectly exported (Figure 2.11, bottom left panel). The key role of services in GVCs is likely to accelerate post-COVID for two reasons. First, the increasing use of remote work will help drive increasing demand for traded services (Baldwin and Forslid, 2020). Second, services production is increasingly embodied in manufactured goods, so the nature of service jobs that are offshored will also change. This was already a trend seen before COVID but is now likely to accelerate. Countries like India specialize in rapidly expanding skill-intensive sectors such as software development and professional services which are in large demand from multinationals (Figure 2.11, bottom right panel). Bangladesh, which principally exports readymade garments, also has a thriving local IT sector that is increasingly tapped by international firms, particularly in gig services (see Chapter 3). Finally, technological advances and the more intensive use of remote work following the COVID pandemic might allow countries to directly export the source of their labor advantage. Remote work will redefine the nature of GVC trade, as it allows people performing tasks for a firm from one country to be physically working in another country (Baldwin 2019). Wage differences and human capital shortages will create incentives for companies to hire more foreign-based service workers to perform different and new tasks online.

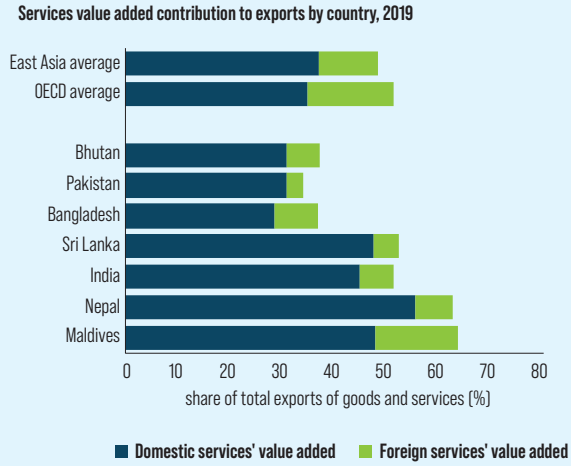
Figure 2.11: Though GVC participation has been low in South Asia, there are opportunities going forward: other than short-term disruptions, the size of a sector COVID shock and its GVC participation are uncorrelated. Moreover, services' domestic value added in exports is high and India dominates in terms of jobs in specialized software FDI.



Note: GVC participation is the summation of backward and forward participation. Backward GVC participation refers to the ratio of the foreign value-added content of exports to the economy's total gross exports. Forward GVC participation corresponds to the ratio of the domestic value added sent to third economies to the economy's total gross exports.

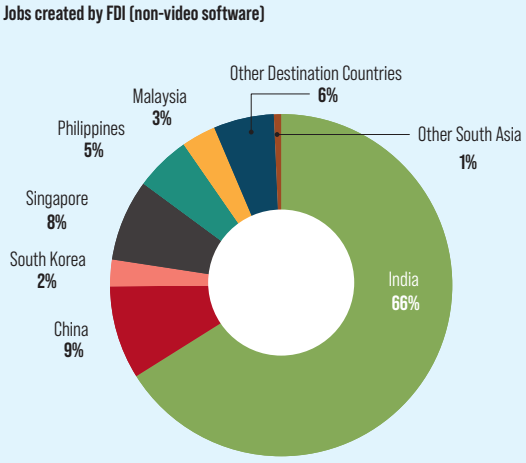


Note: The red dashed line represents the linear trendline with the coefficient equal to 0.1, which shows the insignificant correlation between the GVC backward participation and the COVID shock.



Note: Domestic services value added refers to value added contributed domestically to produce exports. Foreign value added is foreign services value added embodied in own exports.

Source: World Bank (2019), ADB (2020), FDI Markets, Financial Times (2020)



Note: Share of new jobs created from greenfield investment in software publishing and custom computer programming service (excluding video games), 2015-2019

In sum, COVID has provided an opportunity to change course and increase GVC participation, but South Asian countries need to prepare to take advantage of these new opportunities. This can be done with improvements to logistics performance, lowering effective tariffs, improving regulatory environments, supporting innovation ecosystems, creating digital free-trade zones and expanding digital banking for small entrepreneurs who can now offer service to a larger global market.

to training, schooling and other education in the event of severe income losses, even once restrictions are lifted, will also lower human capital and labor productivity over the long term.

But there are mitigating factors and open opportunities, not taken into account in the above analysis. In some dimensions, pandemics and epidemics can accelerate productivity-enhancing changes such as investment in innovative types of training of more highly skilled workers (Bloom 2014). Moreover, the mitigation measures of COVID-19 like social distancing may encourage investment in more efficient business practices. For example, the greater reliance on digital technologies during the pandemic is likely to lessen geographical barriers despite less air travel, which could increase the region's low participation in global value chains (Box 2.1). Surprisingly, foreign direct investment in India[9] and Pakistan has surged so far in 2020, with early evidence in India of services development that could increase the productivity of firms. FDI in services can also enhance the productivity of other downstream sectors such as manufacturing and exports, as has been documented in India over the last 30 years (Arnold et.al., 2014). There is already a high demand for gig-economy services from India and Bangladesh (Chapter 3).

The role of government and policy recommendations

The effectiveness of public health policy and of government economic policies can also turn the course of the downturn. The simulations above abstract from these issues. There have been differences in responses by policymakers across the globe, and even within Indian districts or Pakistani provinces. Figure 2.12 is a visual representation of how the combination of good health and economic policies, as well as good leadership, can impact GDP growth and economic recovery over the long-term.

At this stage of the pandemic, it is still important to differentiate between short-term relief responses and setting the stage for the economic revival. Restructuring can be planned now as countries start to reopen for businesses, and policies should support firms' and workers' transition to a "new normal", hopefully a "better normal" that rewards resilience. Policymakers need to take stock of their finances and set the stage for a more efficient economy.

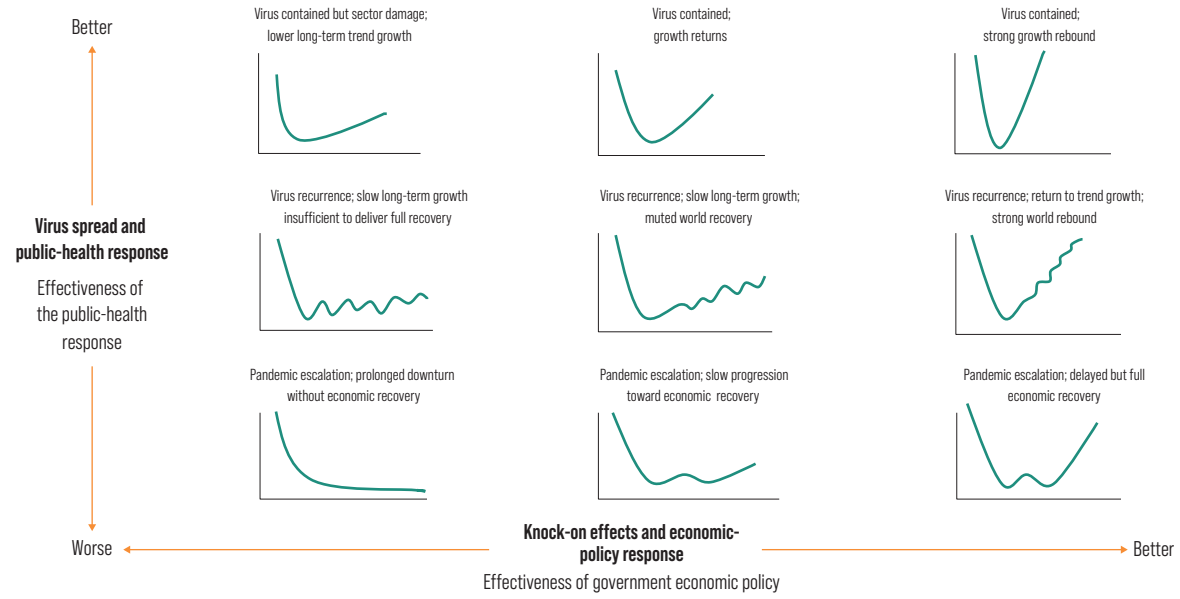
The main recommendations center around two themes. First, South Asian governments should do everything they can to ensure that external financing is forthcoming while following sound debt management practices. This is also a shared responsibility with the international community. Beyond that, the medium-term planning should focus on encouraging new endeavors and enabling the process of creative destruction that is inevitable while not losing sight of long-term opportunities to build back better.

- The extra time afforded by initiatives such as the Debt Service Suspension Initiative (DSSI) and generous credits from other central banks will provide an opportunity for governments to take stock of their finances. While DSSI is unlikely to provide meaningful debt forbearance given the breadth of the pandemic, it may provide some breathing space for those that participate to prepare for what may lie ahead. This is the time to increase transparency and reporting standards and reach out to creditors to ensure there is good faith if a rollover or renegotiation is needed. Standstill is not a substitute for debt restructuring. A good example is the "Punto Final" Program developed by Mexico during its debt restructuring, in which creditors were encouraged to participate in negotiations: those that came forth early were given incentives that offset some of the write-down losses with Mexico. While none of the South Asian countries are in default, they can learn from the Mexican government's pro-active stance to reach a financial resolution (Calomiris, 2020).
- A sound strategy would be if policymakers avoid the temptation of temporarily propping up large enterprises and instead indirectly support a transition towards activities that may be more viable in a post-COVID world. South Asian governments may not have broad unemployment benefits systems that help guide the recovery like high-income countries, but transfer and support policies that can help subsistence workers feed themselves and their families during the transition can have a similar effect. At some point, the private investment will take the driving seat of the

9 India's investment promotion agency has seen a surge of foreign investment applications by firms post-COVID, many trying to de-risk the entire supply chain locally to get closer to the consumers (India Times, 2020).

Figure 2.12: Policies matter for the long-term effects of the pandemic

Possible course of post-pandemic long-term GDP growth as a function of health and economic policy effectiveness



Source: McKinsey and Company (2020)

recovery. Governments should avoid subsidizing large firms directly or keeping large enterprises afloat that will not be viable in a post-COVID world, but instead devote scarce funds to work programs or business facilitation which also supports the private sector. For example, many governments in developing countries and the United States have been under pressure to support large airlines, when support of the workers that are laid off from those airlines instead of the companies themselves can give way to a faster transition. If an activity comes back online amid renewed demand, firms in that sector will be able to rehire workers. Governments can enable the inevitable reallocation of resources that will eventually take shape through simplified regulations and as well as continued support of lives and livelihoods.

- To help the recovery of jobs and consumption, digital services for job seekers can benefit the poor and unemployed, including migrants. Several apps and portals have been set up in India (for example, Majajobs, Razgaar Bazaar, Pravas Rojgar) that seek to match potential employers and employees. These could be replicated across the region, both for local employment and migrants. Now potential employers and employees incur high costs as currently most placements take place through references, which can limit options and result in sub-optimal matching of employees' skills to jobs. This type of intervention provides immediate relief to the urban unemployed and helps the recovery process. Over the long term, it will help reduce initial fixed costs incurred by both national and international migrants as well as create greater efficiency and transparency in the job-seeking process.
- A key challenge will be transforming the tourism sector, which will take many years to recover (Box 1.3). A relatively innovative strategy has been to create 'tourism bubbles' or "free travel zones" in Asia--agreements with neighboring regions that allow for travel across borders for non-essential trips without quarantining upon arrival. There are proposals underway in India, Bhutan and Maldives. If implemented in tandem with other health precautions like more frequent testing for COVID-19, this could bring back a steady stream of visitors[10]. Tourism will face a difficult transition but is one of the more promising and viable sectors in South Asia in the long-term (World Bank, 2020e). Moreover, South Asia offers multiple ecotourism and religious tourism opportunities, which could be promoted further through use of digital applications. Interventions may include guidelines on designing and implementing safeguards and safety mechanisms, marketing, development of information and booking portals, and working with national and sub-national governments to harmonize policy changes.
- South Asia can be part of the solution to the epidemic itself. Once a vaccine is developed,

10 For example, Emirates Airways required every passenger to be tested prior to flying, but also created incentives by providing free coverage of health care costs for any passenger that contracts COVID-19 on its flights.

depending on the technology, vaccine producers in the region, especially in India, are anticipated to play a pivotal role in providing doses for global immunization efforts against COVID-19. India is home to some of the largest vaccine producers in the world, including the Serum Institute, which produces 1.5 billion doses of vaccine a year to primarily support childhood immunizations in low- and middle-income countries. With its cost advantage and enormous scale, India is estimated to produce over 60 percent of vaccines used in the developing world (Vaidyanathan, 2020). Serum Institute has already entered into two agreements with funding from the Bill & Melinda Gates Foundation to produce 200 million doses of vaccine candidates being developed by Oxford University/Astrazeneca and Novavax, respectively.

- There is an opportunity to build back better. Raising the quality and effectiveness of governance and improving the business environment while tackling climate change can encourage a faster rebound from disasters (Box 2.2).

Box 2.2 Green and Resilient Recovery in South Asia

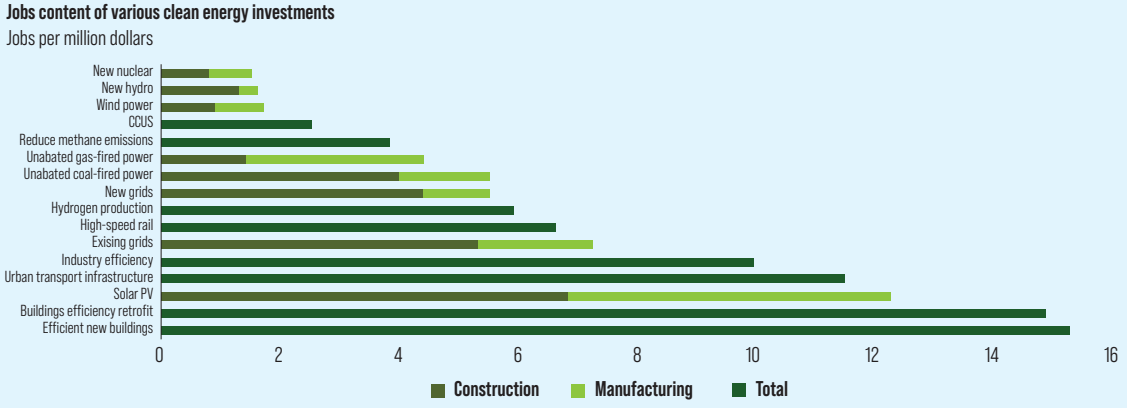
COVID-19 will profoundly transform South Asia for years to come, and South Asia may also change because the COVID-19 crisis has brought into sharp focus the possibility of unprecedented disruptions, including from climate change. Ignoring those threats is no longer a viable option. A first step to a more sustainable future is a smartly designed recovery program. Economic stimulus packages can include renewable-energy investments, climate-smart buildings, and resilient public transportation systems.

During the last few months, carbon emissions have fallen, and pollution levels in the region are down. This happened in the general economic slump caused by the COVID-19 pandemic, offering the chance to shape economic recovery in ways that decouple economic growth from climate change. Most fiscal recovery programs following previous crises have tended to be carbon intensive. In 2009 the financial crises caused CO2 emissions to fall by 1.4 percent, but the following year they increased by 5.1 percent, much more than the rate of increase prior to the crises.

Recovery policies can be designed to deliver both economic and climate goals. These could include: clean physical infrastructure investment in the form of renewable energy assets; improved battery storage technology and grid modernization; increases in efficiency through spending for renovations and retrofits, including improved insulation; improved heating and domestic energy storage systems; investment in building natural capital to address immediate unemployment from COVID-19 and structural shifts from decarbonization; climate-friendly agriculture; and clean R&D spending. Investing in resilience is crucial, as disruptions are extremely costly for governments, households, and the private sector.

In response to calls from governments around the world, the International Energy Agency, in collaboration with the IMF, has recently produced a Sustainable Recovery Plan for actions that can be taken over the next three years (Figure 2.13). The plan identifies cost-effective measures that could be implemented during the specific timeframe of 2021 to 2023 and shows how governments have a unique opportunity today to boost economic growth, create millions of new jobs and put global greenhouse gas emissions into structural decline.

Figure 2.13: Long-term job opportunities in environmentally friendly activities abound.



Source: International Energy Agency (2020).

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Appendix

A. Procedure to estimate the impact of COVID on economic activity by sectors.

A *COVID shock* by sector is defined as a supply-side exogenous shock, where reduced domestic production by each sector is assumed to be driven solely by the direct effects of COVID (the indirect economic effects are subsequently simulated by the model). The underlying country-sector shares for the COVID shock use the 2017-2019 value added data at the 35-sector level for all countries using the Multi-Regional Input-Output Table (MRIOT) database (ADB, 2020). We construct the COVID shock at a monthly frequency for 2020 and extrapolate to 2021 assuming it becomes smaller throughout 2021 (where the average level is 25 percent of the December 2020 effect), and goes to zero in December 2021 and beyond for all countries. It can take values between 0 (if there is no effect of COVID) and 1 (if the sector completely stops production). We summarize the procedure in three steps.

In the first step, a regression of the number of daily COVID cases per capita for each country is estimated and the results extrapolated. Box A2.1 shows the estimation procedure results.

In the second step, we develop a rule which maps the extent of the COVID-19 outbreak to the impact on economic activity, applied to each South Asian country as well as export partners. This will define the country-specific severity of the COVID-19 contagion on value added produced and consumed domestically. We ranked the sample of countries according to the projected number of new daily COVID-19 cases per 100,000 population for the last quarter of 2020—see forecast methodology in Box A2.1--and create an index between 0 and 1 according to the following criteria:

- Countries with projected new average daily cases of 5 per 100,000 people or less on or before the last quarter of 2020 are assumed to see economic activities go back to normal levels by end-October due to lifting of restrictions, necessity or both. Within the region, Afghanistan, Bhutan, Pakistan and Sri Lanka had already reached that milestone by September 2020, while Bangladesh is forecasted to reach it as well.
- For countries with projected new daily cases between 5 and 10 per 100,000 people, country domestic activity is expected to go back to normal more gradually, but normal activity is expected by end-December 2020. This is the case for Nepal.
- For countries with projected new daily cases between 10 and 100 per 100,000 people, the direct shock persists at a rate proportional to the caseload into 2021, although it gets smaller. This is the case for India and Maldives. This abstracts from heterogeneity of the COVID impact within large countries like India
- Beyond that the COVID shock on country domestic economic activity is assumed to continue to impact economic activity by the same amount as in the second and third quarters of 2020. None of the major South Asian trading partners are in this category.

This will define the factor that measures the severity of the COVID contagion, S_i for any of the i=1 to 93 countries in the sample.

In the third step, we estimate the gap in production for each South Asian country at the 9-sector production level (grouped from the 35-sector level). In turn, the share of production is disaggregated by destination--whether domestic or foreign—with the decomposition calculated using input-output relationships.

- The production loss in each sector j that is consumed domestically, $Prod\_L^i_{dom,j}$, is proxied by high-frequency indicators and measured by the average deviations of activities relative to the 2019 level using

principal components analysis discussed in Chapter 1. Agriculture is assumed to not be affected by COVID-19 (zero loss). Manufacturing loss is mostly obtained from indicators such as industrial production, and PMI. Many of the production loss of trade services' activity indicators due to COVID-19 have been nowcasted using the Google mobility index. The associations are established in part using the regression analysis shown in table A2.2 but fitted for each South Asian country. At the initial stage the losses for public services, health and education provision, denoted as 'other services,' are assumed to be zero[11].

- The production loss that would have been destined abroad is assumed to be equal to the loss of exports relative to no COVID. This is weighted by the share of exports to all countries i multiplied by the COVID breakout severity S_k of all of country i's export partners k ($i \neq k$). In other words, the impact on exports depends on the extent of the recovery of economic activity of external partners.

This provides a measure of the 2020 activity loss between March (when COVID was declared an international pandemic) up to July (the underlying data for nowcasting were not available beyond July). For January and February, the activity loss is assumed to be zero

In the final step, we forecast the production loss out to December 2020 at the 9-sector production activity level for production consumed domestically and for exports. The supply-side *COVID shock* for country *i* and sector *j*, $COVID\_shock_i^j$ is thus:

$$COVID\_shock_i^j = D_j * Prod\_L_{dom,j}^i(S_i) + \left(1 - D_j\right) * Prod\_L_{x,j}^i + add\_factor_j^i$$

where $Prod\_L_{dom,j}^i$ denotes the production loss due to COVID in country *i* sector *j* consumed or invested domestically. In turn, $Prod\_L_{x,j}^i = \sum_{i \neq k} S_k * expgr_j^k$, denotes production loss in country *i* sector *j*'s exports to trading partner *k.*; and *expgr* is the decline in export demand growth as a result of COVID. *Dj* is the average share of production of sector *j* consumed domestically in 2017-2019 (we only have data for 2018 for Afghanistan). We perform an out of sample projection based on the last observation where the implied growth forecast depends on the COVID contagion severity factor S_i. For the production loss for export ($Prod\_L_{x,j}^i$) the out of sample projection will be a weighted by the severity of contagion abroad S_k ($i \neq k$).

This model-based GDP forecast is checked against our baseline GDP forecast by sector. If some exogenous event results in a large difference between the two, we add a third term $add\_factor_j^i$. This was the case in three instances: (i) the forecasted 22 percent output growth of the new Mangdechhu hydropower plant in Bhutan, which offset negative effects; (ii) the expected one-time increase in trade services activity due to temporary remittance inflows in Bangladesh, Nepal, Sri Lanka and Pakistan; and (iii) the growth in foreign-financed infrastructure construction activity in Pakistan. If country-sector assumed effects were not captured, we include a sector-level add factor to the COVID shock for those sectors. These adjustments are very small in magnitude relative to the production loss effects, particularly the domestic effect. We obtain the 9 sector-level COVID shocks for each country *i* (8 estimated plus 'other services') and the model then aggregates using as weights the share of each sector's value added in total GDP in 2017-2019 (ADB, 2020).

Figure A2.2 shows the *COVID shock* for the South Asian countries in 2020 and the share of each sector's value added in total. Countries with higher shares in GDP of community, trade and tourism services and construction, all of which require more social contact, also tend to have a higher *COVID shock*.

11 This is done because the model will endogenously change their value depending on whether the government is assumed to respond with either more or less spending.

Box A2.1. Forecasting COVID caseloads and estimating services activity using the Google mobility index.

In order to assess the evolution of COVID cases in South Asia, we regress the number of cases using some of the rule-of-thumb relationships espoused by public health experts as reflected in the following regression model:

$$log\,CPC_{it} = \alpha\, log\,CPC_{it}^{2} + \beta\, log\,CPC_{i,t-14} + \mu\, D\_threshold_{it} + \phi\, TestingRate_{it} + \gamma\, StringencyIndex_{i,t-30} + Constant_{it} + \varepsilon_{it}$$

We postulate that the log of number of reported COVID cases per capita in a given day t for country i will depend on the number in the past few days to indicate persistence ($log\,CPC_{i,t-14}$). We add a squared term, $log\,CPC_{it}^{2}$, to emulate epidemiological models that suggest that the relationship is concave, so the growth rate diminishes and tends to flatten (Baldwin, 2020). We control for other country-specific elements such as: (i) whether the virus is under control; if cases are above a threshold of 10 per 100,000 daily, the variable $D\_threshold = 1$, based on a rule of thumb used by public health experts[1]; (ii) the daily COVID tests per thousand population ($TestingRate_{it}$), since the reported caseload is dependent on the number of tests administered; and (iii) $StringencyIndex_{i,t-30}$, a proxy for the severity of pandemic-related measures imposed by the government in the previous 30 days. Table A2.1 show the main results. All else equal, a 1 percent increase in cases in the previous 14 days is associated with a 0.05 percent increase in new cases, and the higher the daily rate the slower the growth. All other coefficients are significant and of the expected sign. They show that, if cases are below the rate of 10 per 100,000, there is less testing, and stringency is high, the daily COVID caseload per capita will be lower. Figure A2.1 shows the actual and out-of-sample predicted caseloads for South Asian countries.

One caveat is that if there is a breakout or unexpected surge (a non-linearity), the forecast error is higher. For example, the United States and India had a second surge, so the model under-predicts cases in the recent days in those countries. Likewise, Sri Lanka had an early localized surge but has since controlled the spread, so caseload is slightly overestimated. Second, the model forecasts reported cases, since we have scant information on actual caseload.

Table A2.1: Estimation results explaining the number of reported COVID cases

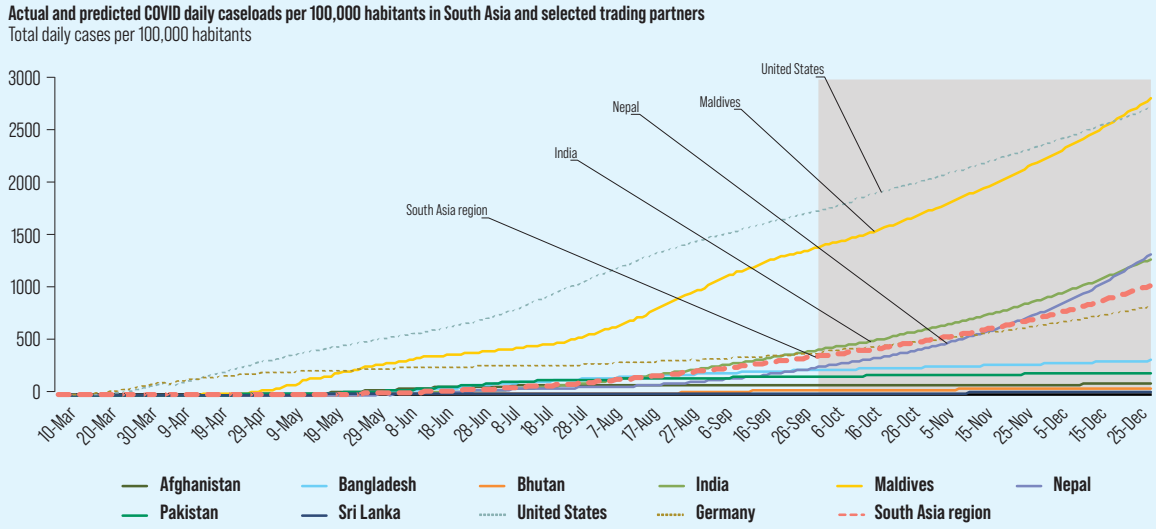
Coefficient on variable. Dependent variable: Daily new cases per capita in log	$log\,CPC_{it}^{2}$ (α)	$log\,CPC_{i,t-14}$ (β)	$D_{thresholdit}$ (μ)	$TestingRate_{it}$ (Φ)	$StringencyIndex_{i,t-30}$ (ϒ)
Estimated value of coefficient	-0.039***	0.0487***	0.344*	0.0381***	-0.00121***

Note: Least Squares Panel with country fixed-effects and clustered standard error. ***, **, * denote significance at the 1, 5, and 10 percent levels, respectively. The estimation period is from January 1st to September 21st at daily frequency, with a sample of 93 countries from Our World in Data COVID-19 database. Testing rate for Bhutan is from official country data. The stringency index reflects strictness of government policies to contain the spread of spread of COVID-19 (Hale et. al., 2020), scaled to a value from 0 to 100 (100=strictest).

Even if the caseload per capita were the same across countries, the effect of the pandemic on activities may-would differ depending on each country's wealth. To test this, we regress each of the six components of the Google mobility index for all countries at the daily frequency since March against per-capita income and COVID cases in the previous 15 days. A low mobility index number for in restaurants, for example, means that less people frequent restaurants compared to before COVID times. We also control for cellphone adoption since the mobility index is captured through cellphone location use. We also control for the stringency index, as measures such as lockdown reduce mobility. The main results are shown in table 2.3. The signs and significance of the variables is as expected: a higher prevalence of COVID is associated with greater mobility (because people are going about their daily business as if there was no virus).

1 For example, based on advice from their public health departments, US state governments restrict travel from residents of some other states (see for example New Jersey DPH, 2020), or decide on phased reopening at the local level based on the number of cases per 100,000 population. The most common thresholds used internationally are 10 per 100,000 or 5 per 100,000 population. The results do not change substantially if a different threshold is used.

Figure A2.1: Most South Asian countries predicted to significantly reduce reported daily COVID caseload by end-2020



Note: The shaded area is projected based on linear regression model with balanced sample of 107 countries. The last actual observation is September 30th, 2020. The United States and Germany are major trading partners.
Source: Ourworldindata.org, World Bank Bhutan country office

Perhaps the most interesting result relevant for South Asia is that mobility of people to retail, groceries, pharmacy, transit and residential areas is not significantly different in rich or poor countries, all else equal. However, people in richer countries go to parks more frequently, possibly reflecting the fact that urban areas in rich countries have more parks that allow them to enjoy fresh air while socially distancing. Moreover, people in rich countries can avoid workplaces more, since workers are more likely to have the option to work remotely compared to workers in poor countries. Remote work is rare for many informal sector activities (chapter 3)[2]. It reinforces the fact that the virus does not affect all equally: people in lower-income countries, like in South Asia, are disproportionately affected because they are more exposed to the virus through their work in densely-packed urban areas and have less opportunities to enjoy fresh air.

$$Mobility_{it} = \alpha\, log\, CPC_{i,t-15} + \beta\, StringencyIndex_{it} + \gamma\, CellphoneAdoption_{i} + \delta\, GDPcapita_{i} + \theta\, (CellphoneAdoption_{i} * GDPcapita_{i}) + Constant_{it} + \varepsilon_{it}$$

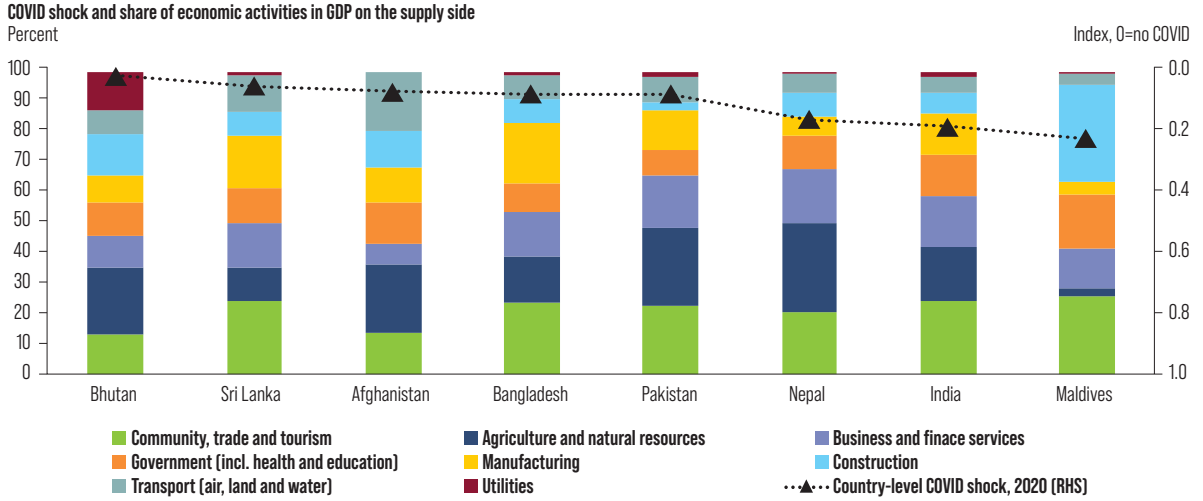
Table A2.2: Government's restrictive measures lead to a low mobility globally on average

Mobility Index shows the number of visits and length of stay compared to no-COVID period. A lower number implies less mobility						
DEPENDENT VARIABLES	**retail and recreation**	**grocery and pharmacy**	**parks**	**transit**	**workplace**	**residential**
$\alpha\, log\, CPC_{i,t-15}$	2.580***	2.283***	4.943***	1.875***	1.331***	-0.794***
$StringencyIndex_{i}$	-1.074***	-0.680***	-1.316***	-0.934***	-0.621***	0.336***
$GDPcapita_{i}$	-0.000493	-4.58e-06	0.00253***	-0.000175	-0.000890***	8.01e-05
$CellphoneAdoption_{i}$	-0.157**	-0.0956	-0.0652	-0.0902	-0.154***	0.0378
$CellphoneAdoption_{i} * GDPcapita_{i}$	2.07e-06	-1.79e-07	-1.43e-05**	3.42e-07	4.56e-06***	-1.41e-07
Observations	13,066	13,066	13,066	13,066	13,066	13,035
Number of countries	88	88	88	88	88	88

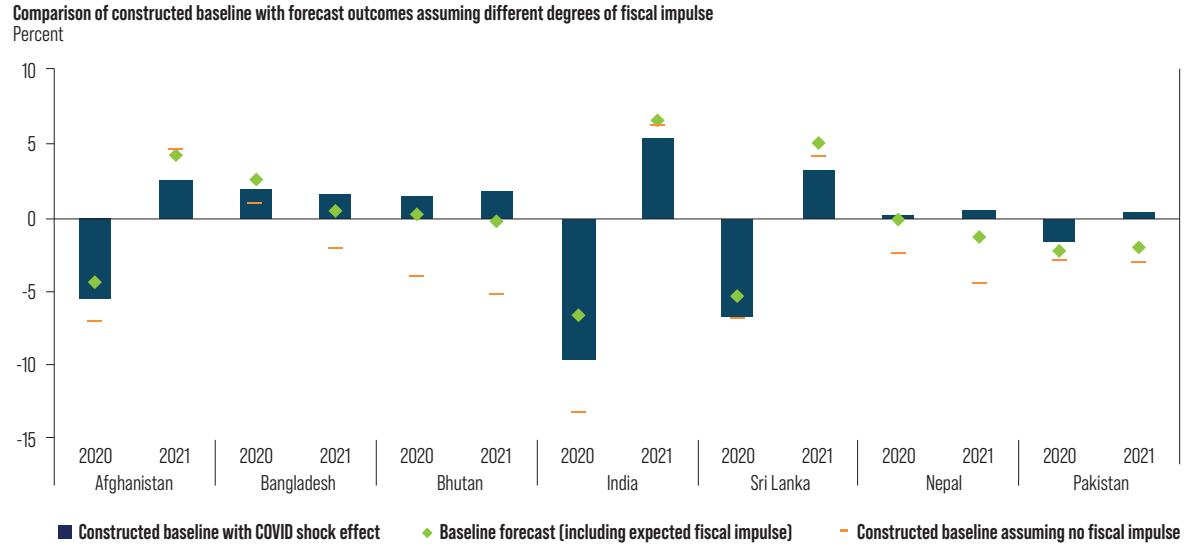
Note: Least Squares Panel with country random effect. ***, **, * denote significance at the 1,5,10 percent levels respectively. The estimation periods from January 1st to August 21st with daily frequency. Unbalanced sample with 88 countries. Google mobility data is taken from Google COVID-10 Community Mobility Reports. Note that low value of mobility index means there is less mobility relative to baseline (no COVID). Cellphone adoption is mostly insignificant but is negatively associated with mobility in retail, recreation and workplaces where there has been less activity.

2 This is also consistent with result from analyses of detailed US data that activity in poorer neighborhoods has been greater than in rich neighborhoods (Chetty et. al., 2020).

Figure A2.2: The constructed *COVID shock* shows that countries with large services sectors are hit especially hard. Using the model to shock GDP, the resulting growth rates closely mimic the forecast, with variations dependent on the forecasted level of fiscal impulse of each country.



Note: *COVID shock* is an indicator between 0 (no COVID effect) and 1 (economic activity is fully shut down). The public sector, including health and education, were not included at this stage.



Note: Forecasts converted to calendar year. 2022 not included as outside outside of the full forecast period for some countries. Difference will be larger in 2021 if forecasted fiscal impulse varies. The dashes represent what growth would have been without a fiscal impulse.
Source: World Bank and staff calculations

The constructed GDP from the model will differ from our baseline forecast in some respects. First, the model converts the baseline forecasts from fiscal to calendar year. Second, the model extends the forecast to 2025. More importantly, the shock was constructed assuming that the fiscal impulse is the same as under a no COVID counterfactual. The bars in the right-hand panel of Figure A2.2 show the modelled GDP growth forecast (neutral on fiscal impulse) for 2020 and 2021 against the forecast and a scenario in which there was no fiscal impulse. It shows that the constructed scenario follows the baseline very well for all countries. The difference between the constructed baseline and the forecast is explained by the implied fiscal impulse of the forecast. The ensuing lower supply-side GDP is distributed across demand categories—including imports—by MFMod.

PHOTO BY: INDIAVIAMIRROR / SHUTTERSTOCK.COM

Chapter 3 The impact of COVID-19 on the informal sector

PHOTO BY: SK HASAN ALI / SHUTTERSTOCK.COM

Summary

The informal economy in South Asia has been hit hard by the COVID-19 pandemic. Many unorganized workers, self-employed people and microenterprises have experienced a large drop in earnings. This is suggested by model simulations presented in this chapter and early confirmations are found in rapid-response surveys. Informal self-employment has provided opportunities for some workers who have lost jobs to maintain livelihoods, but likely at much lower earnings levels than before the pandemic. A key reason for the dire situation in the informal sector is that the service sectors that were affected most by the lockdown are dominated by informality. Many informal workers also tend to be more exposed to the disease due to their involvement in the provision of services that require face to face interactions. Isolated, home-based work is not an option for them. With narrow internet penetration in the region, digital alternatives seem viable for only a small share of the informal sector.

This is of grave concern, because more than three quarters of all workers in South Asia depend on income from activities in the informal sector. Informal workers and firms tend to have inadequate mechanisms for coping with short-term demand and supply interruptions, due to limited savings and constrained access to finance. While the poor have suffered severely during the crisis, many informal workers in the middle of the income distribution have experienced the greatest drop in earnings. Most of them are not covered by social insurance. A major threat to long-term income generation is that many viable small enterprises, including microenterprises, will fail because they lack the resources to survive over the next six months.

The crisis lays bare complicated structural problems in the informal sector. The challenge for policymakers is not only to provide relief to the informal sector in the short run, but also to design more universal social protection systems in the longer run. More generally, policies should support productivity and human capital formation for the informal sector, rather than hoping that informal activities will gradually be absorbed by the formal sector. Informality has remained stubbornly constant in South Asia during the last decades, despite high overall economic growth. Digital technologies will play an important role in these reforms and could help the informal sector increase productivity and integrate better into markets, provided that access to internet and digital technologies is significantly broadened.

Introduction

As described in Chapter 1, the COVID-19 pandemic and the containment policies to combat it have sharply reduced economic activity and household welfare in the South Asian region, and its effects are far from over. The decline in demand and constraints on production due to lockdown policies have hit the informal sector, which accounts for almost three quarters of employment in the region, particularly hard in comparison to the formal sector. This chapter reviews the impact of the pandemic on the informal sector, and on the distribution of income, using both preliminary data and a simulation model to estimate the impact on income distribution and employment. It focuses on informal sector workers, a category that includes not only those working in informal firms, but also the self-employed and those employed in formal firms on an informal basis.[1]

The main messages which arise from this analysis are:

(i) The COVID-19 impact is biased against informality. Informal sector workers have suffered the largest declines in employment, and most of the households who have fallen into poverty during the pandemic are dependent on informal workers, largely daily casual wage workers from the middle of the income distribution.
(ii) Many wage workers in both the informal and formal sectors who lost their jobs have turned to self-employment, but likely at much reduced levels of earnings.
(iii) The pandemic has severely affected both the bottom and the middle of the income distribution.
(iv) Informality is heterogeneous and different policies are needed to assist different groups of informal firms and workers.
(v) The region has quickly expanded relief policies, but some long-term challenges (e.g. the limited coverage of social insurance and the low productivity of informal firms) remain or have even been exacerbated.
(vi) An expansion of the digital economy could help the informal sector over the long run by reducing the amount of capital required to start a business, facilitating matching in the job market, improving management practices in firms, and helping firms connect to markets. However, the digital economy can also, in the short run, exacerbate inequality between the informal and formal sectors: higher income, formal sector workers have greater potential for teleworking, few informal sector firms can take advantage of online platforms, and the "gig economy" is mostly for the better educated workers.

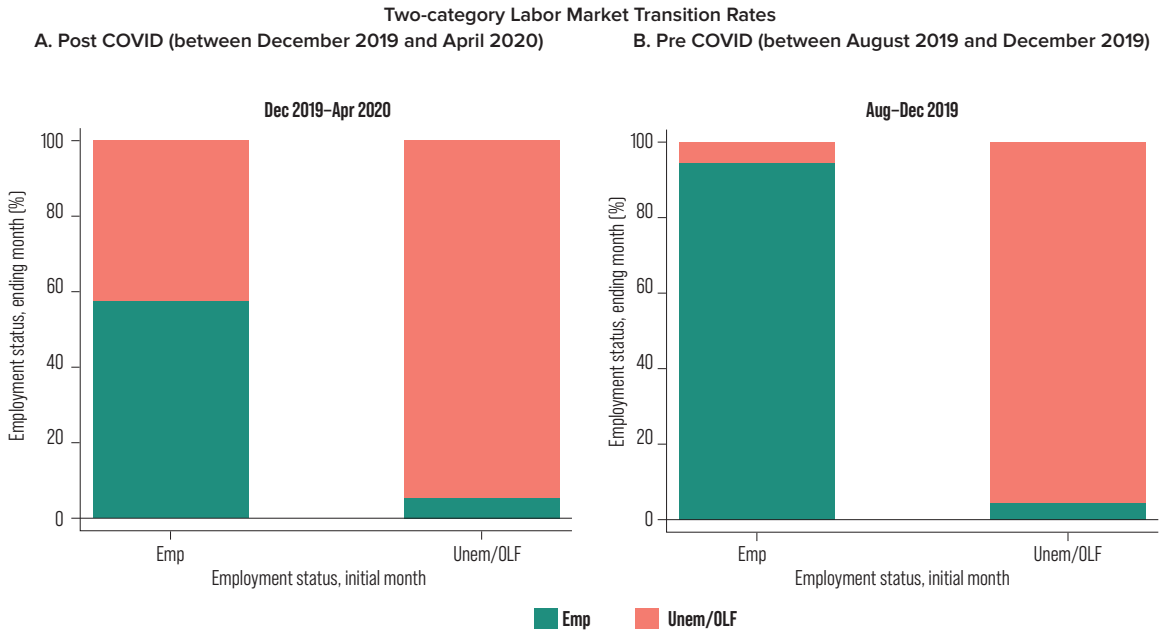
The chapter begins with an analysis of recent household survey data demonstrating that informal workers are particularly affected by the COVID-19 pandemic. We then use a simulation model to assess ex-ante the impact of COVID-19 on informal sector workers and the distribution of income. The next section considers how aspects of the digital economy affect vulnerable informal workers, followed by a discussion of key policy-relevant aspects of informality in South Asia. The penultimate section considers the policy implications of this analysis, and a final section concludes.

COVID-19 is severely reducing employment and incomes, particularly in the informal sector

New data reveal that the pandemic is sharply reducing wage employment in India, and that informal sector workers are most affected. Individual-level panel data from the nationally-representative Consumer Pyramids Household Survey (CPHS) enables us to track the trajectory of individual labor market participants before and after the COVID lockdown.[2] With some exceptions (see Box 3.2 further below) similar extensive data are not available for the other South Asian countries (the section following this one provides model estimates of the

1 Specifically, this chapter defines *informal employment* to include all individuals working in informal enterprises as owners, employees or contributing family members, as well as those employed in formal firms as casual or temporary workers without a formal contract (ILO, 2013). It defines *informal enterprises* as unincorporated enterprises owned by households, including those consisting of a single owner-worker (the self-employed). A key characteristic of such enterprises is that there is not a clear separation between the unit of production and its owner.
2 The analysis in this section is based on Bussolo, Kotia and Sharma (forthcoming). The CPHS is a panel survey conducted three times a year by the Center for Monitoring the Indian Economy (CMIE). Sample households are revisited every four months. For example, households visited in August 2019 (as part of Wave 17 of the CPHS) were revisited in December 2019 (as part of Wave 18) and April 2020 (as part of Wave 19). Unless otherwise mentioned, the figures and estimates discussed in this section are based on the sample of households that were surveyed in the month of August 2019, and then resurveyed in the months of December 2019, April 2020 and finally, August 2020. Details on the CPHS data analysis are presented in Appendix 3.A. Also, please see Vyas (2020) for a description of the CPHS and its execution during the COVID period.

Figure 3.1: The early COVID-19 period in India saw a sharp increase in transitions out of employment



Note: These charts depict the rates at which working age individuals transition, or flow, from one labor force status to another between two periods (months). Each bar shows the breakdown (in percentage terms) of the ending period's status (y-axis) for a group of individuals who had a specific status in the initial period (x-axis). For example, the first bar in Panel A shows that of all the individuals employed (Emp) in the month of December 2019 (the initial period), 43 percent were unemployed or out of the labor force (Unem/OLF) and 37 percent employed in the month of April 2020 (ending period). The second bar shows a similar breakdown for all the individuals who were Unem/OLF in the initial period. The same information is presented in the form of transition tables in Appendix 3.A.
Source: Based on staff calculations using CPHS panel data on India.

probable impact of the pandemic on employment in three countries).

The early phase of COVID-19 experienced a sharp drop in employment, and a shift from wage jobs to self-employment

The early impact of the pandemic on employment has been unprecedented: 43 percent of those employed in December 2019 were either unemployed or out of the labor force (OLF) in April 2020 (Figure 3.1, panel A). This is a stark departure from the pre-COVID survey wave between August 2019 and December 2019: about 95 percent of those employed at the beginning of that period were still employed when it ended (Figure 3.1, panel B).[3]

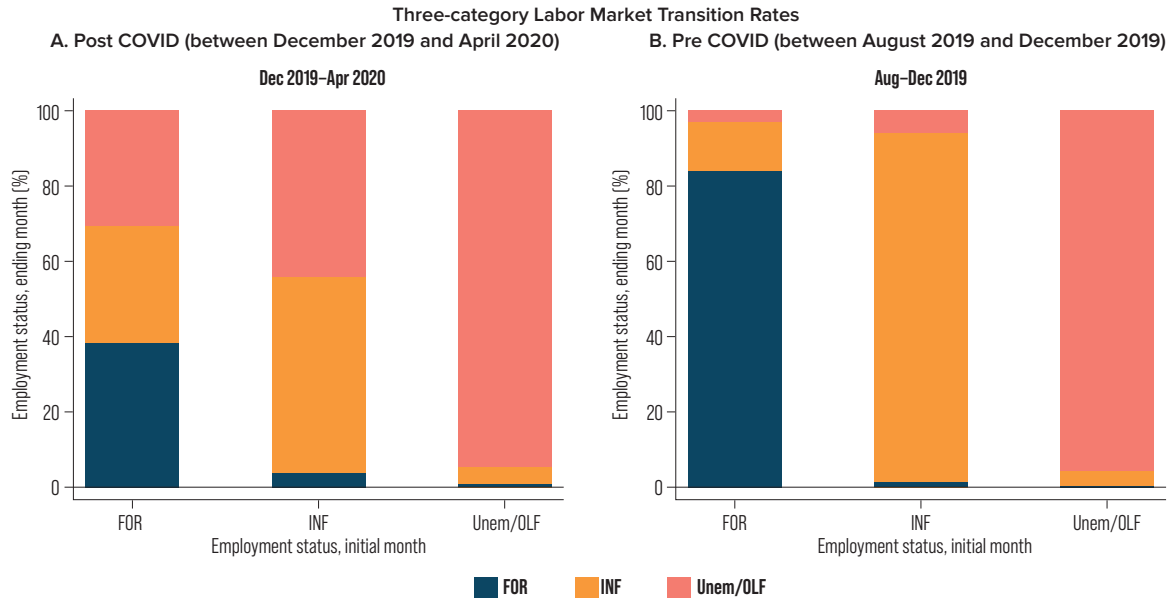
Notably, this sharp drop in employment rates occurred during a mandated 'lockdown'. Concerned about a potential surge in COVID infections, the Government of India enacted a comprehensive national lockdown on March 25, 2020.[4] This nationwide lockdown lasted through the month of April but was gradually eased in parts of the country starting May 2020.

The likelihood of unemployment post-COVID was higher among those initially working in the informal sector (INF) than those initially in formal jobs (FOR); many of the latter kept working by transitioning into the informal sector. Among those employed in the informal sector in December 2019, over 44 percent were not employed (that is, unemployed or OLF) by April 2020 (Figure 3.2, Panel A). The corresponding transition rate for those initially in the formal sector is lower (31 percent). But another 31 percent of those initially formally employed were in informal employment by April 2020. Transitions from formal to informal employment do not occur at such high rates in more normal times (Figure 3.2, Panel B). In general, as suggested by panel data from a range of contexts, such high rates of transition out of formal employment are rarely observed in low and middle-income countries (see, for example, Gatti *et al.* 2014).

Within the informal sector, wage workers were more susceptible to job loss in the early phase of COVID-19 than the self-employed (SE) were. Among those in informal (that is, casual, daily or temporary) wage jobs in December 2019, over 57

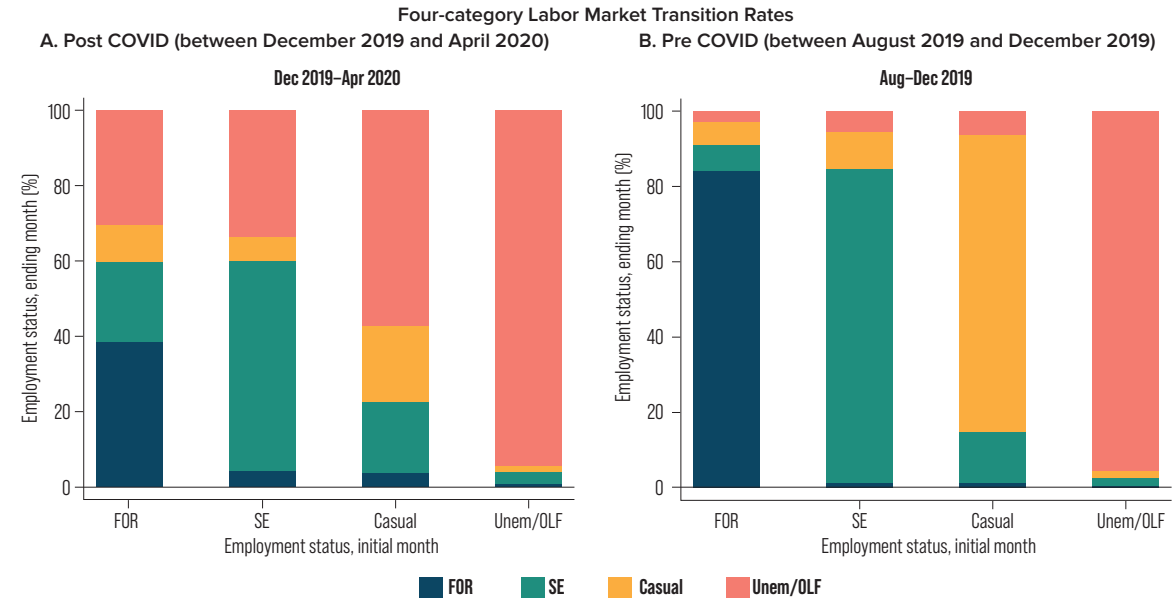
3 The detailed transition tables are presented in Appendix 3.A.
4 Order. D.O.No.40-3/2020-DM-I(A), Ministry of Home Affairs, Govt. of India.

Figure 3.2: The lockdown period also experienced high rates of transitions into informality



Source: Staff calculations based on CPHS Panel for India; see note in Figure 3.1 for explanations

Figure 3.3: Self-employment was more resilient than informal wage employment in the lockdown period



Source: Staff calculations based on CPHS Panel for India see note in Figure 3.1 for explanations

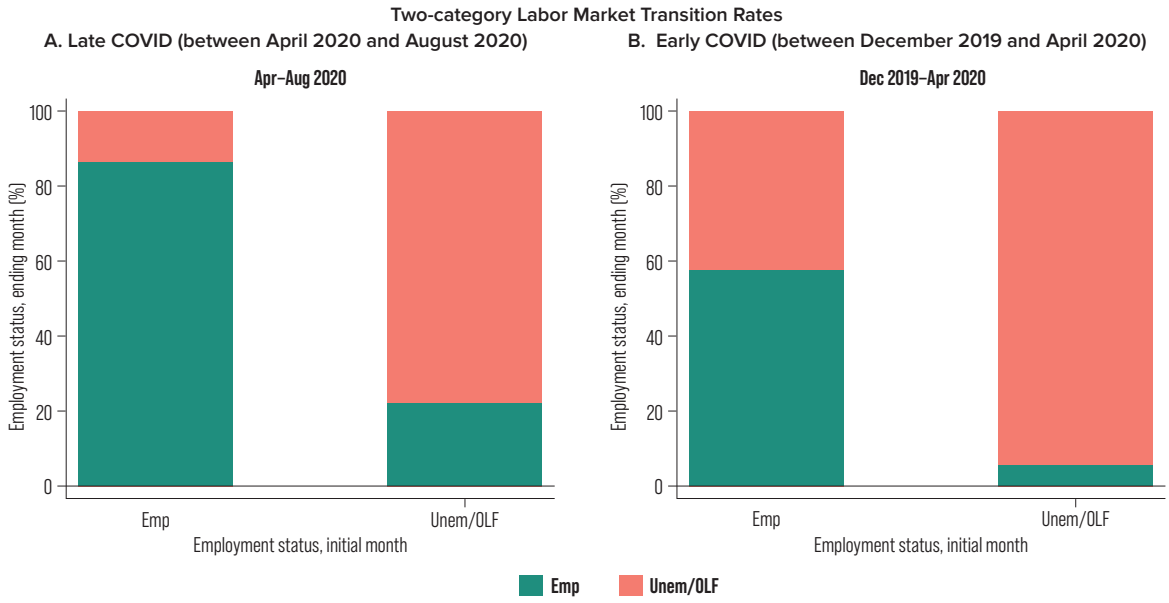
percent were unemployed/OLF by April 2020 (Figure 3.3, Panel A). Those initially self-employed in December 2019 had a lower (34 percent) chance of being unemployed/OLF by April 2020. The rates of transition into unemployment do not differ much across these two sets of workers in more normal times (Figure 3.3, Panel B).

Self-employment may have served as a "cushion" for both formal and informal wage workers who lost jobs. Both among those with formal and informal wage jobs in December 2019, about 20 percent were in self-employment by April 2020 (Figure 3.3, Panel A). This is an unusually high rate of transition from wage jobs to self-employment, particularly for those initially in the formal sector (compare with Figure 3.3, Panel B).

Aggregate employment levels are beginning to recover, but labor market churn and flows into self-employment remain unusually high

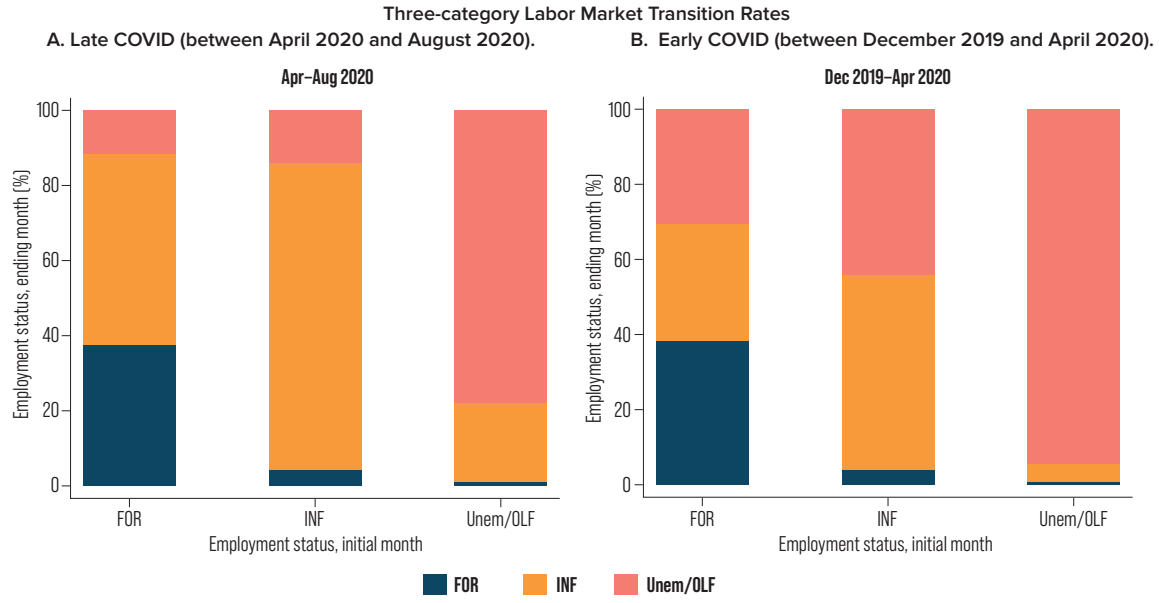
CPHS data from June-August 2020 suggest that employment levels reached a low point in

Figure 3.4: Six months into the COVID crisis, employment levels are staging a recovery



Source: Staff calculations based on CPHS Panel for India

Figure 3.5: Six months into the COVID crisis, high rates of transition into informality continue

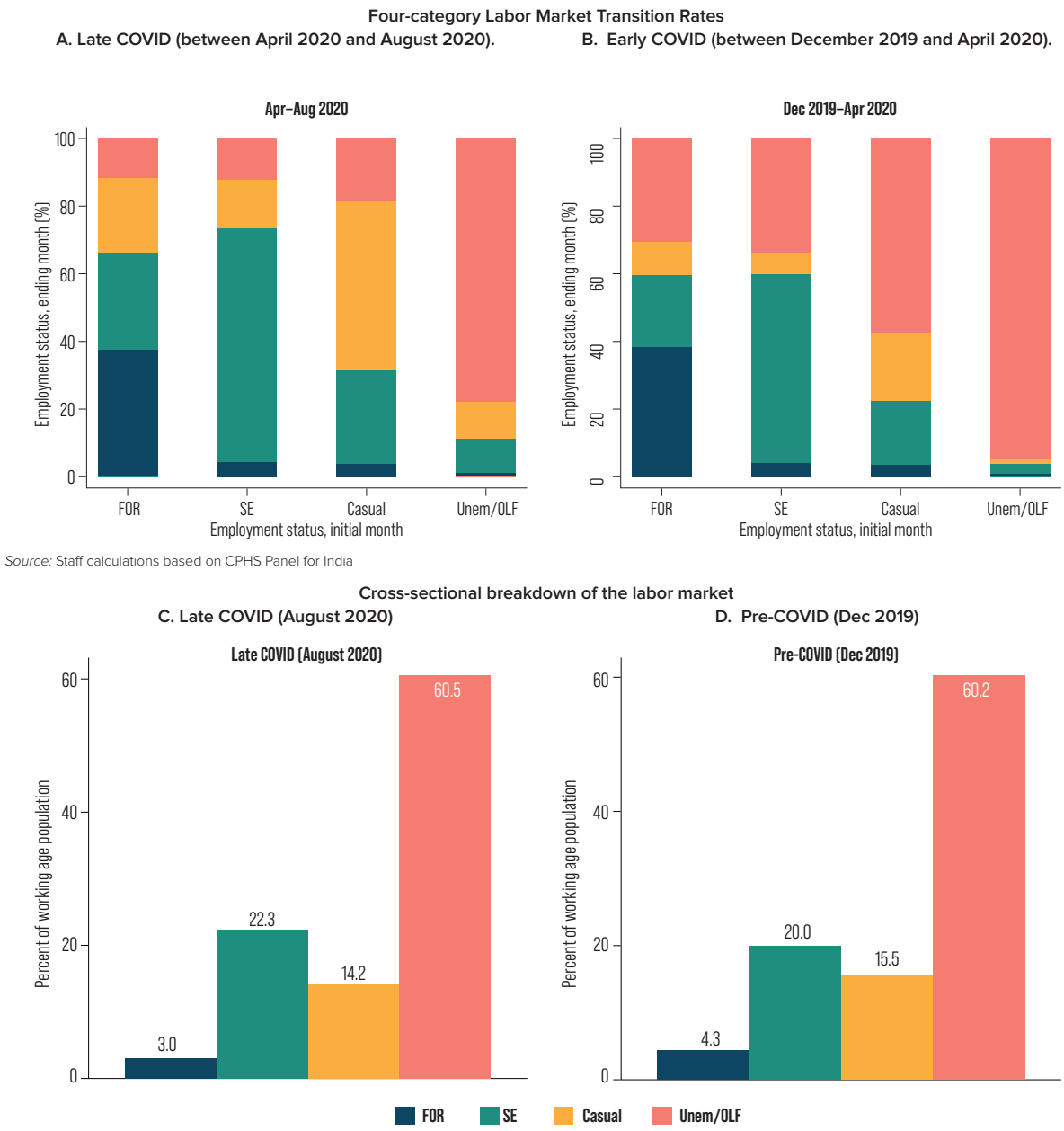


Source: Staff calculations based on CPHS Panel for India

April-May 2020 – in the thick of the national lockdown– and then started to recover. Labor market transition rates between January 2020 and May 2020 are similar to those between December 2019 and April 2020 period, indicating that the crisis of unemployment was still peaking in May 2020. But transition tables for more recent months look different.

The most recent transition table possible given CPHS data availability as of writing this report – that between the months of April 2020 and August 2020 – reveals how much the growth in unemployment has slowed down since early COVID-19 days. Among those who were employed in April 2020, over 85 percent were still employed in August 2020 (Figure 3.4, Panel A), a much higher employment retention rate than that seen between December 2019 and April 2020 (Figure 3.4, Panel B). Moreover, a larger percentage of unemployed/OLF moved back into employment. More than 20 percent of those unemployed/OLF as of April

Figure 3.6: Six months into the COVID crisis, self-employment was the most stable labor market category



Source: Staff calculations based on CPHS Panel for India

Source: Staff calculations based on CPHS Panel for India

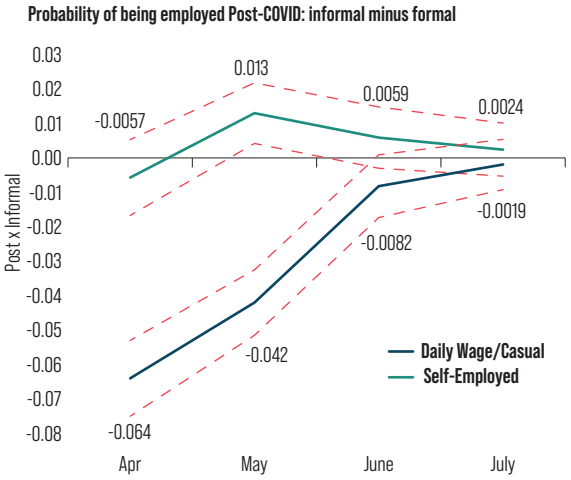
2020 were employed by August 2020, an unusually high rate of entry into employment.

Nonetheless, the exodus from the formal sector has not abated. Among those still holding formal sector jobs as of April 2020, 51 percent were in informal employment by August 2020 (Figure 3.5, Panel A). As a result, the April 2020 to August 2020 transition rate out of the formal sector is nearly as high as it was in the early COVID phase (Figure 3.5, Panel B). The main difference is that the composition of the outflow from the formal sector has tilted away from unemployment/OLF and towards self-employment. In addition, while the rate of transition out of unemployment/OLF and into employment is much higher than it was in the early phase of COVID-19, most of this outflow is headed into the informal sector.

Transitions into self-employment remain at unusually high levels. Nearly 30 percent of those still in formal jobs in April 2020 were self-employed in August 2020, while another 22 percent were in informal wage jobs (Figure 3.6, Panel A). Within the informal sector, the flow from informal wage jobs into self-employment remains at a much higher rate than that in the reverse direction. Overall, self-employment is the only "stable" category in the labor market.

As a result of this unprecedented pattern of employment transitions, six months into the COVID crisis, the overall composition of employment in India has shifted noticeably towards self-employment (Figure 3.6). Consider how the size of each sector, measured in terms of its pre-COVID share in total employment (as of December 2019), has changed: the formal wage sector has shrunk by nearly 30 percent and the informal wage sector by 8 percent, while the self-employed sector has grown by 12 percent. It is also notable that the share of the employed in the total working age population has not changed to the same extent as their composition. The post-COVID situation has evolved from a crisis of unemployment to one of low-quality employment.

Figure 3.7: Informal workers were significantly more vulnerable to loss of employment than formal workers were in the early phase of COVID-19



Note: Estimates based on differences-in-differences panel regressions, with industry-wave and district wave fixed effects included among the control variables. The green line shows the point estimates for the differential changes in employment probabilities post-COVID for those who were self-employed pre-COVID, compared to those in formal wage jobs pre-COVID. Each point estimate corresponds to a specific post-COVID month. The dotted lines depict the 95 percent confidence interval for the estimate. The blue line shows the corresponding estimates for those in informal wage jobs pre-COVID. The estimate for each month (of the year 2020) corresponds to a panel regression using data on the cohort of CPHS sample households that were revisited in that month. For example, the April estimates correspond to a regression on a panel of household surveyed in December 2019 and revisited in April 2019, while the estimate for May corresponds to a regression on a panel of household surveyed in January 2019 and May 2020. See Appendix 3.A for a technical description and regression tables.
Source: Based on staff calculations using CPHS panel data on India.

Informal wage workers were the most vulnerable to a loss of employment in the early phase of COVID-19 in India

The CPHS panel data suggest that informal workers – in particular, informal wage workers — were significantly more vulnerable to loss of employment than formal workers were during the early phase of COVID-19. As discussed, the rates of transition into unemployment/OLF in the national lockdown phase (April-May 2020) were higher among informal workers. This differential tendency for job loss is explored further in regressions that compare changes in the probability of employment post-COVID across those initially in formal and informal jobs. The regressions control for differential changes in the probability of employment post-COVID across industry, occupation and location. These controls matter because the formal and informal sectors have different industry, occupation and location profiles. For example, the informal sector is more concentrated in sectors such as retail and hospitality, which were hit hard by the lockdown (see model-based estimates, below).

The regressions suggest that informal wage workers were inherently more vulnerable than formal employees to the early COVID-19 employment shock. Within the same industry and location (district), the decrease in the probability of being employed post-COVID, as observed in April 2020, was 6.4 percent points higher among those initially in informal wage jobs, compared to those initially in formal wage jobs (Figure 3.7).[5] In May 2020, this differential reduction in the probability of being employed post-COVID among informal wage workers was 4.2 percentage points. The differential between informal and formal wage workers narrowed down as the COVID crisis evolved, and was statistically not significant in June and July 2020. In contrast to daily wage, casual, and temporary workers, self-employed individuals do not show significant vulnerability post-COVID relative to formal workers (Figure 3.7). These patterns are robust to controlling for additional attributes such as occupation, education and caste.

The evidence from the CPHS suggests that labor markets remain in turmoil

Even though headline employment numbers may be recovering, South Asian economies are not back to normal. In particular, the fact that wage workers, including formal wage workers, have moved into self-employment at an unprecedented rate reveals that a complex chain of adverse effects on labor demand by firms is still in play. Besides precipitating the lockdowns, the COVID-19 crisis has

5 Estimates based on differences-in-differences panel regressions using CPHS data with industry-wave and district wave fixed effects included among the control variables. See Appendix 3.A for a technical description and regression tables.

also hurt firms' output demand, input supply, labor supply and liquidity, while adding to their uncertainty (World Bank, 2020a).

These channels of impact may have differed across industries, locations and over time. For example, firms more dependent on imported inputs from China were likely more vulnerable to external supply-chain disruption in the early stage of the crisis, while those exporting to OECD countries were more vulnerable to external demand shocks later on. In contrast, prior research would suggest that firms producing durables are more exposed to the ongoing domestic demand slump (Eaton *et al.* 2016; Levchenko *et al.* 2010). Small, informal firms are particularly vulnerable to shocks as they tend to have less cash on hand and more limited access to credit. For example, the "COVID-19 Business Pulse Surveys", conducted recently in 46 countries by the World Bank and the International Finance Corporation, find that on average micro, small and medium-sized firms are significantly more likely than large-sized firms to fall into arrears in the next six months (Apedo-Amah, M.C. *et al.*, 2020).

The resilience of self-employment points to how individuals may have attempted to cushion the immediate shock from COVID-19 in the absence of access to adequate safety nets. Potentially, several factors make self-employment a fallback option for those who have lost jobs. Such microenterprise activity is less embedded in formal credit markets and in complex supply chains than large formal firms, and hence may be less exposed to credit and supply chain shocks emanating from COVID-19. Operating on a day-to-day basis with basic technologies and skills, such businesses may be more flexible in responding to demand shocks. There are also fewer entry barriers to microenterprise activity.

However, it is unclear if such marginal, necessity-borne microenterprise activity can survive for long in the event of a prolonged downturn, or form the basis of a thriving recovery. As discussed later in this chapter, the vast majority of microenterprises in South Asia already had very low value added per worker in pre-COVID times. The downturn in demand in the current post-COVID environment may have reduced the income of the self-employed to even lower levels.

Another potential explanation of the resilience of microenterprises in the early phase of COVID-19 is that they were less likely to comply with mandated lockdowns and related measures, whether out of desperation or due to a lack of proper information. Understanding this channel better could help design policies that make the recovery from COVID more robust by instilling better health and safety measures in firms.

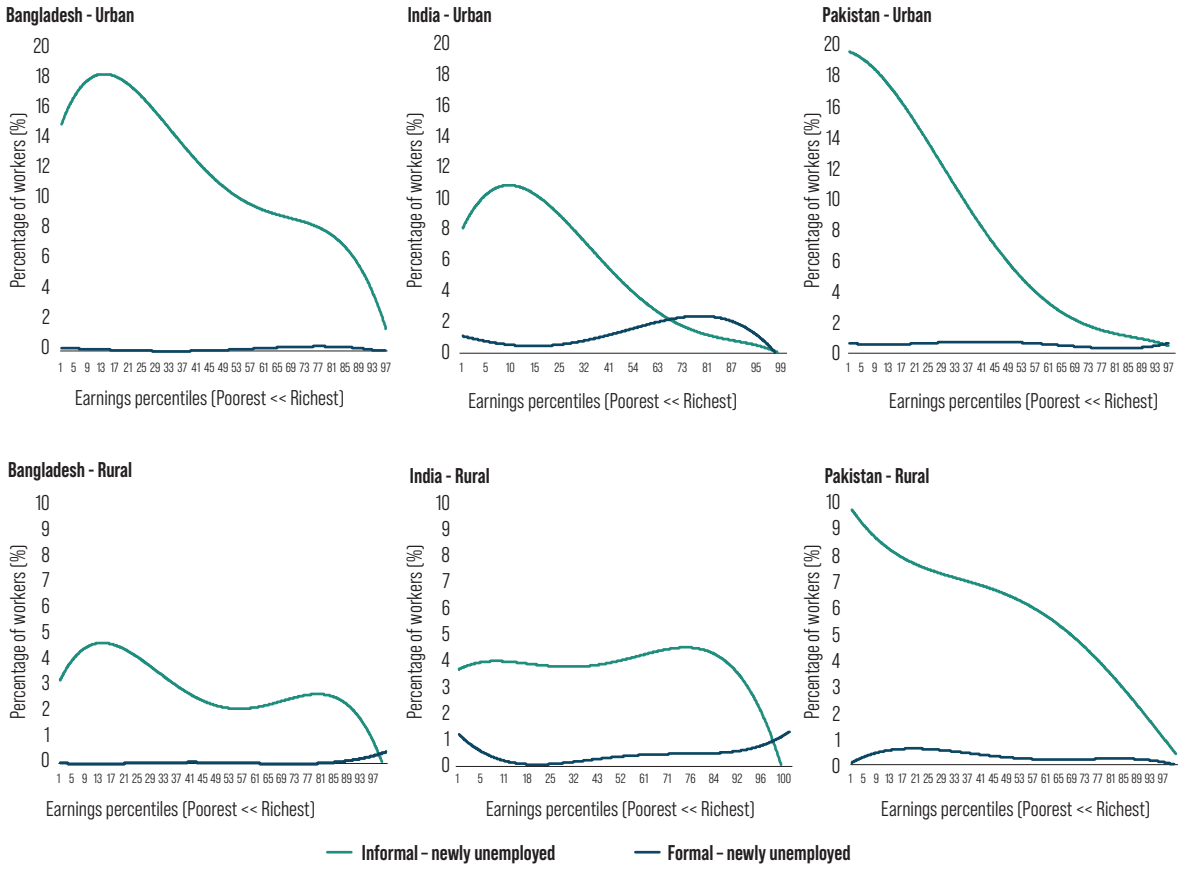
Model simulations indicate that COVID-19 has particularly harmed informal sector workers

Complementing the still limited real-time data on household incomes (see Box 3.2 for an example of almost instantaneous data collection for some specific subregions in Bangladesh), this section analyzes the impact of COVID-19 with a macro-micro simulation model that calculates the impact based on the characteristics of households before the pandemic and changes in aggregate employment and prices during the pandemic. The 'macro' sectoral employment losses are mapped to specific individuals using a Probit model, and the ensuing losses of labor income are then reflected in losses of welfare at the household level (see Box 3.1 for a more detailed description).

In the three countries we examine, simulations show that informal workers are over-represented among those likely to face job losses, especially in urban areas (top three graphs in Figure 3.8). Figure 3.8 shows, for each percentile of the earnings distribution – i.e. for each one percent of the population earning an income ordered from the lowest to the highest group – the share of people likely to be newly unemployed and belonging to either the informal sector (green line) or the formal sector (dark blue line). While informal employment is 74 percent in urban India, the share among those newly unemployed by the shock is 83 percent. The unemployment shock affects informal workers across the full range of the earnings distribution, but the negative slope of the incidence curves indicates that workers most affected were located, before the job loss, at the low or middle percentiles of the distribution and high earners are relatively insulated from the shock.

The distributional impact is more varied across countries in rural areas (bottom panel of Figure 3.8). Across the three countries, rural informality is rife due to the large agricultural sector,

Figure 3.8: Newly unemployed are mainly urban and informal workers



Note: The lines in each panel represents the ratios of new unemployed persons to total number of workers in each percentile. The lines are obtained using a polynomial regression of the actual ratios.
Source: Authors calculations using data from Bangladesh (LFS 2015-16, left), India (PLFS 2017-18, center) and Pakistan (LFS 2017-18, right) and model simulations.

while the services sectors most hit by the crisis are less important. Pakistan is a slight exception, with seemingly a higher incidence of the shock in rural areas. However, this is most likely due to the sample bias that does not capture the agricultural sector when reporting wages (refer to Appendix 3.B).

Urban informal workers are particularly vulnerable because of their sectors of employment. High contact-intensive urban services, like retail, transport, accommodation, food, and tourism services were severely affected by the lockdowns, and on average, 90 percent of workers in these sectors are informal (Figure 3.9). These sectors have some of the highest shares of informal workers (apart from agriculture and household activities--domestic work, subsistence production of goods and services--where the shares of informal workers are higher). Combined, these sectors account for 13 to 20 percent of the working age population and about 20 percent of labor income. While employment losses are clearly concentrated in these most-affected sectors, the overall ripple effects of the crisis are felt in other sectors as well.

The rise in the food prices by more than non-food prices – linked to hoarding and food supply chain disruptions – compounded the deterioration in income distribution owing to the pandemic's impact on informal workers. This relative price change has a regressive impact since food is a large share of total consumption for the poor (as per Engel's Law). A rise in the prices of food relative to non food by 11 percent in India, as estimated by the macro model, thus has a further regressive impact on welfare.

The economic crisis is pushing many people into poverty. The World Bank (2020b) (see also, Lakner et al., 2019) estimates, on the basis of downside scenarios developed in June, that in the whole SAR region, between 49.3 and 56.5 million people will have become poor by the end of 2020 compared to a counterfactual without COVID-19. This impact comprises the new poor, that is individuals pushed into poverty by this crisis, as well as lost reduction in poverty, that is people who would have escaped poverty had growth continued on its trend before the pandemic. The increase in the number of regional new poor will likely be even larger.

BOX 3.1: How to simulate the impact of the COVID-19 crisis

The ex-ante assessment of the impact of the pandemic at the household level is carried out using a macro-micro simulation model (see Pereira da Silva *et al.*, 2008; and Bourguignon and Bussolo 2013 for a survey of these methods). The objective is to assess how the crisis has affected the welfare of each individual in a specific country. Starting with the micro model, real income *per capita* $\left(\frac{Y_h}{P_h}\right)$ at the household level can be used as the welfare indicator (Wh), and household *per capita* income (Yh) can be defined as the sum of household members' labor endowments ($\theta_{h,l}$ where l represents the level of the skill of the worker which is linked to her education and sector-specific experience) rewarded by the market wages (w_l), and an exogenous income (Y_h^0) as follows:

$$Y_h = \sum_l \theta_{h,l} w_l + Y_h^0$$

The household-specific price index is for simplicity assumed to depend on the economy-wide prices of food (p_f) and non-food (p_{nf}) items, weighted by the household consumption shares ($\varphi_{h,f}$) of these consumption items:

$$P_h = p_f \varphi_{h,f} + p_{nf}(1 - \varphi_{h,f})$$

For each household, welfare effects can be approximated by the following expression:

$$dW_h = \frac{\partial W_h}{\partial Y_h}\left\{\frac{\partial Y_h}{\partial \theta_{h,l}} d\theta_{h,l} + \frac{\partial Y_h}{\partial w_l} dw_l\right\} + \frac{\partial W_h}{\partial P_h} dP_h$$

This last equation determines changes in welfare as changes in household income and the household-specific price index. In the simulations, the budget shares $\varphi_{h,f}$ are kept fixed, and thus changes in the household price index depend only on changes of the food and nonfood economy-wide price indexes. Changes in household income are solely determined by changes in labor incomes and these, in turn, are allowed to vary as a result of changes of workers endowments $(d\theta_{h,l})$ or, in the short term, by the intensity of the use of the endowment (a worker could lose her job), and the returns to labor in the different labor market segments (dw_l). A new household welfare aggregate is computed by adding the exogenous household income to the sum of simulated labor incomes for each member of the household (given her skill endowments and sector of employment) and deflating the new total household income by the new household-specific price index.

In terms of welfare distribution, the initial distribution for 'year' t – representing the equilibrium before the COVID-19 shock hits the economy – for a population of N households can be written as:

$$D_t = \{W_{1,t} \ldots W_{N,t}\} = \{f(Y_{1,t}, P_{1,t}) \ldots f(Y_{N,t}, P_{N,t})\} \quad (1)$$

The microsimulation consists of using new values for $\theta_{h,l}$, w_l, p_f and p_{nf}, that represent the situation after the COVID has hit the economy, and equation (1) to compute new households' real incomes and to generate a simulated new distribution:

$$\hat{D}_t = \{\hat{W}_{1,t} \ldots \hat{W}_{N,t}\} = \{f(\hat{Y}_{1,t}, \hat{P}_{1,t}) \ldots f(\hat{Y}_{N,t}, \hat{P}_{N,t})\} \quad (1')$$

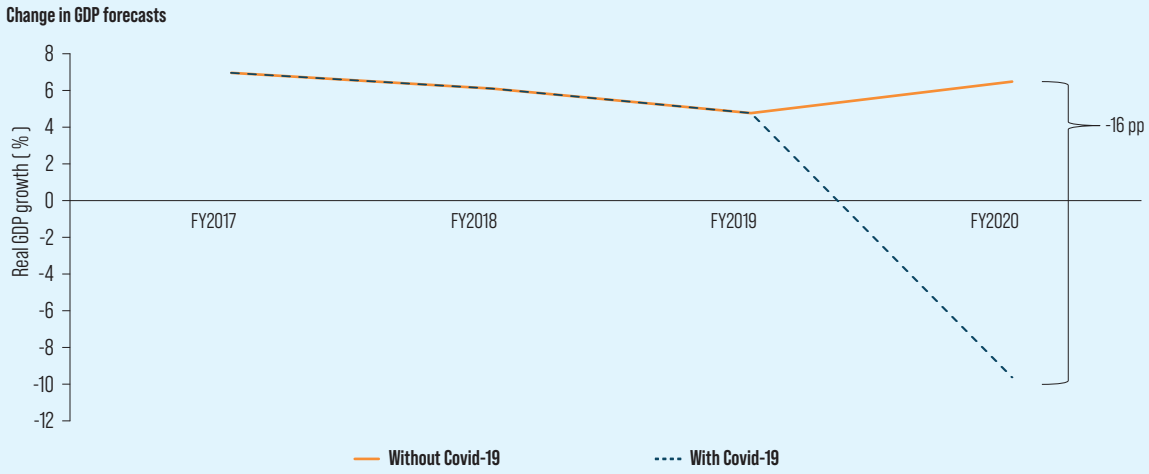
The macro model is used to compute the new endowments or, since these do not change in the short term, their aggregate intensity of use (employment and unemployment levels), and the other prices. The macro model used here is a global Computable General Equilibrium (CGE) model which includes all the individual countries in the South Asia region (with the exception of Bhutan and Maldives) and the other aggregated regional economies: Sub-Saharan Africa, Middle East and North Africa, Europe and Central Asia, Latin America and the Caribbean, East Asia and the Pacific, and the high-income countries. The model is implemented in comparative statics mode, and its main features (full documentation for the model is available in van der Mensbrugghe, 2013) are as follows. In each country, production is modeled using nested CES (Constant Elasticity of Substitution) functions that combine at various levels, with different substitution elasticities, intermediates and primary factors. Households' consumption demand is derived from maximization of

household utility, whose argument is a composite good of imported and domestically produced varieties. Export supply is modeled as a Constant Elasticity of Transformation (CET) function. Producers decide to allocate their output to domestic or foreign markets responding to relative prices.

The labor market specification is an important driver of the distributional results, so its specification calls for some clarification. Two types of labor are distinguished: skilled and unskilled. These categories are considered imperfectly substitutable inputs in the production process. Moreover, factor market segmentation is assumed: workers are not mobile across sectors. The labor market segmentation by skill level is a standard assumption, while the further segmentation by sectors is adopted to capture the very short-term impact, when workers cannot move freely across sectors. Wages are fixed in contracting sectors and are rising in expanding sectors, thus the adjustment to the shock is in quantities (unemployment) for the contracting sectors and in prices for the expanding ones.

The COVID shock in the CGE model is simulated as the cumulative effect of seven separate shocks: i) all regions outside of South Asia are hit by a reduction of total factor productivity; ii) global fossil fuel prices drop by 10 percent and the global price of ores drops by 3 percent; iii) the cost of international trade rises; iv) the cost of tourism-related services is increased by 50 percent; v) South Asia countries are hit by a TFP reduction; vi) demand for services requiring face-to-face transactions is reduced by 15 percent and preferences for other goods and services are increased proportionately; and vii) domestic food supply chains are hit by disruptions. The first four represent the external shocks, and the next three represent the domestic shock. Note that these shocks are calibrated so that the GDP growth impacts (endogenously calculated in the model) are the same as those described in Chapter 2. For example, in the case of India, as shown in Figure 1, the comparison of the forecasts of GDP growth with COVID versus a counterfactual growth without COVID indicates an overall shock of 16 percent of GDP.

Figure 1: The growth loss due to COVID is significant



Source: Chapter 2 in this report

The general equilibrium results from these simulations and, specifically, the overall reduction of income, unemployment by sector, and the food and non-food prices are used to shift the distribution *Dt* as described above.

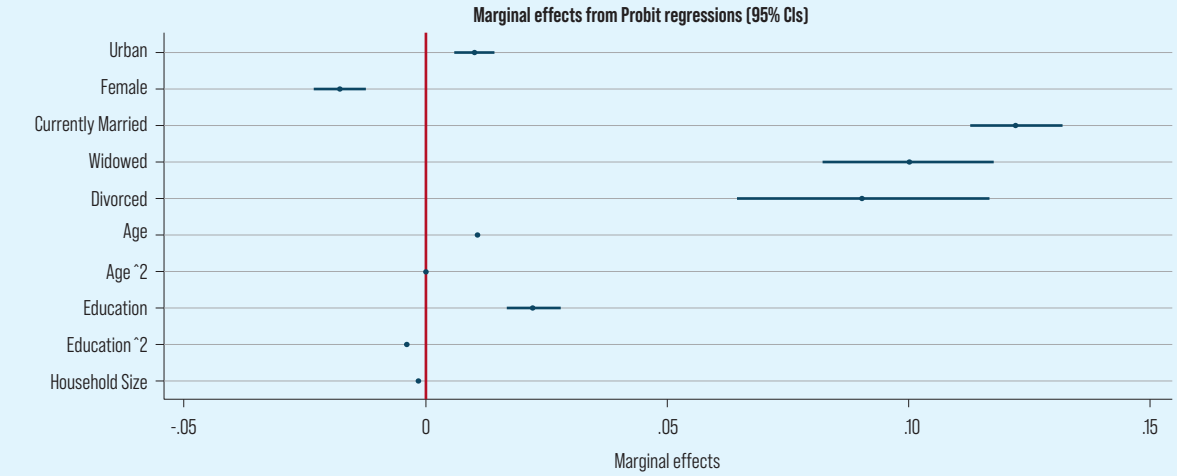
The sectoral unemployment results are mapped to specific individuals by using a Probit model estimated with household survey data. This probabilistic model uses characteristics like gender, age, education and household composition to predict an individual's ties to the labor market, i.e. her employment status. Figure 2 below shows the estimation results for the case of India, highlighting clearly that, for example, higher-educated workers are more likely to be employed or, equivalently, are less likely to lose their job.[1] In other words, many of the newly unemployed people will be the less educated workers. In the simulations, workers switch between employment and unemployment until the CGE-estimated unemployment levels of the

1 A validation of these estimates is provided by comparing them with those estimated from actual transitions from employment to unemployment in ex-post data (from the CMIE survey). The coefficients of predictors – gender, age, education and household characteristics – have the same signs and similar magnitudes. Geographic location is an exception; whereas individuals in urban India are more likely to be employed according to the PLFS 2017-18 sample, the direction is reversed in CMIE data for April 2020. This is coherent with the sectoral impact of the pandemic.

COVID scenario are achieved. Newly unemployed lose their labor income but, unless all other members of the household are also unemployed, their final *per capita* income is not equal to zero.

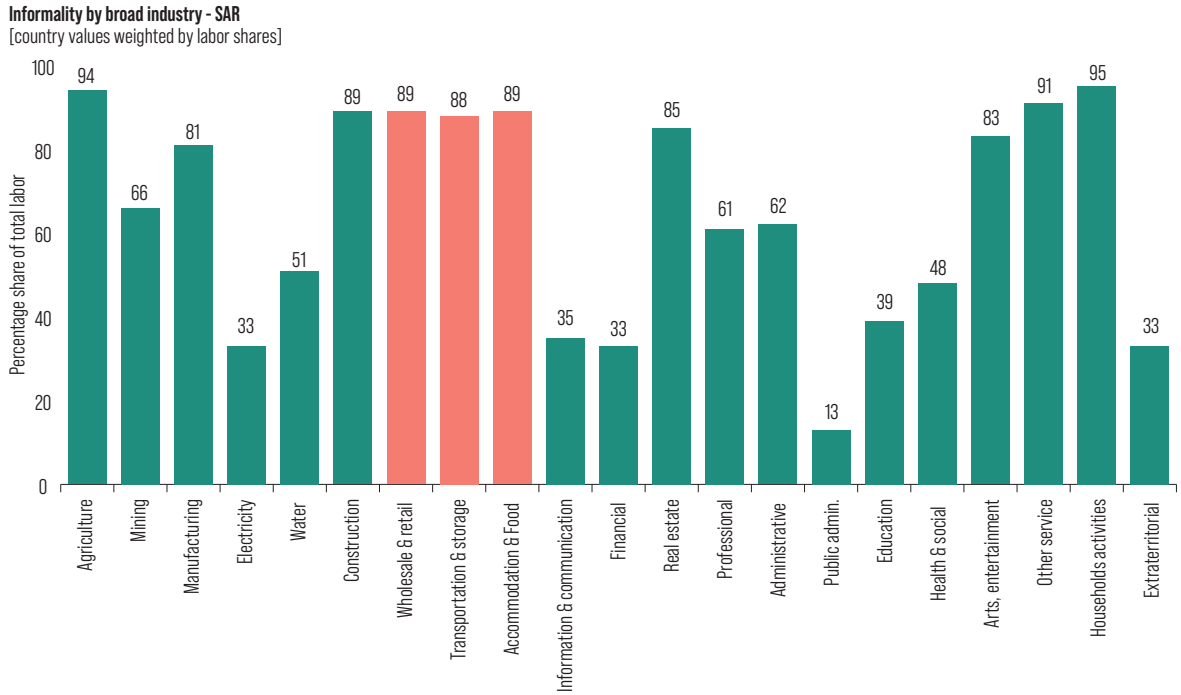
At this point, the impact of the COVID shock can be assessed by comparing the standard inequality and poverty indicators of the initial distribution (D_t) against those of the counterfactual distribution ($\widehat{D}_t$).

Figure 2: Correlates of employment status



Source: Authors' calculations using India's PLFS (2017-18)

Figure 3.9: High-intensity, face-contact services employ informal workers in high proportions

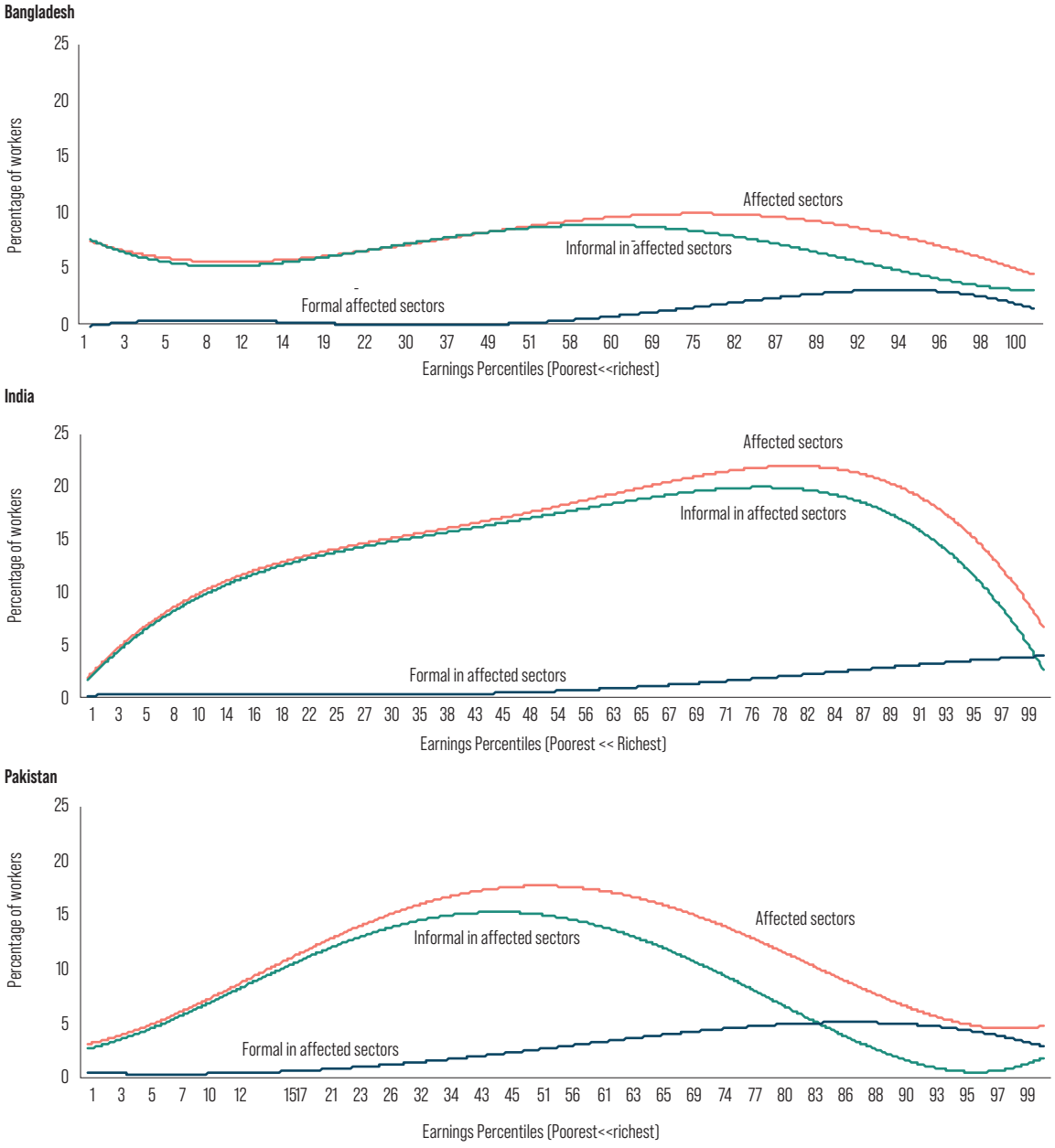


Note: Aggregates shown in the graph refer to the weighted average of four countries – Bangladesh, India, Pakistan and Sri Lanka.
Source: Bangladesh LFS (2017), India PLFS (2017-18), Pakistan LFS (2017), Sri Lanka LFS (2015).

As explained in Chapter 2 of this publication, the growth outlook has further deteriorated in some countries, even compared to the June downside scenario. Moreover, the estimate does not account for the increases in inequality described in this chapter. So, the region should anticipate a massive increase in the number of poor, while the income of many of the already poor falls further below the poverty line.

The pandemic has had a severe impact on the middle of the income distribution as well. Workers in high-intensity face-contact sectors tend to live in urban households with members employed in

Figure 3.10: Informal workers are found across the whole distribution of earnings

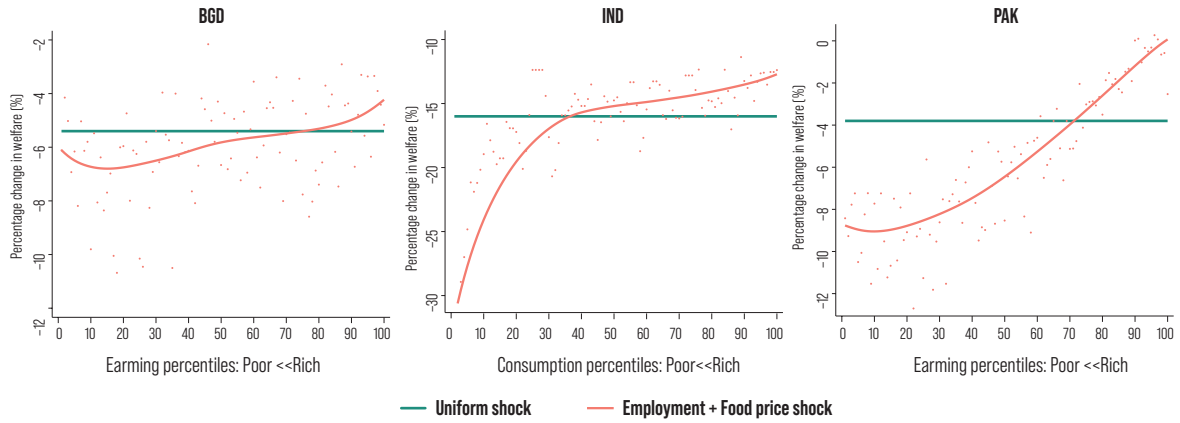


Source: Bangladesh (LFS 2015-16, left); India (PLFS 2017-18, center); Pakistan (LFS 2017-18, right)

different sectors, and thus they are not all at the bottom of the distribution, where mainly rural agriculture-dependent households are found. Informal workers in these most affected sectors can be found across the full distribution of earnings (see Figure 3.10 for Bangladesh, India and Pakistan). Thus, the workers with the greatest probability of suffering unemployment and large losses in income have varied income levels; large losses are not restricted to the poor. Figure 3.10 shows, for each percentile of the earnings distribution – i.e. for each one percent of the population earning an income ordered from the lowest to the highest group – the share of people working in the sectors most affected by the pandemic (the red line), and the share of workers who are informal and working in these sectors (green line) or formal and working in these sectors (blue line). Almost all the workers in the bottom 50 percent of the earnings distribution in Bangladesh and India are informal. It is only for the higher parts of the distribution that the shares of formal workers in these sectors become significant.

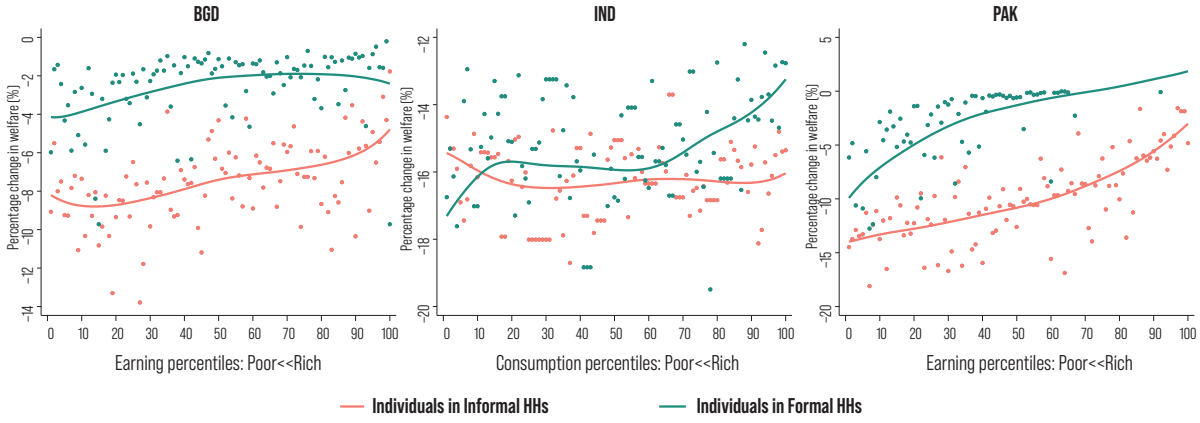
The simulation model calculates that the fall in employment would have reduced consumption *per capita* in real terms by around 5 to 16 percent in the three countries in line with the difference in GDP

Figure 3.11: Welfare losses of anonymous incidence curves are concentrated at the bottom



Note 1: The change in mean welfare (the average consumption *per capita* in India, and the average labor earnings *per capita* in Bangladesh and Pakistan) is the same, within each country, across the two lines presented in the graphs above. In the case of the straight line, the uniform shock, the welfare variable decreases by the same amount for all individuals, and this is the same decrease of the mean. The red line representing the employment and food price shocks emphasizes the distributional impact, as the average impact is the same as the straight line.
Note 2: The red lines are produced with the LOWESS (Locally Weighted Scatterplot Smoothing) approach. This performs locally weighted regressions to generate a smoothed function. As it is based on many iterative model fits and not just one, it does not yield a unique confidence interval; the dots which represents the actual points show the dispersion around the line.
Source: Authors calculations using data from Bangladesh (LFS 2015-16, left), India (PLFS 2017-18, center) and Pakistan (LFS 2017-18, right) and model simulations.

Figure 3.12: Non-anonymous incidence of welfare losses



Note: As for Figure 3.11, the lines are produced with the LOWESS approach.
Source: Authors calculations using data from Bangladesh (LFS 2015-16, left), India (PLFS 2017-18, center) and Pakistan (LFS 2017-18, right) and model simulations.

growth rates between the scenario with COVID-19 and that without (refer to Box 3.1). This loss, if it were affecting every one equally would be represented by a straight line, as in Figure 3.11. As can be seen, however, the poorer income groups in India, Bangladesh and Pakistan suffer a greater fall in *per capita* consumption than the richer income groups do owing to the rise in unemployment. Similarly, in the three countries the rise in food prices hurts the poor most.

The impression given by Figure 3.11, that the impact of the pandemic on the poorest is greater than the impact on households in the middle percentiles, is slightly misleading. Figure 3.11 compares the *per capita* consumption of each percentile before and after the shock, irrespective of the composition (or identity) of the households in the percentiles, which is common practice in analyzing survey data.[6] However, Figure 3.11 does not account for the fact that households move ranks, i.e. move across percentiles in the distribution. If instead one calculates the change in *per capita* consumption of the households based on their original percentile, the percentile they belonged to *before the shock*, a different picture emerges (see Figure 3.12, which is based on the same information as Figure 3.11).

6 The same approach is used in the calculation of the World Bank's shared prosperity indicator.

Workers and households in each percentile are not identical and are not equally hit by the employment shock. Within a specific percentile, some workers lose their jobs and consequently, all or a large share of their household incomes. These losses shift the ranking of the incomes of these workers and place them, after the shock, in lower percentiles. For example, in the case of India, almost 7 percent of workers who were, before the shock, in percentiles 31 to 35 sustain substantial income losses of about 35 percent. These large losses push these workers well below the average incomes of the poorest 10 percent, who also experience losses, but not as large and thus move up in the income (or consumption) ranks. This re-ranking results in a shift in the composition of the percentiles. In the case of the anonymous growth incidence curve of Figure 3.11, the lowest percentiles contain the households who experienced the largest losses, in this scenario households with members who have lost employment, no matter where they were initially. The ensuing shift in composition of the percentiles tilt the line so that its upward slope appears steeper compared with the non-anonymous curves in Figure 3.12. This is why the impact depicted in the anonymous incidence curve appears more regressive. Both results are valid, but in the anonymous case the concern is on what happens to the poorest, no matter who is at the bottom; in the non-anonymous case, the focus is to consider how each household is affected conditional on its initial economic position.

Figure 3.12 also shows that informal workers, no matter at what level of income, suffer larger losses than formal workers, apart for the bottom 10 percent in India (but, given the dispersion of the dots around the lines, the difference between formal and informal individuals is not statistically significant at the bottom of the distribution).

Indeed, preliminary survey data from India and Bangladesh confirm the view that the economic impact of the pandemic was more likely to be reported by households in both the bottom and the middle of the income distribution. For India, Bertrand, Krishnan, and Schofield (2020) using CMIE data find that overall 84 percent of households report suffering income losses. However, the reporting of losses is higher for the second and third quintiles of the distribution, where more than 90 percent of household have experienced declines in income. The case of Bangladesh is described in Box 3.2.

The informal sector cannot (especially in the short run) expect huge benefits from key aspects of the digital economy

Three important innovations of the digital economy, teleworking, the "gig economy" and online platforms, are likely to benefit higher-income workers, most of them in the formal sector, much more than informal workers.

Teleworking technology has disproportionally helped formal workers, a divide that has become particularly stark in the time of COVID-19. Only specific occupations are amenable to teleworking given inherent task characteristics (Dingel and Neiman, 2020). For example, a computer programmer can work from home, but a construction worker and domestic helper cannot. As illustrated in the case of India, the share of telework-friendly occupations is significant only among workers located in the upper reaches of the earnings distribution in South Asia (Figure 3.13). In general, fewer than 10 percent of workers at the 70th and lower percentiles of the earnings distribution can telework. Since most of these are informal, this implies that only a small share of informal workers has access to teleworking possibilities.

Given the disparities in access to digital technology, the percentage of informal workers who are actually able to work from home in South Asia is likely to be much lower than the potential upper bounds shown in Figure 3.13. Even in occupations inherently amenable to telework, the actual possibility of teleworking depends on the availability of complementary factors (such as stable internet connections) that may not be available at lower incomes.

The online "gig economy" does offer considerable potential for informal jobs, but almost exclusively for educated workers. Employers worldwide are increasingly using online labor platforms to hire "online gig workers" for specific projects on hourly rates or piece rates. Millions of workers are thought to participate in online gig works (Kuek *et al.*, 2015), with the world's two largest online platforms being visited by about 200 and 75 million unique individuals per month, respectively (Kassi and Lehdonvirta, 2018).

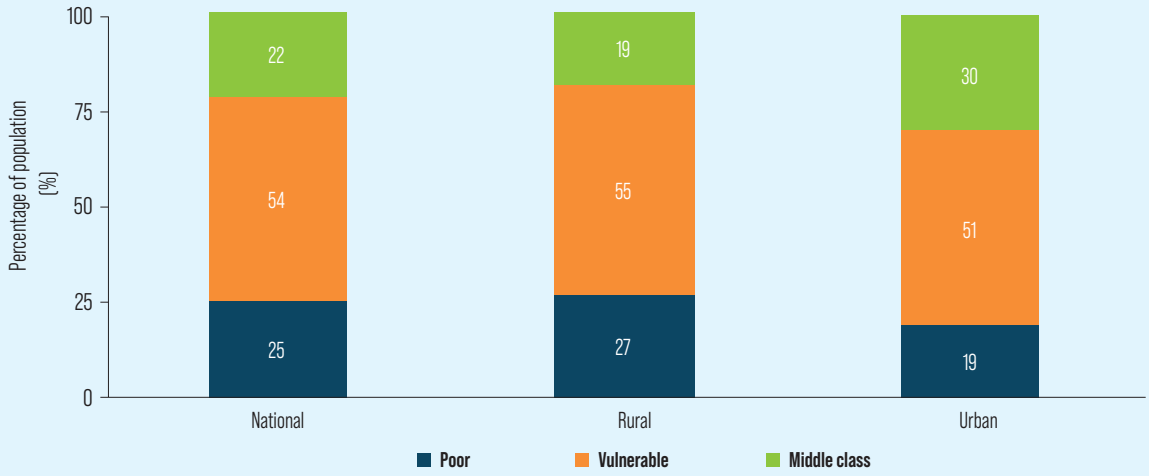
While online gig work can offer workers more flexibility and higher returns by reducing job search

BOX 3.2: Early insights from Bangladesh - Informal workers and women are losing livelihoods, and considerable uncertainty remains *

Panel data from Bangladesh provides early insights into the evolving labor market impacts of the COVID-19 crisis. These data are representative of some parts of the country which are particularly vulnerable to the crisis because of their density, for which baselines were collected before COVID. Follow up phone monitoring surveys were implemented in Dhaka, Chittagong City Corporations (conducted in June-July, 2020) and Cox's Bazaar district (conducted in April-May 2020).

Labor markets are a key channel through which welfare is affected, as labor incomes comprise more than 80 percent of household income for the poorest 40 percent of households (Hill and Genoni, 2019). A large share of Bangladeshi workers is engaged in sectors directly impacted by COVID-19. Compounded with pre-existing vulnerabilities and the absence of formal safety nets, households tend to manage income shocks with their own resources. According to the HIES 2016/17, about 25 percent of the population were living in poverty and another 54 percent could be considered vulnerable, as they had consumption levels very close to the poverty line (between the official upper poverty line and twice the line, refer to Figure 1 below).

Figure 1: Poverty and vulnerability by area (% of the population)



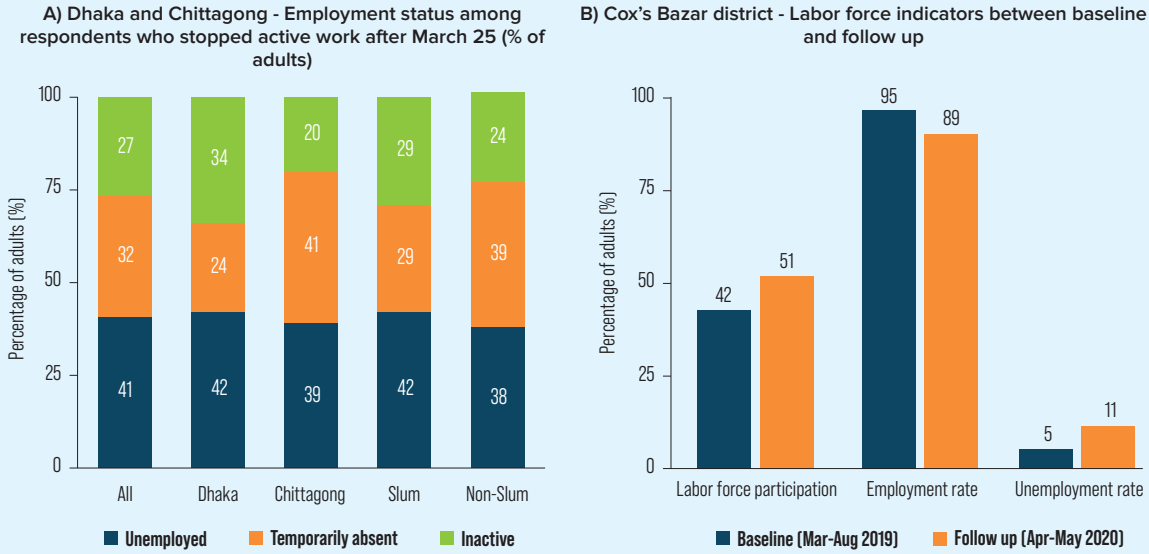
Source: Authors' calculations using HIES 2016/17.

Early employment impacts, suggested by the rapid monitoring surveys, are large in terms of jobs losses, absenteeism, and reduced earnings, in a context of high uncertainty about jobs prospects. In poor and slum areas of Dhaka and Chittagong CCs, 23 percent of adults had stopped work between March 25, when the official COVID-19 lockdown was announced, and the time of the interview. Figure 2 (Panel A, left) shows that group of respondents that stopped actively working is composed of people expecting to resume work (32 percent searching for a new job (41 percent), or exiting the labor force (27 percent).

Compared to Dhaka and Chittagong, Cox's Bazar district is less urbanized, with its urban areas being located relatively far from concentrations of recently displaced Rohingya. Although close to 90 percent of the Bangladeshi living in Cox's Bazar reported being employed during the lockdown (Figure 2, Panel B, right), these employment rates mask high rates of temporary absence from work. Almost 2 out of 3 adults who reported being employed were in fact not actively working in the 7 days before the survey. In contrast, during the baseline period (March to August 2019), temporary absence from work among the employed was less than 1 percent.

Given the informal nature of jobs held by the majority of active and temporarily absent workers who report themselves as being employed, it is difficult to predict how fully this employment will translate into active jobs in the medium term. Reported income losses were widespread across all three areas, among those who retained employment. Monthly salaried wage workers in Cox's Bazar have been relatively protected in terms of income losses, while daily and weekly wage laborers faced much higher losses in income.

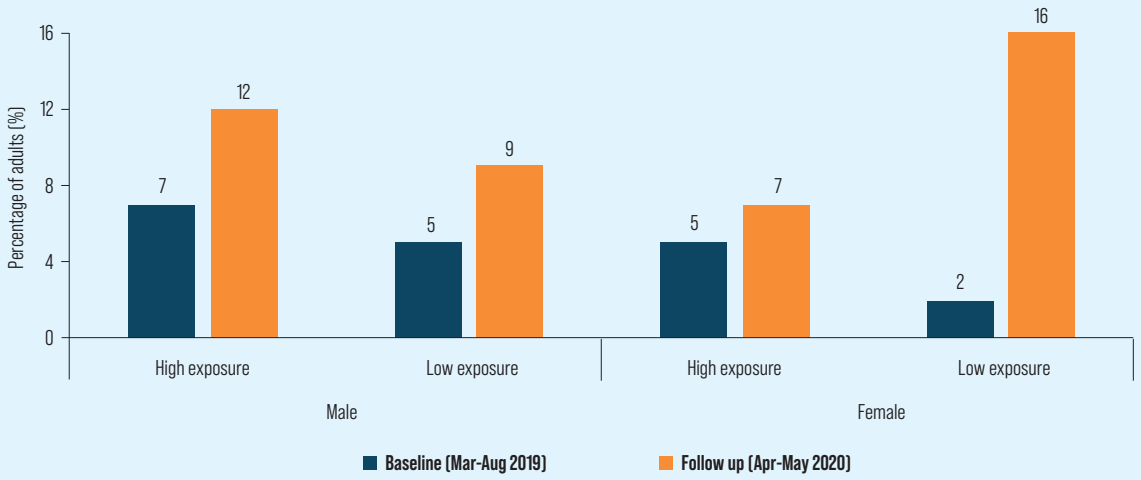
Figure 2: Employment indicators from Dhaka and Chittagong; and Cox's Bazar district



Source: Author's calculations using the DIGNITY (Dhaka low Income area GeNder, Inclusion, and poverTY) survey and CITY (Chittagong low income area Inclusion, and PoverTy) survey follow-up from June-10 July 2020 (left); Cox's Bazar Panel Survey (CBPS) follow-up from Apr-May 2020 (right)

Women have been disproportionately affected due to their overall lower participation in the labor market and their occupations. In Dhaka and Chittagong, women were more likely to leave the labor force, while in Cox's Bazar, women have been more likely to look for work. In Cox's Bazar, although unemployment rates increased across areas and gender, women in more urban, low-exposure areas were significantly more likely to become unemployed (Figure 3). However, this increase was not driven by job losses, but by new labor force entrants seeking jobs. In Dhaka and Chittagong, reductions in wages for salaried and daily workers were significantly higher for women, consistent with their high engagement in the garment sector and housemaid services, both of which have been severely impacted by COVID-19.

Figure 3: Cox's Bazar district - increasing unemployment rates by gender and exposure area

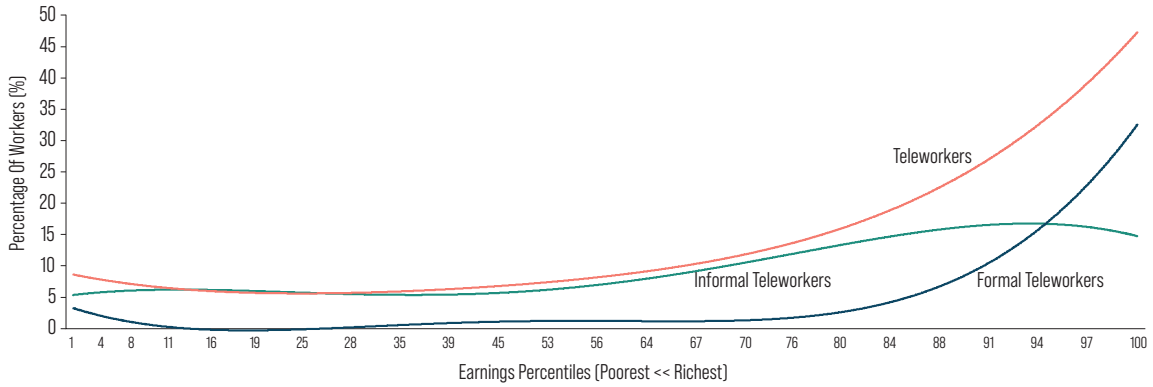


Source: Cox's Bazar Panel Survey (CBPS) follow-up from Apr-May 2020

The high level of job uncertainty in all three survey locations makes it difficult to infer the extent to which this crisis will translate into permanent job losses with longer-term consequences for poverty, food-security, and future earnings. There is some evidence of recovery in employment in ongoing second rounds of the phone surveys, although other dimensions such as earnings and certainty around earnings may take longer to recover, as there remains considerable uncertainty in the country on how widespread the health consequences of the pandemic will be, and whether more stringent social distancing measures will be enforced in the future.

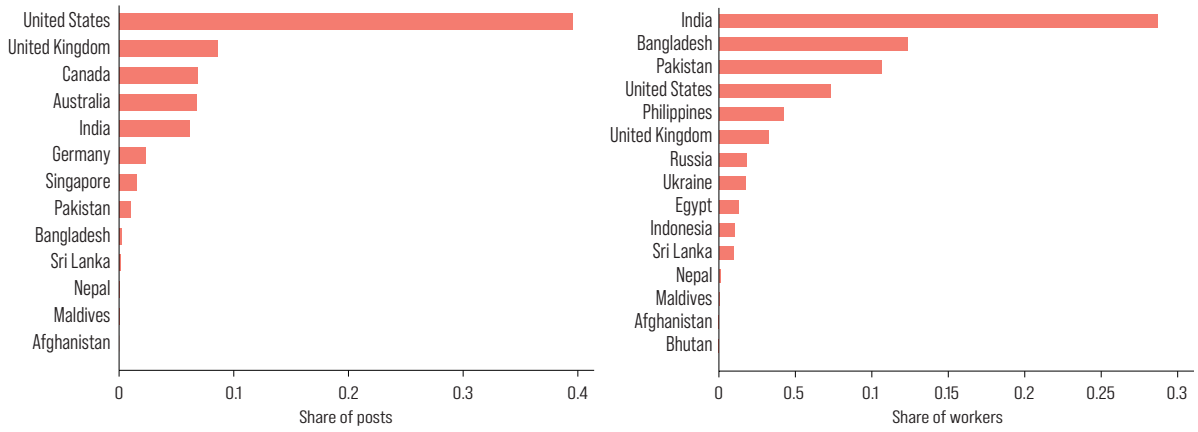
*This box was prepared by Luz Carazo, Maria Eugenia Genoni and Nandini Krishnan, and is based on "Losing Livelihoods: The Labor Market Impacts of COVID-19 in Bangladesh" (forthcoming)

Figure 3.13: Teleworking status by wage percentile for India, formal vs informal



Source: Staff calculation based on India's PLFS 2017-18 and the occupational classification scheme in Dingel and Nieman (2020)

Figure 3.14: decomposition of OLI posts and workers



Note: The charts present OLI Post and Worker indices averaged over 2019 to calculate the share of posts and workers by country.
Source: Staff calculations based on OLI (2019)

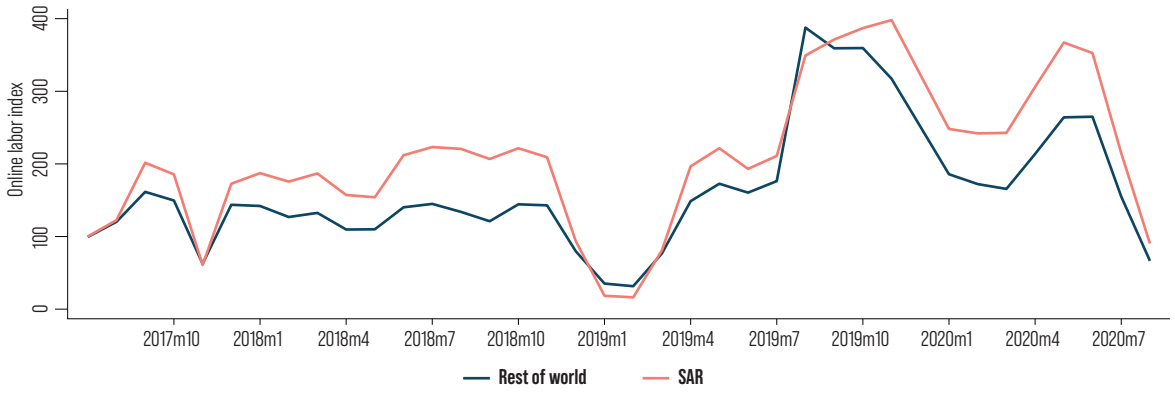
frictions, it also represents a new type of informality. Gig workers do not have formal employment contracts or a long-term work relationship with its associated protections (explicit or implicit). Moreover, gig employers have considerable market power, which could allow them to extract a large share of the surplus generated by gig platforms (Dube *et al.* 2020).

Online labor platforms increasingly allow educated job seekers in South Asia to tap into foreign markets for online tasks. Most job postings originate in high-income countries, while the majority of workers are from South Asia. As shown by data from the Oxford Internet Institute's Online Labor Indices (OLI), the United States (39 percent), the United Kingdoms (8 percent), Canada (7 percent) and Australia (7 percent) account for two thirds of the total tasks posted while India (28 percent), Bangladesh (12 percent), Pakistan (11 percent) and Sri Lanka (1 percent) account for more than half of the workers on the online gig platforms (Figure 3.14).[7] The occupational profile of online work suggests that it requires secondary school or higher education: most of the workers from South Asia (and elsewhere) are engaged in tasks related to software development and technology, creative and multimedia industries, and sales and marketing support.[8]

Online gig platforms may help workers cope with domestic labor demand shocks, but in a limited sense. Since the demand for online gig jobs mainly originates from developed countries, it is largely insulated from purely domestic labor demand shocks in South Asia. This can help domestic

7 Specifically, the OLI Index measures the number of new vacancies (tasks) posted on each day while the OLI Worker Index measures the number of workers active on the five online labor platforms in the 28 days. Counts of vacancies are normalized so that the value in May 2016 equals 100 index points.
8 Based on staff calculations using OLI.

Figure 3.15: OLI worker index, with SAR normalized to 100 in 2017



Source: Staff calculations based on OLI (2019)

workers in periods when domestic labor demand falls. Consistent with this hypothesis, cross-country panel regression analysis shows that country shares in the OLI worker index are countercyclical: that is, negatively related to domestic GDP growth, a proxy for domestic labor demand (see Table 3.C.1 in Appendix 3.C). That said, the global gig economy itself seems to be highly volatile, with the total volume of online labor demand fluctuating significantly even in normal times and declining precipitously post-COVID (Figure 3.15).

Finally, the growth of online platforms holds little promise for informal sector firms. To the extent that informality is the result of limited firm capabilities or human capital (as argued, for example, in Levy 2008 and Maloney 2004), the typical informal firm may have limited scope to benefit from online platforms. Firms that sell online are more likely to be large, export and cater to diverse markets (Kathuria, Grover, Perego, Mattoo, & Banerjee, 2019). Klapper, Miller and Hess (2019) find that digital financial services make it easier for informal firms to register as formal businesses, but the benefits of formalization may be most appealing to the larger informal firms. These firms typically want to increase foreign sales, purchase property and access credit; and even after registering, they may require additional training.

Data from the "Future of Business" (FBS) survey, which are representative of firms with an active Facebook Business Page (FBP)–mostly small and medium-sized— suggest that being on a digital platform does not eliminate key challenges for informal firms, such as expanding their market reach or accessing credit. The rate of informality in the FBS sample is 70 percent, and most firms are in the services sector (Table 3.1). Despite having a digital presence on Facebook, only about a third of the firms engage in international trade and e-commerce. Access to credit is low, but relatively higher in South Asian countries covered by the FBS (Bangladesh, India, Nepal and Pakistan).

Table 3.1: Descriptive characteristics of firms with Facebook Business Page (percent shares)

	ROW	SAR	Total
	(Mean)		
Informal (if < 10 employees)	0.7	0.77	0.7
Engaged in international trade	0.29	0.32	0.29
Any ecommerce engagement	0.38	0.25	0.37
Access to credit	0.23	0.27	0.23
Industry of operation			
Services	0.73	0.65	0.73
Manufacturing	0.14	0.17	0.14
Construction	0.08	0.1	0.08
Agriculture	0.05	0.09	0.05
Total Observations	63784	2018	65802

Source: Future of Business Survey 2019

Informal businesses on Facebook are more likely to report that digital platforms (i.e. FBP) help their businesses, and also tend to use them more often than formal firms (Table 3.2, Columns 1 and 2). They are also more likely to engage in e-commerce (Table 3.2, Column 5). Note, though, that this is a self-selected sample of informal firms that have voluntarily signed up to FBP. It is also notable that some of these tendencies are muted in the South Asia region - only 30 percent of the population use the internet; the global average is 50 percent (World Development Indicators, 2017). Although digital technology may reduce some costs, it does not remove all barriers to informal businesses: informal businesses are still less likely to engage in international trade and have access to credit than formal firms (Table 3.2, Columns 3 and 4).

Table 3.2: Regression results for firms with a Facebook Business Page

	Probit marginal effects				
	Digital platforms help (1)	Frequent FB use for business (2)	Engages in intnl trade (3)	Access to credit (4)	Uses ecommerce (5)
Informal (if < 10 empl.)	0.0686*** (0.00670)	0.0689*** (0.00772)	-0.157*** -0.0069	-0.137*** -0.00727	0.0400*** -0.00841
SAR	-0.0281*** (0.00387)	-0.0839*** (0.00588)	-0.0673*** -0.00201	0.00216 -0.00158	0.0333*** -0.00135
Observations	36117	40306	48001	23450	24235
Pseudo R-squared	0.099	0.0821	0.0307	0.0465	0.0319

* p<0.10, ** p<0.05, *** p<0.010. Standard errors in parentheses are clustered at the country level. All regressions include country effects and control for firm level characteristics like age, gender and industry. Columns 1-2 use data from the survey round of 2019 winter and Column 3-5 use data from 2019 spring.

Understanding key characteristics of the informal sector is critical for policy effectiveness

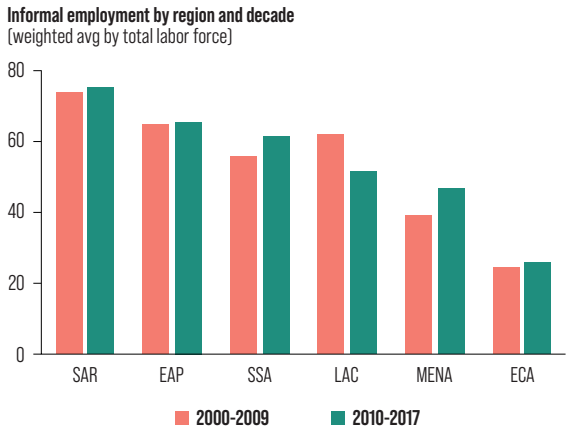
Government should take into account four aspects of the informal sector, including its pervasiveness and low value added per worker, its heterogeneity, the lack of social protection, and the barriers to formalization, in designing policies to support the sector.

Three quarters (75 percent in 2017) of the region's workers are informal, the highest share among global regions (Figure 3.16). Note that a significant share of these informal workers is actually employed in formal firms. For example, in Bangladesh, almost 16 percent of all the workers are informal workers working in formal firms. This share is 10 percent in the case of Pakistan, almost 8 percent in India, and about 3 percent in Sri Lanka. In other words, the labor intensity of formal firms is different if one includes or not the informal workers (for more details see Appendix 3.D).

Being concentrated in relatively labor-intensive and low-skill intensive activities, the informal sector typically has lower low-value added per worker than the formal sector, and its share in total output is much smaller than that in total employment. In India's manufacturing sector, for example, 85 percent of employment is in informal firms, but these jobs account for only 19 percent of the total manufacturing sector revenue (Figure 3.17). The informal sector is critical to employment in South Asia precisely because it is labor intensive and low-skilled intensive.

Targeted policies are necessary to take into account the heterogeneity of the informal sector. Workers

Figure 3.16: Size of the informal economy



Note: Graph excludes agriculture.
Source: WDI.

in larger informal firms add more value *per capita* than those in informal microenterprises (Figure 3.18). Thus, the share of informal firms employing more than 5 persons in the total revenue of the informal manufacturing sector is much larger than their corresponding employment share (Figure 3.17). This heterogeneity within the informal sector reflects variation in capital per worker, skills, technology, scale economies and efficiency across informal firms of different sizes.

Similarly, while informal workers earn less than formal workers on average, there is also significant variation in their income levels. As illustrated in the case of Pakistan and Bangladesh, there is a sizable presence of informal workers at every level of the distribution of earnings among South Asian workers (Figure 3.19). Informal workers dominate the lower half of the income distribution, but they are also found in large numbers in the upper half of the earnings distribution and are present even at its top end.

Figure 3.17: Size-wise breakdown of formal and informal firms in India's manufacturing sector

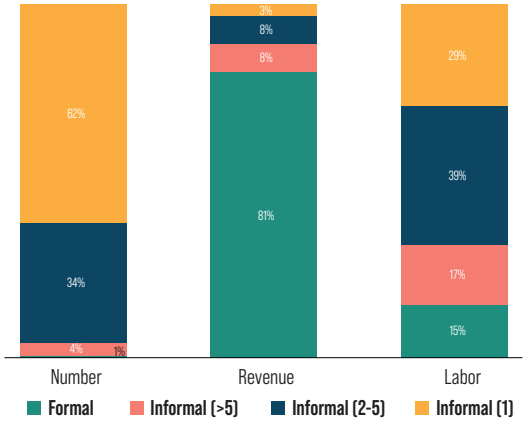
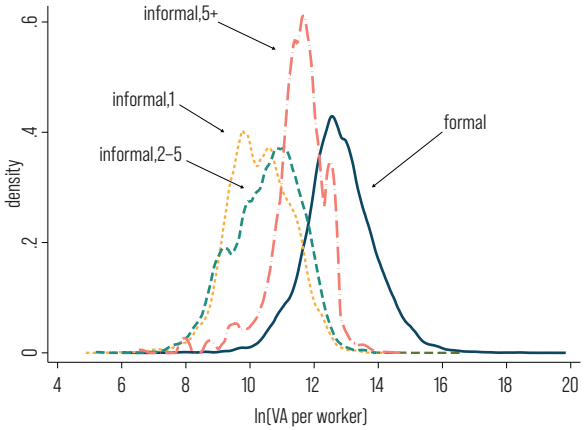
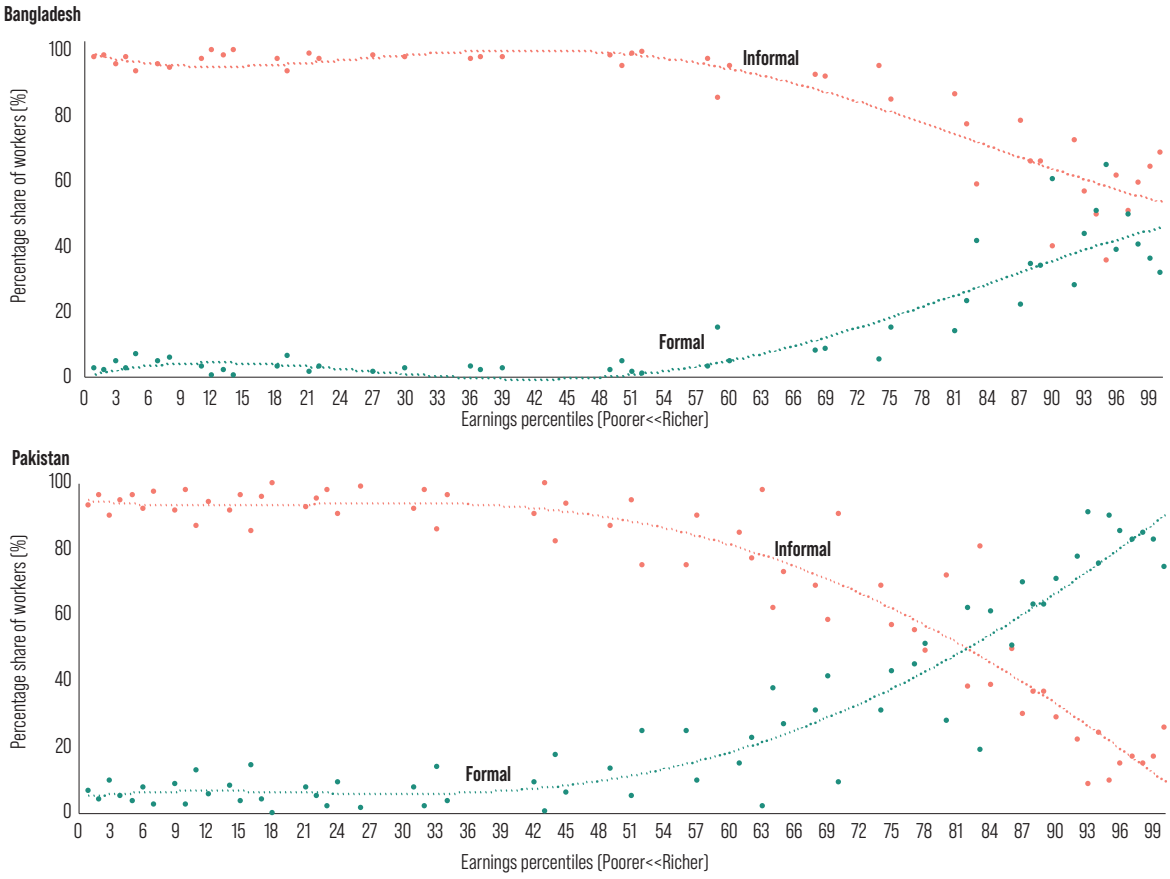


Figure 3.18: Distributions of value added per worker in India's formal and informal manufacturing sectors



Source: Staff calculations based on firm-level survey data from the Annual Survey of Industries and the National Sample Survey (NSS) of Unincorporated Enterprises 2015-16

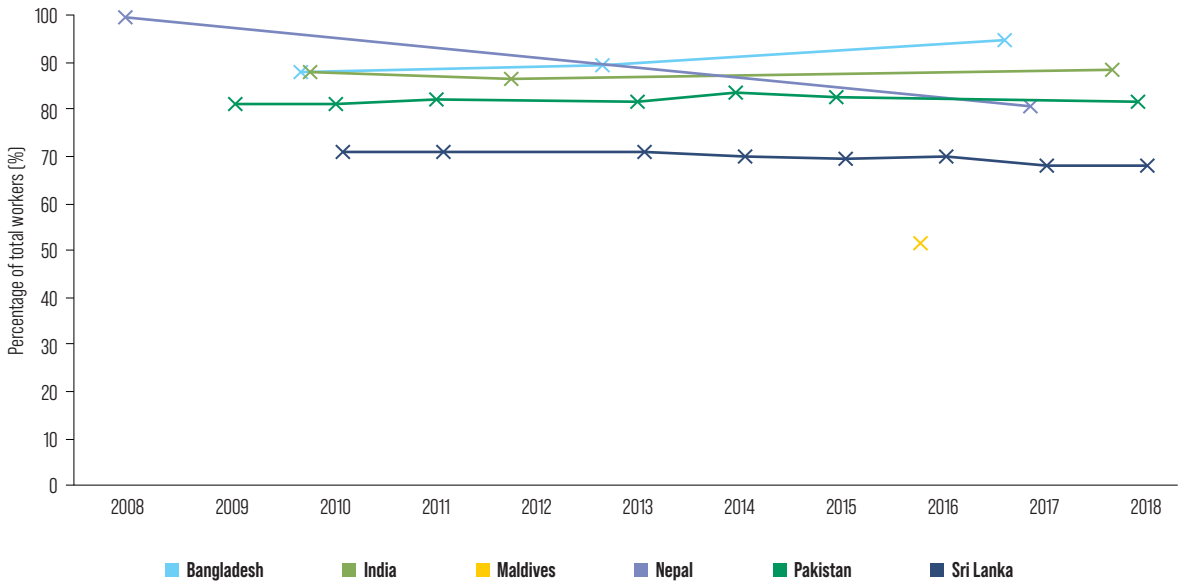
Figure 3.19: Informal workers are found across the entire income distribution



Note: The green and blue lines depict the share of informal workers and formal workers, respectively, at every earnings percentile (x-axis).
Source: Staff calculations based on Pakistan and Bangladesh Labor Force Surveys (LFS), 2017.

Informal workers are more vulnerable to unemployment and less protected than formal sector workers are. Informal workers are not covered by labor laws and social insurance schemes that apply to organized labor. Lacking formal contracts, they are more likely to be laid off in the event of a negative shock. Furthermore, they are employed disproportionally in smaller firms that have limited financial buffers, likely causing faster layoffs and closures. In the farm sector, employment is almost entirely comprised of family workers and casual wage workers. In the non-farm sector, most of the workers are either self-employed or employed in informal, unincorporated enterprises in which there is not a clear separation between the unit of production and its owner. The non-farm sector also

Figure 3.20: Informality (stubbornly stable) over time



Source: ILOSTAT

includes a sizable number of workers who are employed in formal firms under informal contracts. Overall, informality "is more prevalent in smaller firms, more marginal locations, more rudimentary activities, and among less educated people" (Loayza, 2018).

Finally, it is important to note for any discussion of how to prepare for future crises that it is extremely difficult to achieve greater formalization. A view that formalization will gradually happen as incomes grow is contradicted by recent history. South Asia has experienced high economic growth rates for at least two decades, but the share of informality has not changed, and in some cases has even increased, as shown in Figure 3.20.

Supporting this large and diverse segment of the economy in South Asia is a crucial development issue. A growth model that is not inclusive of the informal segment is ultimately not sustainable. Moreover, the COVID crisis has quickly revealed that existing disparities have been exacerbated and risk leaving permanent scars. More fragmented societies will find it harder to shift to a sustainable, inclusive economic path.

Policy implications

The analysis in this chapter has highlighted two relevant policy implications. The first is that the heterogeneity of informality and its incidence along the income distribution matter. Relief measures should, for example, consider the high vulnerability of casual and temporary wage workers. Expanding income assistance in the form of transfers linked to a poverty threshold may be sufficient to protect some of these workers. And other forms of support, such as in-kind transfers or public works, may also be effective. However, since a large group of affected informal workers may not qualify for poverty-tested transfers, there may be a need to loosen the conditions for eligibility. Different types of policy instruments altogether are needed to support small informal firms: here a great challenge is that of selection and knowledge, in addition to budget resources. Successful policies need to support firms that would be viable in the absence of the crisis, or even discriminate what specific constraint is affecting them, for example lack of capital or limited access to skills or to markets.

The second policy implication is that there is an uneven playing field with respect to coping strategies, and this is linked to the institutional setting that is biased against informality. Formal workers or firms can access resources that are out of reach for their informal counterparts. For example, we showed that working from home is a realistic possibility only for a small share of workers, and these workers tend to be formal and concentrated at the top of the earnings distribution. Similarly, large firms are more likely to have access to credit, irrespective of their profitability and other fundamentals (Khwaja and Mian, 2005). In contrast, the

analysis illustrated that coping strategies for the informal sector are more precarious. Self-employment tended to be resilient to the crisis or even operate as a buffer, as former wage workers become self-employed during the crisis. However, this resilience has been shown only in terms of employment status. While 'not falling in unemployment' may be read as resilience, income flows generated by many informal self-employed during the crisis are close to subsistence. Access to credit or other forms of formal support, such as social insurance, is quite limited for these workers, and their own savings are not sufficient. Indeed, only 30 percent of Indian households report being able to survive one month or more without additional assistance (Bertrand, Krishnan and Schofield, 2020).

This initial policy discussion can be organized according to Table 3.3.

This table highlights that policy instruments should differ according to both their target beneficiaries and the time frame. The short run measures aim to tackle the immediate effects of COVID-19 by helping workers and firms stay afloat while longer run policies would facilitate a recovery (Carranza *et al.*, 2020). Social protection policies are designed to support workers and households and, while support can be expanded to assist them in the short run, the crisis has also highlighted some long-term challenges in the design of such policies. A similar distinction can be made for policies helping firms. The next two subsections discuss these two sets of policies in more detail.

Table 3.3: Policy discussion, a simple framework

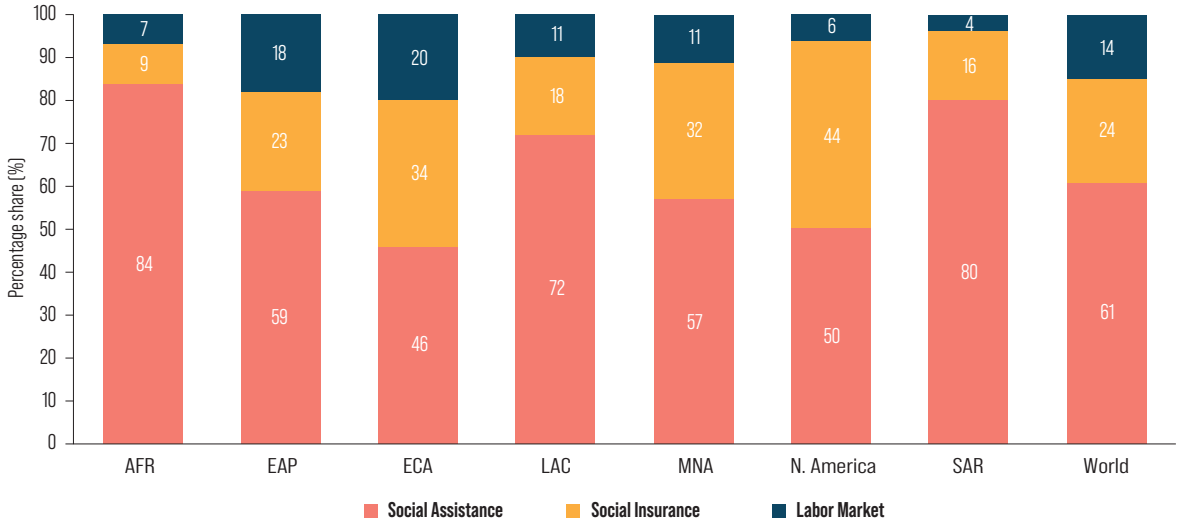
Target \ Time frame	Short run, relief	Long run, build better
Workers and households	Expansion of social assistance (food subsidies, public works, and cash transfers)	Towards universal social protection, expand social insurance; Closing digital gaps
Firms	Liquidity support (grants, credit)	Four main areas: 1) Capital 2) Access/matching with workers 3) Efficiency 4) Access to markets

Short-term and long-term policies in support of informal workers and households

In their short-term relief efforts, governments in the region have responded rapidly using their current systems (for a detailed example in the case of India, see Box 3.3). The COVID-19 response in South Asia has mainly consisted of an expansion of social assistance programs. This expansion, making up 76 percent of the social protection response in the region (see Figure 3.21, from Gentilini *et al.*, 2020), has been partly automatic, as people fell below the eligibility thresholds, and partly discretionary, by changing some of the rules. Social insurance programs made up 20 percent of the response, while labor market programs accounted for 5 percent.

Five of eight countries in South Asia have implemented at least one cash transfer program or are

Figure 3.21: Social protection in COVID response, composition by region



Note: Social assistance programs in South Asia include in-kind transfers such as food security programs as in Afghanistan, Bangladesh and Sri Lanka, and cash transfers. In principle these programs, which are not conditional on participation in the formal sector, might help address the impacts of the crisis on informal workers.
Source: Gentilini *et al.* (2020)

BOX 3.3: Unpacking India's COVID-19 Social Assistance Package*

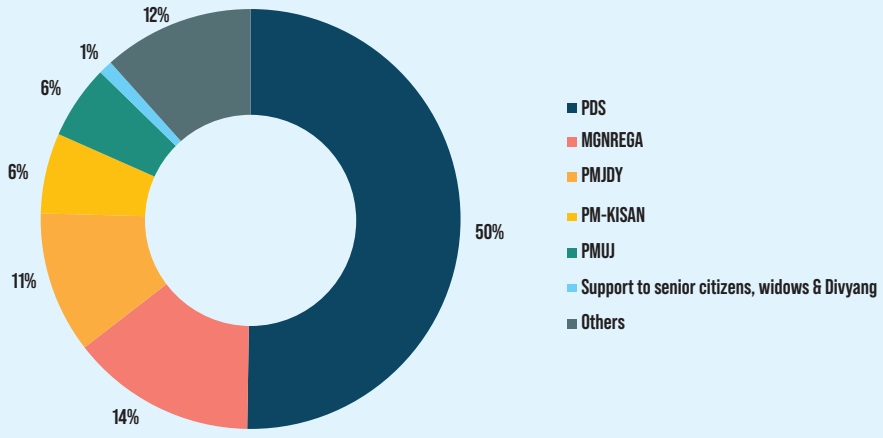
On 24th March 2020, the Government of India (GoI) ordered a nation-wide lockdown limiting the movement of 1.3 billion people as a preventive measure against COVID-19 pandemic. The resulting shock to economic activity threatened to drive millions to extreme poverty. In response, the GoI announced a substantial social assistance package – about one percent of India's GDP – to provide immediate relief to the poor and vulnerable. The package, known as the Pradhan Mantri Garib Kalyan Yojana (PMGKY), extends the scope and raises the benefits of several existing social protection programs. Four components of the package stand out for their magnitude: food subsidies via the Public Distribution System (PDS), work guarantees under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), cooking gas subsidies under the Pradhan Mantri Ujjwala Yojana (PMUY) and cash transfers to female bank account holders under the Pradhan Mantri Jan-Dhan Yojana (PMJDY). Taken together, these four components account for nearly 90 percent of the budget allocation (Figure 1).

The implementation of the package is sensitive to the design features of each of the programs that are being scaled up. Implementation is also bound to depend on the resource envelope available to individual states, as well as on their administrative capacity. Therefore, the institutional setting is critically important to assess the amount of resources that will be spent on social assistance, and how it will be distributed across locations and households. Such assessment is difficult to conduct based on household surveys, as data on program coverage is limited, scattered across different survey instruments, and often dated. An alternative is to rely on administrative data from each of the four top programs.

The largest component, PDS, covers about sixty percent of Indian families – nearly 200 million, with 2 million added since April 2020 alone. But the program data shows that not every family that is entitled to receive food subsidies under the PMGKY is doing so. It also shows that households are partially replacing subsidized food grains that they are entitled to under the National Food Security Act (NFSA) with free food grains under the PMGKY. Moreover, there is substantial variation in coverage, use and implementation across states.

In the case of MGNREGA, an additional half a billion days of work was provided in the period between April and August 2020 relative to the same period in 2019. The budget allocation of the social assistance package was built on the assumption that many rural households would make use of the full 100 days of work they are entitled to. However, administrative data shows that the additional employment was mainly due to more households demanding work, not to more days worked per household. In fact, an analysis of the program data reveals that only 5 percent of the households with a job card worked for the full 100 days typically.

Figure 1: Program-wise Budget Allocation under PMGKY

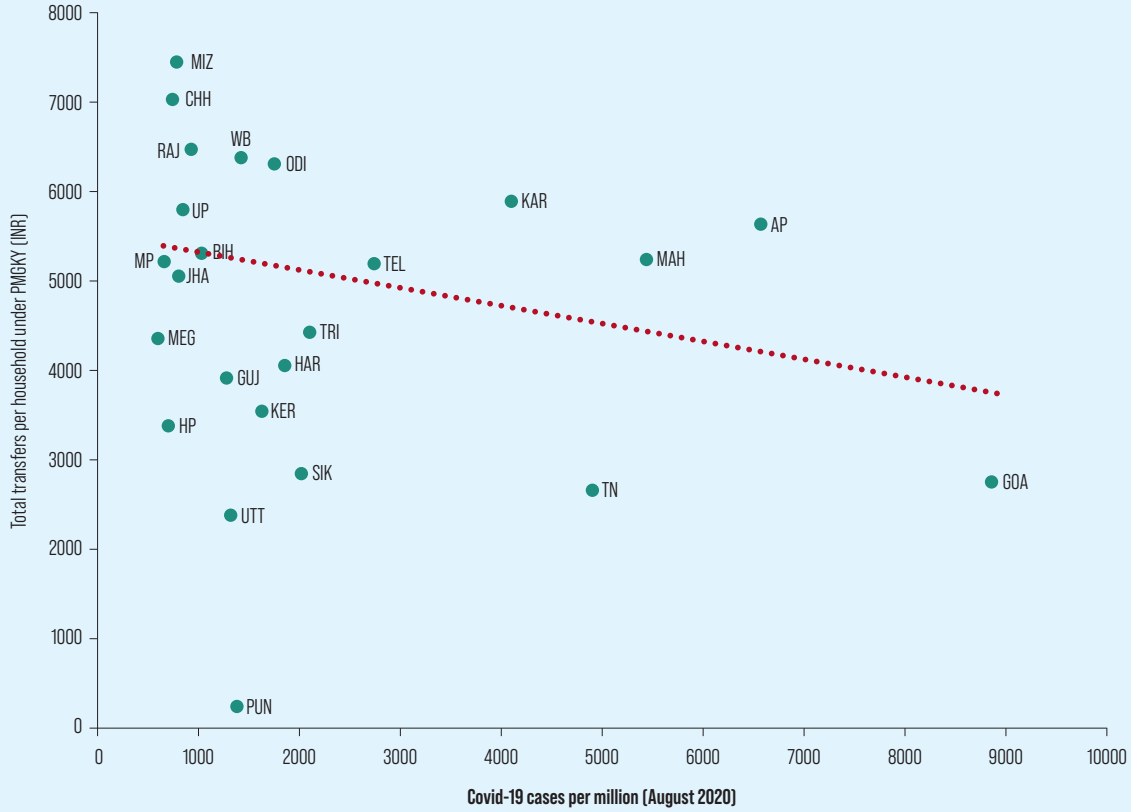


Source: Based on administrative data and authors' calculations

The net transfers under the social assistance package can be computed considering features of program design and implementation like those described for PDS and MGNREGA, extrapolated to the entire fiscal year based on expected uptake. Overall, the transfers to households under the four top programs is about two-thirds of the budget allocation for the fiscal year 2020/21. While the transfers under the PMJDY and

MGNREGA are nearly 100 percent of the budget allocation, the transfers under the PDS and PMUY account for 60 percent and 39 percent of the budget allocation. The net transfer also varies considerably across India, ranging from less than 1 percent of aggregate household consumption in some states to 6 percent in others. Overall, the package is progressive in that households in poorer states receive a larger transfer. However, the package is also geared toward poorer and more rural states, whereas the crisis might have impacted informal workers in large metropolitan areas the most (Figure 2).

Figure 2: Household Transfers and COVID-19 Intensity



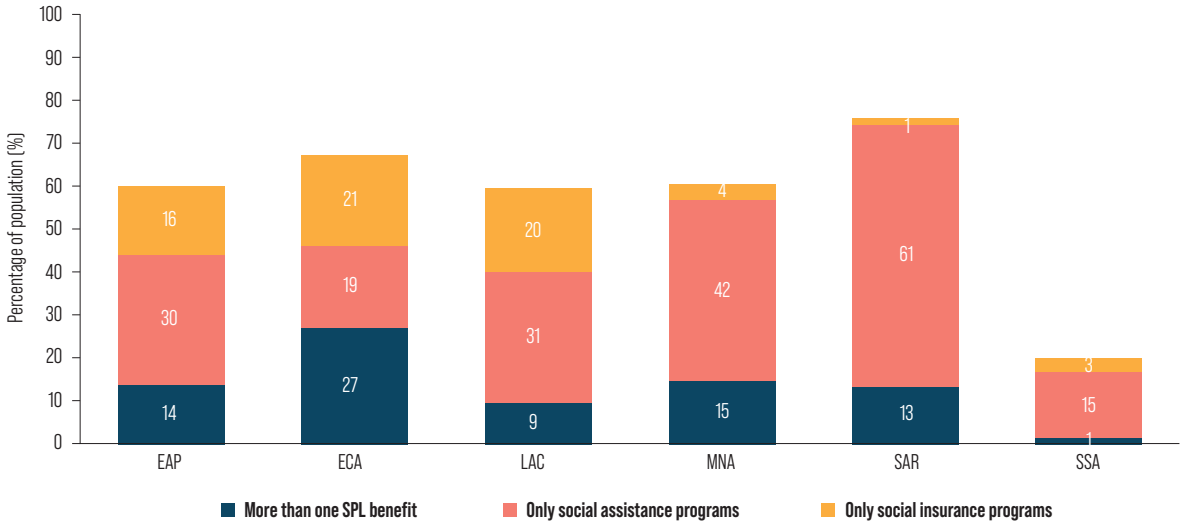
Source: Based on administrative data and authors' calculations
*This Box is based on the background paper titled "Unpacking India's Covid-19 Social Assistance Package" by Urmila Chatterjee and Deepak Varshney, forthcoming.

expanding cash payments through existing programs in response to the pandemic. Overall, cash transfer programs are projected to reach an additional 21 percent of the population in South Asia, on top of an already existing covered population of 15 percent (Gentilini *et al.*, 2020). For example, India has implemented a cash transfer of Rs 500 ($6.5) for 3 months to 200 million women with a Pradhan Mantri Jan Dhan Yojana (PMJDY) financial inclusion account. In addition, Bangladesh is giving Taka 2,245 ($30) to 5 million low-income families through mobile financial services.

These programs are typically means-tested and targeted to those with a low threshold income. For example, Sri Lanka's Samurdhi program, expanded its benefits to reach more vulnerable sections during the crisis. Similarly, in Bangladesh, Prime Minister Sheikh Hasina announced the disbursement of Taka 1,250 crore cash assistance among 50 lakh poor families (5 million households) hit hard by the crisis. Some countries are relaxing eligibility requirements. In Pakistan, eligibility for the means-tested "Ehsaas Kafaalat" cash transfer program is to be determined by using the national socioeconomic database to relax eligibility requirements during the pandemic. Similarly, the Indian states Delhi and Gujarat have expanded food security coverage to all residents, even those in above-poverty line households.

The main requirement of these programs is identifying the poor, not whether a poor person works, or used to work, in the formal or informal sector. In fact, these programs do not even need to identify the shock, or the long-term reasons, that cause someone to be in poverty. These are clear advantages, and the programs' automatic and non-discriminatory nature is important in assisting the large group of people that the crisis has pushed

Figure 3.22: Composition of social protection by component



Source: ASPIRE database

into poverty. But, as shown by our analysis, the incidence of the shock is intense also for the people above the poverty line, and informal workers in the middle of the distribution may have no access to government relief support. This lack in coverage can be quite concerning if some of these informal workers are employing other people in their small businesses.

In addition to the incidence issue just mentioned, there may be other barriers to broad inclusion in these programs. Financial inclusion is one of these barriers. Many programs require recipients to have either a bank or mobile money account in order to receive funds. Yet, levels of financial inclusion in some South Asian countries remain persistently low, raising questions about how broadly these programs will be able to reach those in need. For example, Bhutan's Relief Kidu program website specifies that beneficiaries should either have a bank account to facilitate receipt of the transfer or collect via local administration. Similarly, Sri Lanka's "Samurdhi" allowance program requires special bank accounts in the Samurdhi bank. Bangladesh's G2P programs require mobile money accounts with bKash. In the Global Findex Survey (2017), the share of individuals with a bank account in the bottom 40 percent of the income distribution ranged from 14 percent in Pakistan and Afghanistan to above 70 percent in India and Sri Lanka. In Bangladesh, 21.2 percent reported having a mobile money account.

In addition, informal workers have limited access to other forms of government support, highlighting the uneven institutional setting of current social protection systems. For example, in Nepal, individuals and firms get a 1-month extension for loan payments if they have formal credit. And the Nepali government will pay one month of Social Security Fund payments for both employee and employers associated with the Social Security Fund for formal workers. In India, the GoI amended EPFO regulations to allow workers to access a nonrefundable advance from their accounts. The regulations will allow workers to withdraw 75 percent or 3 months wages (whichever is lower). This also primarily benefits formal workers.

In the longer term, social protection systems and the financial sectors need to be redesigned to be more inclusive of the informal sector. The first way to improve design of the social protection system is to expand its social insurance component. As shown in Figure 3.22, at one percent of the covered population, SAR has the lowest share of social insurance coverage across the world. The main issue here is whether the current, limited coverage can be extended as is to a larger group, or whether to design an alternative insurance system for the informal population. Antón, Trillo, and Levy (2012) and Packard, *et al.* (2019) have an in-depth discussion of the tradeoffs between a dual system and a universal one.

In the meantime, including the "missing middle" of informal workers could potentially be achieved by leveraging "big data", such as mobile phone usage data, to better and more efficiently target those in need. Additionally, improving financial

inclusion – by also using non-bank financial institutions, such as microfinance institutions – may facilitate access to and participation in social protection programs and encourage resilience on its own. By removing asymmetries in information, the technological revolution can deliver new types of social protection arrangements delinked from formal employment relationships of the past. These can be in the form of combined voluntary saving / risk-pooling arrangements embedded in the gig economy platforms themselves.

The World Bank and other international financial institutions could have an important role in this redesign effort. As discussed after the 2008 financial crisis, the challenge is not to design the perfect social protection system against a specific crisis, but rather to design a system flexible enough to be effective for the current but also future crises. The proposal to successfully achieve such redesign is articulated in three parts (Kanbur, 2010 and 2012). First, given the uncertainty about the type of the crisis (financial, climatic, civil unrest and displacement/migration, collapse of export prices, among others) and its timing (when the crisis happens and how long it lasts), comprehensiveness and flexibility are two key aspects to be considered in the redesign. It is also important to consider social protection as a system rather than to evaluate separately its individual components. A potential way to do that is to conduct stress tests of the system against a range of crises. The results and recommendations could be gathered in a Social Protection Assessment Program (SPAP), similarly to how the resilience to shocks of the financial system is assessed in Financial Sector Assessment Programs (FSAP) conducted jointly by the World Bank and International Monetary Fund. Second, investment lending could finance improvements in the system identified in the SPAPs, such as the potential gaps in coverage and difficulties in scalability. Third, pre-qualified lines of credit could be set up to cover automatically the needs of the redesigned system when certain crisis triggers are breached.

Short-term and long-term policies in support of informal firms

Supporting firms in addressing their liquidity problems has been an urgent policy imperative during the stringent lockdown period (World Bank, 2020a). This was needed to avert the danger that a temporary lockdown would force viable firms to close permanently and lose their organizational capital, with adverse consequences for long-term economic recovery and productivity growth. South Asian governments introduced a range of measures to help firms tide over the temporary shock. The types of assistance included grants, credit/credit relief, tax relief, assistance with paying salaries of workers and assistance with or waiver of utility payments. However, the determination of the 'viability' of firms (the selectivity issue) has been based on simplistic criteria, and the coverage of small, informal enterprises by these short-term measures has been a major concern. For example, measures such as tax relief and wage subsidies may have a limited impact on small enterprises that pay little or no tax and have few workers on formal contracts.

Our analysis suggests that six months into the crisis, wage employment in firms has only partially recovered. Liquidity support may still be needed by many viable firms. A major challenge for governments in South Asia is to plug the gaps in the coverage of small and informal firms that are mostly outside the tax and formal financial system. Options include providing transfers through suppliers, extending factoring and credit guarantee mechanisms to informal firms, and supporting community-based financing institutions (World Bank, 2020a).

Increasingly, short-term policies to address the COVID-19 shock on firms need not just money, but also more knowledge. The nature of the crisis is shifting, and it is no longer just a question of supporting firms' liquidity. Potentially, a range of market disruptions could be generating short-term losses in productive firms. They include, for example, issues with buyers, input supply chains and the labor supply. Each type of market failure or friction requires a different type of policy response and is not necessarily solved by just a grant or a loan. It is therefore important to better understand the specific frictions and market failures affecting firms, and to target the support accordingly.

In the medium to longer term, keeping firms alive ceases to be a suitable policy objective, and addressing barriers to new business creation and resource reallocation will become increasingly important for recovering from the crisis. Evidence from the US suggests that COVID-19 crisis has changed production and demand patterns and requires a reallocation of resources across firms to re-optimize their use (Barrero *et al.*, 2020). While many firms in the US are shrinking their workforce and even expect a

permanent reduction in their workforce, others are hiring workers as they expect a growth in demand. There are hints of a similar reallocation process in the labor market transition analysis discussed in this chapter, with recent months seeing unusually high rates of outflows and inflows into employment. Relief measures that could inadvertently hamper reallocation, such as subsidies for employees' retention, should be phased out.

With self-employment growing and becoming a key coping mechanism during the COVID-19 crisis, it is also increasingly critical to extend support to microenterprises and the self-employed to help them tide over the shock, and in the long run, raise their productivity. Urgent support measures could include one-time grants or microcredit. Evidence from the highly destructive 2004 tsunami in Sri Lanka suggests that microenterprise recovery following a major shock can take longer than a year, and that an early injection of capital can speed up the recovery process significantly (de Mel *et al.* 2012a).

In the even longer run (rebuilding better phase), policymakers should consider strengthening financial support and business training programs that can help improve the productivity of microenterprises. The form of support will matter. The evidence base on financial support to microenterprises, while limited, favors grants over loans: while loans are generally found to have a limited impact on profitability, grants have been found to be effective in a range of contexts (Woodruff, 2018; Jayachandran, 2020). For example, a one-time grant had long-lasting positive impacts on microenterprises in Sri Lanka (de Mel *et al.* 2012b). With regards to strengthening business capabilities of microenterprise, classroom training is less effective than one-on-one training provided through consulting or mentoring (Woodruff, 2018).

The crisis has underlined the long-term value of addressing barriers to the growth of small firms in the informal sector. Simply making it easier to register has limited impact on the productivity and growth of informal enterprises (Bruhn and McKenzie, 2014). Instead, policy needs to address supply and demand side market failures that keep small firms from realizing their growth potential though systemic reforms, institutional strengthening and targeted programs. Important supply side constraints include access to credit, skilled workers, technology and organizational knowledge. The demand side also matters, as stronger linkages to markets can improve the productivity of small firms by enabling competition and information flows. It is also worth stressing that the evidence base on the growth of microenterprises and small firms is still evolving, and that investing in this evidence base in the context of South Asia is important.

Conclusions

The decline in demand and supply disruptions generated by the pandemic and the policies required to contain its spread have resulted in severe reductions in incomes in the South Asia region. Governments have begun to respond by expanding assistance to the poor and to affected firms. An effective policy response will require a clear understanding of which households and firms are most in need of assistance, and how to reach them. A key finding of this chapter is that workers in the bottom and the middle of the income distribution, mostly in the informal sector, experienced the largest loss in income. While policies are geared to assisting the poor, workers who had been in the middle of the distribution workers receive little in the way of social assistance because their previous incomes made them ineligible for these programs. At the same time, they lack access to the social insurance schemes and other forms of support available to formal sector workers. Finding ways to assist these workers will be critical to addressing the welfare losses from the pandemic.

But the response to the pandemic cannot only focus on supporting incomes. The survival of many informal sector firms is threatened by what is hoped to be a temporary

shock to their markets and access to supplies. These firms tend to be quite small and lack the savings and the financial access to keep afloat during this extended crisis. The likely disappearance of many otherwise viable firms as the crisis continues threatens the long-term welfare of informal sector workers and the productivity and growth of the economy as a whole. Providing effective and well-targeted assistance to such inherently productive firms while facilitating the entry of promising new firms will be a major challenge going forward.

The pandemic highlights an important fact about South Asian economies. The informal sector dominates employment, but its productivity, and thus the incomes of workers, tends to be low. Improving these workers' human capital and access to physical capital is key to maintaining high rates of growth. Thus, policies that focus on supporting productivity in the informal sector are critical to development, as well as to improving income distribution, in the region.

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Appendix

A. Analysis of the Consumer Pyramids Household Survey (CPHS) of India

The CPHS survey

Consumer Pyramids Household Survey (CPHS) is administered on a panel of over 170,000 households across India thrice a year. The survey is typically conducted face-to-face but owing to the COVID lockdown in India after the third week of March, the face-to-face interview format was replaced with a telephonic one, allowing CMIE to continue gathering data. The response rate in comparison to the planned execution during the lockdown was a little over 60 per cent compared to over 95 per cent before the lockdown (Vyas, 2020).

CMIE maintains that even with this reduced sample, their data is representative of the population across several dimensions. Notably, the rural-urban divide of the CPHS sample is typically about 37:63. In the first week of the lockdown (ending March 31), this shifted to 46:54 but was restored to pre-lockdown levels by week 3.

Sample selection

The full CPDX sample of 174,000 households is surveyed over a four-month period, called a "wave". Each wave of the survey is representative of the Indian population. Note that a household surveyed in one wave of the CPHS panel is resurveyed in the next wave approximately four months later. In this sense, the set of households that are covered in one full month of the survey can be considered as a monthly "cohort" that reappears in the CPHS panel after four months. The execution of the survey is planned and executed in a manner that the households surveyed each month are well distributed over the country. Hence, each monthly cohort gives a balanced picture of the country.

India imposed its lockdown in the third week of March, which fell in the middle of wave 19 of the survey. To capture the impact of the COVID shock, we use wave 19 data of only those individuals who were interviewed in April 2020, i.e. after the survey. All transition tables and regressions are based on panel data observed for this "April 2020 cohort." This cohort was surveyed earlier in August 2019 and December 2019. It was most recently surveyed in August 2020, during Wave 20. Given the balanced rollout of the survey, this sample spans 28 states of India.

For the charts on the transitions between different labor force categories which are shown in the chapter, we use a balanced panel from August 2019 to August 2020, consisting of 20,126 individuals of the April cohort in the working age population. For the difference-in-difference regressions, we use a two-wave balanced panel for each of the four cohorts.

CMIE provides weights that adjust for non-response. All figures and regressions use these weights to make our estimates representative of the working age population (individuals who are 15 years of age or more).

Variables and definitions

We use data on employment status, employment arrangement, education, caste, district, industry, and occupation. A person is considered unemployed if she reports her employment status as "Unemployed, willing and looking for a job". She is characterized as out of the labor force if she reports her employment status as "Unemployed, not willing and not looking for a job" or "Unemployed, willing but not looking for a job".

Labor market transition tables

These tables show the "rates" at which working age individuals transition, or flow, from one labor force status to another between two periods, estimated using CPHS panel data on individuals' labor market status in the initial and ending period. The rate of transition for a group of individuals who had the same status in the initial period is the breakdown (in percentage terms) of their ending period's status.

Table 3.A.1: Labor market transition

		Aug-20				
		Formal	Self-employed	Casual	Unem/OLF	Total
Apr-20	Formal	37.38	28.90	22.01	11.71	100
	Self-employed	4.26	68.97	14.35	12.42	100
	Casual	3.78	27.76	49.72	18.74	100
	Unem/OLF	0.98	10.15	10.87	78.00	100
		Apr-20				
Dec-19	Formal	38.30	21.19	9.82	30.69	100
	Self-employed	4.00	55.90	6.23	33.87	100
	Casual	3.53	18.82	20.31	57.34	100
	Unem/OLF	0.73	3.00	1.65	94.62	100
		Dec-19				
Aug-19	Formal	83.94	6.94	6.11	3.01	100
	Self-employed	1.29	83.30	9.87	5.54	100
	Casual	1.23	13.55	78.79	6.43	100
	Unem/OLF	0.36	2.08	1.90	95.66	100

Difference-in-difference regressions

We estimate the following regression specification:

$$Employed_{it} = \alpha DW_i + +\beta SE_i + \gamma(DW_i \times POST_t) + \delta(SE_i \times POST_t) + \eta\ HighSch_{it} + \rho\ Caste_i + \sum\theta_t X_i + \varepsilon_{it}$$

DW_i is an indicator for being a daily wage (or casual or temporary salaried) worker, and SE_i indicates self-employed workers- both based on the baseline employment status. The omitted category is permanent (that is, formal) wage worker. $POST_t$ is a dummy variable that takes value 1 for April 2020 and all following months. *HighSchool* is a dummy denoting workers with more than 10 years of education. Caste is a dummy equal to 1 if the caste category is OBC/SC/ST. $\sum\theta_t X_i$ indicate wave-interacted fixed effects. We use wave ×occupation, wave ×industry, and wave × district fixed effects. The above regression specification is estimated for each of the four cohorts of households who repeatedly participate in the survey. The regressions are estimated separately for each cohort. For example, the regression using the households in the April cohort are estimated on a balanced panel for the December 2019 and April 2020 waves of this cohort.

The main coefficients of interest are those on the interaction terms $DW_i \times POST_t$ and $SE_i \times POST_t$ which measure the differential change in the probability of employment post-COVID for the daily wage workers and the self-employed, respectively, relative to formal wage workers. Tables 1-4 present detailed results for these regressions. Figure 3.7 in the chapter plots coefficients of $DW_i \times POST_t$ and $SE_i \times POST_t$ from column 1 of these tables.

Table 3.A.2: Impact of COVID-19 on Employment (April cohort): DID estimates

	(1)	(2)	(3)
(DailyWage+Tem)	0.016*** (0.0021)	0.0067*** (0.0025)	0.0046** (0.0019)
Post X (DailyWage+Tem)	-0.064*** (0.011)	-0.017* (0.0098)	-0.0013 (0.0094)
(Self Employed)	0.0073*** (0.0018)	-0.0010 (0.0039)	-0.0030 (0.0035)
Post X (Self Employed)	-0.0057 (0.011)	-0.010 (0.010)	0.0018 (0.0097)
HighSchool	0.042*** (0.0047)	0.018*** (0.0043)	0.0089** (0.0040)
Caste	-0.026*** (0.0047)	-0.0043 (0.0042)	-0.0052 (0.0040)
District X Wave FE	Yes	Yes	Yes
Industry X Wave FE	Yes	No	Yes
Occupation X Wave FE	No	Yes	Yes
Observations	37007	37007	37007

* p<0.10, ** p<0.05, *** p<0.010. Standard errors in parentheses are clustered at the individual level

Table 3.A.3: Impact of COVID-19 on Employment (May cohort): DID estimates

	(1)	(2)	(3)
(DailyWage+Tem)	0.0083*** (0.0014)	0.0023* (0.0012)	0.0015 (0.0011)
Post X (DailyWage+Tem)	-0.042*** (0.0095)	-0.0094 (0.0090)	0.0025 (0.0089)
(Self Employed)	0.0047*** (0.0012)	-0.00087 (0.0021)	-0.0017 (0.0020)
Post X (Self Employed)	0.013 (0.0088)	-0.0073 (0.0085)	0.0038 (0.0084)
HighSchool	0.031*** (0.0042)	0.018*** (0.0043)	0.012*** (0.0042)
Caste	-0.0066 (0.0041)	0.0022 (0.0039)	0.0041 (0.0039)
District X Wave FE	Yes	Yes	Yes
Industry X Wave FE	Yes	No	Yes
Occupation X Wave FE	No	Yes	Yes
Observations	42899	42899	42899

* p<0.10, ** p<0.05, *** p<0.010. Standard errors in parentheses are clustered at the individual level

Table 3.A.4: Impact of COVID-19 on Employment (June cohort): DID estimates

	(1)	(2)	(3)
(DailyWage+Tem)	0.0017 (0.0022)	-0.00080 (0.0023)	-0.0012 (0.0023)
Post X (DailyWage+Tem)	-0.0082 (0.0091)	0.0096 (0.0092)	0.014 (0.0089)
(Self Employed)	0.00023 (0.0021)	-0.0019 (0.0035)	-0.0021 (0.0035)
Post X (Self Employed)	0.0059 (0.0089)	-0.00020 (0.0095)	0.0034 (0.0091)
HighSchool	0.010*** (0.0029)	0.0047 (0.0029)	0.0029 (0.0029)
Caste	-0.0056* (0.0030)	-0.0011 (0.0031)	-0.00052 (0.0029)
District X Wave FE	Yes	Yes	Yes
Industry X Wave FE	Yes	No	Yes
Occupation X Wave FE	No	Yes	Yes
Observations	51284	51284	51284

* p<0.10, ** p<0.05, *** p<0.010. Standard errors in parentheses are clustered at the individual level

Table 3.A.5: Impact of COVID-19 on Employment (July cohort): DID estimates

	(1)	(2)	(3)
(DailyWage+Tem)	-0.010** (0.0049)	-0.00094 (0.0041)	-0.0023 (0.0049)
Post X (DailyWage+Tem)	-0.0019 (0.0073)	-0.0066 (0.0068)	-0.0031 (0.0073)
(Self Employed)	-0.0093 (0.0057)	-0.014 (0.0086)	-0.015* (0.0087)
Post X (Self Employed)	0.0024 (0.0077)	0.0051 (0.010)	0.0082 (0.010)
HighSchool	0.00089 (0.0019)	-0.0015 (0.0021)	-0.0016 (0.0021)
Caste	-0.0027 (0.0019)	-0.000048 (0.0019)	0.00011 (0.0019)
District X Wave FE	Yes	Yes	Yes
Industry X Wave FE	Yes	No	Yes
Occupation X Wave FE	No	Yes	Yes
Observations	42819	42820	42819

* p<0.10, ** p<0.05, *** p<0.010. Standard errors in parentheses are clustered at the individual level

B. Technical note on macro-micro simulations

The macro-micro simulations in this chapter use household data from labor force surveys for three countries – Bangladesh, Pakistan and India.

Generating earnings percentiles

The Indian Periodic Labour Force Survey (PLFS 2017-18) reports employment information of respondents according to the usual status (principal + subsidiary) and current weekly status. We use the respondents' current weekly status to match with earnings data. For regular wage/salaried persons in current weekly status information on earnings was collected for the preceding calendar month, for self-employed persons in current weekly status information on earnings was collected for the last 30 days and for casual labour information on earnings was collected for each day of the reference week. We compile all types of earnings into a single variable at a monthly frequency to generate rankings based on earning percentiles.

Dealing with missing observations

We apply the same procedure to calculate monthly wage in Bangladesh labor force survey (2015-16) and Pakistan labor force survey (2017-18). However, we encounter the problem of non-response of earnings variable in both countries. We compare the subsample of wage-reporting workers and wage-missing workers to understand the sample bias. Wage-reporting workers are those employed workers who report their wage above zero. Wage-missing workers are those employed workers who do not report wage or report zero wage.

In both Pakistan and Bangladesh, workers in the non-agricultural sector are more likely to report wage income. More than 60 percent of workers in the non-agricultural sector report wage in Pakistan, while only 12 percent workers in the agricultural sector do so. This implies that the sample of wage-reporting workers that we use to conduct earning rankings is biased towards non-agricultural workers.

Table 3.B.1: Description of Pakistan LFS (2017-18) data

Wage-missing		Rural	Urban	Total
Non-agri	unskilled	3,168,768	3,375,757	6,544,525
	skilled	2,043,859	4,650,453	6,694,312
Agri	unskilled	13,800,000	468,274	14,268,274
	skilled	3,423,408	158,179	3,581,587
Total		22,436,035	8,652,663	31,088,698
Wage-reporting				
Non-agri	unskilled	4,070,372	5,908,776	9,979,148
	skilled	2,832,001	7,900,943	10,732,944
Agri	unskilled	2,155,741	92,631	2,248,372
	skilled	212,784	21,595	234,379
Total		9,270,898	13,923,945	23,194,843

Table 3.B.2: Description of Bangladesh LFS (2015-16) data

Wage-missing		Rural	Urban	Total
Non-agri	unskilled	17,000,000	2,302,941	19,302,941
	skilled	2,527,907	760,474	3,288,381
Agri	unskilled	17,700,000	450,563	18,150,563
	skilled	1,712,277	67,177	1,779,454
Total		38,940,184	3,581,155	42,521,339
Wage-reporting				
Non-agri	unskilled	9,911,266	1,651,917	11,563,183
	skilled	3,808,890	1,066,793	4,875,683
Agri	unskilled	3,881,749	61,195	3,942,944
	skilled	110,581	5,592	116,173
Total		17,712,486	2,785,497	20,497,983

Calculating welfare rankings and food-shares

Labour force surveys do not contain detailed data on food and non-food consumption. However, the Indian PLFS (2017-18) contains the household's usual consumer expenditure (in Rs.) in a month calculated by asking respondents about (i) expenditure for household purposes, (ii) purchase value of any household durables and (iii) consumption from wages in -kind, home-grown stock and free collection. The sum of all three expenditure categories is reported. We use this total monthly consumption expenditure to generate household welfare rankings. In our simulations, we map the percentage change in household wages due to the employment shock to an equivalent percentage change in household welfare.

In the case of Bangladesh and Pakistan, we use the labor force surveys to generate welfare rankings. However, one constraint is the lack of consumption variables in the labor force surveys. Alternatively, we use the wage variable from a subsample of wage-reporting workers to produce welfare rankings in both countries. We compare the distribution of wage *per capita* and consumption *per capita*. Mean and median wage are 4 times higher than mean and median consumption while wage *per capita* has similar mean and median value as consumption. The distribution of wage and wage *per capita* has a longer left and right tail than the distribution of consumption.

Table 3.B.3: Summary statistics (Pakistan and Bangladesh)

	observations	mean	median
PAK			
wage per capita from LFS (2017-18)	140,198	4,220	3,106
consumption per capita from HH survey (2015)	157,636	5,052	3,931
BGD			
wage per capita from LFS (2015-16)	58,820	2,619	1,875
consumption per capita from HH survey (2016)	185,115	3,800	3,040

Food shares are predicted by using a linear model on NSS (2011), which includes detailed consumption expenditure data, and applying it to PLFS (2017-18) data. We use total household consumption, household size, and the household head's social group membership, employment status and education to predict food-shares of expenditure. The same procedure also applies to Bangladesh and Pakistan to calculate the food share variable.

Work from home status

The PLFS 2017 records individual's occupations based on the National Classification of Occupations (NCO-04) at the 3-digit level. This is consistent with the International Standard Classification of Occupations (ISCO-88) at the Minor Group level (also 3-digt). Using the corresponding ISCO-88 codes for the occupations in the PLFS data, we map to the Standard Occupational Classification (SOC-00) system used by the US federal government. The SOC-00 and its 2010 version have been categorized by the Occupational Information Network (O*NET) with an indicator for being "suitable for teleworking or not". Following a similar process of ranking individuals based on reported earnings, we summarize the share of workers who can *potentially* work from home along the whole earnings distribution and disaggregate by those sectors most likely to be affected by the lockdown. The same procedure applies to Pakistan and Bangladesh.

Two caveats need to be mentioned:
1) Mapping from ISCO-88 to the O*NET classification is not one-to-one because the former is at the 3-digit level and the latter is at a much more granulated 7-digit level. We conduct some manual checks for consistency.

2) Classification of an occupation for "teleworking suitability" is likely to be very different for occupations based in the US vis-à-vis those in South Asia. We manually modify some occupations such as village-level administrators, teachers, etc. to approximate the context on the ground.

C. Can online gig work buffer domestic downturns?

We use the country-year-quarter panel data between 2017Q3 and 2019Q3 to test the correlation between domestic economic shocks and domestic online gig jobs.

$$\Delta \text{labor share}_{it} = \beta_0 + \alpha * \Delta \log(\text{GDP})_{it} + \gamma_i + \varepsilon_{it}$$

labor share_{it} is the share of online gig workers in country i over total online gig workers in year quarter t , $\log(\text{GDP})_{it}$ is log GDP in country i and year quarter t, and γ_i is the country fixed effect. The underlying hypothesis that workers turn to online gig platforms to mitigate a negative domestic economic shock. Therefore, we expect the coefficient α to be negative.

The table below shows the estimation of the above equation. The change in the share of online gig worker is negatively correlated with domestic GDP growth, which is consistent with our hypothesis (Column 1). For the convenience of interpretation, we replace the dependent variable with the log change of online gig workers as a proxy for online gig worker growth in Column 3. A 1 percentage point drop in GDP growth is associated with 0.4 percentage points increase in online gig worker growth. On the other hand, the share of online gig posts and the growth of online gig posts is not significantly correlated with GDP growth (column 2 and column 4), suggesting the domestic online gig demand is not affected by domestic economic shocks.

Table 3.C.1: the share of online gig worker is negatively correlated with domestic GDP growth

VARIABLES	(1) D. worker share	(2) D. post share	(3) D. ln(worker)	(4) D. ln(post)
GDP growth	-0.371** (0.155)	-0.005 (0.159)	-0.406* (0.213)	-0.2 (0.202)
Country FE	Y	Y	Y	Y
Year-quarter FE	N	N	Y	Y
Observations	574	574	574	571
R-squared	0.003	0	0.745	0.707
Number of countries	72	72	72	72

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

D. Informal employment in the region

The tables below were obtained using the definition of informality adopted in this chapter and applied to data from Labor Force Surveys. The definition(s) of informality is based on the ILO practices which distinguish informal sector (a firm-based concept) and informal employment (a worker-based concept).

A key feature to identify non-farm informal firms is that there is not a clear separation between the unit of production and its owner, often a household. Non-farm informal sector consists of unincorporated enterprises, household-run small firms.

Informal employment is defined by considering both firm/worker status and relations of the worker with the firm, as shown in the table below:

- Informal employment: all shaded cells in green
- Employment in the informal sector (unincorporated firms with < 10 workers): cells 3 to 7
- Informal employment outside the informal sector: cells 1,2,8,9

Table 3.D.1: definition of informal employment

Production units by type	Jobs by employment status						
	Own-Account Workers		Employers		Contributing Family Workers	Employees	
	Informal	Formal	Informal	Formal	Informal	Informal	Formal
Formal sector enterprise					1	2	
Informal sector enterprise	3		4		5	6	7
Households	8					9	

These tables highlight several interesting facts, and more research will be needed in the future on the interaction of the formal and informal sector:

- In some cases, formal firms are employing a higher share of informal workers than formal workers (Bangladesh in 2015-16, Pakistan 2001-02);
- In Bangladesh, the share of informal workers has increased, but the share of informal firms (measured by the number of people these firms employ) has decreased. This is partly because of more informal workers in households, but also because the formal sector now employs more informal workers.
- In Pakistan, the share of formal workers has increased much more than the share of formal firms (as measured by the number of people they employ). It seems that over time informal workers in the formal sector have received formal contracts.

Table 3.D.2: Informal Employment in the region

Bangladesh, 2015-16			
workers	informal	formal	all
in formal firms	15.9	10.1	25.9
in informal firms	51.5	0.5	51.9
in households	22.1	0	22.1
all	89.4	10.6	100

Bangladesh, 2002-03			
workers	informal	formal	all
in formal firms	4.2	19.2	23.4
in informal firms	60.3	4.9	65.2
in households	11.2	0.2	11.4
all	75.7	24.3	100

Pakistan, 2017-18			
workers	informal	formal	all
in formal firms	10.2	17.7	27.9
in informal firms	69.3	1.4	70.8
in households	1.3	0.1	1.4
all	80.8	19.2	100

Pakistan, 2001-02			
workers	informal	formal	all
in formal firms	16.8	1.4	18.1
in informal firms	44.4	1.8	46.2
in households	35.7	0	35.7
all	96.8	3.2	100

Sri Lanka, 2015			
workers	informal	formal	all
in formal firms	3.2	26.5	29.7
in informal firms	6.6	0.9	7.5
in households	60.8	2.1	62.9
all	70.6	29.4	100

Sri Lanka, 2006			
workers	informal	formal	all
in formal firms	1.1	30.5	31.6
in informal firms	1.8	2.0	3.7
in households	61.0	3.7	64.7
all	63.9	36.1	100.0

India, 2017-18			
workers	informal	formal	all
in formal firms	7.7	10.3	18
in informal firms	38.9	0.8	39.7
in households	42.1	0.1	42.3
all	88.8	11.2	100

Chapter 4 South Asia country briefs

PHOTO BY: MANOEJ PAATEEL / SHUTTERSTOCK.COM

Afghanistan

Afghanistan experienced moderate growth in 2019 as the agricultural sector recovered from the impacts of drought. However, the economy is estimated to have contracted sharply in the first half of 2020 due to economic disruptions associated with nation-wide lockdowns, border closures, and declining remittance inflows. Medium-term prospects are subject to high levels of uncertainty, related to the COVID-19 pandemic, peace talks and future international security and aid support. Given the shock to the economy poverty is expected to increase in 2020.

Table 1	2019
Population, million	38.0
GDP, current US$ billion	19.3
GDP per capita, current US$	507.1
Poverty headcount ratio[a]	54.5
School enrollment, primary (% gross)[a]	72.5
Life expectancy at birth, years[b]	64.5

Notes: (a) Afghanistan Living Condition Survey (ALCS) (2016-2017); (b) Most recent WDI value (2018).
Sources: WDI, Macro Poverty Outlook, and official data.

RECENT DEVELOPMENTS

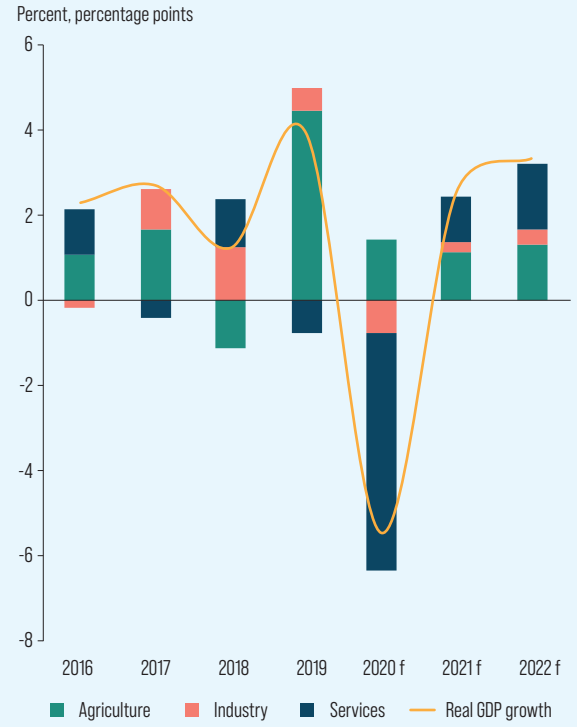
After a relatively strong performance in 2019 (3.9 percent growth), the economy contracted in the first half of 2020. Over 2019, growth was mainly driven by recovery in the agriculture sector (17.5 percent) following drought in the previous year. This good performance, together with a moderate expansion of industry (4.8 percent), offset a decline in services (-1.4 percent). However, the economy contracted sharply in the first half of 2020, largely reflecting the impact of the COVID-19 crisis. Lockdowns hampered domestic production and consumption (especially in urban centers). Border closures disrupted exports and supply chains, and remittances declined significantly. While wheat production grew significantly, driven by favorable weather conditions, this was insufficient to offset the large negative impact of COVID-19 on other sectors of the economy.

Inflation was low in 2019 (averaging 2.3 percent) but it increased significantly in 2020. In March and April 2020, panic buying and import disruptions drove a significant spike in food prices and led the government to adopt administrative measures to prevent price gouging and distribute emergency wheat supplies. As a result, headline and food inflation have since declined, standing at 5.3 percent and 10 percent on average respectively, as of end June.

Afghanistan recorded a current account surplus in 2019 and in the first half of 2020. In 2019, the trade deficit narrowed to 30.4 percent of GDP (from 34.7 percent in 2018), as stronger domestic agricultural production drove a 7.1 percent drop in imports. With large grant inflows, the current account registered a small surplus of 0.6 percent of GDP in 2019. Over the first quarter of 2020 exports grew by 11 percent (year-on-year) reflecting the improved performance of air corridors, while weak domestic demand led to a 14 percent decline in imports. In the second quarter of 2020, both imports and exports fell precipitously given border closures and disruptions to trade and transportation, with greater absolute declines in imports driving an improvement in the trade and current account balances.

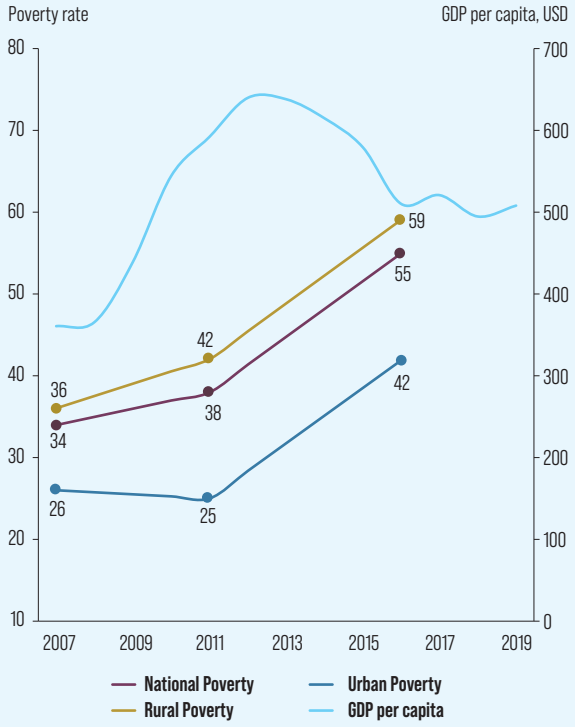
Fiscal imbalances that appeared in 2019 were aggravated in 2020. Domestic revenues reached a record high of 14.2 percent of GDP in 2019, largely driven by significant one-off revenues, including a transfer of operating profits from the central bank (Afs 24 million, equivalent to 1.6 percent of GDP). However, increased expenditures, mainly driven by salaries and wages, led to a deficit of 1.1 percent of GDP. With the onset of the COVID-19 crisis, weak economic activity, disruptions to trade and compliance, revenue performance deteriorated significantly and revenue estimates for 2020 were revised downward by over 30 percent (from Afs 209 to 144 billion) in the budget mid-year review. Total domestic revenue collection

Figure 1: Real GDP growth and contributions to real GDP growth



Source: Macroeconomics Trade & Investment Global Practice.

Figure 2: Actual poverty rates and real GDP per capita



Sources: WDI, NSIA, Official data, and ALCS (2016-2017)

at end-June reached Afs 74.7 billion, 20 percent lower than the initial budget target.

Poverty is believed to have worsened in 2019 surpassing 54.5 percent (in household survey 2016-2017), amidst continued violence and political uncertainty. In the first half of 2020, with declining households incomes due to economic hardship, higher food prices due to COVID-19, a significant fall in remittances, and high returnee flows (mainly from Iran), poverty is estimated to have further increased.

OUTLOOK

Real GDP is expected to contract by 5.5 percent in 2020, largely due to the impacts of the COVID-19 crisis. In following years, the pace of recovery is expected to be constrained in a context of continued insecurity, uncertainties regarding the outcome of planned peace talks, and questions about the level and duration of international security and aid support.

External balances are expected to improve in 2020, against a backdrop of declining trade activity. The trade deficit is projected to narrow to 26 percent of GDP down from 30.4 percent 2019. While exports are projected to fall by 24 percent, imports (that are significantly larger) are expected to decline by around 18 percent, reflecting border disruptions, depressed domestic demand, and lower global oil prices. With sustained foreign grants inflows, the current account is expected to reach a surplus of 4.6 percent of GDP in 2020. However, it is projected to deteriorate over the medium term as grants decline, to a deficit of 2.2 percent of GDP by 2022.

With depressed revenues and higher expenditure needs, the fiscal deficit is projected to deepen to 3.4 percent of GDP in 2020. Over the medium-term, declining grants and overall growth weaknesses will constrain fiscal space, although the implementation of VAT in 2022 should provide a partial offset.

The economic contraction in 2020 is expected to have significant adverse social impacts. World Bank micro-simulations suggest that the combination of reduced incomes and higher prices could drive the poverty rate to as high as 72 percent, despite benefits from robust agricultural production to rural households. Over the medium term, the poverty outlook hinges on the pace of economic recovery and the continued provision of international aid and humanitarian support.

RISKS AND CHALLENGES

The main source of downside risk to the outlook stems from possible further adverse COVID-19 developments. Additional sources of risk include further political instability, a deterioration of security conditions, uncertainties associated with the planned peace agreement with the Taliban, and precipitous reductions in aid flows. By contrast, on the upside, a sustainable and credible political settlement with the Taliban could help boost growth, confidence and private investment.

Given Afghanistan's declining revenues and constrained fiscal potential, public expenditures need to be carefully directed to protecting the vulnerable, limiting long-term economic damage, and establishing solid foundations for economic recovery. To support households, the government should prioritize: i) targeted social protection measures; and ii) ensuring the continued provision of basic services, especially healthcare. To support the private sector, priorities include: i) pursuing business regulatory reforms to facilitate new investment; ii) expanding access to credit; iii) ensuring the continued provision of basic infrastructure; and iv) avoiding accumulating arrears to private sector vendors. A clear commitment from international partners to continued grant support would help reduce uncertainty and improve confidence and investment, providing a vital underpinning for Afghanistan's recovery from the already-severe impacts of the COVID-19 crisis.

Table 2: Macro poverty outlook indicators (annual percent change unless indicated otherwise).

	2017	2018	2019	2020 e	2021 f	2022 f
Real GDP growth, at constant market prices	2.6	1.2	3.9	-5.5	2.5	3.3
Private Consumption	3.5	10.0	-2.0	-9.0	7.0	3.0
Government Consumption	3.3	-17.8	15.0	6.2	2.6	2.5
Gross Fixed Capital Investment	19.4	0.0	-15.3	-30.8	-3.6	4.1
Exports, Goods and Services	0.5	49.6	-6.3	-21.4	19.0	8.0
Imports, Goods and Services	9.8	13.1	-6.8	-16.3	13.0	3.0
Real GDP growth, at constant factor prices	2.3	1.2	4.4	-5.5	2.5	3.3
Agriculture	6.4	-4.4	17.5	5.0	3.5	4.0
Industry	9.2	11.1	4.8	-6.8	2.0	3.0
Services	-0.7	1.9	-1.4	-10.6	2.0	3.0
Inflation (Consumer Price Index)	5.0	0.6	2.3	5.0	4.2	4.5
Current Account Balance (% of GDP)	2.4	2.7	-0.1	4.6	-1.6	-2.2
Net Foreign Direct Investment (% of GDP)	0.2	0.5	0.0	0.0	0.0	0.1
Fiscal Balance (% of GDP)	-0.6	0.8	-1.1	-3.4	-2.2	-0.9
Debt (% of GDP)	6.6	5.8	6.6	8.6	9.6	9.6
Primary Balance (% of GDP)	-0.5	1.8	-0.4	-3.0	-2.2	-0.9

Notes: e = estimate, f = forecast.
Sources: World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.

Bangladesh

An extended national shutdown, a sharp decline in exports, and lower private investment reduced GDP growth in FY20 to an estimated 2.0 percent. While growth is expected to recover over the medium term, downside risks include a prolonged COVID-19 pandemic and financial sector fragility. The observed impact of COVID-19 on the labor market suggests that poverty is likely to increase significantly. Going forward, the implementation of the government's COVID-19 response program will remain a paramount priority.

Table 1	2019
Population, million	168.6
GDP, current US$ billion	302.7
GDP per capita, current US$	1795.5
International poverty rate ($1.9)[a]	14.5
Lower middle-income poverty rate ($3.2)[a]	52.5
Upper middle-income poverty rate ($5.5)[a]	84.3
Gini index[a]	32.4
School enrollment, primary (% gross)[b]	116.5
Life expectancy at birth, years[b]	72.3

Notes: (a) Most recent value (2016), 2011 PPPs. (b) Most recent WDI value (2018).
Sources: WDI, Macro Poverty Outlook, and official data.

RECENT DEVELOPMENTS

Real GDP growth fell to an estimated 2.0 percent in FY20 as COVID-19 and the global recession disrupted economic activity in the second half of the year. On the demand side, exports declined by 18.5 percent in FY20, as external demand for readymade garments (RMG) plummeted in the fourth quarter. Private investment growth also slowed as financial conditions deteriorated. Consumption, however, was supported by a surge in remittance inflows, which partially offset lost labor income. On the supply side, the industrial sector contracted, with a severe decline in RMG manufacturing, while service sector growth decelerated due to disruptions in transport, retail, hotels, and restaurants. In the agricultural sector, a resilient rice harvest was dampened by losses in poultry, meat, and dairy due to supply chain disruptions in the last quarter of FY20.

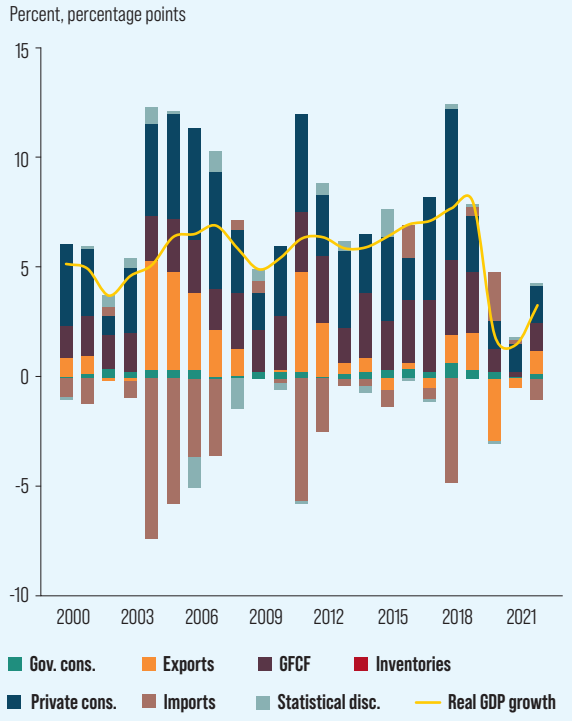
Inflation rose to 5.7 percent in FY20 from 5.5 percent in FY19, as food prices increased due to supply chain disruptions, while nonfood prices were dampened by weaker demand. In response to deteriorating economic conditions, Bangladesh Bank (BB) reduced the cash reserve ratio to 4 percent (from 5.5 percent) and the repo rate to 4.75 percent (from 6 percent). Monetary policy has been expansionary, with a 15.6 percent target for broad money growth announced in July 2020.

The COVID-19 pandemic has exacerbated existing financial sector vulnerabilities. Non-performing loans (NPLs) officially reached 9.2 percent of loans in June 2020 but are likely higher due to deviations from international recognition, loss provisioning, and capital calculation standards. The government's COVID-19 response relies heavily on commercial bank lending, supported by US$ 4.5 billion in BB refinancing facilities and relaxed prudential requirements. However, a new interest rate cap has disincentivized lending. Credit to the private sector grew by 8.6 percent in FY20, while public sector credit grew by 50.3 percent, driven by a rising fiscal deficit.

The current account deficit (CAD) narrowed from 1.7 percent of GDP in FY19 to 1.5 percent in FY20, as a sharp decline in exports was offset by a surge in remittance inflows. The lower CAD coupled with increased external government borrowing resulted in a substantial balance of payments surplus. The real effective exchange rate appreciated while the taka depreciated marginally in nominal terms against the US dollar. Foreign exchange reserves remained adequate at US$ 36.4 billion or 7.2 months of imports at the end of FY20.

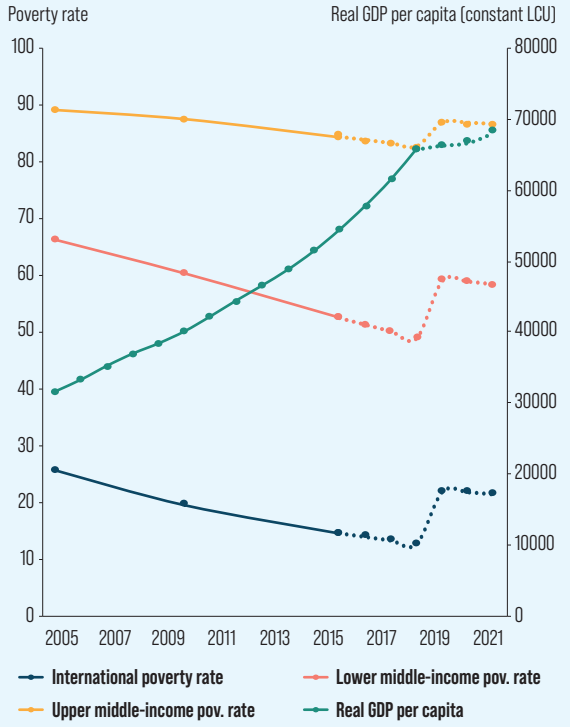
The FY20 fiscal deficit is estimated at 8.2 percent of GDP. Revenues were depressed by lower trade volumes and corporate profits while social protection and healthcare expenditure rose. Public debt is estimated at 39.2 percent of GDP at the end of FY20, and Bangladesh remains at a low risk of debt distress.

Figure 1: Real GDP growth and contributions to real GDP growth



Sources: Bangladesh Bureau of Statistics (BBS) and staff estimates.

Figure 2: Actual and projected poverty rates and real GDP per capita



Notes: See Table 2.
Source: World Bank.

Job losses and temporary absences were widely reported in representative surveys in poor areas of Dhaka, Chittagong and Cox's Bazaar, with widespread uncertainty about employment and business prospects. Only 58 percent of active workers in poor areas of Dhaka and Chittagong thought they would be able to continue in their job or work activity in the month following the survey. Women appear to have higher job and income losses than men, given higher employment in directly affected sectors such as RMG manufacturing.

OUTLOOK

Significant uncertainty notwithstanding, GDP growth is projected to decelerate to 1.6 percent in FY21 assuming that the impact of COVID-19 deepens. Private consumption growth is likely to remain subdued with depressed wage income and a decline in remittance inflows, while anemic private investment is projected due to heightened uncertainty. Weaker demand and financing constraints may further reduce industrial production, while flooding in early FY21 may hamper agriculture production. However, GDP growth is projected to recover to 3.4 percent in FY22, supported by a rebound in export demand, remittance inflows, and public investment.

Inflation is projected to remain above target due to expansionary monetary and fiscal policies and higher food prices. The CAD is expected to widen with a decline in exports, due to continued low external demand, and a decline in remittances, due to the return of workers from overseas. The fiscal deficit is likely to rise as recurrent expenditure on social protection measures remains elevated in the near term, and capital expenditure increases in the post-COVID-19 recovery phase.

Poverty is expected to increase substantially in the short term, with the highest impact on daily and self-employed workers in the non-agricultural sector and salaried workers in the manufacturing sector. Urban areas will continue to be disproportionately affected, with an estimated 68 percent of directly affected workers located in Dhaka and Chittagong.

RISKS AND CHALLENGES

Downside risks to the outlook are substantial. Domestic risks include additional waves of COVID-19 that may require renewed restrictions. In the government's COVID-19 response program, risks include ineffective implementation of infection prevention measures and limited operationalization of credit programs. In the context of COVID-19 disruptions,

fiscal risks may rise, particularly if tax reforms are delayed or infrastructure projects face cost overruns. Increased deficit financing from domestic banks may put upward pressure on interest rates and may further constrain credit to the private sector.

In the financial sector, challenges include deviations from international regulatory and supervisory standards, the absence of a bank resolution framework and weak governance in state-owned banks. The resolution of rising NPLs will require substantial policy dialogue to reduce credit risks, limit moral hazard and manage fiscal risks. The introduction of interest rate caps is an ongoing challenge, impairing the health of the banking sector.

External risks also remain elevated. While external demand for RMG products is stabilizing, the recovery is fragile. Lower oil prices may limit demand for Bangladesh's overseas workforce in the Gulf region, impairing remittance inflows. Also, continued appreciation of Bangladesh's real exchange rate would adversely impact export demand and remittances.

Going forward, the government's COVID-19 response will remain a paramount priority, including testing, quarantining and treating patients and providing economic relief to the poor and vulnerable. Other ongoing priorities include strengthening fragile banks, diversifying exports, accelerating reforms in business regulation, and deepening fiscal reforms.

Table 2: Macro poverty outlook indicators (annual percent change unless indicated otherwise).

	2016/17	2017/18	2018/19	2019/20 e	2020/21 f	2021/22 f
Real GDP growth, at constant market prices	7.3	7.9	8.1	2.0	1.6	3.4
Private Consumption	7.4	11.0	3.9	2.1	2.0	2.7
Government Consumption	7.8	15.4	8.2	6.0	2.6	4.3
Gross Fixed Capital Investment	10.1	10.5	8.4	3.1	0.7	3.9
Exports, Goods and Services	-2.3	8.1	10.9	-18.5	-2.8	8.6
Imports, Goods and Services	2.9	27.0	-2.0	-11.6	-1.5	5.9
Real GDP growth, at constant factor prices	7.2	7.9	8.3	2.0	1.6	3.4
Agriculture	3.0	4.2	3.9	2.7	2.6	3.0
Industry	10.2	12.1	12.7	-0.1	-0.9	2.7
Services	6.7	6.4	6.7	3.2	2.9	3.9
Inflation (Consumer Price Index)	5.4	5.8	5.5	5.7	5.8	5.8
Current Account Balance (% of GDP)	-0.5	-3.5	-1.7	-1.5	-2.4	-1.9
Net Foreign Direct Investment (% of GDP)	0.7	0.6	0.9	0.6	0.4	0.6
Fiscal Balance (% of GDP)	-3.4	-4.6	-5.4	-8.2	-8.8	-8.6
Debt (% of GDP)	31.0	31.9	33.1	39.2	45.9	51.4
Primary Balance (% of GDP)	-1.6	-2.8	-3.4	-6.0	-6.2	-5.6
International poverty rate ($1.9 in 2011 PPP)[a,b]	13.9	13.2	12.6	21.9	21.8	21.4
Lower middle-income poverty rate ($3.2 in 2011 PPP)[a,b]	51.4	50.2	48.9	59.1	59.0	58.5
Upper middle-income poverty rate ($5.5 in 2011 PPP)[a,b]	83.8	83.2	82.6	86.9	86.9	86.7

Notes: e = estimate, f = forecast. (a) Calculations based on SAR-POV harmonization, using 2010-HIES and 2016-HIES and fiscal year growth rates. Actual data: 2016. Nowcast: 2017-2019. (b) Projection using point-to-point elasticity (2010-2016) with pass-through = 1 based on GDP per capita in constant LCU.
Sources: World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.

Bhutan

Real GDP growth is estimated at 1.5 percent in FY20 reflecting COVID-19 related disruptions, including in the tourism sector and industrial production. The fiscal balance deteriorated due to salary increases and higher government spending. Medium-term growth prospects are subdued and risks are tilted to the downside, particularly in the event of a large scale domestic outbreak of COVID-19. The poverty rate is expected to remain unchanged at 11 percent in 2020, reflecting lack of progress due to the pandemic.

Table 1	2019
Population, million	0.8
GDP, current US$ billion	2.5
GDP per capita, current US$	3288.6
International poverty rate ($1.9)[a]	1.5
Lower middle-income poverty rate ($3.2)[a]	12.2
Upper middle-income poverty rate ($5.5)[a]	38.9
Gini index[a]	37.4
School enrollment, primary (% gross)[b]	100.1
Life expectancy at birth, years[b]	71.5

Notes: (a) Most recent value (2017), 2011 PPPs; (b) Most recent WDI value (2018).
Sources: WDI, Macro Poverty Outlook, and official data.

RECENT DEVELOPMENTS

Bhutan's economy has been affected significantly by the COVID-19 crisis, with real GDP growth decelerating to 1.5 percent in FY20 (from 3.8 percent in FY19). Even though Bhutan managed to contain the number of domestic COVID-19 cases, the economy was affected through two main channels: a decline in the services sector as tourist arrivals dried-up, and disruptions in industrial activities, reflecting reduced foreign demand, shortages in critical inputs (including foreign labor), and temporary export restrictions. However, hydropower production and exports increased in FY20 due to the on-streaming of the Mangdechhu project. On the demand side, consumption, public investment, and net exports declined due to domestic containment measures, disruptions in public sector infrastructure projects, and the lockdown in India -Bhutan's largest trading partner-, which affected supply chains.

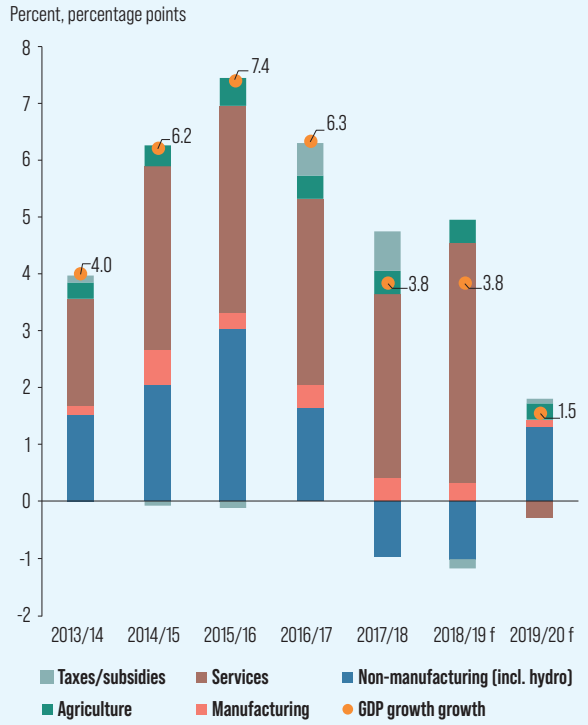
In spite of relatively low growth, headline inflation accelerated to 7.6 percent in July 2020, driven by food prices and reflective of similar trends in India. Asset quality in the financial sector deteriorated further. The Non-Performing Loan (NPL) ratio rose to 17.7 percent in March 2020, up from 10.9 percent in December 2019. While this partly reflects seasonal fluctuations in NPL cycles, the sector has been adversely impacted by weak underwriting standards and supervision, and the effect of COVID-19 on businesses and households.

The growth deceleration drove a reduction in trade activity and a narrowing of the current account deficit. Both exports and imports decreased, in line with weak foreign and domestic demand, and disruptions to trade. Given that imports declined significantly more than exports the current account deficit narrowed to 14 percent of GDP in FY20 (down from 22.5 in FY19).

The fiscal balance, however, deteriorated, with salary increases and additional COVID-19 related expenditures driving the deficit to 3.1 percent of GDP in FY20. Total spending is estimated to have increased by 27.4 percent in FY20. Total revenues also increased, but to a lesser extent, and were driven by a one-off profit transfer from the commissioning of the Mangdechhu hydropower plant. Non-hydro revenues declined with the discontinuation of excise duty refunds from India and lower tourism receipts. With a higher deficit, public debt is projected to have increased, albeit modestly (to 109.1 percent of GDP from 104.4 at end FY19).

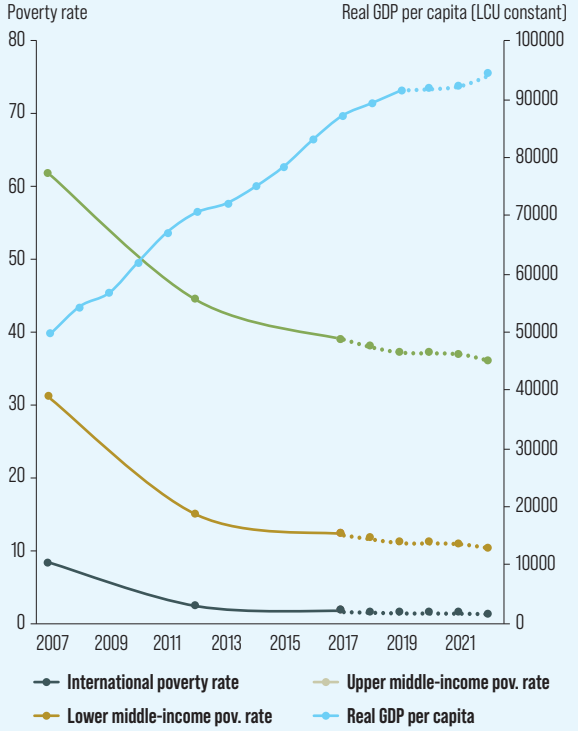
The poverty headcount, measured at $3.20 per day per person (in 2011 PPP terms), is estimated to have decreased slightly, from 11.5 percent in 2018 to 11 percent in 2019. Services sector workers in urban areas, including many that directly or indirectly depend on tourism, experienced jobs and earnings losses since the COVID-19 outbreak. However, tourism is highly concentrated in just a few districts with very low poverty while almost all of the

Figure 1: Real GDP growth and sectoral contributions to real GDP growth



Notes: Bhutan reports data on fiscal year (FY) basis. The fiscal year runs from July 1 though June 30.
Source: Government of Bhutan and staff calculations.

Figure 2: Actual and projected poverty rates and real GDP per capita



Note: See Table 2.
Source: World Bank.

poor live in rural areas, primarily engaged in subsistence agriculture, and are thus relatively shielded from the economic fallout of the pandemic.

OUTLOOK

Economic growth is projected to slow markedly, averaging 2.5 percent a year over the medium term, well below the pre-COVID-19 five-year average of 5.5 percent. Tourism is expected to recover only gradually, given that travel restrictions in Bhutan will likely continue until at least early 2021, delaying a rebound in overall services sector growth. The slowdown in India is expected to depress manufacturing and exporting industries, and the construction sector is also likely to experience a protracted slowdown due to a limited pipeline of public sector infrastructure projects. Finally, hydropower production is expected to pick up marginally in FY21, providing limited support to industry sector growth. Inflation will likely remain elevated in the short term because of localized food shortages resulting in higher prices, but a moderation in prices is expected in the medium term.

Relative to previous years, the current account deficit is expected to remain lower in the medium term mostly on account of subdued imports for public investment and hydropower projects. However, the fiscal deficit is projected to increase to 6.7 percent of GDP in FY21 before gradually decreasing over the medium term. This trend reflects upward pressure on expenditures to implement the COVID-19 recovery package and downward pressures on non-hydro revenues from weak economic activity.

The pandemic is expected to significantly slow down the pace of poverty reduction. The poverty headcount rate (at $3.20 per day) is projected to remain unchanged at 11 percent in 2020. Unemployment will likely remain high, particularly in tourism related activities, though temporary cash support through the Druk Gyalpo's Relief Kidu should help mitigate the impact of earnings losses. Reduced demand for agricultural products could lower exports and hurt agribusinesses. Elevated food prices could disproportionately impact poor households since not all of their food requirements are met by own production. This could exacerbate high levels of pre-existing malnutrition and should be closely monitored.

RISKS AND CHALLENGES

Given the unpredictability of the pandemic's course, there is a high degree of uncertainty over

the ultimate growth and poverty trajectory. The most acute risk to the outlook is a large-scale domestic outbreak of the virus leading to prolonged mobility restrictions. The materialization of financial sector contingent liabilities is another potential risk, which could strain government finances. Other domestic risks include lower-than-expected hydropower production and delays in the implementation of revenue measures, particularly the goods and services tax, which are critical to offset the decline in excise duties and grant financing in the medium term.

The immediate opportunities are to prevent a large-scale community transmission of the virus and to ensure that the national response to COVID-19 is well coordinated across sectors. There is also an opportunity to accelerate the policy reforms required to boost private sector job creation and economic diversification.

Table 2: Macro poverty outlook indicators (annual percent change unless indicated otherwise).

	2016/17	2017/18	2018/19	2019/20 e	2020/21 f	2021/22 f
Real GDP growth, at constant market prices	6.3	3.8	3.8	1.5	1.8	2.0
Private Consumption	0.0	10.1	6.0	1.5	2.0	3.5
Government Consumption	4.3	3.7	4.5	6.0	5.0	4.0
Gross Fixed Capital Investment	4.4	-3.6	7.2	-19.5	-10.4	-5.6
Exports, Goods and Services	0.4	5.5	-5.7	-3.9	-9.6	3.1
Imports, Goods and Services	-5.3	3.6	4.4	-20.2	-15.4	-1.6
Real GDP growth, at constant factor prices	6.0	3.3	4.2	1.5	1.8	2.0
Agriculture	3.6	3.7	3.8	2.5	3.1	3.5
Industry	4.7	-1.2	-1.6	3.7	2.0	1.5
Services	8.2	7.9	9.9	-0.6	1.3	2.2
Inflation (Consumer Price Index)	4.3	3.7	2.8	3.2	5.0	2.8
Current Account Balance (% of GDP)	-23.9	-19.1	-22.5	-14.0	-13.8	-12.3
Fiscal Balance (% of GDP)	-4.8	-2.8	0.7	-3.1	-6.7	-5.3
Debt (% of GDP)	111.8	110.5	104.4	109.1	108.8	109.1
Primary Balance (% of GDP)	-3.5	-1.5	1.6	-2.1	-5.6	-3.7
International poverty rate ($1.9 in 2011 PPP)[a,b]	1.5	1.4	1.3	1.3	1.3	1.2
Lower middle-income poverty rate ($3.2 in 2011 PPP)[a,b]	12.2	11.5	11.0	11.0	10.8	10.2
Upper middle-income poverty rate ($5.5 in 2011 PPP)[a,b]	38.9	37.8	37.1	37.0	36.9	36.0

Notes: e = estimate, f = forecast. (a) Calculations based on SAR-POV harmonization, using 2017-BLSS and fiscal year growth rates. Actual data: 2017. Nowcast: 2018-2019. Forecast are from 2020 to 2022. (b) Projection using neutral distribution (2017) with pass-through = 0.7 based on GDP per capita in constant LCU.
Sources: World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.

India

India's economy had been slowing prior to the COVID-19 pandemic. The spread of the virus and containment measures have severely disrupted supply and demand conditions. Monetary policy has been deployed aggressively and fiscal resources have been channeled to public health and social protection, but additional counter-cyclical measures will be needed, within a revised medium-term fiscal framework. Despite measures to shield vulnerable households and firms, the trajectory of poverty reduction has slowed, if not reversed.

Table 1	2019
Population, million	1371.3
GDP, current US$ billion	2862.3
GDP per capita, current US$	2087.3
International poverty rate ($1.9)[a]	22.8
Lower middle-income poverty rate ($3.2)[a]	62.4
Gini index[a]	35.4
School enrollment, primary (% gross)[b]	113.0
Life expectancy at birth, years[b]	69.4

Notes: (a) Most recent value (2011), 2011 PPPs.; (b) WDI for School enrollment (2017); Life expectancy (2018).
Sources: WDI, Macro Poverty Outlook, and official data.

KEY CONDITIONS AND CHALLENGES

India emerged from the Global Financial Crisis (GFC) with stressed balance sheets of banks and corporates, depressed private investment, and weaker exports growth. Efforts to deal decisively with nonperforming assets in the banking sector, strengthen the insolvency framework, and improve the governance of public sector banks were only partially successful. Thus, in the period following the GFC, growth was driven mainly by private consumption. From FY09 to FY18 annual GDP growth averaged 6.7 percent (or 5.3 percent per capita).

After FY17, during which the economy grew at 8.3 percent, growth decelerated in each subsequent year to 7.0, 6.1 and 4.2 percent. This was on account of two mutually reinforcing dynamics: emerging weaknesses in non-bank financial companies (a major source of credit growth, making up for risk aversion from banks) and slowing private consumption growth.

Thus, the impact of COVID-19 materialized against a backdrop of (i) enduring fragility in the financial sector, (ii) slowing overall growth, and (iii) limited fiscal buffers. The response of the government of India to the COVID-19 outbreak was swift and comprehensive. A strict lockdown was implemented to contain the health emergency. To mitigate its impact on the poorest, it was complemented by social protection measures; to ensure that businesses could maintain their operations, the Reserve Bank of India (RBI) and the government also provided liquidity and other regulatory support. Nonetheless, there was a massive contraction in output and poor and vulnerable households experienced significant social hardship – specifically urban migrants and workers in the informal economy.

RECENT DEVELOPMENTS

In the first quarter of FY21 (India's fiscal year is from April 1 to March 31) economic growth contracted by an unprecedented 23.9 percent (year-on-year). On the demand side, private consumption and investment contracted sharply. On the supply side, industrial and services output fell by 38 and 21 percent, respectively.

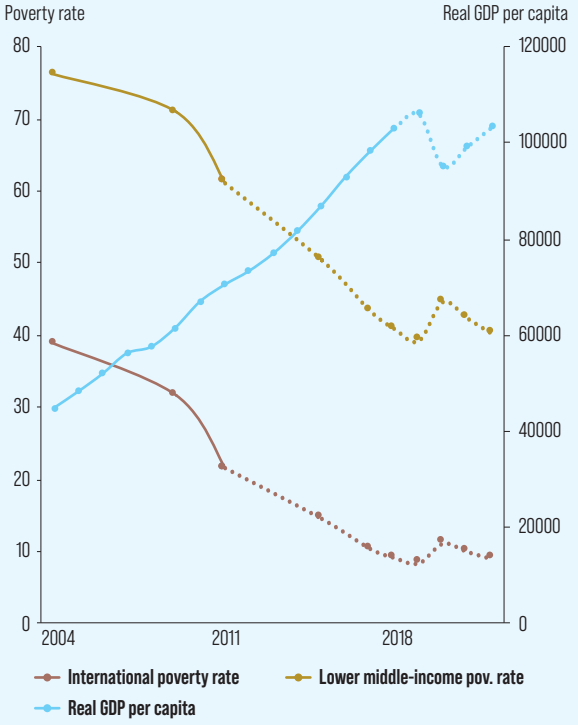
After reaching 4.8 percent in FY20, headline inflation averaged 6.6 percent, during April-July 2020, given supply-chain disruptions. The RBI cut the repo rate by a cumulative 115 bps between March and May, while maintaining significant excess liquidity in the market, and then paused further easing in August.

During the first quarter of FY21, the current account turned to a surplus, as a large decline in

Figure 1: Real GDP growth and contributions to real GDP growth

Sources: Central Statistics Office and staff calculations.

Figure 2: Actual and projected poverty rates and real GDP per capita



Notes: See Table 2.
Source: World Bank.

imports more than offset a drop in exports. With significant net foreign investment inflows, foreign reserves reached USD 534.5 billion at end-July, equivalent to more than 13 months of FY20 imports. Following a sharp depreciation in March, the rupee has gradually regained its value against major currencies but remains slightly weaker than at the start of the year.

The growth slowdown in FY20 and the contraction in early FY21 have impaired revenue collection. Thus, after increasing to 7.6 percent in FY20 (from 5.4 percent in FY19), the general government deficit is believed to have increased further during the first half of FY21.

Available household survey consumption data indicate that the poverty rate declined from 22.5 percent to values ranging from 8.1 to 11.3 percent, between 2012 and 2017[11]. More recent household survey data[22] indicate significant disruptions to jobs due to COVID-19 that likely boosted the poverty rate, with 2020 rates back to levels overserved in 2016. These surveys suggest the labor force participation rate was 3.2 percentage points lower in the last week of August than in the months leading up to the lockdown. They also point to increased vulnerability: 11 and 7 percent of urban and rural individuals, respectively, who recently identified themselves as "employed" performed zero hours of work in the week prior to the survey. Data on the government's rural workfare program show that demand for casual work increased 66 percent y-o-y in August 2020. Between the last four months of 2019 and May-August 2020, the proportion of people working in urban and rural areas fell by 4.2 and 3.8 percentage points, respectively. Overall, the pandemic has likely raised urban poverty, creating a set of "new poor" characterized by non-farm employment and secondary or tertiary education.

OUTLOOK

Growth is expected to contract sharply in FY21 (by 9.6 percent in a baseline scenario), reflecting the impact of the national lockdown and the income shock experienced by households and firms. However, there is substantial uncertainty

1 The point estimate for 2017 is 10.4. The confidence interval reflects the degree of uncertainty associated with different statistical methods used to estimate poverty in the absence of recent household survey data. As documented in Box 1.3 of the Poverty and Shared Prosperity report (2020), there are other additional sources of uncertainty that are not reflected in this range of estimates.
2 From the Centre for Monitoring Indian Economy (CMIE).

related to (i) the course and duration of the pandemic, (ii) the speed at which households and firm behavior will adjust to the lifting of lockdowns, and (iii) a possible new round of countercyclical fiscal policy. Thus, there is a wide confidence interval around the baseline projections. Growth is expected to rebound to 5.4 percent in FY22, but mostly reflecting base effects, while potential output is expected to remain depressed in the medium-term. Inflation is expected remain around the RBI's target range mid-point (4 percent) in the near-term.

Weak activity, domestically and abroad, will depress both imports and exports. Thus, the current account is expected to reach a surplus of 0.7 percent of GDP in FY21 and is projected to gradually return to a deficit in later years.

The COVID-19 shock will lead to a long-lasting inflexion in India's fiscal trajectory. Assuming that the combined deficit of the states is contained within 4.5-5 percent of GDP, the general government fiscal deficit is projected to rise to above 12 percent in FY21 before improving gradually. Public debt is expected to remain elevated, around 94 percent, due to the gradual pace of recovery.

Policy interventions have preserved the normal functioning of financial markets thus far. However, the demand slowdown could lead to rising loan delinquencies and risk aversion. Recent RBI analysis indicates the gross nonperforming loans to asset ratio of scheduled commercial banks may increase to 12.5 percent by March 2021 (from 8.5 percent in March 2020).

Table 2: Macro poverty outlook indicators (annual percent change unless indicated otherwise).

	2017/18	2018/19	2019/20	2020/21 e	2021/22 f	2022/23 f
Real GDP growth, at constant market prices	7.0	6.1	4.2	-9.6	5.4	5.2
Private Consumption	7.0	7.2	5.3	-13.2	6.1	5.5
Government Consumption	11.8	10.1	11.8	10.5	5.5	5.9
Gross Fixed Capital Investment	7.2	9.8	-2.8	-16.2	7.8	6.7
Exports, Goods and Services	4.6	12.3	-3.6	-12.0	7.3	8.5
Imports, Goods and Services	17.4	8.6	-6.8	-20.0	12.3	12.0
Real GDP growth, at constant factor prices	6.6	6.0	3.9	-9.6	5.4	5.1
Agriculture	5.9	2.4	4.0	4.0	3.5	3.5
Industry	6.3	4.9	0.9	-20.0	5.5	5.0
Services	6.9	7.7	5.5	-7.4	6.0	5.7
Inflation (Consumer Price Index)	3.6	3.4	4.8	3.8	4.0	4.0
Current Account Balance (% of GDP)	-1.8	-2.1	-0.8	0.7	0.0	-0.5
Net Foreign Direct Investment (% of GDP)	1.1	1.1	1.5	1.1	1.3	1.5
Fiscal Balance (% of GDP)	-5.8	-5.4	-7.6	-12.4	-10.9	-8.9
Debt (% of GDP)	69.8	67.5	72.2	90.4	93.5	94.1
Primary Balance (% of GDP)	-1.1	-0.9	-2.8	-7.0	-4.4	-2.1
International poverty rate ($1.9 in 2011 PPP)[a,b]	10.4	9.2	8.3	11.1	10.0	9.0
Lower middle-income poverty rate ($3.2 in 2011 PPP)[a,b]	44.9	42.4	40.9	46.2	43.9	41.9

Notes: e = estimate, f = forecast. (a) Calculations based on SAR-POV harmonization, using 2011-NSS-SCH1 and fiscal year growth rates. Actual data: 2011. Nowcast: 2012-2019. Forecast are from 2020 to 2022. (b) Projection using neutral distribution (2011) base on HFCE with pass-through .733 (rural) and .559 (urban) up to 2015, and .67 for 2016-17. GDP pc in constant LCU with pass-through = .67 for 2018-23. "
Sources: World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.

Maldives

Maldives is expected to face its deepest recession in history. GDP is projected to contract by 19.5 percent in 2020 and to rebound by 9.5 percent in 2021, largely on account of base effects. The poverty rate is expected to increase to 5.6 percent in 2020, given widespread income losses. Fiscal vulnerabilities, already high prior to the pandemic, have been exacerbated by further external non-concessional borrowing. Postponing non-essential spending, especially on infrastructure, is critical to restoring fiscal and debt sustainability.

Table 1	2019
Population, million	0.5
GDP, current US$ billion	5.7
GDP per capita, current US$	10710.0
Upper middle-income poverty rate ($5.5)[a]	3.4
Gini index[a]	31.3
School enrollment, primary (% gross)[b]	97.1
Life expectancy at birth, years[b]	78.6

Notes: (a) Most recent value (2016), 2011 PPPs.
(b) WDI for School enrollment (2017); Life expectancy (2018).
Source: WDI, World Bank, and official data. WDI, Macro Poverty Outlook, and official data.

RECENT DEVELOPMENTS

The COVID-19 pandemic has paralyzed the Maldivian economy through its impact on tourism. Real GDP contracted by 5.9 percent year-on-year (y-o-y) in Q1 2020. The shock is expected to be larger in Q2 due to border closure and stringent mobility restrictions. Tourism inflows remained anemic even after borders reopened in mid-July. Only 13,787 tourists visited between July 15 and September 15, a 95 percent y-o-y decline; the average number of daily international commercial flights has declined to four (compared to 40 before the pandemic) and half of all resorts remain shut. Construction, the other main driver of growth, also slumped due to logistical difficulties and repatriations of foreign workers following COVID-19 outbreaks.

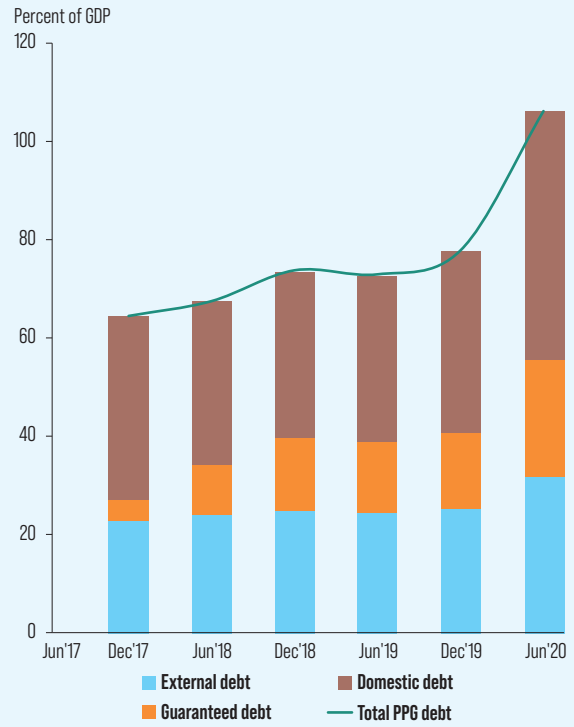
With overall depressed activity, price controls on staple food, and additional subsidies on utility bills, prices fell by an average of 4.0 percent y-o-y in Q2 2020. The deflation was more pronounced in Malé than in the atolls. Credit to the private sector grew by 6.9 percent y-o-y in Q2 thanks to the deployment of relief loans to businesses. Non-performing loans remained stable at 9.3 percent of total gross loans as of July, reflecting the loan moratoria announced in March.

Weak activity also led the goods trade deficit to narrow. Merchandise imports fell by 29.8 percent y-o-y from January to July 2020, driven by lower imports of capital goods, diesel, and food and beverages consumed by tourists. However, merchandise exports fell even more, by 35.4 percent y-o-y, over the same period. This was mostly due to lower re-exports of jet fuel from muted air traffic, but also to lower fish exports following weak demand from Europe and lower yield during the monsoon season.

As foreign exchange earnings from tourism plummeted, usable reserves fell from USD 311.3 million at end-January to USD 122.3 million as of end-August, equivalent to 0.5 months of 2019 goods imports. Nonetheless, Maldives maintains a de facto stabilized exchange rate arrangement. To help preserve exchange rate stability, the Maldives Monetary Authority activated a USD 150 million foreign currency swap with the Reserve Bank of India.

Fiscal imbalances have widened significantly. Although the state collected only USD 471 million in revenues and grants from January to July (half the amount in the corresponding period of 2019), there was no commensurate adjustment in spending. While there was some degree of fiscal consolidation on the recurrent side, capital spending grew by 16.7 percent y-o-y in the first half of the year, mainly due to land reclamation and harbor reconstruction projects. Total spending amounted to USD 948 million over January to July, only 1.2 percent less than over the same period in 2019. Total public and publicly guaranteed (PPG) debt rose to USD 4.8 billion as of end-June 2020, a significant increase from USD 4.4 billion as of end-2019.

Figure 1: Public and publicly guaranteed debt



Sources: Ministry of Finance data. 2019 and 2020 denominators are World Bank estimates.

Figure 2: Actual and projected poverty rates and real GDP per capita

Sources: 2016 data is World Bank estimate from HIES 2016, all other years are World Bank projections.

With the shutdown of tourism due to COVID-19, it is estimated that about 22,000 Maldivians have suffered job and/or income losses in the sector, not including seasonal workers, third-party providers of ancillary services and guesthouse employees. To mitigate the impact, monthly income support was provided to about 9,000 Maldivians in Q2, with an extension of the scheme in Q3. Based on data collected in 2016, poverty was estimated at 2.5 percent in 2019 (using the international poverty line of USD 5.50 per day in PPP terms).

OUTLOOK

In a baseline scenario that assumes borders remain open and tourists gradually return, GDP is projected to shrink by 19.5 percent in 2020. Thereafter, it is expected to rebound to 9.5 percent growth in 2021, largely on account of base effects and the expected resumption of tourism once a COVID-19 vaccine is commercially available, tentatively by mid-year. However, real GDP is forecast to remain below 2019 levels until 2023.

Lower remittance outflows and some import compression should help to narrow the current account deficit to 19.5 percent of GDP in 2020. However, the fiscal deficit is projected to more than triple to 22.5 percent of GDP as expenditures have not sufficiently adjusted to lower revenue levels, which are projected to halve. As a result, PPG debt is expected to increase from 77.7 percent of GDP in 2019 to 120 percent of GDP in 2020.

COVID-19 will likely cancel the gains in poverty reduction from the last five years. The poverty rate is projected to increase to 5.6 percent in 2020 (measured at USD 5.50 a day in PPP terms) and to decline very slowly thereafter. Even in the baseline scenario, the poverty rate would still be higher in 2021 than in 2016.

RISKS AND CHALLENGES

Should a 'second wave' materialize and prevent tourists from visiting in Q4 2020, the recession would be even more severe. While the unique "one island, one resort" concept facilitates socially-distanced vacations, difficulties in resuming commercial flights and recent increases in domestic transmission pose challenges to attracting more visitors. Although medium- and long-term tourism prospects remain strong, visitor arrivals are not projected to return to pre-pandemic levels until 2023. Meanwhile, the potential closure of tourist establishments and other small businesses could result

in permanent supply-side losses, hurting long-term growth.

Against this backdrop of slower growth and lower revenues, addressing core spending needs will be a challenge. Greater fiscal prudence would help address fiscal and debt sustainability risks. In particular, large public infrastructure investments that are not urgently needed in a context of weak aggregate demand could be postponed.

The COVID-19 shock has shed renewed light on the importance of strengthening the Maldives' resilience to external shocks. Although there are plans to develop agriculture and fishing to diversify the economy, the scarcity of arable land is a binding constraint. Focusing on higher value-added financial and business services could create good jobs, but the growth of these sectors is currently constrained by a shortage of local skills. Investing in human capital, including by retraining and upskilling workers, can help Maldives build back better.

Table 2: Macro poverty outlook indicators (annual percent change unless indicated otherwise).

	2017	2018	2019	2020 e	2021 f	2022 f
Real GDP growth, at constant market prices	6.8	6.9	5.9	-19.5	9.5	12.5
Real GDP growth, at constant factor prices	6.7	6.9	5.2	-19.5	9.5	12.5
Agriculture	8.3	4.8	3.2	1.8	3.5	4.5
Industry	10.7	10.5	4.5	-2.7	4.8	5.5
Services	6.0	6.5	5.5	-23.2	10.9	14.3
Inflation (Consumer Price Index)	2.8	-0.1	0.2	0.1	0.5	1.0
Current Account Balance (% of GDP)	-21.5	-28.0	-25.7	-19.5	-17.6	-15.6
Net Foreign Direct Investment (% of GDP)	9.7	10.8	15.7	5.0	7.5	10.6
Fiscal Balance (% of GDP)	-3.2	-4.7	-6.4	-22.5	-19.6	-16.6
Debt (% of GDP)	64.6	73.1	77.7	120.0	127.7	128.8
Primary Balance (% of GDP)	-1.6	-2.9	-4.6	-20.8	-17.7	-15.0
Upper middle-income poverty rate ($5.5 in 2011 PPP)[a,b]	3.2	2.9	2.5	5.6	4.1	2.7

Notes: e = estimate, f = forecast. (a) Calculations based on SAR-POV harmonization, using 2016-HIES.Actual data: 2016. Nowcast: 2017-2019. Forecast are from 2020 to 2022. (b) Projection using neutral distribution (2016) with pass-through = 0.87 based on GDP per capita in constant LCU.
Sources: World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.

Nepal

Nepal's economy came to a standstill in FY20 with negligible growth of 0.2 percent, a deceleration in the service sector and a contraction in industrial activity due to COVID-19. Trade disruptions resulted in a collapse in imports and narrowed the current account deficit, but the fiscal balance deteriorated. In the medium term, the economy is expected to recover only gradually as the pandemic-induced disruptions recede. Poverty is expected to increase in the short term.

Table 1	2019
Population, million	29.9
GDP, current US$ billion	30.6
GDP per capita, current US$	1023.4
International poverty rate ($1.9)[a]	15.0
Lower middle-income poverty rate ($3.2)[a]	50.9
Upper middle-income poverty rate ($5.5)[a]	83.0
Gini index[a]	32.8
School enrollment, primary (% gross)[b]	142.1
Life expectancy at birth, years[b]	70.5

Notes: (a) Most recent value (2010), 2011 PPPs.; (b) WDI for School enrollment (2019); Life expectancy (2018).
Source: WDI, Macro Poverty Outlook, and official data.

KEY CONDITIONS AND CHALLENGES

In the three years prior to the pandemic, the economy grew at an average rate of 7.3 percent, against a backdrop of political stability and policy emphasis on investment, productivity, and effective public institutions. Still Nepal's economy remains hampered by structural challenges, including heavy reliance on remittance-fueled consumption, and higher concentration of employment in agriculture. In addition, an ambitious decentralization reform initiated in FY18 has resulted in higher fiscal deficits and constrained service delivery, reflecting the weak capacity of the new local administrations. Addressing these challenges will require improving the quality of policymaking in the federal context, investing in human capital and skills, strengthening the business climate, and improving budget execution toward closing critical infrastructure gaps.

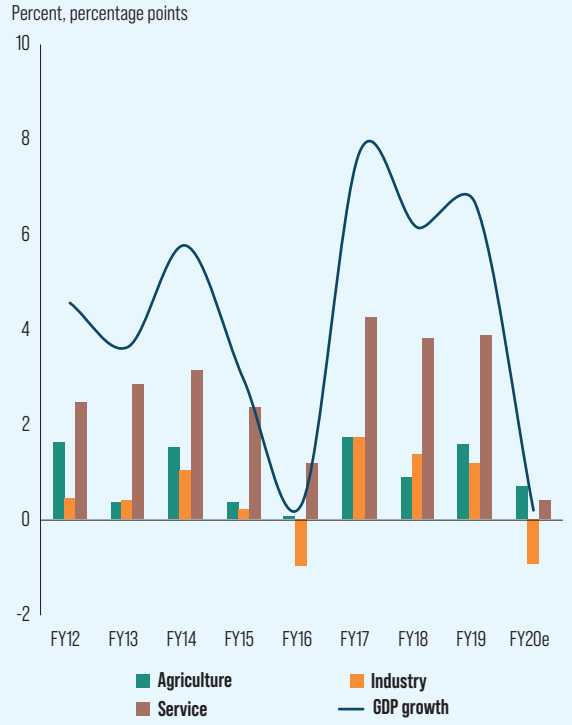
The COVID-19 crisis has derailed the growth momentum and exacerbated structural vulnerabilities. Travel restrictions have halted tourism and labor outmigration with ripple effects on domestic employment, remittances, and private consumption. Trade with India, Nepal's main trading partner, remains impaired as both countries struggle to contain the pandemic. The nationwide lockdown impacted production across all sectors of the economy and exacerbated pressure on livelihoods and an already stressed domestic labor market. In response, the government adopted health measures, and expanded safety net programs and concessional loan facilities.

RECENT DEVELOPMENTS

Economic growth slowed to 0.2 percent in FY20, mainly due to a national lockdown in response to the pandemic. Service sector growth deteriorated to an 18-year low of 0.7 percent, as tourism arrivals stopped and domestic transport and wholesale and retail trade were disrupted. Industrial growth contracted, and capacity utilization fell from 80 to 46 percent because of shortages in production inputs and labor. Agricultural growth also decelerated sharply as market access and labor mobility became constrained. On the expenditure side, a contraction in private consumption and investment was marginally offset by positive contributions from government expenditures (on wages and COVID-19 related expenditures on health and social assistance) and net exports (driven by lower imports).

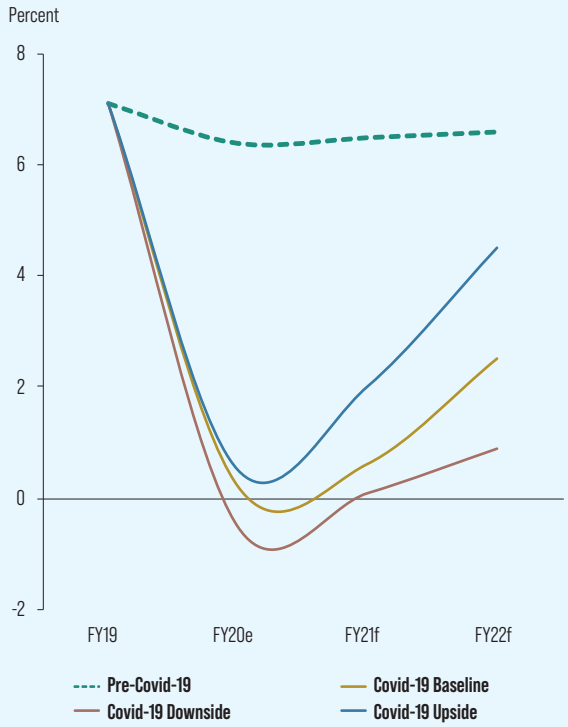
Average inflation reached 6.2 percent in FY20. Food price inflation spiked in early FY20 following an

Figure 1: Real GDP growth and contributions to real GDP growth



Source: Central Bureau of Statistics and staff calculations.

Figure 2: GDP growth is expected to decelerate significantly compared to projections before COVID-19 outbreak



Sources: Central Bureau of Statistics and staff calculations.

export ban on onions by India and remained elevated because of localized food shortages resulting from transport disruptions. Prudential indicators of banking and financial institutions remained within regulatory targets: non-performing loans stood at 1.9 percent, capital adequacy at 14.2 percent, and liquidity at 27.9 percent. As a part of COVID-19 relief measures, the central bank relaxed regulatory requirements for banking and financial institutions, reduced the targeted interest rate, and increased the size of the refinancing facility. Despite these measures, deposit growth exceeded credit growth for the first time in five years: the credit to core capital and deposits ratio fell to 69.6 percent, well below the 80 percent regulatory limit.

Trade disruptions led to a 19.7 percent year-on-year drop in imports in FY20, significantly narrowing the current account deficit to 0.9 percent of GDP. The sharp drop in imports outweighed both the contraction in exports - reflecting lower external demand for Nepali goods and a shutdown of tourist arrivals – and a 3.4 percent decline in remittance inflows due to lower outmigration and weak economic activity in migrant receiving countries. The current account deficit was mostly financed by external concessional loans. Foreign exchange reserves increased to $11.6 billion, equivalent to 12.7 months of imports.

The fiscal deficit increased in FY20 as trade restrictions caused a 5 percent contraction in tax revenue. The fall in tax revenue was partly offset by low budget execution, with total expenditures remaining close to FY19 levels in nominal terms. As a result, the fiscal deficit widened only marginally, to 3.2 percent of GDP in FY20. Public debt increased to 38.3 percent of GDP in FY20, compared to 30.1 percent in FY19, reflecting the adverse growth dynamics.

COVID-19 related disruptions in livelihoods and the contraction in households' consumption are expected to have affected the poor, vulnerable, and households engaged in informal sector activities disproportionately. Therefore, poverty is likely to increase in 2020. However, outdated poverty data (from 2010/11) makes projection-based estimates of poverty imprecise. The 2017/18 national labor market data also predates COVID-19. But, new data from an ongoing regional survey on the labor impacts of COVID-19 will help track the evolution of job losses and recoveries in the last quarter of 2020.

OUTLOOK

Growth is expected to remain subdued in FY21 and FY22. Under a baseline scenario, GDP is projected to expand by only 0.6 percent in FY21, as periodic and localized lockdowns continue. Disruptions to tourism are expected to persist well into FY21. Although key hydropower projects, such as the Upper Tamakoshi Project, are expected to support industrial growth, demand and trade are likely to remain subdued, further depressing industrial sector growth in FY21. The agricultural sector is expected to pick up, given favorable monsoons, but could be impacted by a shortage of fertilizers and labor. On the demand side, private consumption is expected to support growth, but investment and exports will likely remain subdued. In a downside scenario, should COVID-19 persist, continued disruptions and weak subnational capacity to implement relief spending could weaken growth to 0.1 percent in FY21, likely increasing poverty. But if an effective vaccine becomes available, growth could recover to 2 percent in FY21. A protracted recovery is expected into FY22, assuming a gradual retreat of the pandemic.

Inflation is expected to accelerate slightly to 6.5 percent in FY21, reflecting a gradual recovery in global oil prices and higher domestic food prices, due to slow agricultural growth and periodic disruptions to supply chains. The current account deficit, meanwhile, is projected to remain close to its FY20 level, with a gradual rebound in imports offset by increased remittance inflows and merchandise exports. However, remittances are likely to remain below pre-COVID-19 levels until the end of FY21. Thereafter, the current account deficit is expected to gradually widen to 3.1 percent of GDP in FY22, as domestic demand for imports rebounds. The fiscal deficit is expected to widen to 6.4 percent of GDP in FY21 due to additional recurrent spending on COVID-19 relief and recovery measures, stable capital spending, and subdued tax revenue collection.

Risks to poverty will increase with declining remittances and lagged effects from extended lockdowns on informal sectors.

Table 2: Macro poverty outlook indicators (annual percent change unless indicated otherwise).

	2017	2018	2019	2020 e	2021 f	2022 f
Real GDP growth, at constant market prices	8.2	6.7	7.0	0.2	0.6	2.5
Private Consumption	2.6	3.3	5.5	-3.1	-0.9	2.3
Government Consumption	10.5	13.5	7.8	38.7	-2.2	-6.7
Gross Fixed Capital Investment	44.3	18.1	5.0	-46.1	-1.2	40.1
Exports, Goods and Services	11.3	6.2	4.7	-16.6	-12.2	6.1
Imports, Goods and Services	27.2	16.5	7.8	-21.7	-5.6	12.7
Real GDP growth, at constant factor prices	7.7	6.1	6.6	0.2	0.6	2.5
Agriculture	5.2	2.8	5.1	2.3	2.1	2.9
Industry	12.4	9.6	7.7	-5.9	-4.1	3.2
Services	8.1	7.2	7.3	0.7	1.0	2.1
Inflation (Consumer Price Index)	4.5	4.2	4.5	6.2	6.5	6.3
Current Account Balance (% of GDP)	-0.4	-8.1	-7.7	-0.9	-1.0	-3.1
Fiscal Balance (% of GDP)	-3.1	-6.6	-2.8	-3.2	-6.4	-5.8
Debt (% of GDP)	26.1	30.1	30.1	38.3	43.6	46.7
Primary Balance (% of GDP)	-2.7	-6.1	-2.2	-2.5	-5.6	-4.9

Notes: e = estimate, f = forecast.
Source: World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.

Pakistan

Pakistan's economy has been severely affected by measures taken to contain the pandemic. Economic activity contracted and poverty is expected to have risen in FY20, as monetary and fiscal policy tightening, earlier in the year, was followed by lockdowns. Growth is expected to gradually recover but remain muted, given heightened uncertainty and the resumption of demand compression measures. A possible resurgence of the infection, widespread crop damage due to locusts and heavy monsoon rains pose major risks to the outlook.

Table 1	2019
Population, million	204.7
GDP, current US$ billion	278.2
GDP per capita, current US$	1359.5
International poverty rate ($1.9)[a]	4.0
Lower middle-income poverty rate ($3.2)[a]	35.1
Upper middle-income poverty rate ($5.5)[a]	75.6
Gini index[a]	33.5
School enrollment, primary (% gross)[b]	94.3
Life expectancy at birth, years[b]	67.1

Notes: (a) Most recent value (2015), 2011 PPPs; (b) Most recent WDI value (2018).
Sources: WDI, Macro Poverty Outlook, and official data.

RECENT DEVELOPMENTS

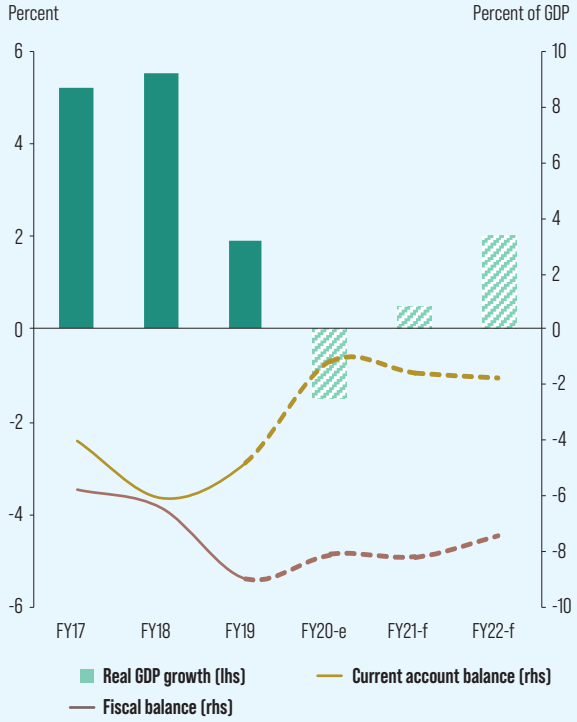
Real GDP growth (at factor cost) is estimated to have declined from 1.9 percent in FY19 to -1.5 percent in FY20, the first contraction in decades, reflecting the effects of COVID-19 containment measures that followed monetary and fiscal tightening prior to the outbreak. To curtail the spread of the infection, a partial lockdown - that included restrictions on air travel, inner-city public transport, religious/social gatherings and the closure of all non-essential businesses and schools - was imposed in March and gradually eased from May 2020 onwards. This disrupted domestic supply and demand, as businesses were unable to operate and consumers curbed spending, which specifically affected services and industry. The services sector is estimated to have contracted, by over 1 percent, while industrial production is expected to have declined even more, due to the high policy rates prior to the pandemic and plunging domestic and global demand thereafter. The agriculture sector, partially insulated from the effects of containment measures, is estimated to have expanded modestly over the year.

On the demand side, private consumption is estimated to have contracted in FY20, as households reduced consumption amid the lockdown and dimmer employment prospects. Similarly, with heightened uncertainty, disrupted supply chains and a global slowdown, investment is estimated to have fallen drastically. Exports and imports also shrank given weaknesses in global trade and domestic demand. In contrast, government consumption growth rose, reflecting the rollout of the fiscal stimulus package to cushion the effects of the pandemic.

Despite weak activity, consumer price inflation rose from an average of 6.8 percent in FY19 to an average of 10.7 percent in FY20, due to surging food inflation, hikes in administered energy prices, and a weaker rupee, which depreciated 13.8 percent against the U.S. dollar in FY20. With elevated inflationary pressures, the policy rate was held at 13.25 percent from July 2019 to February 2020 but was subsequently lowered to 7.0 percent over the remainder of FY20, to support dwindling activity and as inflationary expectations fell amid the pandemic. The central bank also implemented multiple measures to provide liquidity support to firms. At end-FY20, the banking system remained well capitalized, however upticks in non-performing loans were beginning to erode capital buffers.

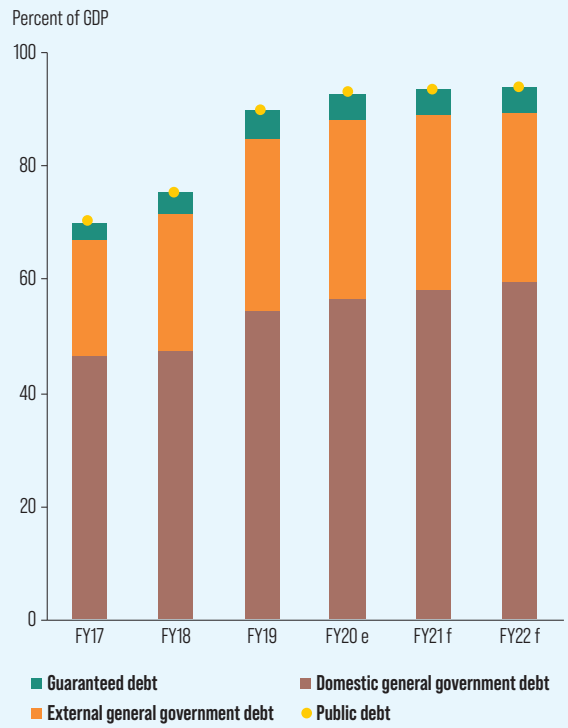
The current account deficit shrank from 4.8 percent of GDP in FY19 to 1.1 percent of GDP in FY20, the narrowest since FY15, driven mainly by import values falling 19.3 percent (Figure 1). Total export values also contracted 7.5 percent due to weak global demand. Despite the global downturn, workers' remittances increased relative to FY19, underpinning a wider income account surplus. Meanwhile, higher net foreign direct investment, and multilateral

Figure 1: Twin deficits and real GDP growth



Notes: Pakistan reports data on fiscal year (FY) basis. The fiscal year runs from July 1 through June 30.
Sources: Ministry of Finance and staff estimates.

Figure 2: Public debt



Sources: Ministry of Finance, State Bank of Pakistan and staff estimates.

and bilateral disbursements, more than offset a decline in portfolio flows, leading to a larger financial account surplus. The balance of payments consequently swung to a surplus of 2.0 percent of GDP in FY20, and official foreign reserves increased to US$13.7 billion at end-June 2020, equivalent to 3.2 months of imports.

In FY20, the fiscal deficit narrowed to 8.1 percent of GDP from 9.0 percent in FY19. Total revenues rose to 15.3 percent of GDP due to higher non-tax revenue, as the central bank and the telecommunication authority repatriated large profits. Despite reforms, tax revenues slipped to 11.6 percent of GDP, with lower economic activity and larger tax expenditures. Expenditures rose mainly due to a fiscal stimulus package valued at around 2.9 percent of GDP, while public debt, including guaranteed debt, increased to 93.0 percent of GDP by end-FY20 (Figure 2).

The economic contraction is likely to have a significant impact on poverty. Lockdown measures have severely affected non-farm sectors that provide livelihoods to the most vulnerable segments of the population, particularly in urban areas. With government estimates of pandemic job losses at approximately 14 million, poverty is expected to increase for the first time in two decades. The pandemic is also expected to exacerbate Pakistan's human capital challenges. The closure of education institutes has impacted more than 50 million students, while access to essential healthcare like prenatal/postnatal services and immunization has been disrupted. All these challenges disproportionately affect poor and vulnerable groups, including women and girls.

OUTLOOK

While domestic economic activity is expected to recover, as lockdown measures are lifted, with a gradual decline in active COVID-19 cases, Pakistan's near-term economic prospects are subdued. Significant uncertainty over the evolution of the pandemic and availability of a vaccine, demand compression measures to curb imbalances, along with unfavorable external conditions, all weigh on the outlook. Economic growth is projected to remain below potential, averaging 1.3 percent for FY21-22. This baseline projection, which is highly uncertain, is predicated on the absence of significant infection flare ups or subsequent waves that would require further widespread lockdowns.

The current account deficit is expected to widen to an average of 1.5 percent of GDP over FY21-22, with imports and exports gradually picking up as

domestic demand and global conditions improve. The fiscal deficit is projected to narrow to 7.4 percent in FY22, with the resumption of fiscal consolidation and stronger revenues driven by recovering economic activity and critical structural reforms. Expenditures will remain substantial due to sizeable interest payments, a rising salary and pension bill, and absorption of energy SOE guaranteed debt by the government.

Given anemic growth projections in the near term, poverty is expected to worsen. Vulnerable households rely heavily on jobs in the services sector, and the projected weak services growth is likely to be insufficient to reverse the higher poverty rates precipitated by the pandemic.

RISKS AND CHALLENGES

There are considerable downside risks to the outlook with the most significant being a possible resurgence of the infection, triggering a new wave of global and/or domestic lockdowns and further delaying the implementation of critical structural reforms. Locust attacks and heavy monsoon rains could lead to widespread crop damage, food insecurity and inflationary pressures, and livelihoods for households dependent primarily on agriculture could also be negatively impacted. Finally, external financing risks could be compounded by difficulties in rolling-over bilateral debt from non-traditional donors and tighter international financing conditions.

Table 2: Macro poverty outlook indicators (annual percent change unless indicated otherwise).

	2016/17	2017/18	2018/19	2019/20 e	2020/21 f	2021/22 f
Real GDP growth, at constant market prices	5.6	5.8	1.0	-1.5	0.5	2.0
Private Consumption	8.5	6.2	2.9	-1.1	1.5	2.4
Government Consumption	5.3	8.6	0.8	5.6	0.1	1.9
Gross Fixed Capital Investment	10.3	11.2	-12.8	-17.9	-6.9	1.2
Exports, Goods and Services	-0.6	12.7	14.5	-8.6	-0.7	3.8
Imports, Goods and Services	21.2	17.6	4.3	-10.5	-0.7	4.3
Real GDP growth, at constant factor prices	5.2	5.5	1.9	-1.5	0.5	2.0
Agriculture	2.2	4.0	0.6	1.2	1.0	2.3
Industry	4.6	4.6	-2.3	-5.0	-2.4	1.7
Services	6.5	6.3	3.8	-1.3	1.2	2.1
Inflation (Consumer Price Index)	4.8	4.7	6.8	10.7	9.0	7.0
Current Account Balance (% of GDP)	-4.0	-6.1	-4.8	-1.1	-1.5	-1.7
Net Foreign Direct Investment (% of GDP)	0.8	0.9	0.5	1.0	0.7	0.8
Fiscal Balance (% of GDP)	-5.8	-6.4	-9.0	-8.1	-8.2	-7.4
Debt (% of GDP)	70.0	75.2	89.8	93.0	93.5	93.8
Primary Balance (% of GDP)	-1.5	-2.1	-3.5	-1.8	-1.8	-1.3

Notes: e = estimate, f = forecast.
Source: World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.

Sri lanka

COVID-19-related disruptions will lead to a sharp contraction in Sri Lanka's economy in 2020. A significant increase in poverty is expected due to widespread jobs and earnings losses. With already narrow fiscal buffers before the pandemic, additional spending and reduced revenues due to COVID-19 will put additional pressure on fiscal sustainability. Over the medium term, growth is expected to recover slowly. However, macroeconomic vulnerabilities will remain high, with depleted fiscal buffers, high indebtedness and large refinancing needs.

Table 1	2019
Population, million	21.8
GDP, current US$ billion	84.0
GDP per capita, current US$	3861.0
International poverty rate ($1.9)[a]	0.9
Lower middle-income poverty rate ($3.2)[a]	10.8
Upper middle-income poverty rate ($5.5)[a]	41.7
Gini index[a]	39.8
School enrollment, primary (% gross)[b]	100.2
Life expectancy at birth, years[b]	76.8

Notes: (a) Most recent value (2016), 2011 PPPs.; (b) Most recent WDI value (2018).
Source: WDI, Macro Poverty Outlook, and official data.

RECENT DEVELOPMENTS

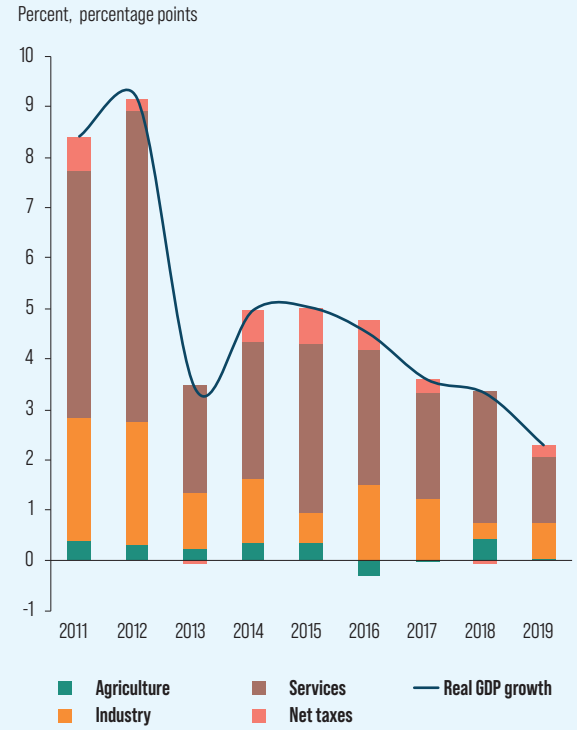
Sri Lanka's economy was already showing signs of weakness before the COVID-19 pandemic. After growing by 2.3 percent in 2019, the economy contracted by 1.6 percent y-o-y in the first quarter of 2020. The contraction, a first in 19 years, was driven by weak performances of construction, textile, mining and tea industries. Against this backdrop, the COVID-19 health crisis is believed to have impacted economic activity severely. High frequency indicators suggest that growth has faltered in the second quarter, as curfews impeded economic activity and global demand remained weak. Moreover, the closure of airports to tourists between April and September brought tourism activity to a standstill.

Weak demand has kept inflation in check thus far in 2020, creating room for policy support. Annual average inflation measured by the Colombo Consumer Price Index was 4.8 percent in August 2020 despite high food inflation. This allowed the central bank to reduce policy rates by 250 basis points and the reserve ratio by 300 basis points over the first seven months of 2020. The central bank also introduced a refinancing facility and a credit guarantee scheme to encourage commercial banks to increase lending. Despite these measures, private credit growth remained subdued in the first half of 2020. Asset quality and earnings of financial businesses deteriorated, reflecting the impact of decelerating loan recoveries and shrinking margins.

The current account deficit is estimated to have narrowed in the first half of 2020. A reduction in imports due to severe import restrictions and low oil prices is likely to have offset reduced receipts from remittances, tourism, tea and textiles. Following heavy depreciation pressures in March, the Sri Lankan Rupee (LKR) stabilized in the second quarter, as import controls helped the current account. Official reserves, estimated at USD 7.4 billion as of August, remain low relative to short-term external liabilities. Included in reserves is a swap facility of USD 400 million with the Reserve Bank of India and a loan of USD 500 million from the China Development Bank. The central bank also secured a repo facility with the New York Federal Reserve Bank for USD 1.0 billion as a contingency measure. A Eurobond of USD 1.0 billion is maturing in October 2020.

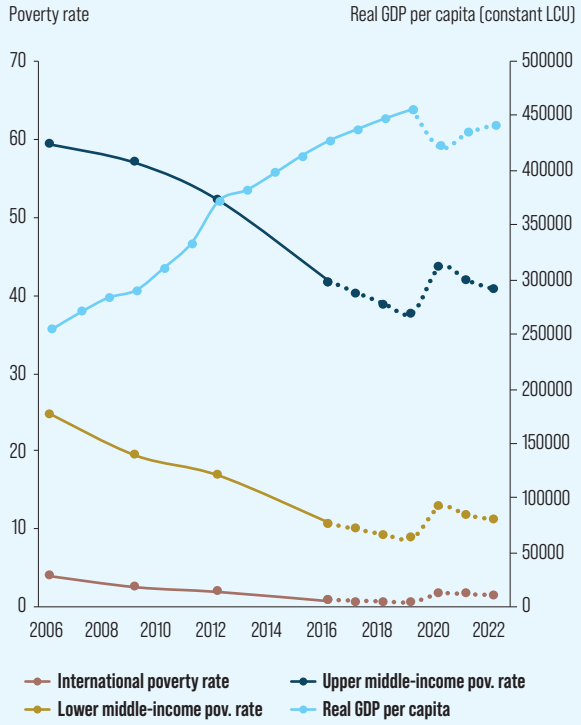
Fiscal accounts deteriorated in the first four months of 2020. Tax revenues fell short due to weak collection of value-added, income, and import taxes. The fiscal stimulus package implemented in November 2019 -which included a reduction of the VAT rate and an increase of the registration threshold, as well as import controls-, and slow growth contributed to the reduction in tax collection

Figure 1: Real GDP growth and contributions to real GDP growth (production side)



Source: Department of Census and Statistics and staff calculations.

Figure 2: Actual and projected poverty rates and real GDP per capita



Note: See Table 2.
Source: World Bank.

during this period. As a result, despite a moderation in public investment, the overall budget deficit increased by 24 percent in the first four months of 2020, year-on-year. Approximately 40 percent of the deficit was financed by central bank credit. The central government debt-to-GDP ratio rose to over 90 percent (from 86.8 percent at end 2019), with more than half of the debt denominated in foreign currency. Citing limited fiscal buffers and external vulnerabilities, Fitch and S&P downgraded the sovereign rating to B-.

The economic effects of COVID-19 will have significant welfare implications. Poverty measured using the $3.20 poverty line (in 2011 PPP) is estimated to have declined from 9.4 percent in 2018 to 8.9 percent in 2019. However, the COVID-19 crisis is believed to have caused sharp jobs and earnings losses. Informal workers, about 70 percent of the workforce, are particularly vulnerable as they lack employment protection or paid leave. The apparel industry, which employs about half a million workers, has reportedly cut significant jobs. While agricultural production is expected to be largely undisrupted, weak external demand likely impacted export-oriented subsectors and wages. High food price inflation, which remains at double-digits, is disproportionately affecting the poor who spend a larger share of their budget on food.

OUTLOOK

The COVID-19 crisis has substantially clouded the outlook and exacerbated an already challenging macroeconomic situation. The economy is expected to contract by 6.7 percent in 2020, with all key drivers of demand affected: exports, private consumption and investment. The current account deficit is expected to remain low (at 2.2 percent of GDP in 2020) thanks to low oil prices and strict import restrictions, which should largely offset the reduction in receipts from garment exports, tourism and remittances. However, refinancing requirements will be high, with annual foreign exchange debt service requirements estimated at 7-8 percent of GDP over 2020-2022. The fiscal deficit is projected to expand further to over 11 percent of GDP in 2020, driving an increase in debt levels.

Reflecting these challenges, the $3.20 poverty headcount is projected to increase from 8.9 percent in 2019 to 13 percent in 2020. During the lockdown, the government extended temporary cash support to Samurdhi households, including a large number of which were on the waitlist. But the program is not well targeted and benefit amounts are inadequate. Construction and services sectors, including tourism, have been important sources of jobs growth in recent years and the outbreak

will likely harm the prospects of many low-skilled workers. The government is employing 60,000 graduates and 100,000 individuals from low-income families to support livelihoods, but this will remain insufficient and add further strain on public finances. A fall in remittances could adversely impact some poor households that rely on them as an important source of income.

RISKS AND CHALLENGES

A longer than expected outbreak of COVID-19, that would extend the horizon and depth of related economic disruptions, is a key risk to the baseline outlook. In turn, a longer downturn could push many small and medium enterprises from illiquidity to insolvency, and the poverty rate could rise even higher as more people suffer income losses. Low growth would also put additional strain on public finances.

Sri Lanka is also highly exposed to global financial conditions, as the repayment profile of its debt requires the country to access financial markets frequently. A high deficit and rising debt levels could further deteriorate debt dynamics and negatively impact market sentiment. Thus, Sri Lanka will need to strike a balance between supporting the economy amid COVID-19 and ensuring fiscal sustainability.

Table 2: Macro poverty outlook indicators (annual percent change unless indicated otherwise).

	2017	2018	2019	2020 e	2021 f	2022 f
Real GDP growth, at constant market prices	3.6	3.3	2.3	-6.7	3.3	2.0
Private Consumption	3.6	3.7	2.9	-6.7	3.3	2.0
Government Consumption	-6.0	-5.1	9.6	3.8	4.1	2.1
Gross Fixed Capital Investment	6.1	-1.3	4.1	-15.1	3.4	2.6
Exports, Goods and Services	7.6	0.5	7.1	-34.8	3.3	4.6
Imports, Goods and Services	7.1	1.8	-5.8	-29.2	2.8	3.8
Real GDP growth, at constant factor prices	3.6	3.7	2.2	-5.7	3.2	2.0
Agriculture	-0.4	6.5	0.6	1.0	2.0	2.0
Industry	4.7	1.2	2.7	-6.1	3.2	1.9
Services	3.6	4.6	2.3	-6.3	3.3	2.0
Inflation (Consumer Price Index)	6.6	4.3	4.3	4.9	4.9	5.0
Current Account Balance (% of GDP)	-2.7	-3.2	-2.2	-2.2	-2.8	-2.9
Net Foreign Direct Investment (% of GDP)	1.5	1.7	0.7	0.3	0.4	0.5
Fiscal Balance (% of GDP)	-5.6	-5.3	-6.8	-11.1	-8.8	-8.4
Debt (% of GDP)	77.9	83.7	86.8	102.0	106.0	110.3
Primary Balance (% of GDP)	0.0	0.6	-0.8	-4.3	-2.1	-1.6
International poverty rate ($1.9 in 2011 PPP)[a,b]	0.8	0.7	0.6	1.8	1.7	1.6
Lower middle-income poverty rate ($3.2 in 2011 PPP)[a,b]	10.0	9.4	8.9	13.0	11.9	11.3
Upper middle-income poverty rate ($5.5 in 2011 PPP)[a,b]	40.2	38.8	37.6	43.5	41.8	40.6

Notes: e = estimate, f = forecast. (a) Calculations based on SAR-POV harmonization, using 2016-HIES.Actual data: 2016. Nowcast: 2017-2019. Forecasts are from 2020 to 2022. (b) Projections for 2020 are from a microsimulation.
Source: World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.

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