WORLD BANK EAST ASIA AND PACIFIC ECONOMIC UPDATE APRIL 2020

# EAST ASIA AND PACIFIC IN THE TIME OF COVID-19


WORLD BANK GROUP

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# List of Abbreviations

| | |
|---|---|
| BOP | Balance of Payments |
| CBOE | Chicago Board Options Exchange |
| CGE | Computable general equilibrium |
| DEC | Development Economics |
| E&E | Electrical and electronics |
| EAP | East Asia and the Pacific |
| EFI | Equitable Growth, Finance, and Institutions |
| EIS | Employment Insurance Scheme |
| EMDE | Emerging Markets and Developing Countries |
| EPF | Employees Provident Fund |
| GDP | Gross domestic product |
| GVC | Global Value Chain |
| HNP | Health, Population, and Nutrition |
| ICU | Intensive care unit |
| IMF | International Monetary Fund |
| MFN | Most favored nation |
| MOF | Ministry of Finance |
| NPI | Nonpharmaceutical interventions |
| NPL | Nonperforming loans |
| OECD | Organisation for Economic Co-operation and Development |
| PBOC | People's Bank of China |
| pp | Percentage point |
| PTA | Preferential trade agreement |
| RERF | Revenue Equalisation Reserve Fund |
| ROW | Rest of the World |
| RPC | Revenue Processing Centre |
| SME | Small and medium enterprise |
| SOE | State-owned enterprise |
| SPS | Sanitary and phytosanitary |
| U.S. | United States |
| USTR | United States Trade Representative |
| VA | Value added |
| VER | Voluntary Export Restraint |
| VIE | Voluntary import expansions |
| VIX | Volatility Index |
| VLSS | Vietnam Living Standard Survey |
| WDR | World Development Report |
| WTO | World Trade Organization |

| ***Regions, World Bank Classification and Country Groups*** | |
|---|---|
| EAP | East Asia and Pacific |
| ECA | Eastern Europe and Central Asia |
| LAC | Latin America and the Caribbean |
| MNA | Middle East and North Africa |
| SAR | South Asia |
| SSA | Sub-Saharan Africa |

| ***Country Abbreviations*** | |
|---|---|
| AUS | Australia |
| BRA | Brazil |
| BRN | Brunei Darussalam |
| CAN | Canada |
| CHN | China |
| FJI | Fiji |
| FSM | Federated States of Micronesia |
| IDN | Indonesia |
| IND | India |
| JPN | Japan |
| KHM | Cambodia |
| KIR | Kiribati |
| KOR | Republic of Korea |
| LAO | Lao People's Democratic Republic |
| MEX | Mexico |
| MNG | Mongolia |
| MMR | Myanmar |
| MYS | Malaysia |
| NRU | Nauru |
| PHL | Philippines |
| PLW | Palau |
| PNG | Papua New Guinea |
| RMI | Republic of the Marshall Islands |
| RUS | Russia |
| SGP | Singapore |
| SLB | Solomon Islands |
| THA | Thailand |
| TLS | Timor-Leste |

## List of Abbreviations continued

| | |
|---|---|
| TON | Tonga |
| TUR | Turkey |
| TUV | Tuvalu |
| UK | United Kingdom |
| USA | United States |
| VNM | Vietnam |
| VUT | Vanuatu |
| WSM | Samoa |

| ***Currency Units*** | |
|---|---|
| A$ | Australian dollar |
| $NZ | New Zealand dollar |
| B | Thai baht |
| CR | Cambodian riel |
| D | Vietnamese dong |
| F$ | Fiji dollar |
| K | Myanmar kyat |
| K | Papua New Guinea kina |
| Kip | Lao kip |
| P | Philippine peso |
| RM | Malaysian ringgit |
| RMB | Chinese renminbi |
| Rp | Indonesian rupiah |
| SI$ | Solomon Islands dollar |
| Tog | Mongolian tugrik |
| US$ | Timor-Leste (U.S. dollar) |
| US$ | United States dollar |

# Preface and Acknowledgments

This report is a collective endeavor and involved several parts of the Bank including DEC, EAP, EFI, and HNP.

It was prepared by a team led by Ergys Islamaj, Aaditya Mattoo, and Ekaterine T. Vashakmadze. Other members of the team were Ana Maria Aviles, Chiara Dell' Aira, Kevin Thomas Garcia Cruz, Damien de Walque, Reno Dewina, Sebastian Eckardt, Caroline Freund, Jed Friedman, Sergiy Kasyanenko, Vera Kehayova, Youyang Li, Maria Ana Lugo, Maryla Maliszewska, Davide Salvatore Mare, Andrew D. Mason, Son Nam Nguyen, Michele Ruta, Fabiola Saavedra Caballero, Maria Filipa Seara e Pereira, Franz Ulrich Ruch, Daria Taglioni, Radu Tatucu, Dominique van der Mensbrugghe, Cecile Wodon, Judy Yang, and Luan Zhao.

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The report was edited and typeset by Shepherd, Incorporated.

Throughout the report, geographic groupings are defined as follows:

**Developing East Asia and Pacific** comprises Cambodia, China, Indonesia, Lao People's Democratic Republic (PDR), Malaysia, Mongolia, Myanmar, Papua New Guinea, the Philippines, Thailand, Timor-Leste, Vietnam, and the Pacific Island Countries.

**The Pacific Island Countries** comprise Fiji, Kiribati, the Marshall Islands, the Federated States of Micronesia, Nauru, Palau, Samoa, the Solomon Islands, Tonga, Tuvalu, and Vanuatu.

The **ASEAN** member countries comprise Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

The **ASEAN-5** comprise Indonesia, Malaysia, the Philippines, Thailand, and Vietnam.

Due to the COVID-19 pandemic, economic circumstances within countries and regions are fluid and change on a day-by-day basis. The analysis in this report is based on the latest country-level data available as of March 27, 2020.

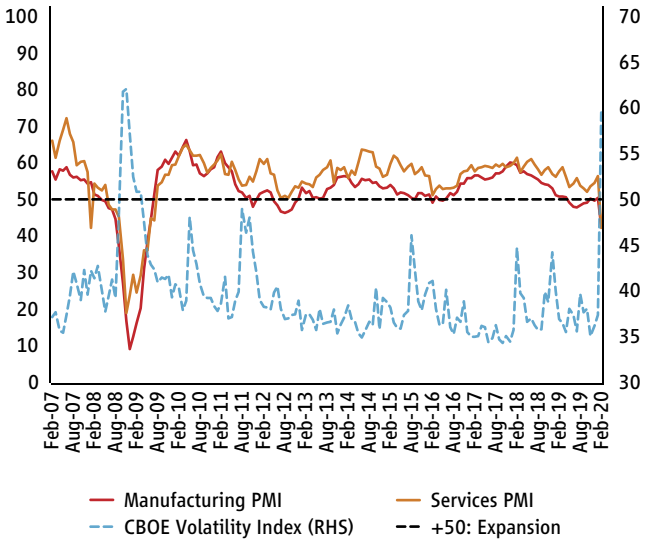
# Overview[1]

The virus that triggered a supply and demand shock in China has now caused a global shock. Developing economies in East Asia and the Pacific (EAP), recovering from trade tensions and struggling with a viral disease, now face the prospect of a global financial shock and recession. The region's relative resilience, demonstrated during recent crises, is being tested again. Have the recent trade and health shocks sapped its ability to deal with this third shock? Steady growth, sound macroeconomic policies, and prudent financial regulation have equipped many EAP countries to deal with normal tremors. But we are witnessing an unusual combination of disruptive and mutually reinforcing events. Significant economic pain seems unavoidable in all countries and the risk of financial instability is high, especially in countries with excessive indebtedness. This exceptional situation needs an exceptional response: bold national action, deeper regional and global cooperation, and significant external assistance.

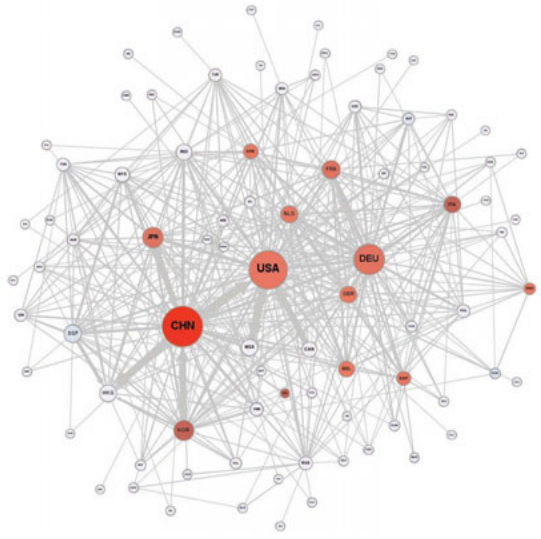
Part I of this update focuses on COVID-19. Because of high transmissibility, low herd immunity and, until recently, significant population mobility, the virus has spread rapidly at a high and increasing human cost. In many countries, the public health system is struggling to cope with the growing need. Since other World Bank work is focusing on the health challenge posed by the pandemic, this update will mostly focus on the economic cost, which is also ultimately a human cost. We recognize that in a rapidly changing environment, any update risks becoming obsolete. Therefore, this update will complement estimates with an analysis of developments, channels of impact and policy choices, which may have a more durable value.

The biggest immediate economic costs of COVID-19 are primarily due to the preventive behavior of individuals and the transmission control policies of governments. These actions first hit the Chinese economy, by disrupting supply and freezing demand, and other partner economies by limiting flows of trade and tourists. As the virus spreads beyond China,

**Global confidence is declining sharply . . .**




**. . . and the virus has hit critical trade nodes**



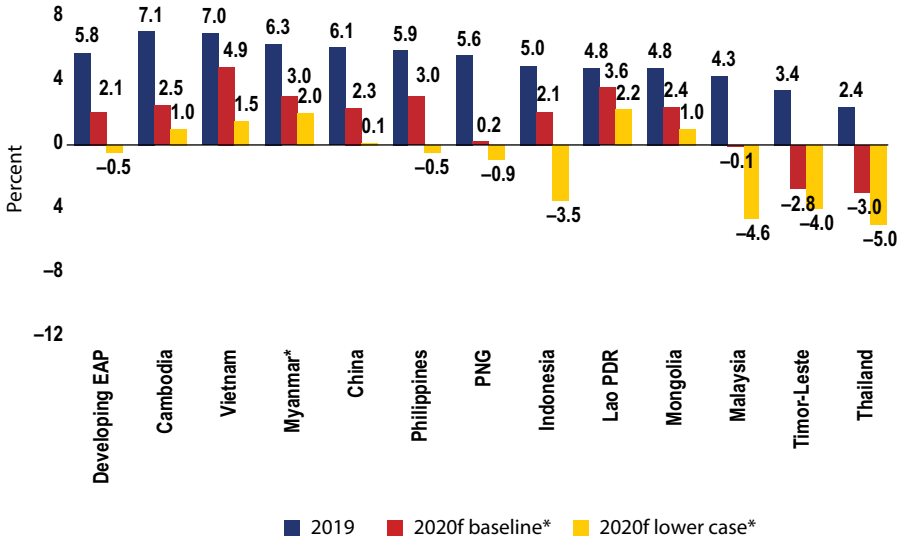

*Sources:* Haver Analytics; World Development Report 2020 using Comtrade database.
*Note:* Right: Critical nodes in the global trade network.

1 Due to the pandemic, economic circumstances within countries and regions are fluid and change on a day-by-day basis. The analysis in this report is based on the latest country-level data available as of March 27.

citizens and governments of many other countries are reacting by taking similar action, which is hitting demand and supply in these countries in turn. That is amplifying the mutual shocks through not just flows of trade and tourists, but also finance. The EAP region's reliance on these flows magnifies its exposure to the shocks.

The pandemic is profoundly affecting the region's economies, but the depth and duration of the shock are unusually uncertain. This update, presents both a baseline and a lower-case scenario. Growth in China is projected to decline to 2.3 percent in the baseline and 0.1 percent in the lower-case scenario in 2020, from 6.1 percent in 2019. Growth in the rest of the developing EAP region is projected to slow to 1.3 percent in the baseline and to negative 2.8 in the lower-case scenario in 2020, from an estimated 4.7 percent in 2019. Containment of the pandemic would allow recovery, but the risk of durable financial stress is high even beyond 2020. Most vulnerable are countries that have poor disease control and prevention systems; that rely heavily on trade, tourism, and commodities; that are heavily indebted; and that rely on volatile financial flows.

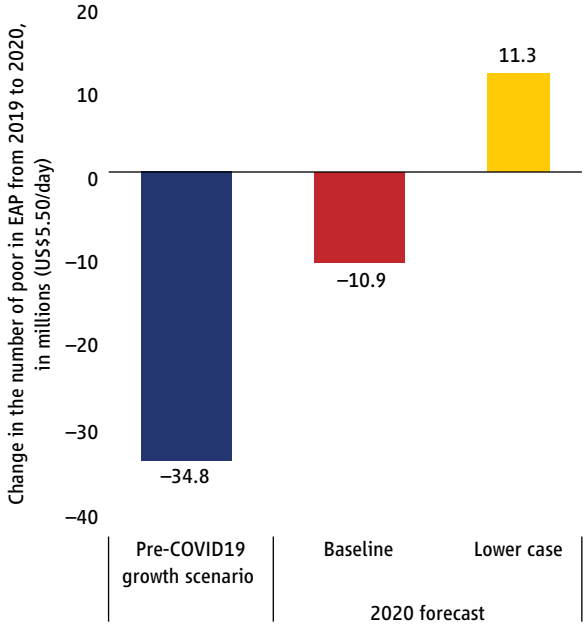
**Growth is forecast to decline sharply in the region**



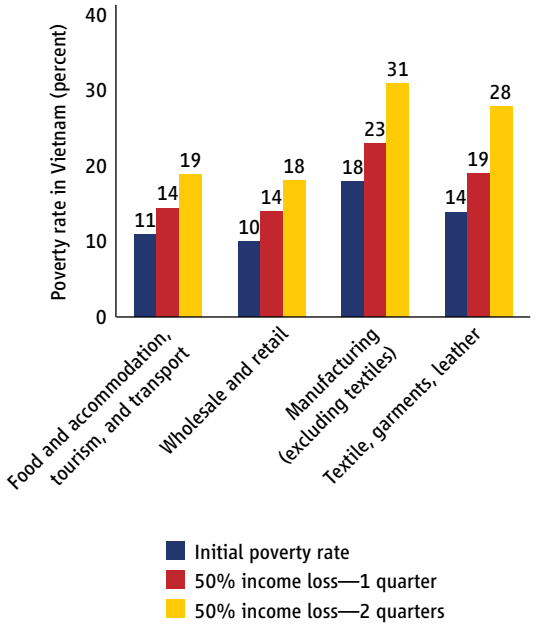

*Source:* World Bank. World Bank staff calculations.
*Note:* *Myanmar growth rates refer to the pre- and post-pandemic period for fiscal year from October to September. Baseline refers to a scenario of severe growth slowdown followed by a strong recovery. Lower case refers to a scenario of a deeper contraction followed by a sluggish recovery.

The COVID-19 shock will also have a serious impact on poverty and welfare, through illness, death, and lost incomes. Under the baseline growth scenario, nearly 24 million *fewer* people are estimated to escape poverty across developing EAP in 2020 than would have in the absence of the pandemic. Under the lower-case scenario, poverty is estimated to *increase* by about 11 million people. Households linked to affected sectors will suffer disproportionately. For example, poverty rates could double among households in Vietnam linked to manufacturing reliant on imported inputs, and in some Pacific Islands where tourism is an important source of employment. While these estimates for GDP and poverty are projections, they reveal the magnitude of potential economic distress and the need for urgent action.

**COVID-19 will hinder poverty reduction in the region as a whole . . .**



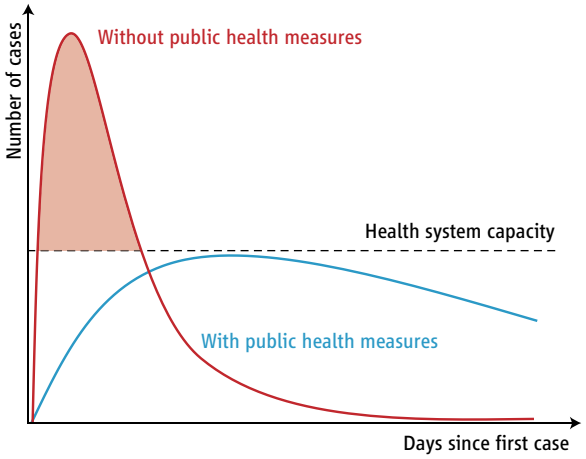

**. . . and those in the most exposed sectors face a greater poverty risk, e.g., in Vietnam**



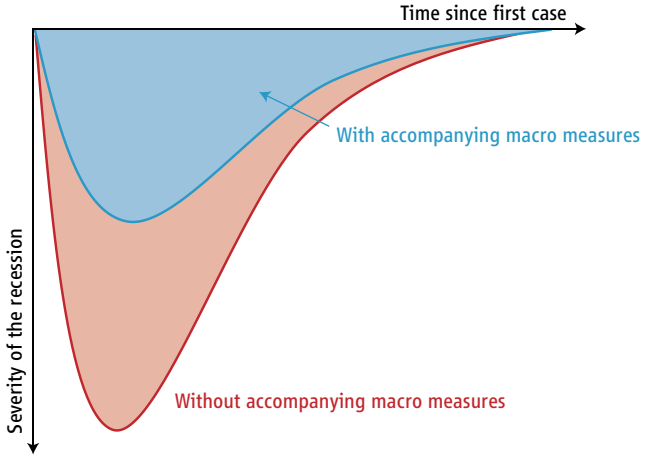

*Source:* World Bank East Asia and Pacific Team for statistical development.
*Note:* Poverty rate using a poverty line of US$5.50 per person per day (2011 PPP). Right: Projections based on Vietnam Living Standard Survey (VLSS) data.

This unprecedented shock requires a powerful response by countries with strong support from the international community. On policy, six main conclusions emerge from the analysis. First, countries need to adjust both health policies and macroeconomic policies. To prevent the spread of infection, many governments are taking transmission control measures like lockdowns and travel bans to "flatten the pandemic curve." In parallel, to mitigate the resulting adverse economic impact, governments are taking monetary, fiscal and structural measures to "flatten the recession curve." But better health and economic outcomes may be achieved through combining policies. For example, countries like Singapore and the Republic of Korea, which learned from the 2003 SARS and the 2015 MERS experience, seem to have achieved more effective containment results with less economically disruptive measures, such as high levels of testing, tracking, and quarantines. Their experience demonstrates that early investments in infectious disease surveillance and response capacity can reduce the need to take costly suppression measures. The sooner other countries create such containment capacity, the sooner they can end the economic pain caused by stringent suppression measures. That could shorten the time to recovery, but could be a challenge particularly for the poorest countries in the region.

**Flattening the pandemic curve is the focus of containment policies . . .**




**. . . and flattening the recession curve the focus of macroeconomic policies**




*Source:* World Bank staff illustrations adapted from Gourinchas (2020).

Second, health capacity needs to be urgently augmented because of the risk of the potentially overwhelming demand for a sustained period. Testing capacity has already been found wanting even in some industrial countries. The number of infected needing treatment is projected to far exceed hospital capacity in the 18 months before a vaccine is likely to become available. Apart from expanding conventional health care facilities and medical equipment factories, innovative measures are being considered and need to be expanded: preparing ordinary hospital beds for potential ICU use; using car factories to make machines to make masks; and training people unable to pursue their normal occupations (e.g., employees of restaurants, hotels, and airlines) to work in basic healthcare. Ensuring adequate access for the poor may require the provision of free or subsidized testing and treatment.

Third, fiscal and monetary policy must be recast in a COVID-19 mold. Expansionary macroeconomic policy is less effective in increasing production and employment during periods when workers are obliged to stay at home because of social distancing requirements, but it can be important for recovery. Initially, fiscal measures should provide social protection to cushion against shocks, especially for the most economically vulnerable. For example, subsidies for sick pay and expenditure on health care could alleviate distress and help support containment. Expanded safety nets could provide temporary relief to families whose earnings have been adversely affected by the outbreak. Transfers in cash or in kind are particularly important for those who work in EAP countries' large informal sectors, as they fall outside the reach of traditional social insurance programs. School feeding and other support to students, as well as employment support to help workers reintegrate into the economy after the outbreak has abated, would ensure that temporary deprivation does not translate into long-term losses of human capital. Firms, especially small and medium enterprises, will need liquidity injections to help them stay in business and maintain beneficial links to Global Value Chains (GVCs). The optimal economic policy response too will change over time and depend on the precise nature and evolution of the shock—to labor supply, aggregate demand or finance. The goal of policy should be to prevent a temporary shock from having permanent effects.

Fourth, in the financial sector, it is urgent to help households to smooth consumption through easier access to credit and firms to survive the disruption through easier access to liquidity. Easing financial conditions and exercising regulatory forbearance are necessary while conditions remain difficult. But regulators must ensure risk disclosure and clearly communicate supervisory expectations to avoid financial instability, especially in economies with high levels of private

indebtedness. For poorer countries, debt relief will be essential, so that critical resources can be focused on managing the economic and health impacts of the pandemic.

Fifth, trade policy must stay open. To retain the production of essential supplies for domestic consumers, several countries have imposed restrictions on exports of medical products. Economics and recent experience show that these measures ultimately hurt all countries, particularly the more fragile. World Trade Organization (WTO) members—or at least the G20 countries—must agree not to restrict exports of coronavirus-related medical products. Consuming countries could do their part too by liberalizing imports.

Avoiding future trade tensions is also of vital macroeconomic significance at the present juncture. The China-U.S. trade agreement at least temporarily averted a damaging trade war and provided relief from the trade tensions that blighted the EAP region's economic performance in 2019, as we discuss in Part II of the update. But it also raised the concern that selective preferential access for the United States to China's markets would erode the multilateral rules against discrimination and divert trade away from third countries in the region—costing them about one-third of a percentage point in gross domestic product (GDP). Now there is a further concern: COVID-19 will make it difficult at least in 2020 to meet the quantitative import expansion commitments made by China because of the contraction in China's demand and the likely contraction in U.S. production.

Instead of renegotiating the bilateral commitments, all countries would benefit if China opens its market to all trading partners. That would provide a much-needed boost of an estimated 0.6 percent to global income. China's income could be nearly 0.5 percent higher. Most developing countries in East Asia would also be better off, despite the partial erosion in their preferential access to the Chinese market.

Sixth, international organizations have a critical role to play in supporting the region's governments in combating the pandemic and in mitigating its health and economic consequences. One immediate contribution could be to help expand the supply of key medical products by facilitating public-private partnerships like the Meningitis Vaccine Project. To generate the greatest benefits, aid-for-production of medical products should be given to countries based not on consumer needs but on producer comparative advantage provided they keep trade completely free. Openness would ensure that essential medical products are produced where it is most efficient and flow to where they are most needed. Providing low-cost access to essential supplies like test kits may require international organizations to procure at scale from suppliers and also to ensure efficient and equitable distribution.

More generally, to support both relief and recovery, the World Bank Group and the International Monetary Fund (IMF) are making available financing, policy advice, and technical assistance. The World Bank Group has already rolled out a $14 billion fast-track package to strengthen the COVID-19 response in developing countries and shorten the time to recovery. As countries need broader support, the World Bank Group is prepared to deploy up to $160 billion over 15 months to protect the poor and vulnerable, support businesses, and bolster economic recovery.

In each of these areas, containment, health, macroeconomic policy, finance, trade, and aid, there are self-evident gains from internationally coordinated action that takes an integrated view of policy. But some nations are resorting to unilateral measures and succumbing to scarcity nationalism. All countries in the East Asia and Pacific region and beyond must recognize that, in addition to bold national actions, deeper international cooperation is the most effective vaccine against this virulent threat.

# Part 1. COVID-19: Impact and Response

# 1. Chapter I. Synthesis

## 1. The disease

**The COVID-19 respiratory virus has become a global pandemic.** A new strain of the virus that affects respiratory organs, COVID-19, was reported in Wuhan, China in late-December 2019. As of March 27, 2020, more than 600 thousand cases of infection were reported worldwide resulting in more than 30 thousand deaths, with the majority outside China. It has affected not only countries in the East Asia and Pacific region but has spread quickly in 199 countries and territories around the World (Figure I.1.1). On March 11, 2020, the World Health Organization characterized COVID-19 as a pandemic.

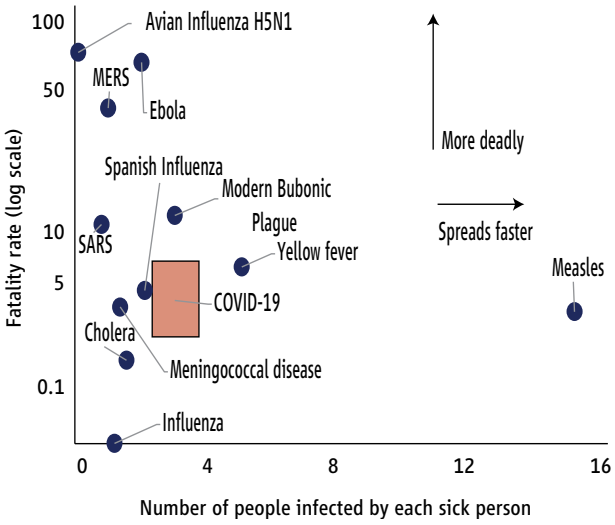
**Figure I.1.1.** COVID-19 has spread rapidly across the world


*Sources:* World Bank staff using data from Johns Hopkins University; World Health Organization; United States Centers for Disease Control and Prevention; European Centre for Disease Prevention and Control; United States National Health Council; DXY; 1point3acres; Worldometers.info; BNO; state and national government health departments; and local media reports.
*Note:* As of March 27, 2020.

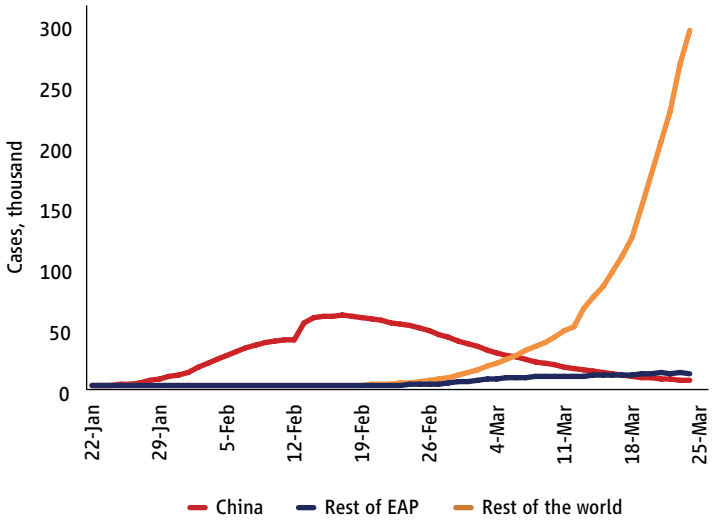
**COVID-19 is inflicting a high human cost and putting immense pressure on public health systems.** Given high transmissibility, zero herd immunity and, until recently, high population mobility, COVID-19 has spread rapidly in many parts of the world (Figure I.1.2). Some disease modelers estimate that eventually, up to 60-80 percent of the world population could be infected (Box I.B.1). The number of fatalities is increasing rapidly. As the world struggles to prevent the spread of the disease, public health systems in many countries are finding it difficult to cope with the growing need for treatment. While some countries are better prepared, others lack essential facilities and have seen delays in testing for the disease.

**Figure I.1.2.** Cases of this highly transmissible disease are declining in China but growing in the rest of the world

**a.** COVID-19 in perspective




**b.** Active cases




*Sources:* Panel A. EM-DAT Database; CEIC database; WHO; CDC; ECDC; NHC; DXY; University of Minnesota; The American Thoracic Society; World Bank staff calculations. Panel B. Haver Analytics. World Health Organization and the National Health Commission of the People's Republic of China.
*Note:* Panel A. Estimates of fatality rate and the total number affected can vary, and COVID-19 rates are preliminary estimates. Panel B. shows a 7-day total.

## **Box I.B.1.** The potential scale of the disease and containment strategies

The last time the world faced a global emerging disease epidemic on the scale of the current COVID-19 pandemic with no access to vaccines was the 1918–19 H1N1 influenza pandemic. That pandemic is estimated to have killed 50 million people worldwide. In lethality, the COVID-19 virus resembles H1N1 influenza.

The Imperial College COVID-19 Response Team in London used a microsimulation model to predict different scenarios depending on the type of response in the United Kingdom and the United States. In the case of an unmitigated epidemic, they predict approximately 510,000 deaths in the United Kingdom and 2.2 million in the US, not accounting for the potential negative effects of health systems being overwhelmed on mortality.

Next, they consider two strategies to reduce mortality and demand for health care.

a. **Suppression.** Here the aim is to reduce the reproduction number (the average number of secondary cases each case generates), *R,* to below 1 and hence to reduce case numbers to low levels. The main challenge of this approach is that non-pharmaceutical interventions (NPIs) (and drugs, if available) need to be maintained—at least intermittently—for as long as the virus is circulating in the human population, or until a vaccine becomes available. In the case of COVID-19, it will be at least an estimated 12–18 months before a vaccine is available. Furthermore, there is no guarantee that initial vaccines will have high efficacy.

*(continued)*

*(Box I.1. continued)*

The optimal suppression policy would combine social distancing of the entire population, home isolation of cases and household quarantine of their family members, probably supplemented by the school and university closures.

**b. Mitigation.** Here the aim is to use NPIs (and vaccines or drugs, if available) not to interrupt transmission completely, but to reduce the health impact of an epidemic, akin to the strategy adopted by some U.S. cities in 1918, and by the world more generally in the 1957, 1968 and 2009 influenza pandemics. In the 2009 pandemic, for instance, early supplies of vaccine were targeted at individuals with pre-existing medical conditions which put them at risk of more severe disease. In this scenario, population immunity builds up through the epidemic, leading to an eventual rapid decline in case numbers and transmission dropping to low levels.

The optimal mitigation policy would combine home isolation of suspect cases, home quarantine of those living in the same household as suspect cases, and social distancing of the elderly and others at the most risk of severe disease.

The most significant conclusion of the simulations is that with mitigation alone the emergency surge capacity limits of the United Kingdom and United States healthcare systems will be exceeded many times over. In the most effective mitigation strategy examined, which leads to a single, relatively short epidemic (case isolation, household quarantine and social distancing of the elderly), the surge limits for both general ward and intensive care unit (ICU) beds would be exceeded by at least eight-fold under the more optimistic scenario for critical care requirements examined. In addition, even if all patients were able to be treated, the authors predict there would still be in the order of 250,000 deaths in the United Kingdom, and 1.1–1.2 million in the United States.

The authors, therefore, conclude that epidemic suppression is the only viable strategy at the current time. The social and economic effects of the measures which are needed to achieve this policy goal will be profound. The major challenge of suppression is that this type of intensive intervention package—or something equivalently effective at reducing transmission—will need to be maintained until a vaccine becomes available (potentially 18 months or more), given that the model predicts that transmission will quickly rebound if interventions are relaxed. The authors show that intermittent social distancing—triggered by trends in disease surveillance—may allow interventions to be relaxed temporarily in relatively short time windows, but measures will need to be reintroduced if or when case numbers rebound.

The estimates from Imperial College have been criticized, for example by Shen, Taleb, and Bar-Yam (2020). Some of their criticisms, such as that the modeling fails to account for the impact of contact tracing and testing, seem fair. But alternative estimates have not been presented. While there remains significant uncertainty around these projections, there is more agreement on the huge mortality risk in the absence of action. For example, the Imperial College estimates have reportedly informed government policy in the United Kingdom and the United States.

The Imperial College COVID-19 response team also worked on projecting the global impact of the COVID-19 pandemic under different strategies for mitigation and suppression. They considered the likely scale of five

*(continued)*

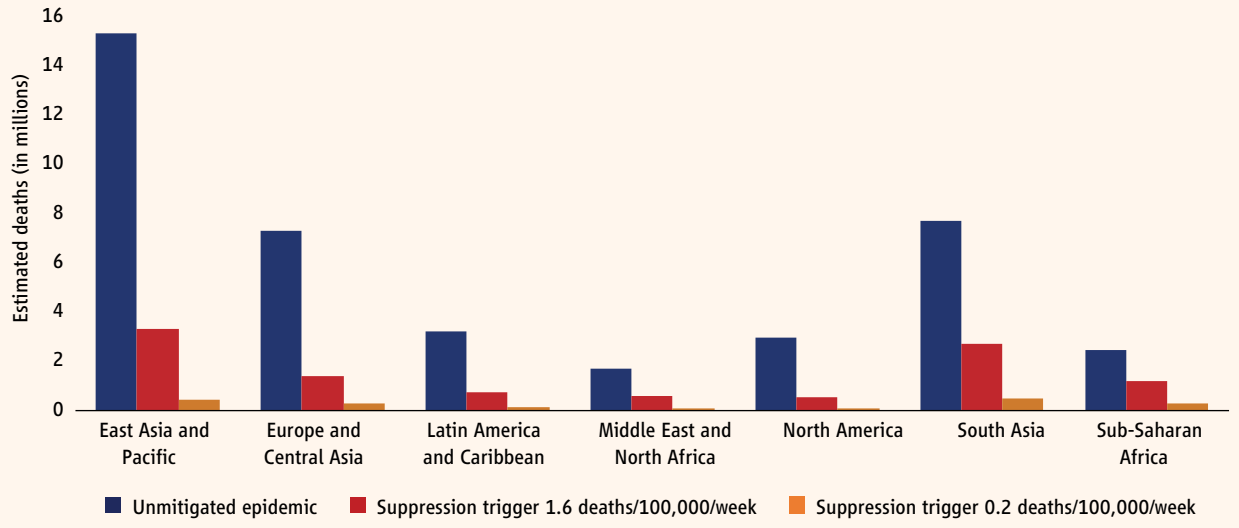
*(Box I.B.1. continued)*

potential scenarios, but we focus here on three: (1) An unmitigated epidemic—a scenario in which no action is taken. (2) Suppression, i.e., the implementation of wide-scale intensive social distancing (modelled as a 75 percent reduction in interpersonal contact rates) with the aim to rapidly suppress transmission and minimize near-term cases and deaths. They explore different epidemiological triggers (deaths per 100,000 population) for the suppression strategy:

- Scenario 2a: Suppression triggered at 1.6 deaths per 100,000 population per week
- Scenario 2b: Suppression triggered at 0.2 deaths per 100,000 population per week

Figure I.B.1.1 shows the estimated number of deaths under the unmitigated scenario and the two suppression scenarios for each of the world regions. In lower income settings where capacity is lowest, intermediate mitigation scenarios (not shown) lead to peak demand for critical care beds in a typical low-income setting outstripping supply by a factor of 25.Their analysis suggests that healthcare demand can only be kept within manageable levels through the rapid adoption of public health measures (including testing and isolation of cases and wider social distancing measures) to suppress transmission, similar to those being adopted in many countries at the current time.

**Figure I.B.1.1.** Suppression measures can help lower the death rate of COVID-19




*Source:* Imperial College COVID-19 Response team.

The estimates from the Imperial College COVID-19 Response Team account for the age structure of the population and rates of contact across older age groups. Even though these rates of contact across generations are higher in lower-income countries, the authors predict a lower incidence of severe disease, hospitalization, and deaths in those settings, driven by the younger average age distribution of these populations. It is important to note, however, that these estimates assume no substantive difference in general health/co-morbidity prevalence between Chinese and other populations. This assumption is unlikely to hold in practice. Furthermore, the standard of medical care

*(continued)*

*(Box I.B.1. continued)*

available varies significantly across the world settings and tends to be substantially lower in lower-income countries. The impact of a lack of adequate care for more severe cases of COVID-19 is difficult to quantify, but is likely to significantly increase overall mortality, and could be compounded if the number of cases requiring care leads to health systems failure. These two factors are not currently captured in the proposed projections of total deaths.

The health care challenge is formidable. A vaccine is only likely to be available in an estimated 18 months, and it might be another 6 months before the vaccine is widely administered in developing countries. Unless capacity increases dramatically, health systems could be placed under tremendous strain for a period of two years. People who need hospitalization for any other conditions will be competing with COVID-19 patients and as a result, many will not be able to get the care they need, therefore, there will also be elevated mortality among non-COVID-19 patients, especially those who need ICU care.

Countries will struggle to offer some form of care in the absence of ventilators, protective personal equipment (PPEs), and other equipment they will need, which are all in short supply already. The experience from Wuhan offers some lessons, but Wuhan was also able to draw on support from the rest of China. That will not be possible when the situation is the same everywhere. There will, therefore, be an urgent need to initiate mitigation and even suppression strategies as well as to expand and coordinate the capacity for care at an international scale now that the virus has spread to many countries.

## **Box I.B.2.** Understanding the shock, its economic implications, and the policy challenge

### Why is the shock unusual?

This is both a supply and demand shock, due to the preventive behavior of individuals and the transmission control policies of governments.

Social distancing prevents people from working and consuming in proximity to each other. Three types of activities are immediately affected: collective high-density production, which is an aspect of many manufacturing factories where workers need to work closely together; collective high-density consumption, which is an aspect of many services activities, like entertainment (sports, music, and cinemas), restaurants, and travel, where consumers need to get together; and proximate production and consumption, which involves suppliers meeting consumers, which is an aspect of personal care, health care, restaurants, and some types of retail.

The nature of the product determines whether it is possible to make up for any reduction in production and consumption by an increase in the future and therefore whether the shock is temporary or permanent. The key attributes are the durability of the product and demand. For example, if cars are not produced or demanded today, to some extent production can be scaled up in the future and there is likely to be pent-up consumer demand. But if a person does not go to the restaurant or hair salon today, there are limits to which demand and supply can be shifted to a future date.

*(continued)*

*(Box I.B.2. continued)*

Finally, substitution possibilities can dampen the shock. Consumers may shift from going to the cinema to streaming movies; from meeting people to using more data and voice. Where factories are fungible, and social distancing is not a binding constraint, firms can shift from supplying what is not needed (cars) to what is (machines to produce masks). Where skills are fungible, and again social distancing is not a constraint, individuals can shift from occupations hit by demand or social distancing constraints, like face-to-face retail, to those that are not, like electronic retail. In most cases, forced substitution in consumption will be associated with a loss in utility and forced substitution in production with a loss in productivity.

### Why will its impact be larger than that of previous shocks?

The Great Recession began as a financial crisis in the United States which triggered a recession and was transmitted to the rest of the world through trade and financial channels. Some affected countries which were fiscally and financially robust, e.g. in East Asia, were able to insulate themselves from the financial shock and mitigate the consequences of the trade shock through expansionary macroeconomic policies. The converse was true in the case of the East Asian financial crisis.

This time is different. The virus and society's responses to it are hitting economies across the world almost simultaneously, and all countries are suffering both a demand and a supply shock described above. In other words, the Great Recession was one shock, albeit to a large country (the US); in contrast, the COVID-19 is a demand-cum-supply shock to all the countries gripped by the virus: China, East Asia, the United States, Western Europe, and the Middle East. And the world is much more integrated today than it ever was through globalized consumption and international production networks. That is reflected in the increased correlation between national incomes, especially in high-income countries. Therefore, the scope for mutual amplification through the trade and financial channels is much greater than when shocks hit just one country or region. Even if the containment measures are restricted to say two quarters, it is likely that annual global GDP growth will be negative for perhaps the first time in decades.

### Why must the policy response be different?

This would be no ordinary recession. In previous cases, such as the Great Recession or the Great Depression, balance sheets were impaired and as a result, demand shrank while factories and people were idle. The solution was repairing the financial system combined with expansionary fiscal and monetary policies that boosted demand and drew idle resources and people back into work. Economists haggled over the size of the fiscal multiplier, but there was no question that the marginal propensity to consume and the elasticity of supply were both reasonably high, especially with interest rates at or close to the lower bound (Blanchard and Leigh, 2013).

In the current situation, there are two differences. The aim of the immediate policy response is not so much to restore demand because reduced supply and overall activity are a necessary consequence of efforts to contain the spread of the epidemic. Instead, the aim is to cushion households, especially poorer ones, against income shocks; and to tide firms over so that large-scale bankruptcies and employment losses are minimized. Monetary and fiscal policies must be recast in a COVID-19 mold. Fiscal measures like subsidies for sick pay and expenditure on health care could encourage some types of consumption and production that are still feasible while helping

*(continued)*

*(Box I.B.2. continued)*

to support containment. Other fiscal transfers could help credit-constrained households to smooth consumption where incomes have shrunk. Liquidity injections can help firms stay in business and maintain GVC links.

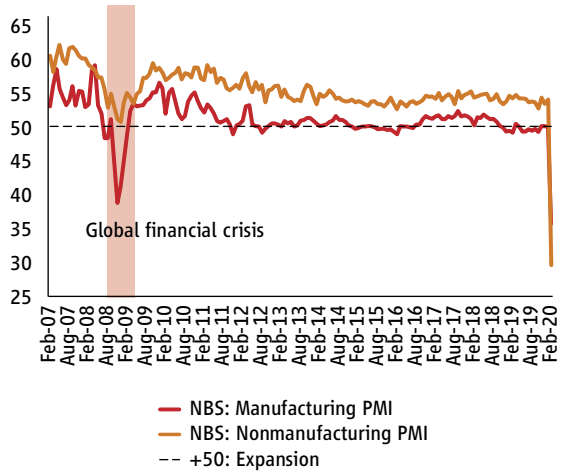
The second difference relates to the impact of such policy responses. During the period of social isolation, the propensity to consume is much lower and supply is much less elastic, for the reasons discussed above. The supply response within a country is also limited by supply disruptions in other input-supplying countries. These factors reduce the potency of monetary and especially fiscal policies with multipliers likely to be much smaller in the short term. The optimal economic policy response will, of course, change over time and depend on the precise nature and evolution of the shock—to labor supply, aggregate demand or finance.

## 2. The immediate impact on China

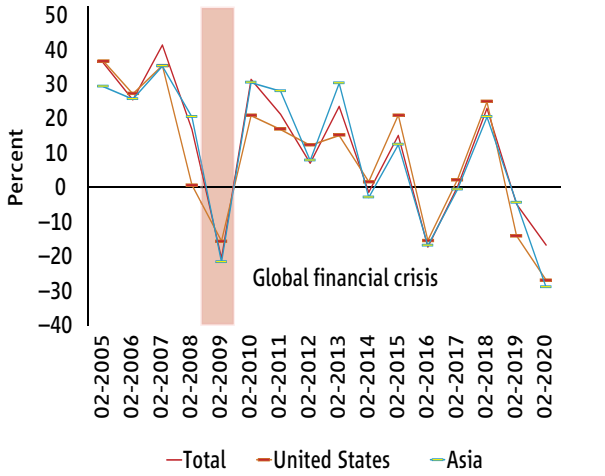
**China has seen a precipitous decline in economic activity, but there are now some signs of recovery (Figure I.1.3).** In February, the purchasing managers' index fell below the 50-point mark that separates monthly growth from contraction. The fall was sharper and wider than during the Great Recession, to 36 in manufacturing and 30 in non-manufacturing sectors; the latter had been relatively resilient during the great recession. Industrial production also registered negative growth for the first time in more than 30 years. Estimates based on high-frequency data indicate that China's growth has declined sharply in the first quarter of 2020 (Box I.B.3). But coal consumption, which is a widely followed indicator of electricity generation and hence economic activity, is gradually increasing. It remains to be seen whether the government can switch on economic activity as abruptly as it was switched off. Most large industrial enterprises outside Hubei have resumed production, however, only 74 percent of their workers have reportedly returned to work, suggesting still less than full capacity utilization. It is conceivable that there is a coordination failure between interdependent firms that is impeding the resumption of production. Indirect estimates, such as pollution indicators, show that activity is increasing gradually in China (Figure I.1.4).

**Figure I.1.3.** Economic activity has declined in China, and the first quarter is likely to see a contraction

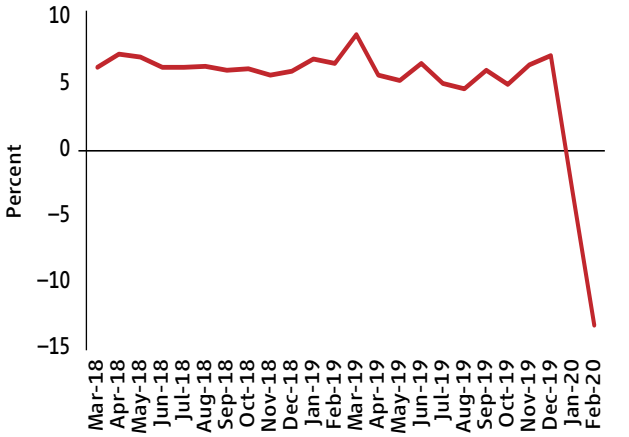
**a.** Manufacturing and services PMI



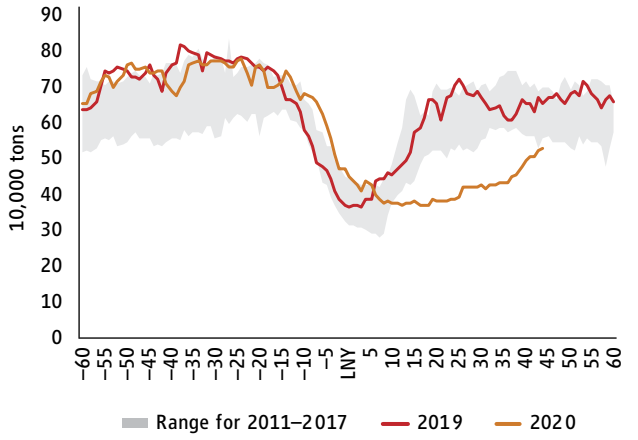

**b.** Trade (year-to-year growth)




**c.** Industrial production (year-to-year)




**d.** Coal consumption (10,000 tons)

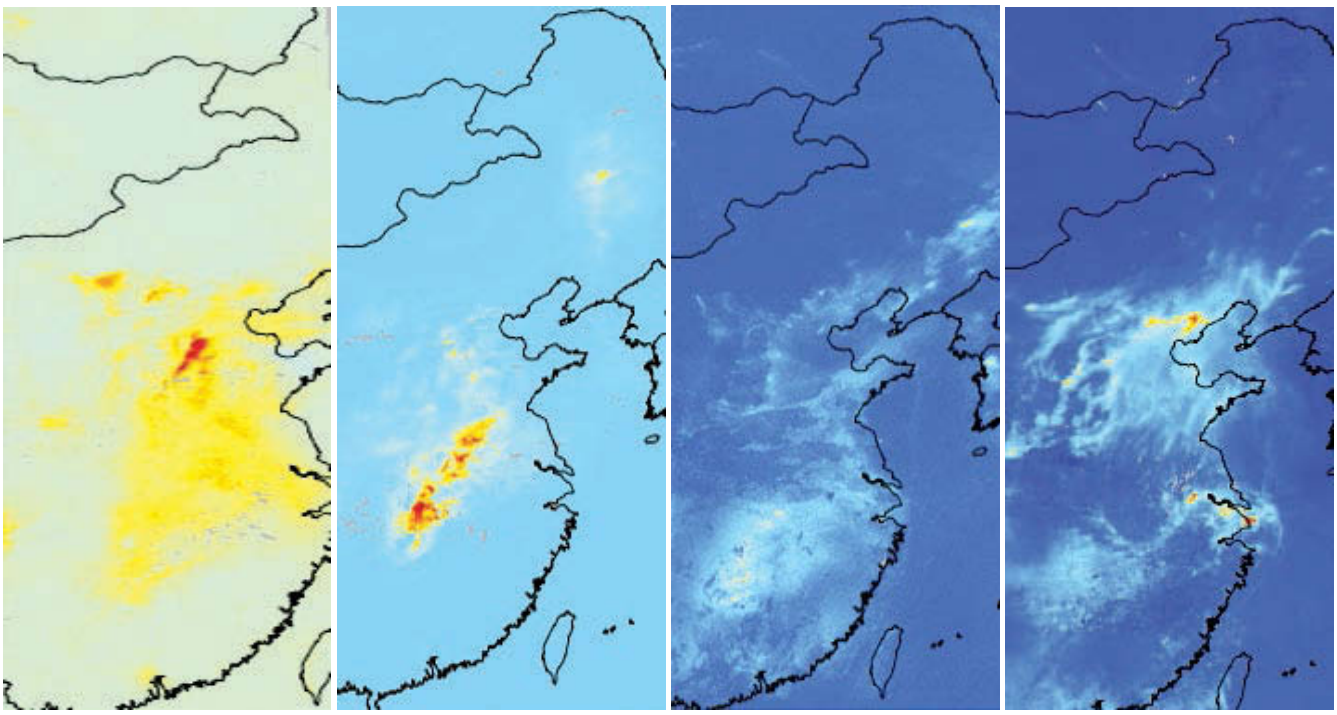



*Source:* CEIC; General Administration of Customs, People's Republic of China; Haver Analytics; www.cqcoal.com
*Note:* Panel D. LNY stands for Lunar New Year. The horizontal axis denotes days. Daily coal consumption for six major electricity producers is a proxy for electricity production in China.

**Figure I.1.4.** Indirect evidence suggests that economic activity in China is resuming at a slow pace

***China's air pollution: noxious nitrogen dioxide ($NO_2$ density)***

**Dec 25, 2019** **Jan 6, 2020** **Feb 2, 2020** **March 11, 2020**



*Sources:* World Bank staff using Sentinel-5P Pre-Operations Data Hub and NASA Panoply.
*Notes:* Blue shows less pollution.

## **Box I.B.3.** Predicting China's growth

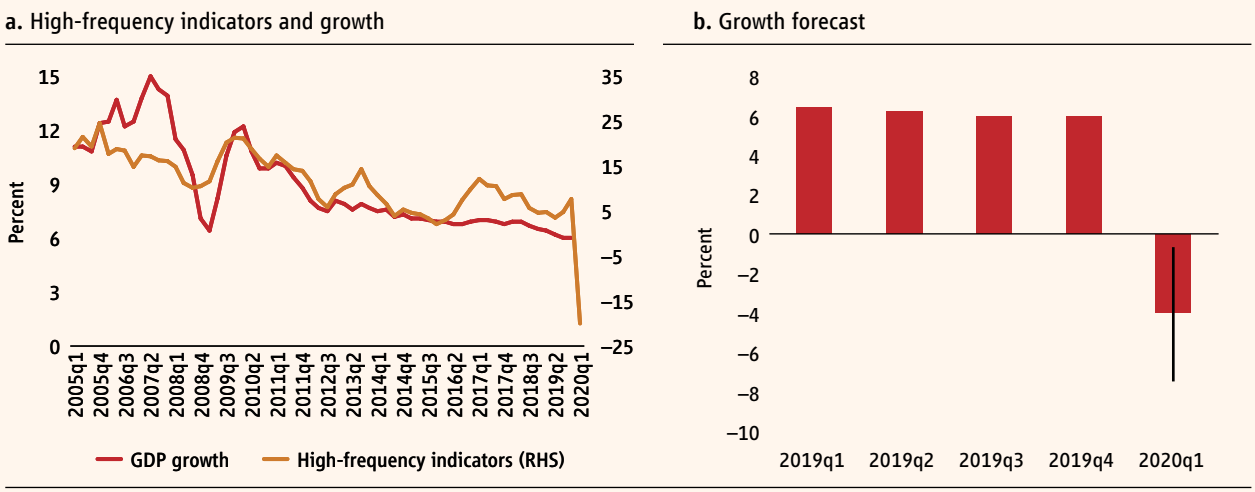
**High-frequency data suggest a sharp decline in China's GDP growth in Q1.** Industrial production data in February showed a sharp contraction, as suggested by several other activity-related high-frequency indicators. High-frequency data-based analysis suggests that unless there is a dramatic revival of economic activity in March, China's growth in the first quarter will come to a halt (Figure I.B.3.1). Information was extracted from the annual growth of coal consumption, railway traffic freight, number of air passengers, industrial production, fixed-asset investment, retail sales of consumer goods, manufacturing PMI, and services PMI. For each one of these high-frequency series, data were available until February 2020. For March 2020 the values were forecasted independently using Auto-Regressive Integrated Moving Average (ARIMA) models. This class of models explains a given time series based on its past values and the lagged forecast errors. For each series, the models take into account the contraction in January and February and assume a gradual recovery for March.

*(continued)*

*(Box I.B.3. continued)*

**Model estimates confirm a precipitous drop in growth in Q1.** Once data for all high-frequency indicators are generated for the full first quarter, GDP growth is estimated using a Newey-West estimator with heteroskedasticity and autocorrelation consistent (HAC) standard errors.[1] The estimation includes lags of quarterly GDP growth as well as information from the high-frequency indicators, specifically the principal component of all the 8 indicators listed above. The estimates show that year-to-year GDP growth for the first quarter of 2020 is likely to be negative, ranging between –7.5 and –0.6 percent, with the mean unbiased estimate at –4.0 percent. These estimates are meant as probable scenarios to illustrate the sharp impact of the COVID-19 pandemic and may underestimate the actual first quarter impact because of the rapid globalization of the shock in recent weeks.

**Box Figure I.B.3.1.** High-frequency data suggest that output will decline in China in the first quarter of 2020




*Source:* CEIC; Haver Analytics.
*Note:* Panel A. Blue bar represents year-to-year quarterly GDP growth. Average HF refers to the unweighted average of the annual growth of coal consumption, railway traffic freight, number of air passengers, industrial production, fixed-asset investment, retail sales of consumer goods, manufacturing PMI, and services PMI. Panel B. GDP growth regressed on its lags and the first and second principal components of the variables in Panel A. Estimated using OLS with Newey-West standard errors that control for heteroskedasticity and correlation.

1 This estimate provides robust estimates when using high-frequency data by controlling for lagged autocorrelation and arbitrary heteroskedasticity.

## 3. The global shock

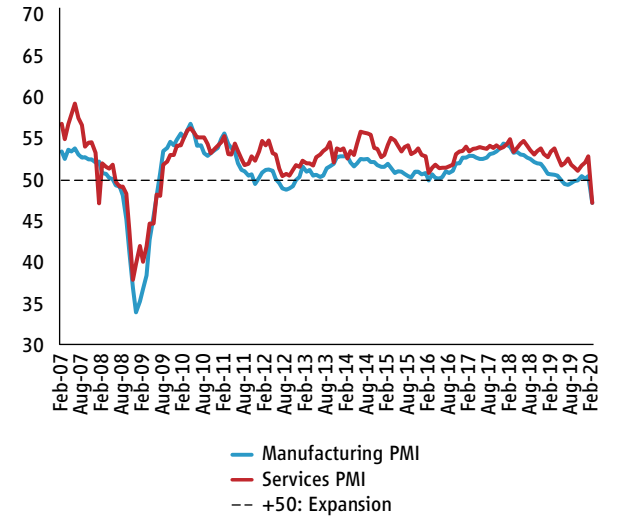
**Initially, developments within China had a profound effect on the region, but now what happens outside China will matter more.** While the number of new cases is decreasing in China, it is increasing at an exponential rate in other parts of the world where the number of actives cases is twice the number in China. The disease seems to have spread at a relatively slower pace in the rest of the developing EAP region, though Malaysia, the Philippines, Thailand, and Indonesia have reported an increasing number of infections in the last few days. The reason for the low number of confirmed cases is not clear, but observers have pointed to the delays in testing, the preventive actions that were taken by countries, and the relatively warm weather compared to countries like Iran, Republic of Korea, Italy, and the United States.

**Global economic activity is declining sharply as the virus spreads around the world.** Events in the region have been overtaken by global developments as confidence declines sharply (Figure I.1.5). Global manufacturing and services

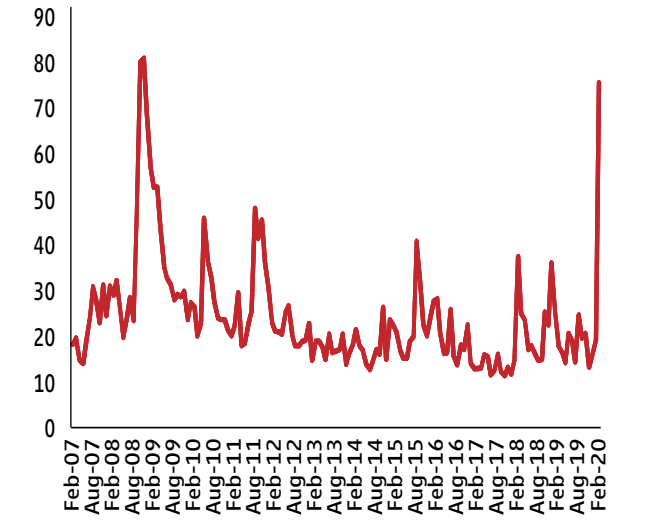
PMI are falling, and the Chicago Board Options Exchange (CBOE) volatility index (VIX)—a measure of market risk and investors' sentiments—has increased sharply. Capital flows to emerging markets retreated sharply, with 4-week average emerging markets non-resident equity and debt flows dropping lower than during the Global Financial Crisis of 2008–09. The prices of most commodities have plunged. The initial drop was related to the outbreak and expectations of falling demand for commodities in China. Oil prices fell even more precipitously following the announcement that both Saudi Arabia and Russia will boost oil production, with Saudi Arabia planning to increase output to a record level of 12.3 million barrels per day, 2.5 million more than it is currently producing.[2]

**Figure I.1.5.** Global confidence is declining sharply and that could affect the region

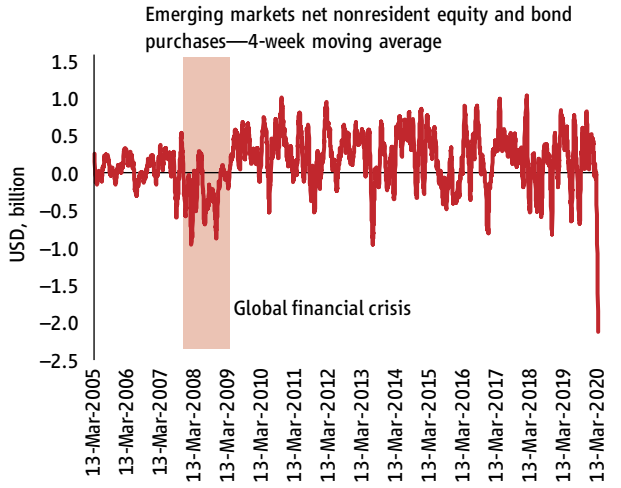
**a.** Global manufacturing and services PMI



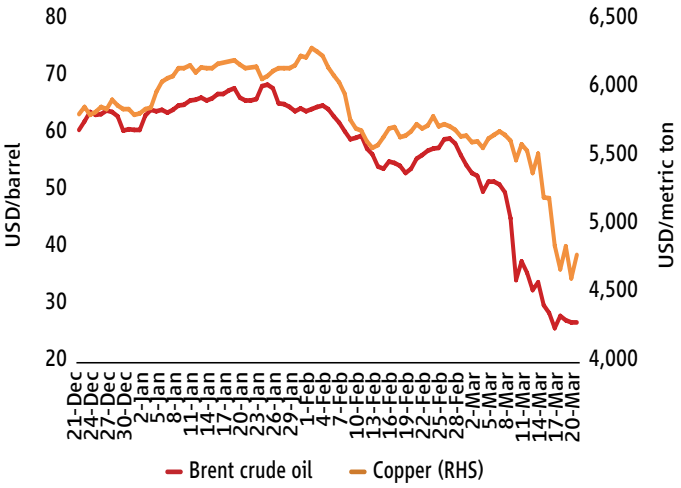

**b.** CBOE volatility index (VIX)




**c.** Emerging markets capital flows




**d.** Commodity prices declined sharply




*Sources:* Panel A. IIF, Haver Analytics; World Bank.
*Note:* Panel B. Maximum value in each month. Panel C. Emerging markets net nonresident equity purchases, 28-days moving average. Panel D. The last date is March 20.

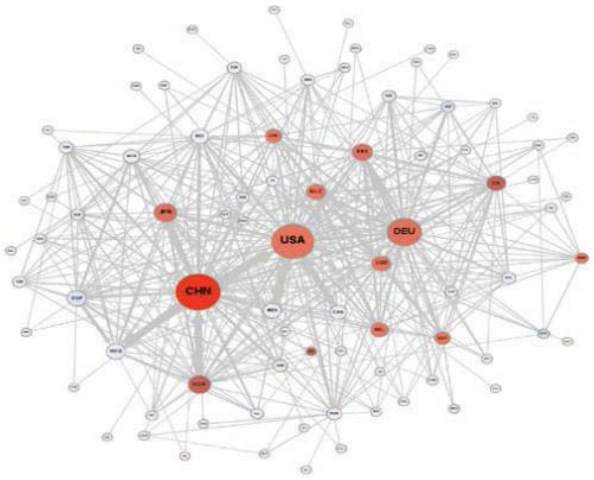
2 The Brent crude price had its worst one day decline since 1991, falling below $35 per barrel where it remains as of March 20. Most industrial metals have also declined, with significant declines in copper (–7 percent) and zinc (-8 percent). Gold prices, meanwhile, have risen 7 percent over the same period on heightened uncertainty and safe-haven flows by investors.

## 4. The "real" channels of impact

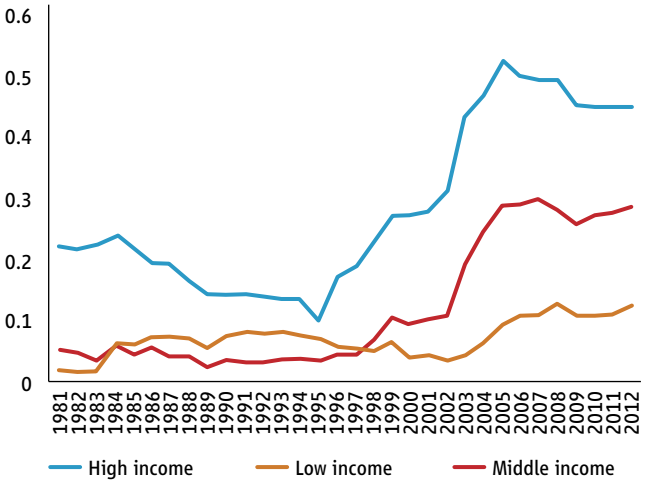
**Apart from the effects of domestic social distancing restrictions, countries in the region are particularly exposed to events in the rest of the world through trade and tourism (Figure I.1.6).** The largest immediate impact on economic activity has come from the measures countries have taken to prevent the spread of infection. But, the plunging global trade and travel is hurting countries. Many of the countries, like Vietnam and Cambodia, rely on imported inputs for exports though others, like Indonesia, are less integrated with GVCs (Figure I.1.7). Countries like Mongolia and Lao PDR rely heavily on commodity exports. Other countries in the region, especially those in the Pacific as well as Cambodia and Thailand, are dependent on tourism for export earnings.

**Figure I.1.6.** The virus has hit critical GVC nodes and countries' fortunes have become increasingly intertwined

**A.** Seventeen countries with the highest COVID-19 cases are critical nodes in the global trade network



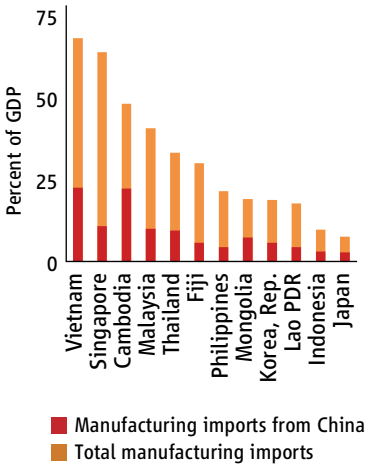

**b.** Countries' economic activity has become more synchronized since the mid-1990s



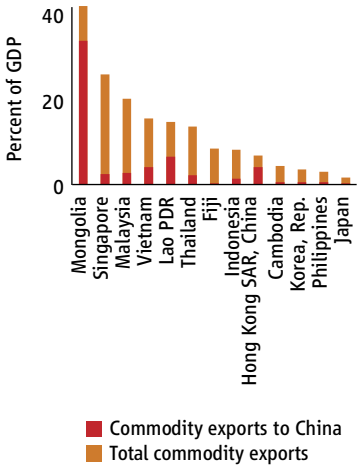

*Source:* WDR 2020; Comtrade database.

**Figure I.1.7.** Trade and tourism transmit external shocks to economies in the region

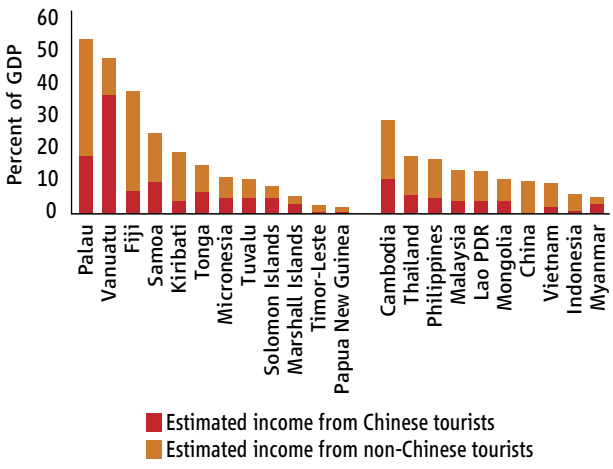
**a.** Manufacturing imports




**b.** Commodity exports



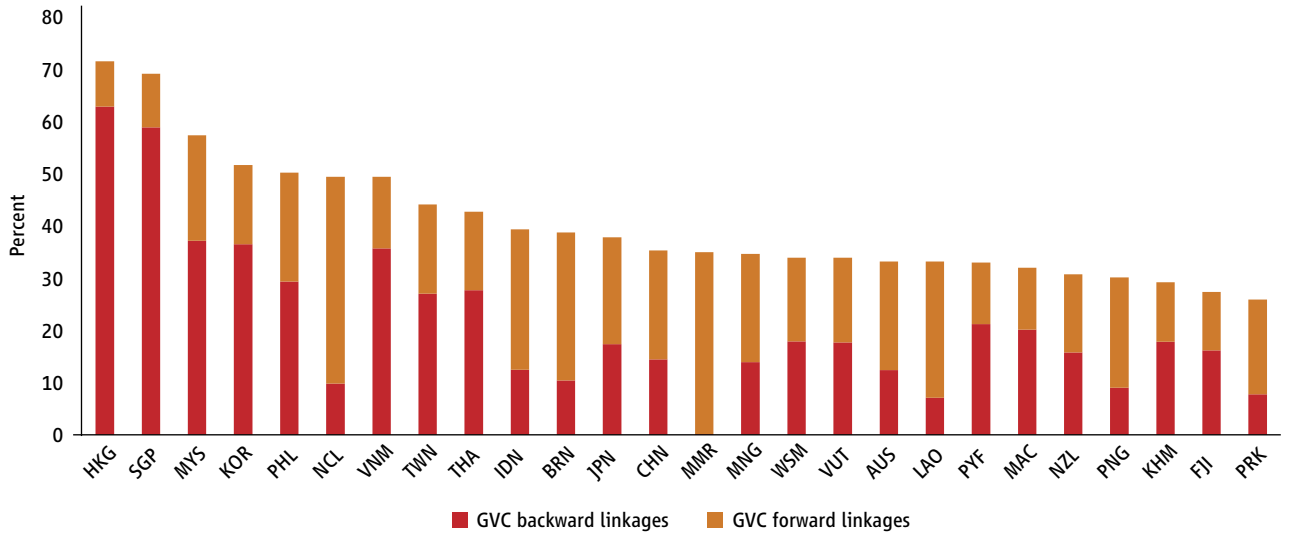

**c.** Tourism




*Sources:* CEIC; World Development Indicators; World Travel and Tourism Council Data; World Integrated Trade Solutions.

**EAP countries are integrated into global value chains (Figure I.1.8).** Some, like Cambodia and Vietnam, have high backward linkages, i.e., depend on imported inputs for their exports, which makes them highly susceptible to supply shocks, in addition to demand shocks. Others, like Myanmar and Mongolia, have high forward linkages, i.e., their exports enter the production for export of other countries, which makes them susceptible to demand shocks.

**Figure I.1.8.** Some EAP countries have stronger backward and others stronger forward links in GVCs



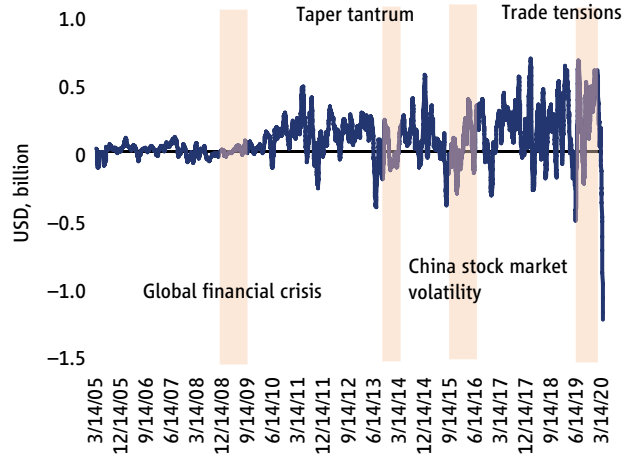

*Source:* EORA.
*Note:* Data are in millions of current US dollars. Backward linkages measure the direct and indirect foreign value added in a country's export. Forward linkages measure how much of a country's value added is embodied in other country's exports, expressed as a share of the country's exports. All the measures of GVC participation are computed using *icio*, a new Stata command for value-added trade and global value chain analysis (Belotti et al., 2020).

## 5. The financial channels of impact

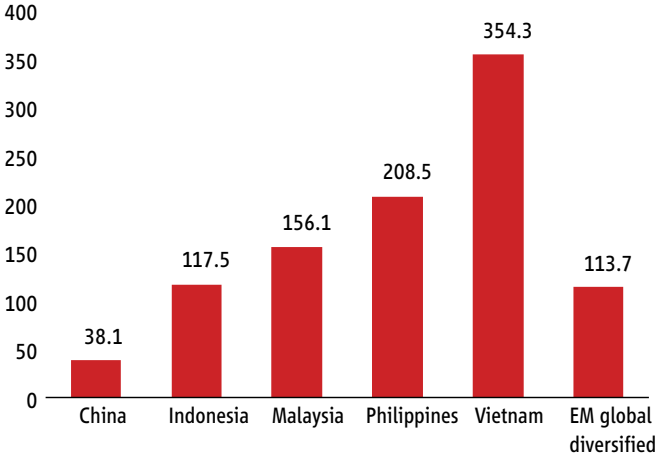
**The global spread of the virus has rattled financial markets around the world and is reverberating in the developing EAP economies.** A first-order implication is an abrupt tightening of the region's financing conditions, with capital flying to safe heavens and interest rate spreads increasing (Figure I.1.19). Uncertainty has triggered a dash for cash, causing a shortage of US dollars on international financial markets, putting pressure on domestic currencies and corporate refinancing. The tight interlinkages between sovereigns, banks, and the corporate sector in some developing EAP countries is giving rise to adverse feedback loops. These developments have negative effects on countries in the region, especially for those countries with high levels of debt, especially external debt, large financing needs, or heavy reliance on short-term funding.

**Figure I.1.9.** Global developments are tightening financial conditions

a. Non-resident net purchases of equity and bonds




b. Regions spreads
*(percent change Jan 2, 2020 versus March 27, 2020)*




*Source:* Bloomberg; Institute for International Finance; BIS; Haver Analytics.
*Note.* Panel A. 28-days moving average. Includes China, Indonesia, Malaysia, the Philippines, Thailand, Vietnam. Global Financial Crisis: September 2008; Taper tantrum: May 2013; China stock market volatility: August 2015; Trade tensions: May 2019.

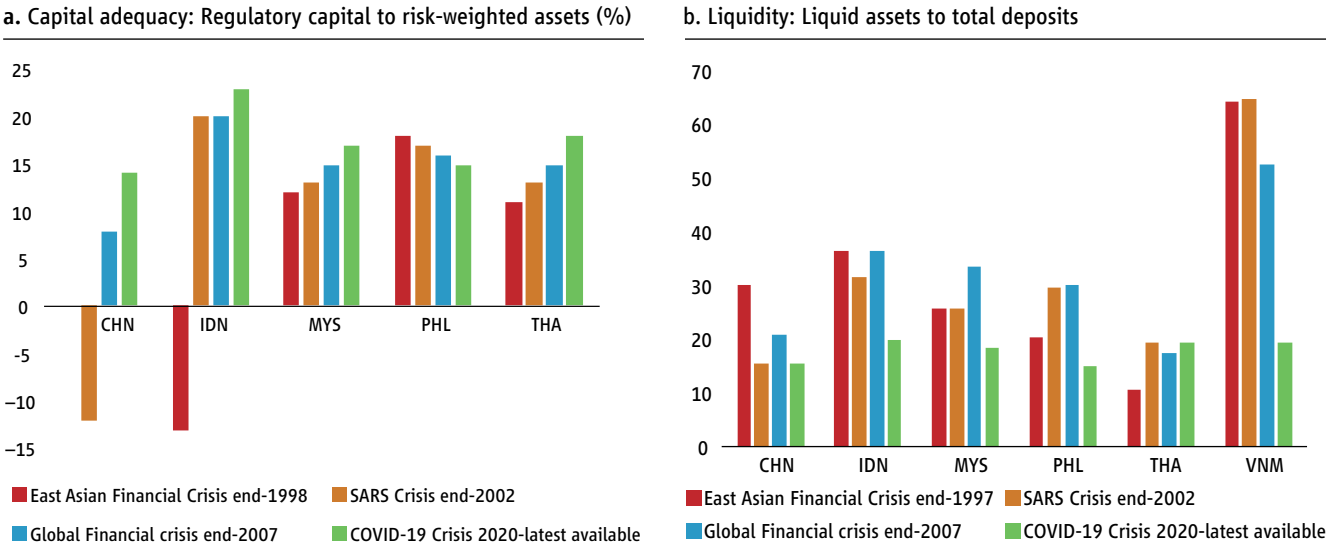
**Some EAP countries have stronger financial conditions than others.** In many EAP countries, initial conditions are better than at the beginning of past crises. Today most countries have greater exchange rate flexibility and more robust monetary, prudential, and fiscal policy frameworks (Table I.1.1). Past reforms and macro policies have also increased the buffers in the financial sector to absorb losses, although there are differences within and across countries (Table I.1.1). In large developing EAP economies, financial institutions are better capitalized than before previous periods of volatility, but liquidity is now lower (Figure I.1.10). Banking sectors in less financially developed countries such as Cambodia, Myanmar, and Mongolia, have higher levels of non-performing loans (NPLs).

**Table I.1.1.** Most countries in the EAP region have pursued sound macroeconomic policies

| | *Fiscal space* | | | *Monetary space* | | | *Reserves buffer* |
|---|---|---|---|---|---|---|---|
| *Period* | *2019* | *2019* | *2018* | *March 2020* | *March 2020* | *2019* | *March 2020* |
| *Select indicators* | *General government gross debt, % of GDP* | *Fiscal balance, % of GDP* | *Domestic credit to private sector, % of GDP* | *Key policy rate, in %* | *Headline inflation rate, in %* | *Inflation target, in %* | *Reserves, months of imports* |
| Cambodia | 30.0 | 0.5 | 100.2 | 1.46 | 1.7 | — | 8.0 |
| China | 39.2 | −5.8 | 207.5 | 4.05 | 5.2 | 3.0 | 16.7 |
| Indonesia | 28.0 | −2.2 | 40.5 | 4.75 | 3.0 | 2.5–4.5 | 9.2 |
| Lao PDR | 59.9 | −4.9 | 49.5 | 4.00 | 6.9 | — | 1.9 |
| Malaysia | 52.5 | −3.4 | 136.4 | 2.50 | 1.6 | — | 6.0 |
| Mongolia | 68.3 | 1.4 | 56.3 | 10.0 | 6.4 | 8.0 | 7.8 |
| Myanmar | 41.2 | −3.9 | 27.7 | 10.0 | 9.5 | — | 3.1 |
| Philippines | 35.7 | −3.5 | 49.9 | 3.75 | 2.6 | 2.0–4.0 | 9.6 |
| Thailand | 42.4 | −0.9 | 116.9 | 1.00 | 0.7 | 1.0–4.0 | 11.3 |
| Vietnam | 54.1 | −4.0 | 133.3 | 4.00 | 5.4 | 4.0 | 3.1 |

*Sources:* Fiscal data come from country teams. Domestic credit data come from Kose A., et al., "Cross-Country Data of Fiscal Space," World Bank, November 2019, IMF Article IV (Myanmar and Vietnam), Bank of Lao PDR (Lao PDR), and the National Bank of Cambodia (Cambodia). Monetary data come from World Bank country reports and various central banks' websites. Foreign reserves data come from World Bank country reports, IMF Data mapper, IMF Article IV (Myanmar), and various central bank websites.

**Figure I.1.10.** Financial institutions are better capitalized today than at the onset of previous crises, but liquidity may be a concern

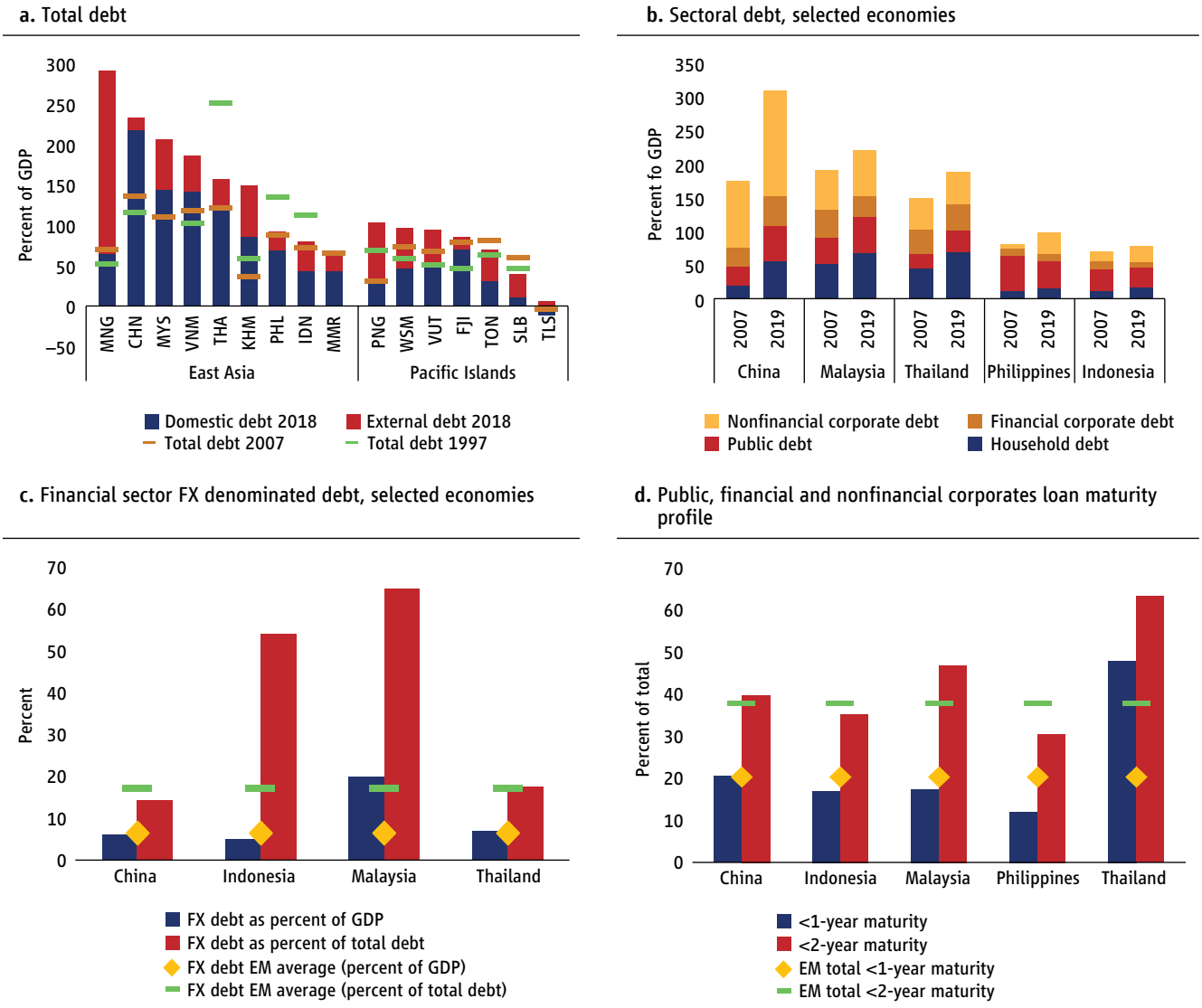



*Source:* World Bank FinStats 2020 Database. CHN stands for China; IDN for Indonesia; KOR for Republic of Korea; MYS for Malaysia; PHL for Philippines; SGP for Singapore; THA for Thailand; VNM for Vietnam. Where available, data is sourced one year previous the occurrence of a financial crisis episode. For capital adequacy (Panel A), data is available for year 1998 but not for year 1997.

**However, the unprecedented nature and size of external shock raises serious concerns.** Increased financial volatility can affect the region's economies through capital (both equity and bond markets), credit, and foreign-exchange channels. In some countries, the resultant financial instability is likely to be amplified because of the rapid growth in private sector debt, dependence on domestic debt held by foreign investors, substantial debt denominated in foreign currencies, and sudden liquidity dry-ups. Developing EAP economies are vulnerable in different ways (Figure I.1.11), for example, through elevated domestic debt (China, Vietnam, Malaysia), private sector debt (China, Malaysia, Thailand), external debt (Lao PDR, Mongolia, Malaysia, Papua New Guinea, Cambodia); or heavy reliance on short-term debt (Malaysia and Thailand).

**High uncertainty, devaluation of the domestic currency and low market liquidity could also represent a source of vulnerability.** Capital outflows raise the cost of funding in domestic debt and equity markets, in addition of creating currency depreciation pressures. In government bond markets, higher interest costs on debt refinancing and new issuance, as well as costs of servicing foreign denominated debt (for countries experiencing significant currency depreciation), threaten to increase fiscal pressures on sovereigns. In corporate debt and equity markets, rising interest rates and declines in share prices could similarly increase debt refinancing pressures and create difficulties for firms in raising new capital. Finally, in credit markets, lending institutions relying more heavily on foreign deposits or foreign wholesale funding markets could face increasing funding pressures as a result of capital outflows from the region. Amidst the deterioration in domestic economic activity and corporate profitability, borrower's debt repayment capacity could be impaired and NPLs on banks' portfolios are also likely to creep higher.

**Figure I.1.11.** High indebtedness, foreign holdings and foreign denomination of the debt could be sources of concern for some countries in the region




*Source:* Institute for International Finance, IMF; World Bank.
*Notes:* Panel C. FX refers to foreign currency. Panel D. EM refers to emerging markets.

## 6. Growth projections

**The pandemic is profoundly affecting the EAP economies, but the depth and duration of the shock are unusually uncertain.** Many countries have stepped up their fiscal and monetary policy measures and several economies have already approached their development partners for assistance to mitigate the impact of the pandemic. The net impact of the shock on growth outcomes remain highly uncertain and will depend on the impact of the pandemic on national economies, cross-border effects, and the effectiveness of policy response.

**As noted above, each economy is struggling with the disease, as well as the demand and supply effects of containment efforts.** Most economies are exceptionally exposed to the potential contraction in demand in the rest of the world, as well as to disruptions in the global and regional value chains into which they are integrated. Governments face a formidable challenge: to contain the disease; to treat its victims; to provide immediate economic relief to vulnerable firms and households; and then to initiate and sustain recovery. If the response is too little or too late, there is a risk of durable damage. Risks are tilted to the downside and country-specific vulnerabilities could amplify the adverse impact of the pandemic. Reflecting the considerable uncertainty along all these dimensions, we present two scenarios.

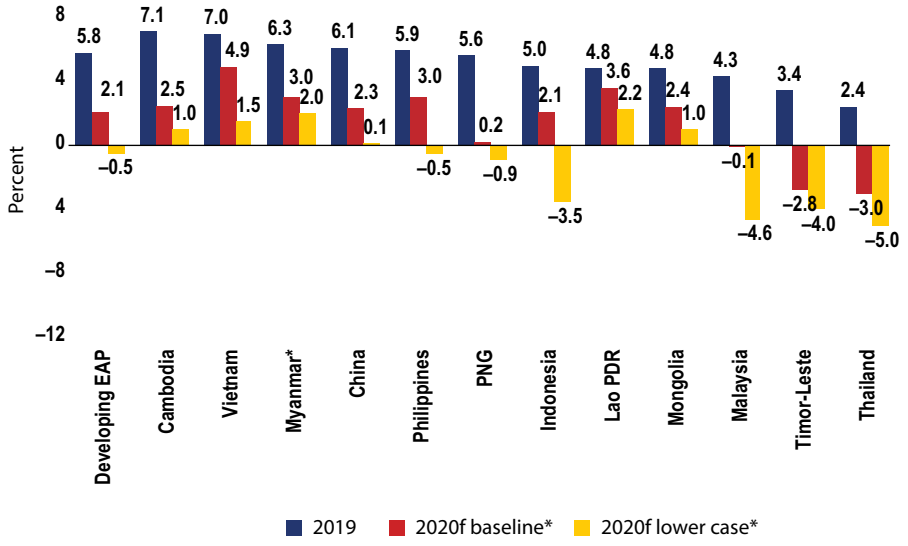
**The baseline scenario is a severe slowdown followed by a strong recovery.** A sharp contraction is followed by a sustained recovery, lowering 2020 growth to 2.1 percent, from 5.8 percent in 2019. In this scenario, regional growth stabilizes around its trend level by late 2021. This scenario assumes that the containment of the pandemic allows a sustained recovery of activity, initially in China—the epicenter of the outbreak—followed by the rest of the world. This scenario also assumes that: the sizable fiscal and monetary policy support measures implemented by major economies, including China, will prevent any lasting impact of the pandemic on global activity; and, as global financial conditions gradually stabilize, capital flows to the region will resume lowering pressure on regional asset prices.

**The lower case scenario is a deeper contraction followed by a sluggish recovery.** Under this scenario, we assume that the pandemic lasts longer and has more severe effects than assumed under the base case scenario. It's economic impact on global economy is also more durable and severe than expected under the baseline scenario. Global trade remains in recession for an extended period; value chain disruptions persist, as businesses reevaluate the costs of sudden interruptions, disruptions, and the benefits of lower production costs; the erosion of confidence and the reversal of capital flows is longer-lasting; and the policy response is less effective. All of these factors could push 2020 growth to well below the baseline scenario.

**Continued financial difficulties and negative feedback loops are embedded in the lower case scenario.** Prolonged financial market stress could exacerbate existing balance sheet weaknesses in the highly leveraged banking, corporate, and household sectors, hindering investment and consumption growth. These problems could be bigger in countries where corporate debt levels are high or have risen rapidly. The slowdown in activity across the region will reduce the ability of some highly leveraged governments and large clusters of businesses to service their debt, shrinking fiscal space and making it more difficult to finance public investment projects in the medium-term. The number of bankruptcies in the region could increase rapidly due to the broad-based and sharp global economic slowdown, with small and medium-sized enterprises (SMEs) particularly vulnerable. In the extreme case, a significant deterioration in the quality of loan portfolios and assets of the major commercial banks and other financial institutions, could trigger a full-blown financial crisis unless mitigated by effective and internationally coordinated policy measures.

**In both scenarios, the growth outlook for 2020 is expected to sharply deteriorated for all the economies in the region (Table I.1.2; Part III for more detailed discussion of country specific projections).** In the baseline scenario, growth in the developing EAP region is projected to slow from an estimated 5.8 percent in 2019 to 2.1 percent in 2020. In the lower case scenario, output will contract by –0.5 percent. Growth in China—the epicenter of the outbreak—is projected to decline to 2.3 percent in 2020 in the baseline scenario from 6.1 percent in 2019, whereas in the lower case scenario it could be as low as 0.1 percent. Growth in EAP excluding China is projected to slow from 4.8 percent in 2019 to 1.3 percent in 2020 in the baseline scenario and plummet to –2.8 percent in the lower case scenario (Figure I.1.12).

**Figure I.1.12.Growth is forecast to decline sharply in the region**




*Source:* World Bank. World Bank staff calculations.
*Notes:* EAP: East Asia and Pacific. Bars show actual or estimated growth for 2019 and forecasted growth for 2020 under two scenarios. *Myanmar growth rates refer to the pre- and post-pandemic period for fiscal year from October to September. Baseline refers to a scenario of severe growth slowdown followed by a strong recovery. Lower case refers to a scenario of a deeper contraction followed by a sluggish recovery. Weighted averages are calculated for developing EAP.

**Growth in the region is projected to decline significantly in all scenarios.** Malaysia, Thailand, and Timor-Leste, as well as some of the Pacific Islands, are likely to see varying degrees of contraction in all scenarios. The economies of Indonesia, Papua New Guinea, and the Philippines are expected to shrink in the lower case scenario, but to see some positive growth in the baseline, albeit at a much lower rate than in 2019. Vietnam, Cambodia, Lao PDR, Mongolia, and Myanmar, are among the few countries which are projected to grow in all scenarios, but at significantly lower levels than in 2019.

**Contractions in both domestic and external demand are expected to lower growth prospects.** Private consumption which had sustained growth in many of these countries in 2019, even as investment was sluggish, will now be hurt by both the preventive measures and declining incomes. Government expenditure, which had hitherto been restrained, is expected to expand and public investment may partially offset the likely further contraction in private investment. For many countries, the biggest shock will be the drop in external demand which will translate into lower exports, decline in tourism revenues, and low commodity revenues.

**Shrinking external demand will affect countries through multiple channels.** Vietnam, Cambodia, Malaysia, and Thailand are likely to be affected by the fall in external demand for their manufacturing exports and the disruption in the supply chains into which they are integrated. In these countries, manufacturing exports and imports each constitute between 30 and 70 percent of GDP. Decline in tourism revenues will affect most Cambodia, Lao PDR, Malaysia, Pacific Islands, the Philippines, and Thailand, in each of which tourism revenues constitute more than 10 percent of GDP. The plunge in commodity prices will affect most Mongolia, in which commodity exports account for more than a third of GDP, but also Indonesia, Lao PDR, Malaysia, Myanmar, Papua New Guinea, Thailand, Timor-Leste, and Vietnam. Countries like the Philippines and many Pacific Islands will also be affected by a decline in remittances.

**The Pacific Island countries have not seen many COVID-19 cases so far but will nevertheless suffer economic consequences.** Many Pacific Islands countries are highly reliant on donor financing and rents from a few key sources,

like tourism, fishing rights, and natural resources. Solomon Islands are highly dependent on commodity exports. Fiji, Kiribati, Palau, Samoa, and Vanuatu, are the most exposed to tourism. COVID-19 will hurt commodity and tourism revenues, but also disrupt imports of raw materials and inflows of workers for infrastructure projects in many small island economies. Output contraction is expected to be particularly severe in Samoa and Vanuatu, which have been affected by natural disasters. Countries like Samoa and Tonga are also vulnerable to declines in remittances.

**For many countries, the likely financial shocks will significantly exacerbate the economic pain.** The most significant effects on both the current and future performance of these countries are likely to originate in financial markets, given the likely magnitude of the financial shock and their existing vulnerabilities. As noted above, developing EAP economies are vulnerable in different ways. In China, Vietnam, Malaysia, and Thailand, for example, through elevated domestic debt; in Cambodia, Lao PDR, Malaysia, Mongolia, and Papua New Guinea through external debt; and in Malaysia and Thailand through heavy reliance on short-term debt.

**The projections beyond 2020 are influenced by several considerations.** One is how far country growth in 2020 has declined relative to the trend in its potential growth rate. Barring new unexpected shocks and durable financial market stress, the deeper the slowdown, the more rapid the recovery can be expected. When recovery is likely to begin, will depend on how soon the pandemic can be contained within countries and in their major trading partners. In so far as the current contraction is only because people are not able to work and spend, early containment would be conducive to a rapid resumption in domestic economic activity and a revival of external demand, though resumption of tourism may take longer. One reason for current pain to become a future handicap is the likelihood of the worsening of balance sheets of households, banks and firms, which could affect the potential trend growth. Much therefore depends on how far policy measures are able to prevent a temporary shock from becoming a permanent drag on economic performance.

**Table I.1.2.** Developing East Asia and Pacific: GDP growth projections

| | | | | Forecast | | | |
|---|---|---|---|---|---|---|---|
| | | | | Baseline[d] | Lower case[d] | Baseline[d] | Lower case[d] |
| | 2017 | 2018 | 2019[a] | 2020 | 2020 | 2021 | 2021 |
| **Developing EAP[a]** | 6.5 | 6.3 | 5.8 | 2.1 | –0.5 | 7.3 | 5.3 |
| China | 6.8 | 6.6 | 6.1 | 2.3 | 0.1 | 7.7 | 5.5 |
| **Developing EAP excl. China[a]** | 5.4 | 5.2 | 4.7 | 1.3 | –2.8 | 5.7 | 4.4 |
| Developing ASEAN[a] | 5.4 | 5.3 | 4.7 | 1.3 | –2.8 | 5.7 | 4.4 |
| Indonesia | 5.1 | 5.2 | 5.0 | 2.1 | –3.5 | 5.6 | 5.2 |
| Malaysia | 5.7 | 4.7 | 4.3 | –0.1 | –4.6 | 6.4 | 4.1 |
| Philippines | 6.7 | 6.2 | 5.9 | 3.0 | –0.5 | 6.2 | 4.1 |
| Thailand | 4.0 | 4.1 | 2.4 | –3.0 | –5.0 | 4.0 | 3.0 |
| Vietnam | 6.8 | 7.1 | 7.0 | 4.9 | 1.5 | 7.5 | 4.0 |
| Cambodia | 7.0 | 7.5 | 7.1 | 2.5 | 1.0 | 5.9 | 3.9 |
| Lao PDR | 6.9 | 6.3 | 4.8 | 3.6 | 2.2 | 5.8 | 3.7 |
| Myanmar[c] | 6.2 | 6.8 | 6.3 | 3.0 | 2.0 | 6.0 | 4.0 |
| Mongolia | 5.4 | 6.9 | 4.8 | 2.4 | 1.0 | 5.1 | 2.9 |
| Fiji | 5.4 | 3.5 | 1.0 | –4.3 | –10.0 | 1.9 | 1.5 |
| Papua New Guinea | 3.5 | –0.8 | 5.6 | 0.2 | –0.9 | 3.3 | 2.2 |
| Solomon Islands | 3.7 | 3.9 | 2.7 | –6.7 | –12.3 | –0.3 | –6.3 |
| Timor-Leste[b] | –3.8 | –0.8 | 3.4 | –2.8 | –4.0 | 3.9 | 3.5 |

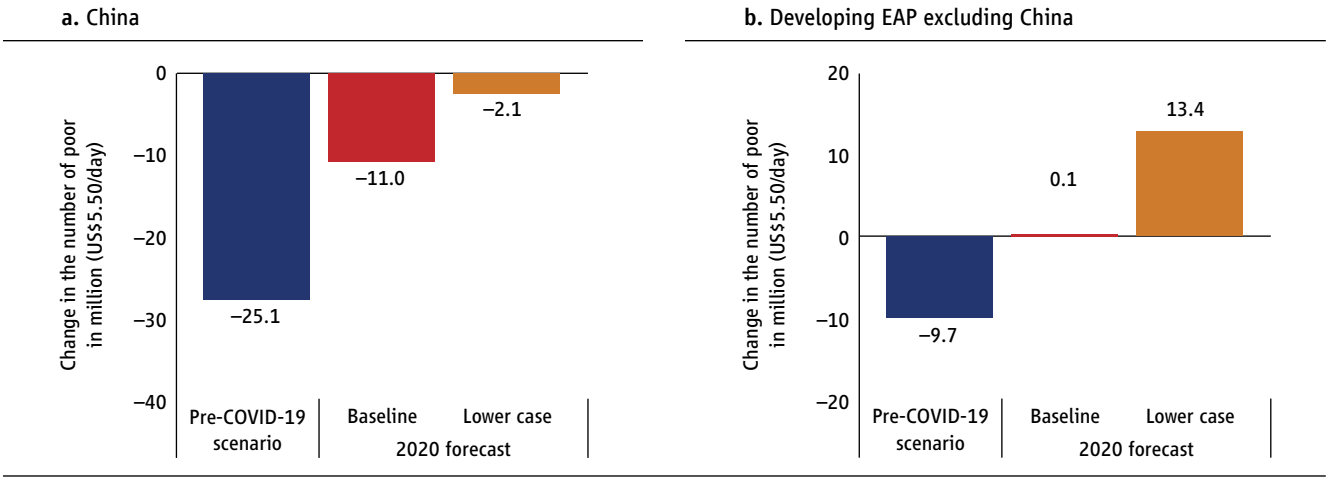
*Source:* World Bank staff estimates.
*Notes:* a. Estimate. b. Nonoil GDP. c. Myanmar growth rates refer to the pre- and post-pandemic period for fiscal year from October to September. d. Baseline refers to a scenario of severe growth slowdown followed by a strong recovery. Lower case refers to a scenario of a deeper contraction followed by a sluggish recovery.

## 7. Poverty impact

**The COVID-19 shock will also have a serious impact on poverty.** People will suffer both directly through illness and indirectly through lost incomes. Under the baseline growth scenarios and using a poverty line of US$5.50/day, it is estimated that nearly 24 million *fewer* people will escape poverty across developing EAP in 2020 than would have in the absence of the outbreak (Figure I.1.13). Under the lower case scenario, poverty is estimated to *increase* by about 11 million people. The magnitudes are significant; prior to the onset of the outbreak, nearly 35 million people were projected to escape poverty in the region in 2020, including over 25 million in China alone.

**Figure I.1.13.** COVID-19 will severely affect East Asian and Pacific countries' ability to reduce poverty

***Number of poor expected to be lifted out of poverty in 2020 under alternative scenarios***

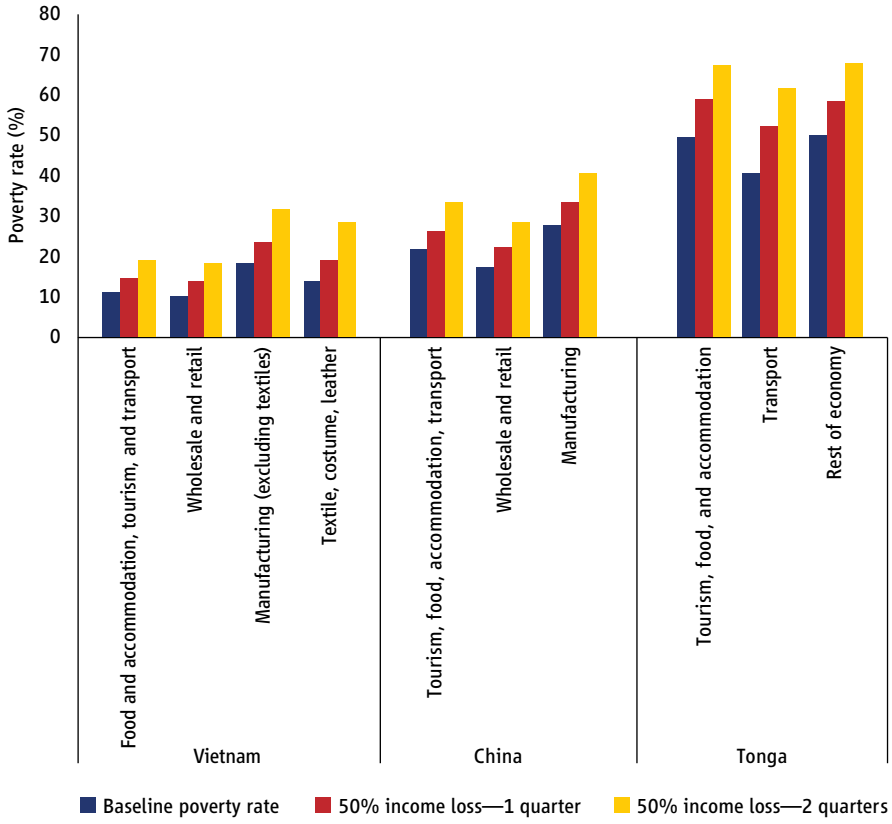



*Source:* World Bank East Asia and Pacific Team for Statistical Development.
*Notes:* Poverty rate measured using a poverty threshold of US$5.50 per person per day (2011 PPP).

**Households linked to economic sectors affected by COVID-19 will face a substantially elevated risk of falling into poverty, at least in the short-run.** In China and other countries, the risk of falling into poverty is particularly high among informal sector and self-employed workers who lack paid sick leave or other forms of social protection, as well as migrant workers who may have more precarious employment status and may have been unable to return to their place of work due to lockdown measures. Across the region, those linked to sectors experiencing strong demand shocks, such as tourism, or value chain disruptions, as in manufacturing, will also face an increased risk of falling into poverty (Figure I.1.14). Simulations suggest, for example, that if households in the tourist and retail sectors in China experience a 50 percent income loss for 2 quarters, their poverty rate would increase by 12 percentage points. In Tonga, where one-third of households rely on earnings from tourism, poverty could reach two-thirds of the population living in households linked to that sector, if faced with an income loss of 50 percent over a 6-month period—up from 49 percent prior to the outbreak. A similar income loss scenario among those linked to the garment industry in Vietnam would double poverty in the households linked to that sector from 14 percent to 28 percent.

**Figure I.1.14.** Households linked to sectors most affected by the COVID-19 shock face an elevated high risk of falling into poverty

***Estimated poverty impacts of income shocks in selected sectors in Vietnam, China, and Tonga***



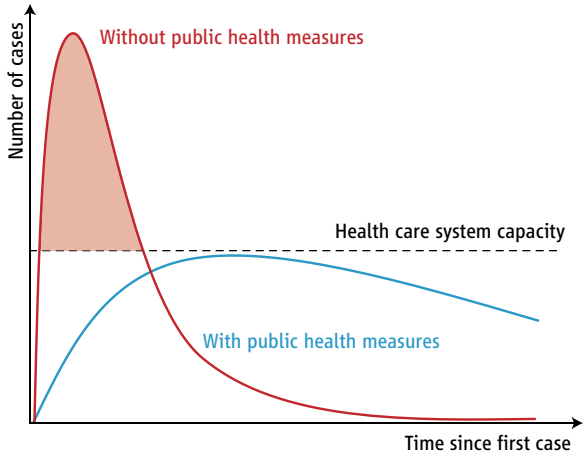

*Source:* Projections based on Vietnam Living Standard Survey, China Household Income Project, and 2015/16 Tonga Household Income and Expenditure Survey data. For China, total household incomes and consumption levels are extrapolated to 2018, based on the reported growth rates of per capital household disposable income and per capita household expenditure between 2013 and 2018, as reported in 2019 China Statistical Yearbook (National Bureau of Statistics).
*Note:* Estimated poverty impacts of income shocks in selected sectors in Tonga, Vietnam and China poverty rates measured using a poverty threshold of US$5.50 per person per day (2011 PPP).

## 8. Policy actions

**Given the unprecedented nature of the economic shock to each country, and the fact that it is also affecting all other countries in the region and beyond, an exceptional policy response is needed.** The need is for bold action at the national level, coordination across the region and globally, as well as high levels of external assistance. For its part, the World Bank Group has already rolled out a $14 billion fast-track package to strengthen the COVID-19 response in developing countries and shorten the time to recovery. The immediate response includes financing, policy advice, and technical assistance to help countries cope with the health and economic impacts of the pandemic. As countries need broader support, the World Bank Group is prepared to deploy up to $160 billion over 15 months to protect the poor and vulnerable, support businesses, and bolster economic recovery.

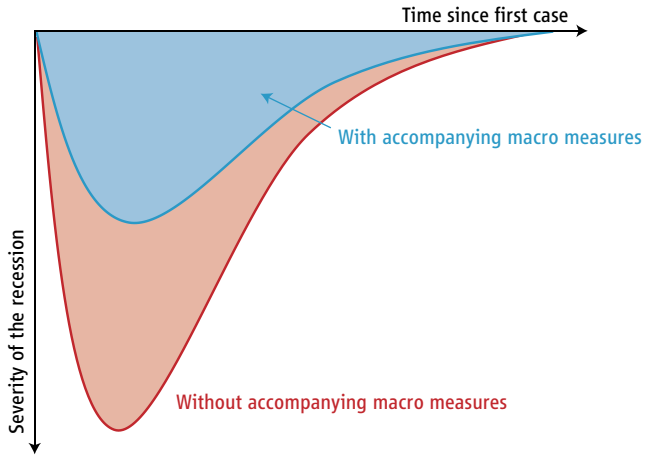
**At the national level, policymakers rightly see the flattening of the pandemic curve as the first objective.** This objective is to be attained by containment policies and up to a specific extent determined by, say, hospital capacity (Figure I.1.15). The goal is to slow the acceleration of the number of cases to save lives by placing less of a strain on the health system and possibly reduce the number of overall cases. It is recognized that flattening the pandemic curve will

**Figure I.1.15.** Flattening the pandemic curve through containment policies is the first objective




*Source:* Gourinchas (2020).

**Figure I.1.16.** Flattening the recession curve through macroeconomic policies is the second objective




*Source:* Gourinchas (2020).

have a significant economic cost and could lead to a recession. Therefore, policymakers are in parallel using fiscal and monetary policy to meet the second objective of flattening the macroeconomic recession curve (Figure I.1.16).

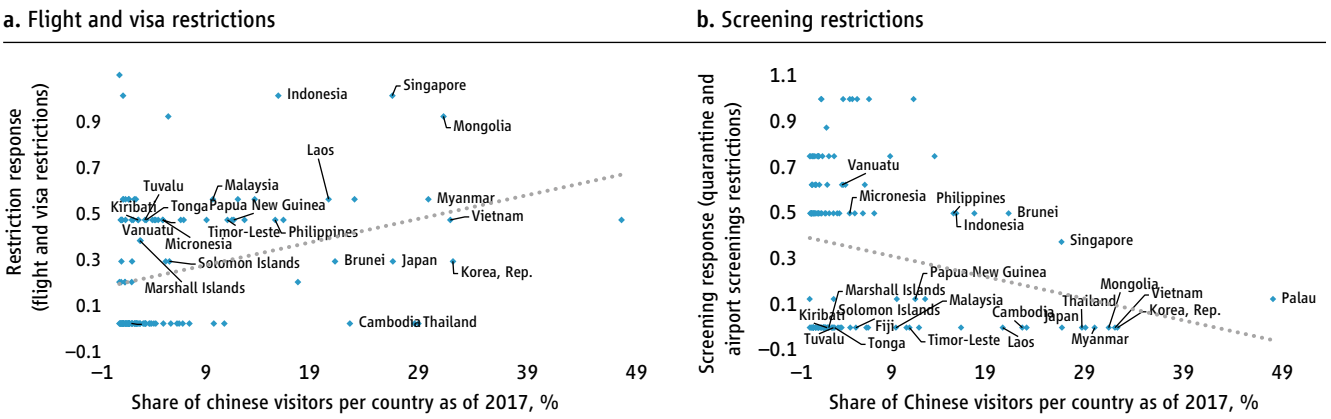
**There are several issues with this compartmentalized approach.** First, there is no clearly defined limit to the flattening: even hospital capacity is endogenous, as China has demonstrated by building new hospitals in a couple of weeks. Therefore, in any case, other (economic) considerations are limiting how far containment goes. Second, there are multiple instruments of containment, which vary in effectiveness and economic cost. Some like lockdowns and travel bans create costs by affecting economic activity; others e.g. health intervention such as testing, and fiscal interventions such as sick-pay to encourage people to stay home, involve direct costs. Third, a dichotomous approach does not exploit the benefits of using combinations of both preventive and macroeconomic policies to achieve even health goals. For example, it is conceivable that any desired level of containment may more efficiently be achieved by combining social distancing policies with fiscal instruments like subsidies for testing and contact tracing.

**In other words, since the infection curve and the recession curve are linked, the flattening of the first steepens the second.** And the policy instruments are not separate, most measures have both health and economic implications. Therefore, governments should frame the issue as a broader, integrated, and intertemporal challenge: to maximize social welfare, which depends on health and income; and using a combination of containment policies (restrictions, healthcare/testing) and macroeconomic policies (fiscal, monetary, financial).

## Public health considerations

**Available evidence shows that the preventive response of most countries in the region has been driven largely by public health considerations.** The countries more exposed to Chinese tourists have tended to take more stringent measures, such as the prohibition of visa restrictions on citizens from Hubei or China. Two exceptions to the relative unimportance of economic considerations are Cambodia and Thailand. Both these countries are highly dependent on Chinese tourists, the former is also politically close to China while the latter has a relatively strong health system. The more targeted and less restrictive measures like screening and quarantines of visitors have been used primarily by countries less exposed to Chinese tourists (Figure I.1.17).

**Figure I.1.17.** Public health considerations




*Source:* Restriction responses collected by World Bank staff from national government statements. Visitor data from Lopez-Cordova (2020).

**In the beginning stages of an outbreak of an emergent illness, there is little guidance as to the course of transmission with (and without) efforts to control spread.** When faced with such trade-offs between unknown risk and the uncertain impact of policy, a national government's tolerance for risk and uncertainty as well as the state of health-preparedness are the factors that determine a course of action. However, when within-country transmission becomes the driver of infection, the emphasis can shift from international to domestic containment, whereupon countries could consider non-pharmaceutical interventions (NPIs) such as hygienic practice promotion, school and event closures, and domestic travel restrictions. Such restrictions imposed on Wuhan and other cities in Hubei province by the Chinese government may have reduced the virus attack rate—i.e., the number of people infected by each infected person—from 3.86 to 0.32 over a 37-day period (Box I.B.4).

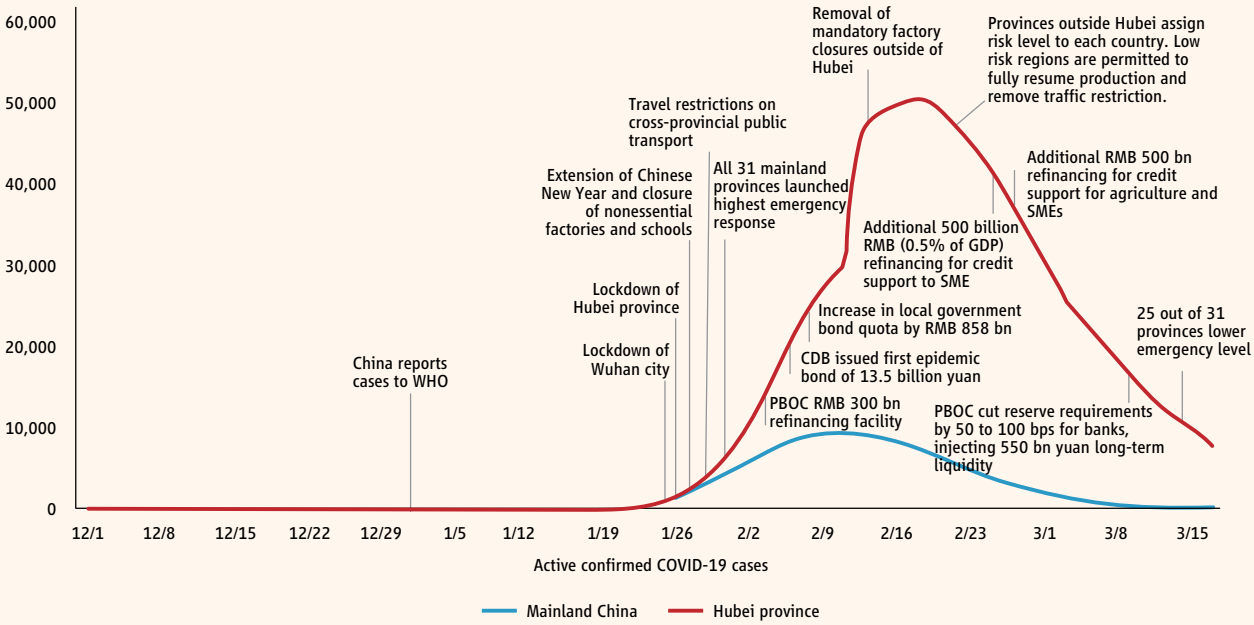
## **Box I.B.4.** Response to COVID-19 in China

An initial cluster of patients first emerged in Wuhan in mid-December 2019. Over the following month, infections spread rapidly and by late-January 2020 the number of confirmed cases had increased to 571 with 17 reported deaths. Faced with a rapidly escalating outbreak, the Chinese authorities began to put in place severe containment measures including lockdowns of Wuhan city, Hubei province, and several other provinces and counties (Figure I.B.4.1). Interprovincial travel restrictions and cancellation of air and rail traffic limited passenger transportation during traditionally busy Chinese New Year holidays. This was followed by school and factory closures across all provinces as well as social distancing and quarantine requirements. The authorities also stepped up public health support, including the provision of free treatment and testing across China.

*(continued)*

*(Box I.B.4. continued)*

**Box Figure I.B.4.1.** Infection curve and policy measures




Despite these measures, the outbreak intensified in Wuhan and Hubei province where ultimately thousands were infected, and the number of active cases peaked at over 50,000 on February 19, 2020. The steeper epidemic curve and the larger number of cases in Hubei were associated with a reported case mortality rate that was almost four times higher than in the rest of China, despite efforts to rapidly increase hospital capacity. Outside of Hubei measures were more effective in slowing the epidemic and active cases peaked much earlier on February 2, 2020 and at a substantially lower level of 9,141 cases. Starting in mid-February as the number of cases subsided the authorities gradually rolled back restrictions allowing economic activity to resume.

The containment efforts resulted in severe disruptions to economic activity, and authorities adopted policies to mitigate the economic impact of the outbreak. The initial policy response aimed to bolster market confidence, relieve near-term cash flow problems and mitigate more permanent economic damage in the form of bankruptcy, unemployment, and rising NPLs. As the epidemic subsides, and economic activity resumes policy focus is expected to shift toward recovery efforts and will likely entail additional stimulus measures.

- **Liquidity support.** PBOC provided net liquidity of 1,289 billion RMB (1.3 of GDP) in the first two months of 2020, 692 billion RMB (0.7 percent of GDP) higher than during the same period last year.

- **Refinancing facility.** In addition, an 800 billion RMB (0.8 percent of GDP) refinancing facility was established to support key manufacturers of medical supplies and daily necessities and bank credit to SMEs.

*(continued)*

*(Box I.B.4. continued)*

- **Regulatory forbearance.** The banking sector regulator adopted regulatory forbearance to encourage banks to increase lending to most affected enterprises and make flexible repayment arrangements and increase its tolerance for non-performing loans (NPLs) during the COVID-19 outbreak.

- **Fiscal support for epidemic control.** Ministry of Finance (MOF) has allocated a cumulative 99.9 billion RMB (or 0.1 percent of GDP) for epidemic prevention and control.

- **Fiscal support to ease SME liquidity constraints.** Targeted fiscal measures were rolled out to ease near-term cash flow problems in the enterprise sector including tax breaks and subsidies and deferrals in social and healthcare insurance payments to affected industries and enterprises that are estimated at about 1.2 percent of GDP.

**Public investment stimulus.** Indicating more traditional fiscal stimulus, the government also authorized an additional 1.3 trillion RMB (or 1.3 percent of GDP) for special local government bond issuance for the first quarter, 0.6 percent GDP higher than 2019Q1. Planned areas for public investment include medical equipment and 5G infrastructure

## **Box I.B.5.** Investing in health infrastructure for containment

Apart from rapidly enhancing the capacity to treat COVID-19 patients, governments also need to invest in the health infrastructure for containment. Some countries, like Singapore, the Republic of Korea, and Hong Kong, SAR, China had already learned from the 2003 SARS epidemic and the MERS epidemic in 2015, and created infectious disease surveillance and response capacity (see, e.g., Dawoon and Hoon, 2020).[1] These countries were prepared to use testing, contact tracing, and isolating the confirmed or suspected cases. The Republic of Korea, for example, can conduct 18,000 tests in a day and is exporting testing kits to other countries. While it is too early to be sure, these countries were able to lower the transmission rate and contain the virus, without necessarily having to resort to the more restrictive social distancing measures. The Korean government has largely avoided restricting the movement of people, and international borders have remained relatively open to travelers from affected countries.

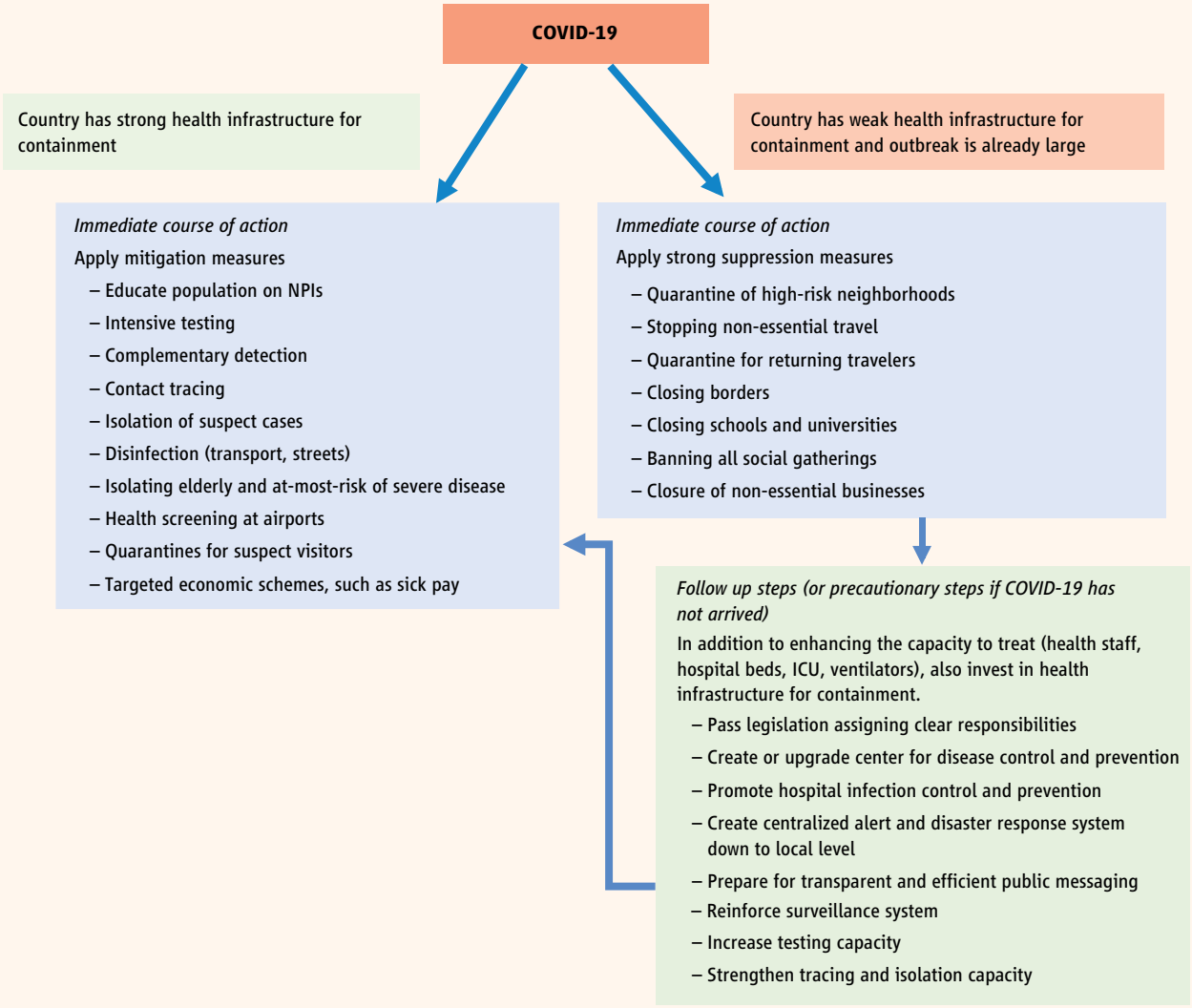
When confronted with a large outbreak, countries with limited capacity to implement such moderate containment measures at a large scale, have needed to take drastic containment measures to suppress the virus and to avoid overwhelming the health system (Figure I.B.5.1). It will be hard to sustain these economically costly measures for the likely duration and the possible recurrence of the pandemic. But countries should use the time they have bought with restrictive measures to invest in the capacity to contain through testing, contact tracing, and isolating the confirmed or suspected cases. These steps should, of course, complement efforts to increase the

1 https://blogs.worldbank.org/eastasiapacific/koreas-response-covid-19-early-lessons-tackling-pandemic

*(continued)*

*(Box I.B.5. continued)*

**Figure I.B.5.1.** COVID-19 and containment preparedness




*Source:* World Bank staff elaboration.

capacity to treat through enhancing hospital capacity (e.g., the number of ICU beds), training health personnel and increasing production of necessary medical supplies (e.g., ventilators, masks).

Preparing for measured containment through testing, tracking, etc. is especially important for countries confronted with their first reported cases, when the task is still manageable and can make the difference between a localized outbreak and a generalized epidemic. With this perspective in mind, countries should pass legislation assigning responsibilities throughout the government on prevention and containment, on-the-ground response, and treatment and quarantine, for example through the creation or upgrading of an institution such as a Center

*(continued)*

*(Box I.B.5. continued)*

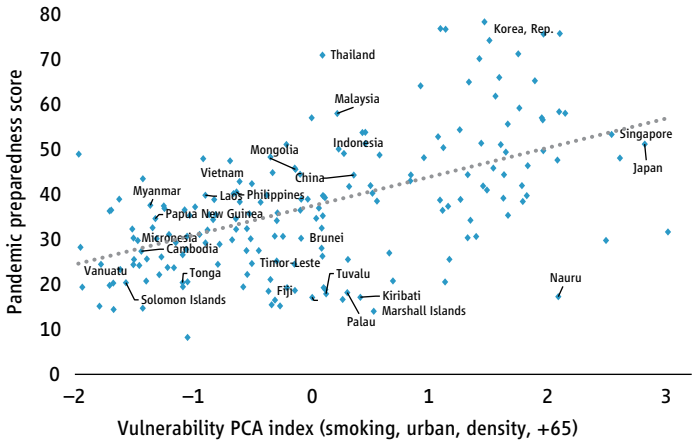
for Disease Control and Prevention. All countries should invest in strong surveillance systems at the local level focused on detecting any resurgence of the COVID-19 virus in the coming months or of other epidemic outbreaks in the future. Countries should prepare an alert and disaster response system that centrally coordinates with provincial and municipal governments and specialized hospitals. Transparency and communication are also key to allay fear and prevent panic. Governments should be prepared to implement a massive public information campaign on personal hygiene and social distancing, through regular press briefings, frequently updated online information, and targeted text messages. Hospitals should also strengthen their capacity for infection prevention and control. These countries should also invest in testing and tracking capacity, in understanding better the disease and its epidemiology in the country, and preparing to deploy potential treatments and vaccines as soon as they become available.

The sooner such investments are made, the sooner countries will be able to contain the disease through measured interventions and phase out the onerous social distancing measures.

## Investing in preparedness

Moving ahead, it would be desirable for governments to consider the design of longer-term preventive policies. At any point in time, preventive action is based on levels of preparedness of the health system and the vulnerability of the population. Some countries in the region such as Thailand are relatively well prepared whereas others such as the Pacific Islands have weak health systems. Similarly, some countries because of aging, urbanization, and density are relatively more susceptible to both the spread and consequences of the disease. The more that governments invest in preparedness today, the more they will be able to rely on targeted healthcare measures like testing and tracking than on drastic restrictions that disrupt economic activity (Figure I.1.18).

**Figure I.1.18.** The "optimal" preventive response would be based on preparedness and vulnerability




*Source:* Pandemic preparedness score constructed from a subset of indicators from the Global Health Security Index, https://www.ghsindex.org/. Vulnerability index constructed by principal components analysis with data from World Development Indicators, United Nations Population Division, and WHO Global Health Observatory.

It is important that efforts to design and strengthen longer-term preventive policies take into account the critical linkages between animal health, food safety, and human health—an approach that is coming to be known as the "One Health" approach. Indeed, the COVID-19 has reinforced the salience of taking a cross-cutting approach to addressing the risks associated with emerging infectious diseases. Over the last twenty years, China has witnessed the emergence of SARS, HPAI (H5N1 and H7N9), and the current COVID-19 outbreak. Without concerted efforts to address the root causes, China, its neighbors, and the global community will face a continued risk of zoonotic and microbial disease outbreaks.

The One Health approach aims to minimize the local and global impact of epidemics and pandemics through a holistic food systems lens, integrating food and nutrition security dimensions. This approach requires collaborative and coordinated efforts between human health, animal health, wildlife health, and food safety regulators. The coordination is meant to

ensure that national and local strategies for animal disease prevention, food safety, and public health are consistent and mutually reinforcing. Dedicating resources to detect zoonoses and microbial risks at their source—i.e., in their animal hosts—before they enter the human chain through food systems or health systems is also a key element of the approach.

## Fiscal policy

**Fiscal measures can support public health policy and mitigate the adverse macroeconomic consequences.** Immediate efforts should fund healthcare workers, medicines, equipment and facilities to cope with the suspected cases of COVID-19 patients. Resources should also be allotted for a public advisory to educate the public and allay fear, contact tracing to stem the spread of the virus and implement preventive measures. Fiscal policy cannot increase production where the source is firm closures or supply chain disruptions, but it can help bring the production back on track after the epidemic is over—for example, China funding travel for workers to get to work. If panic leads to a large decrease in demand, a fiscal expansion may be able, if not to get output back to its previous level, at least to maintain higher output.

**Governments should protect people from the economic impact of this crisis.** Policymakers should move swiftly to provide cash transfers, wage subsidies, and tax rebates to households and businesses hit by supply disruptions and a decline in demand, in order to help people to meet their needs and businesses to stay afloat. Italy has extended tax deadlines for companies in affected areas and broadened the wage supplementation fund to provide income support to laid-off workers, Republic of Korea has introduced wage subsidies for small merchants and increased allowances for homecare and job seekers, and China has temporarily waived social security contributions for businesses. Safety nets should be broadened in the form of enhanced unemployment insurance with extended duration, increased benefits, and relaxed eligibility. In addition, governments should design schemes to pay for sick and family leave to allow affected workers or their caregivers to stay home without fear of losing their jobs during the pandemic.

## Monetary policy

**The sharp tightening in financial conditions, along with expectations of low inflation, provides the right conditions for monetary policy action.** Central banks should help ease the tightening of financial conditions by injecting liquidity and cutting interest rates. They should provide ample liquidity to banks and nonbank financial institutions, particularly to those lending to small- and medium-sized enterprises. Easing credit and liquidity conditions can help firms in trouble, either because of low sales or supply disruptions. A monetary stimulus such as policy rate cuts or asset purchases can inject confidence into financial markets if there is deterioration in financial conditions. China's government has initiated a range of financial policies focused on keeping companies afloat, especially small and medium enterprises, that face major liquidity problems. Republic of Korea has expanded lending for business operations and loan guarantees for affected small- and medium-sized enterprises.

## Financial stability policies

**Regulators and supervisory authorities should work closely with banks and financial institutions to ensure that they adjust quickly to soften the negative effects of the shock.** The goal must be to preserve the financial strength of the system and transparency across the financial sector. A further tightening of the available finance coupled with panic in financial markets could stress the system and lead to a banking crisis. Financial market regulators and supervisors

could encourage, on a temporary and time-bound basis, extensions of loan maturities. That is, supervisory authorities could engage in regulatory forbearance, to ease as much pressure as possible from households and businesses struggling to repay their loans. Given the temporary nature of the pandemic, banks could consider temporarily restructuring of loans for affected borrowers.

**The necessary policies currently enacted to mitigate the negative effects on the financial sectors could create distortions that have repercussions in the future.** Massive injections of financial resources can exacerbate capital misallocation and debt overhang. There is, therefore, the need to gather information, monitor the recipients of funds, and track closely the risks associated to connected lending and crony capitalism.

**Relaxation of regulation and availability of low-interest rate financing need to be complemented by safeguards against excessive risk-taking.** Although there has been a sudden increase in systemic risk and deterioration in the credit portfolio of banks, government intervention through the financial sector does not necessarily guarantee that much-needed financial resources will reach the neediest firms and households. Therefore, intervention should be accompanied by measures that ensure that financial institutions retain all residual resources to shore up capital rather than distributing them as dividends and share buybacks or as bonuses to management.

**Transparency and regulatory oversight are needed to track and inform the allocation of the financial resources injected in the financial system.** Relaxation of regulation, supervision, or accounting standards increases the opacity of financial institutions' balance sheets, undermining public trust. Therefore, some forms of temporary regulatory forbearance (e.g., changing loan loss provisioning methods), should be accompanied by greater transparency and publicly available information, to prevent "zombie" financial intermediaries from operating in the market through government support. It is also critical that at times of distress it is still possible to identify and report asset quality deterioration and the build-up of non-performing loans, ensuring the possibility of clearly and accurately evaluating risks in the financial sector through the duration of the pandemic and beyond.

## Trade policies

Trade policy must stay open. To retain the production of essential supplies for domestic consumers, several countries have imposed restrictions on exports of medical products. Economics and recent experience show that these measures ultimately hurt all countries, particularly the more fragile. WTO members—or at least the G20 countries—must agree not to restrict exports of COVID-19-related medical products. Consuming countries could do their part too by liberalizing imports.

## Policies to help poverty alleviation

Several countries already affected by COVID-19, have taken effective measures to protect or cushion the effect on the poorest populations (Table I.1.3). While specific policy actions will depend on the countries' economic vulnerabilities and existing social protection and health systems, the following are general principles that apply more widely to lessen the immediate impact on families' well-being. Measures can be distinguished between those that are targeted at handling the emergency and relieving the situation of families and firms at the time of the outbreak (very short-term) and those geared towards the recovery of the economy after the outbreak is substantially over, ensuring that the most vulnerable are able to quickly reengage in income-generating activities.

*Interventions toward containment and mitigation of health effects*

- **Provide and expand sick pay/leave** to both alleviate the adverse economic effects of the health shock, but also to incentivize appropriate social distancing measures. For instance, Malaysia has announced financial assistance of RM 600 (around USD$150) per employee per month for up to six months for workers who are forced to take leave without pay, to be delivered through the existing Employment Insurance System, targeted to lower-paid workers.

- **Provide free or subsidized testing and treatment of COVID-19,** to limit financial harm of health-related expenditures and ensure that families are diagnosed and treated regardless of their financial situation. In China, the cost of treatment for everyone is being covered through the public budget since the end of January. In Thailand, instead, the social security agency will cover all medical costs of those infected with COVID-19.

*Interventions to support the poor and newly unemployed affected by the economic shutdown*

- **Deploy existing safety nets and social insurance programs,** such as cash and in-kind transfers, to provide temporary relief for families whose earnings have been adversely hit by the outbreak. In contexts of high labor informality, access to safety nets is particularly important, since informal workers are more exposed to the adverse economic effects of shocks, than the formally employed who have social insurance as well as sick leave. Where conditional cash transfer programs exist, waiving conditionality for a period could enable expansion of coverage, where needed, although the expansion of programs may take time if the information of non-beneficiaries is not readily available. China, Indonesia, and Malaysia have already expanded cash transfers as a response to the outbreak. Hong Kong, SAR, China is providing cash transfers to all adult permanent residents and lowering public housing rent (around 45 percent of the population live in public housing) to relieve people's financial burden as well as to boost local consumption. While social insurance may benefit few (better-off) individuals in countries with high informality, where unemployment benefit programs exist, temporary adjustments to the benefit criteria, such as easing the conditions to receive benefits—can help expand the coverage of such programs to widen the net. Adjustments can also be made in the duration of benefits, as needed.

- **Support firms' efforts to retain workers,** to lessen the employment impacts of the outbreak. In Republic of Korea, for example, the government is financing employment retention subsidies, to help firms finance continued employment of their workers in the face of sharp revenue declines. Elsewhere in the region, governments are temporarily exempting or deferring social insurance contributions to support firms and employees to weather difficult times. For instance, Cambodia has provided the tourism, garment, and footwear sectors with tax relief and exemption from contributing to social security funds and provided suspended-workers with income payment co-funded by firms and government.

*Short-term measures to avoid long-term impacts of the crisis*

- **Provide school meals for families reliant on them,** by delivering to families and making them available in the event of school closures or by providing students with the money to cover for the meal (as in Bihar, India). Short-term impacts on family incomes can potentially translate into long-term impacts on children's human capital, not only via lost time in the classroom but through adverse impacts on child nutrition, if appropriate measures are not taken on a timely basis.

*Programs to support the reintegration of workers after the emergency crisis*

- **Enhance employment support services,** helping job-seekers find employers, as well as by providing training or apprenticeship opportunities for workers to upgrade their skills. Already in China, as the outbreak is winding down local governments have started providing incentives in the form of temporary subsidies to local businesses to prioritize poor households when filling available job opportunities. In Malaysia, the authorities are encouraging the use of outbreak-induced downtime to encourage skills upgrading through deduction of training-related expenses, subsidizing short courses in digital skills and highly skilled courses, and increasing the claimable training cost for affected sectors. Cambodia is to provide retraining and upskilling programs as well as job search services

**Travel subsidies for migrants.** In China, the government has put in place measures to enhance coordination across line ministries and between migrant-sending and receiving regions to provide transportation and employment services to support their return to work.

**Strengthen measures to support school retention,** particularly among secondary school students. Across many countries, schools are being closed. The longer a child is out of school, the less likely she is to return. Measures to ensure that long-distance learning is reaching the most vulnerable, considering that access to technology might be limited to them, will be key to keeping students engaged. High stakes standardized tests may need to be offered online or postponed while remote learning mechanisms are developed and rolled out. In countries where cash transfers with conditions related to school enrolment are present, raising the benefit levels for those most-at-risk could further encourage students to return once classes resume. Additional flexibilization of re-entry requirements might also be needed.

**Table I.1.3.** Policy responses to address the COVID-19 challenge

| | *Policy responses* | | | |
|---|---|---|---|---|
| *Countries* | *Monetary* | *Fiscal* | *Health response* | *Travel* |
| **China** | • Interest rate (–10 bp)<br>• Liquidity support of 1.0% of GDP in the first two months of 2020 (0.4. percent of GDP higher than last year).<br>• Refinancing facility (0.8% of GDP)<br>• Regulatory forbearance Increase of lending funds by 0.2% of GDP.<br>• Reserve requirement ratio cut effective March 16 that would release 0.5% of GDP in base money liquidity | • Public investment stimulus (1.3% of GDP)<br>• Measures to ease SME liquidity constraints (1.2% of GDP)<br>• Epidemic prevention and control (0.1% of GDP)<br>• Small-scale taxpayers VAT exemption for Hubei province, and reduction from 3% to 1% for those in other provinces.<br>• Lowered/exempted employers' contributions to social insurance.<br>• Exemption of tariffs on imported supplies for COVID-19 control | • All provinces declared public health emergencies<br>• Two major emergency hospitals set up in Wuhan<br>• Free medical services provided to COVID-19-related pneumonia | • Severe travel restrictions on domestic and international traffic<br>• Strict quarantine requirements |

| | | | | |
|---|---|---|---|---|
| **Indonesia** | • Interest rate (–25 bp)<br>• Lowered minimum reserve requirement<br>• Regulatory forbearance with banking sector stimuli<br>• Central Bank of Indonesia (BI) stabilization of the rupiah's exchange rate, increase of foreign exchange liquidity and provision of alternative hedging instruments | • Initial fiscal stimulus package (USD$745 million in contingency funds)<br>• Granted tax deferment facilities<br>• Emergency fiscal stimulus that includes a raft of tax breaks worth IDR22.92 trillion | • Designated hospitals as referral units<br>• Created a contingency fund to cover incremental costs for patient care and treatment | • No entry if traveled to China last 14 days<br>• Visa restriction to Chinese nationals<br>• Enhanced screening measures at ports of entry |
| **Malaysia** | • Interest rate (–50 bp)<br>• RM 3.3 billion to assist SMEs in sustaining business operations, safeguard jobs and encourage domestic investments<br>• Special loan funds<br>• Central Bank of Malaysia (BNM) reduced the statutory reserve requirement ratio | • RM 20 billion economic stimulus package was announced on February 27. Some measures aim to ease the cash flow of affected businesses and tourism and to provide financial aid to employees on unpaid leave.<br>• Relief measures (0.04% of GDP) announced on March 15 | • Fourteen-day movement control order with general prohibition of mass gatherings, restriction of travel, closure of schools, universities and private and government premises | • No entry if traveled to China last 14 days<br>• All foreign visitors are prohibited from entering or transiting through Malaysia and Malaysians are prohibited from traveling abroad effective March 18 until the 31st<br>• Enhanced screening measures at ports of entry<br>• Self-quarantine for 14 days if traveled abroad |
| **Philippines** | • Interest rate –25 bp in February<br>• Interest rate (–50 bp in March<br>• Signaled an additional 25 bp cut later in the year | • Expansionary budget, with a planned 12% year-to-year increase of spending<br>• Additional spending for the tourism sector (0.03% of GDP)<br>• PHP27.1 billion fiscal support package to provide economic relief to business and livelihood affected by COVID-19 announced on March 17 | • Expanded testing and treatment capacity of hospitals<br>• Established a repatriation and quarantine facility<br>• Community quarantine until April 14 | • No entry if traveled to China last 14 days<br>• Mandatory 14 days of quarantine for citizens if traveled to China |

| | | | | |
|---|---|---|---|---|
| **Thailand** | • Interest rate (–25 bp)<br>• Regulatory forbearance<br>• Relaxed foreign exchange regulations | • THB400 billion stimuli package that includes THB150 billion for soft loans<br>• Reduction of withholding taxes for businesses from 3% to 1.5%<br>• Tax deduction for businesses of 1.5 times on interest rates and 3 times on wage expenses<br>• Reduction or postponement of utility bills | • Initiated pandemic preparedness plan | • Health certificate with negative COVID-19 test required for all passengers arriving in Thailand (national and foreigner) effective March 22<br>• Travelers who have been in the United States 14 days prior arrival should self-monitor and report starting March 13 |
| **Vietnam** | • Regulatory forbearance<br>• SBV reduction of policy rates (refinancing rate from 6% to 5% and discount rate from 4% to 3.5%)<br>• USD$12.4 billion in preferential credit to affected businesses<br>• SBV lowered the cap on short-term deposit rates by 0.25% and by 0.5% on short-term lending rates<br>• SBV allowed commercial banks to restructure loans maturities to affected businesses | • Accelerated preventative measures using existing health insurance funds<br>• Introduced tax exemptions for essential medical equipment<br>• Delay in the tax payment deadline by five months for businesses impacted by COVID-19 (under consideration of Government as of March 17) | • Declared Public Health Emergency in the affected areas<br>• Established a nCoV National Steering Committee chaired by Deputy PM | • No entry if traveled to China last 14 days<br>• Enhanced screening measures at ports of entry<br>• Reduced flight and sea transportation from China<br>• No entry for travelers who transited Europe's Schengen Area and Britain in the past 14 days effective March 15 |
| **Cambodia** | • Regulatory forbearance<br>• Reduction of reserve requirement rates, benchmark rate and liquidity coverage ratio | • Fiscal stimulus (3% of GDP)<br>• Tax relief<br>• Targeted capital injection to support smaller firms and microfinance institutions<br>• Additional capital injection for the Rural Development Bank<br>• Provided suspended workers with income payment co-funded by firms and government | • Prepared national hospital and all provincial hospitals for COVID-19 outbreak<br>• Allocated US$30 million for prevention | • Suspension of entry for travelers through waterways starting March 13<br>• 30-day restriction on visitors from Italy, Germany, Spain, France, and the United States effective March 17 |
| **Lao PDR** | | • Specific measures are being considered | • Resources are being allocated to buy medical supplies | • Restricted cross-border travel; reduction of flights from China, Republic of Korea, Vietnam, Cambodia and Thailand<br>• Suspension of all visa on arrivals and visa exemptions until April |

| | | | | |
|---|---|---|---|---|
| **Myanmar** | | • None, so far | • Established an inter-ministerial committee to fight the coronavirus<br>• Developed a US$4.8 m costed plan for donor support | • Restricted cross-border travel; flight ban from China<br>• Visa restriction to Chinese nationals<br>• Enhanced screening measures at ports of entry<br>• Myanmar nationals who traveled to Hubei Province (China) or Daegu and Gyeongbuk regions (Republic of Korea) will be quarantined in public hospitals for 14 days |
| **Mongolia** | • Monetary Policy Committee (MPC) reduced the policy rate by 100 bp to 10%<br>• Reserve requirements on domestic currency reduction by 200bp to 8.5%<br>• Regulatory forbearance | • Tax exemptions (including customs and VAT on food items)<br>• Accelerate the process of tendering for public investment projects | • Suspension of educational activities and community activities until March 30<br>• Suspension of the Lunar new year celebration<br>• Temporary suspension of the Trans-Siberian railway (reducing coal and crude oil export)<br>• Closure of nonfood markets, stores, wholesale markets and nonessential services until March 16 | • Suspension of all international flights and road/rail travel (except for rail freight) until March 28 and all forms of domestic inter-city passenger trips during March 10–16<br>• Visas restriction to Chinese nationals<br>• 14-day quarantine for those who traveled to China, Republic of Korea, Japan, Iran and Italy at local designated hospitals upon arrival |
| **Papua New Guinea** | | • 45 million Kina funding of Emergency Preparedness and Response Plan | • Appointed new temporary quarantine stations | • No entry if traveled to China last 14 days<br>• Reduced entry for flight or sea transportation from China |
| **Timor-Leste** | | • None, so far | • Inter-ministerial Coordination Committee to "prevent and control" COVID-19<br>• Training for surveillance teams and rapid responders (national and municipality level) | • No entry if traveled to China last 4 weeks<br>• Entry restriction for nationals and travelers from China, Iran, Italy, and the Republic of Korea, effective March 11. Those who refuse to return to their port of origin will be subject to 14-day mandatory quarantine. |

# 2. Chapter II. Analysis

COVID-19 has created, not just an unprecedented health shock, but also a profound economic shock, first to China and now to the global economy. Most economies are better equipped to cope than in previous crises, thanks to sound macroeconomic policies and prudent financial regulation. But serious economic pain seems imminent, and the high private-sector debt could pose a serious problem in some economies.

The economic costs of infectious disease include: (a) the direct and indirect effects of illness; and (b) the costs induced by the preventive behaviors of citizens and by the transmission control policies of governments. With emergent illnesses of which the epidemiological aspects are not known, the economic costs due to preventive actions are likely to exceed the economic costs of illness, at least in the initial periods of the outbreak. Studies on SARS suggest losses between 0.5–1.0 percent of GDP in China, Hong Kong, SAR, China, Singapore, and Taiwan, China, during the outbreak year and ultimately 7,000 likely cases of infection with 700 fatalities.

At the start of an emergent disease outbreak with uncertainty about transmissibility and severity, forceful prevention efforts may be cost-effective even if they provoke substantial avoidance costs. However, the optimal preventive health policy response to a pandemic threat will shift over time as disease knowledge increases and the disease spreads. The optimal economic policy response too will change over time and depend on the precise nature and evolution of the shock—to labor supply, trade, aggregate demand, or finance.

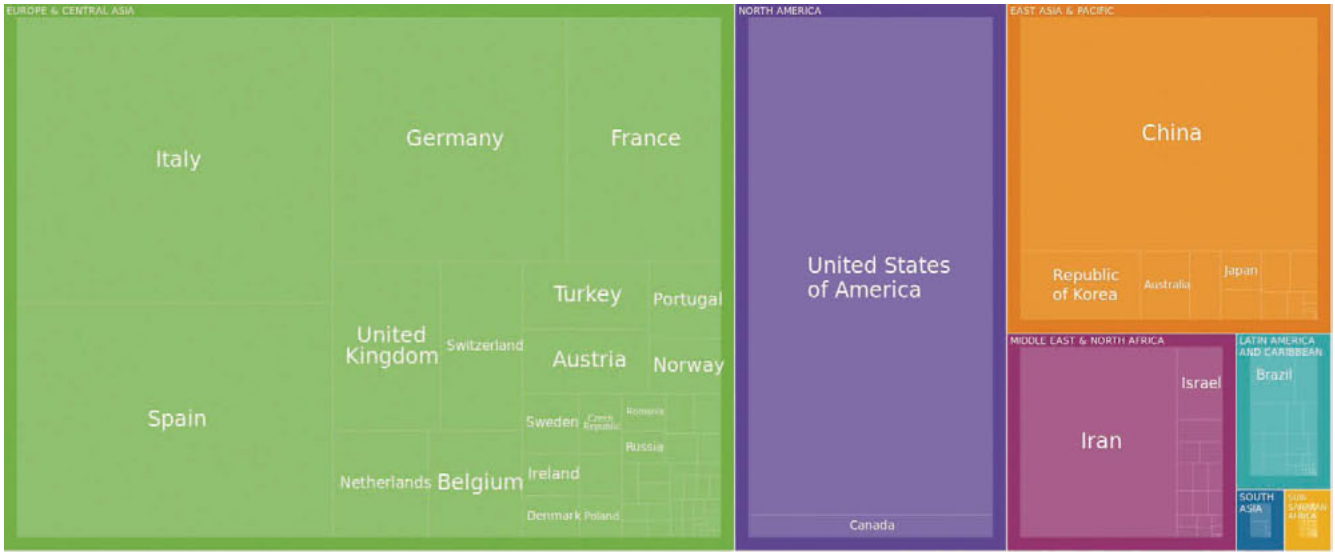
But some policy lessons are already evident. To prevent the spread of the disease, most governments in the region and elsewhere have relied on stringent transmission control measures, which have been necessary but are likely to have significant current and future economic costs. To mitigate the economic impact, governments are turning to monetary and fiscal policies, which in some cases have immediate and eventual health benefits. A key recommendation of this note is that countries need to take an integrated and intertemporal view of health, containment, and macroeconomic policies, rather than see them as separate instruments to achieve separate goals.

This chapter begins by briefly describing the disease because its attributes influence its impact and the policy response. A description of the channels through which the real economic impact is likely to be felt by individual EAP countries highlights their exposure to China and the world, including through global value chains. To inform policy generally, rather than to predict precisely, we quantify the real impact of the China outbreak and the global pandemic on individual economies using a computable general equilibrium (CGE) model. We also simulate the implications for poverty in the region, drawing upon aggregate data as well as household data for two countries. We then identify the channels through which the financial shock could be felt by the region and assess its ability to cope. We conclude with a focus on five types of policies: transmission control and health; fiscal and monetary; financial sector; trade; and poverty. In each case, we describe what countries are doing and suggest ways in which they might do better by taking an integrated view of policy.

## 1. Attributes of the disease

The COVID-19 respiratory virus, which started in China in December 2019, has become a pandemic. A new strain of the virus that affects respiratory organs, COVID-19, was reported in Wuhan, China in late-December 2019. As of March 27, 2020, more than 600 thousand cases of infection were reported worldwide resulting in more than 30 thousand deaths, with the majority outside China. It has affected not only countries in the East Asia and Pacific region but has spread quickly in 199 countries and territories around the WorldIt has affected not only countries in the East Asia and Pacific region but has spread quickly in 199 countries and territories around the World (Figure I.2.1). While it appears to have already peaked in China, it continues spreading at an increasing rate in other countries (Figure I.2.2).

**Figure I.2.1.** Spread of COVID-19




*Sources:* World Health Organization and the National Health Commission of the People's Republic of China.
*Note:* As of March 27, 2020.

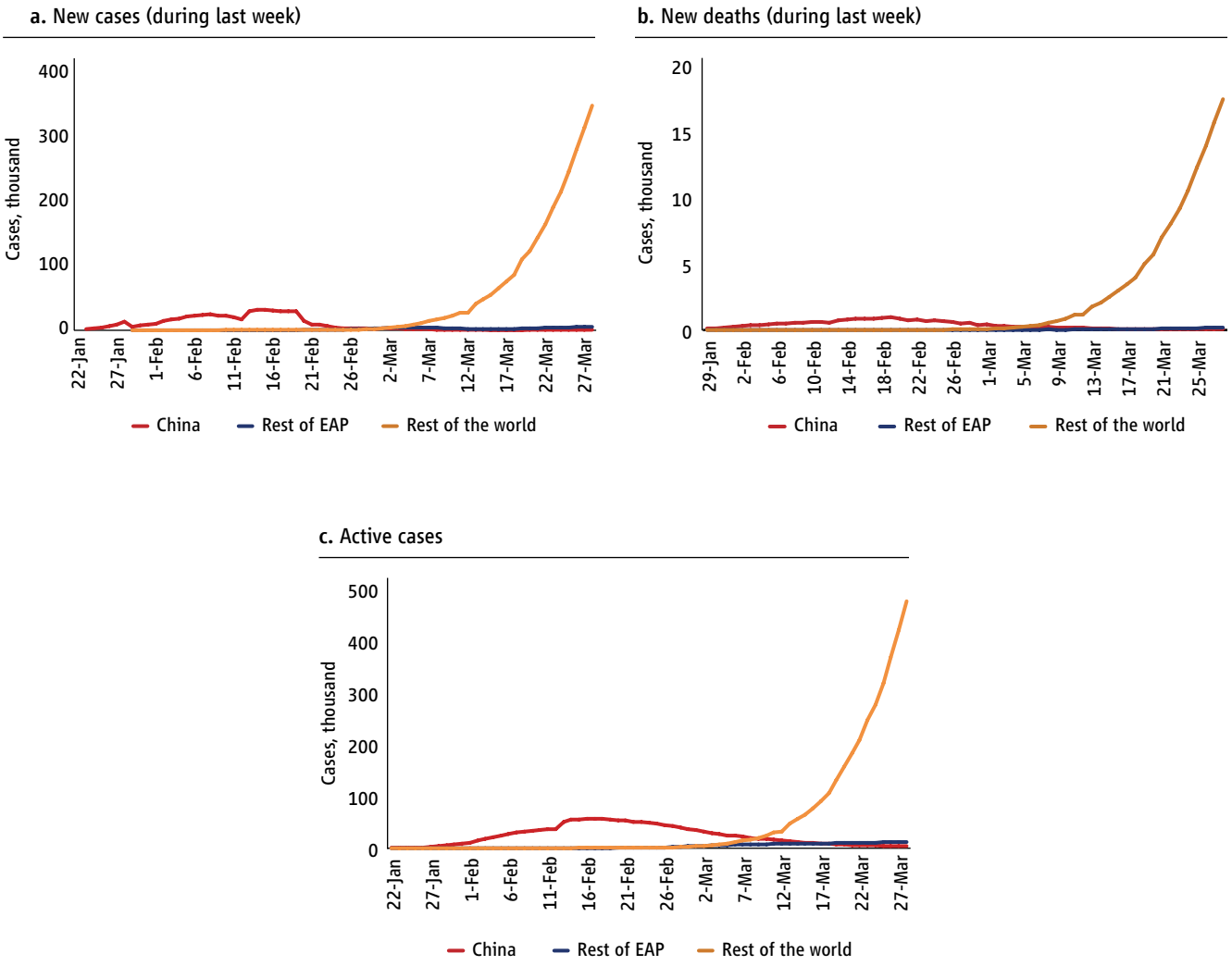
COVID-19 is an outbreak of great concern. Some argue that the COVID-19 threat is overblown because seasonal flu causes far more illnesses and deaths annually. In the US alone, the flu has already caused an estimated 26 million illnesses, 250,000 hospitalizations, and 14,000 deaths this season, according to the US CDC. However, three key dimensions determine the spread of an infectious pathogen: transmissibility, population immunity, and level of population mixing. COVID-19 is of utmost concern along all three dimensions.

COVID-19 has high transmissibility. The level of transmissibility by infectious disease is represented by the Basic Reproductive Ratio ($R_0$), which is the average number of other susceptible people that each infected case can potentially infect. Early studies of the COVID-19 outbreak show that $R_0$ of SARS-CoV2 is about 4.5.[3] For comparison, $R_0$ value is 1.28 for a typical seasonal flu, 1.5 for the 2014 Ebola outbreak in Guinea and 1.8 for the 1918–20 Spanish Flu pandemic. More recent COVID-19 studies even indicate even higher values of $R_0$ up to 8.18.[4]

3 Time-varying transmission dynamics of novel coronavirus pneumonia in China. Liu et al. https://www.biorxiv.org/content/10.1101/2020.01.25.919787v2

4 Data-based analysis, modelling and forecasting of the novel coronavirus (2019-ncov) outbreak. Anastassopoulou et al. (2020) https://www.medrxiv.org/content/10.1101/2020.02.11.20022186v1

**Figure I.2.2.** COVID-19 is spreading fast across the globe

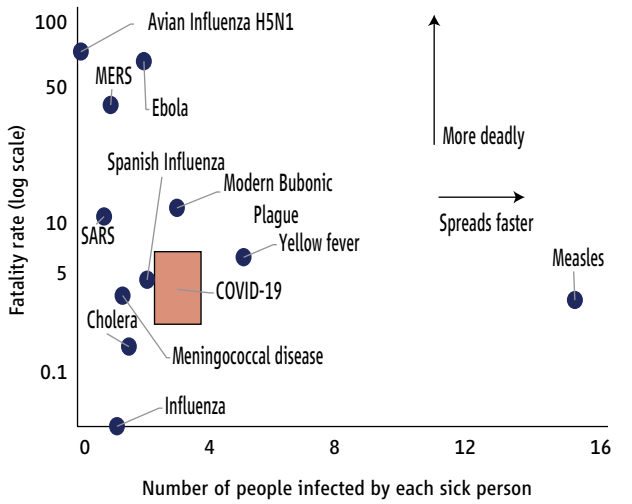



*Sources:* World Health Organization and the National Health Commission of the People's Republic of China.
*Note:* Panel C shows a 7-day total.

The world population lacks immunity to COVID-19. Due to (i) the recent animal-to-human jump by the pathogen and (ii) the nonavailability of a vaccine, there is currently no herd immunity to COVID-19. Researchers have been responding fast to the outbreak. The WHO database has more than 2,000 papers on COVID-19. Despite China's sharing the DNA of the virus widely and the frenzied efforts of the research community, a vaccine is unlikely to become available during the next few months.

Population mobility is at historic levels. Due to globalization, the world is hyperconnected with the largest number of people on the move within and across countries in human history. Pathogens propagate on connectivity. Short-distance and long-distance mixing of populations facilitates the spread of a highly transmissible virus like SARS-CoV2.

**Figure I.2.3.** COVID-19 has a high fatality rate



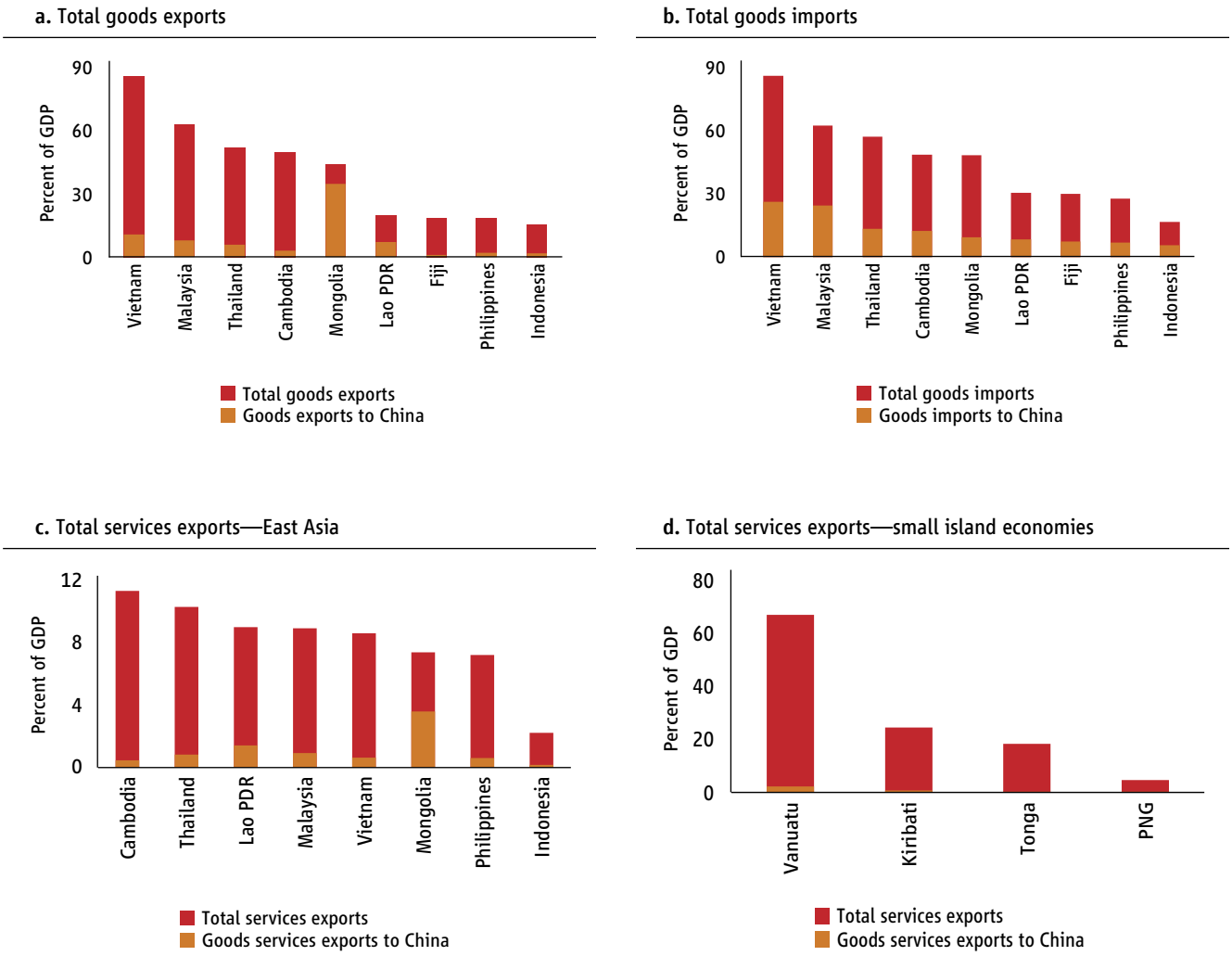

*Sources:* EM-DAT Database; CEIC database; WHO; CDC; ECDC; NHC; DXY; University of Minnesota; The American Thoracic Society; World Bank staff calculations.
*Note:* Estimates of fatality rate and the total number affected can vary, and COVID-19 rates are preliminary estimates.

COVID-19 has been spreading rapidly outside China. Given high transmissibility, zero herd immunity, and high population mobility, COVID-19 has been spreading at an increasing rate in other parts of the world. While the number of new cases is decreasing in China, it is increasing at an exponential rate in other parts of the World (Figure I.2.3). Similarly, the number of fatalities is increasing rapidly as the world struggles to prevent its spread. As of March 9, 2020, the number of active cases of infection outside China is less than the number of active cases in China. Some disease modelers estimate that eventually, up to 60–80 percent of the world population will be infected with SARS-CoV2. This is a very high attack rate.

## 2. Real channels of economic impact

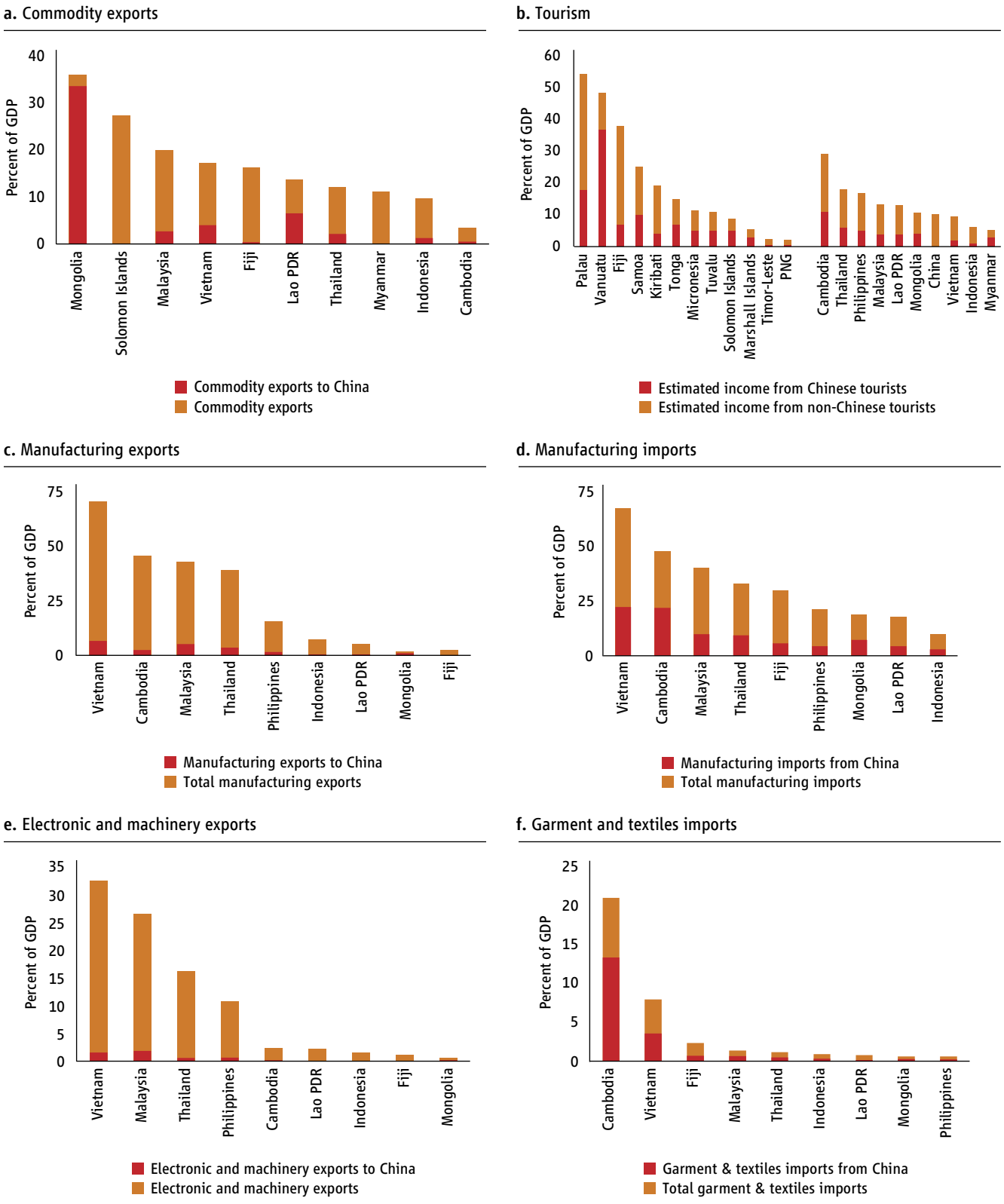
**The region is highly open to trade and investment.** A few small economies in the region, including Lao PDR, Mongolia, and Cambodia, have benefited from FDI inflows from China between 2013 and 2017, including investments made as part of the Belt and Road Initiative. China's economic linkages with the rest of the region are large and complex and have deepened over time (Figure I.2.4). Intraregional trade and FDI flows are substantial. Fear of infection can lead to a substantial decline in consumer demand, especially for travel and retail sales service. The adverse demand shock becomes more substantial in countries that are more dependent on tourism as a source of growth. The physiological fear of contagion is likely to negatively affect arrivals and especially hurt the economies with a high volume of travel exports to China (Figure I.2.4 and Figure I.2.5). Cambodia and Thailand are particularly vulnerable, with a significant dependence on tourism, and around 30 percent of tourists arriving from China for both countries. Other economies, with a share of tourism to GDP close to 5 percent and high exposure of tourists from China include Malaysia, Lao PDR, and Vietnam. Timor-Leste is particularly dependent on tourism and remains vulnerable as COVID-19 spreads. Among Pacific Island countries, Palau is most vulnerable, with high dependence on tourism and tourists from China, whereas other island economies, such as Samoa, Fiji, Vanuatu, and Tonga, would be negatively affected if tourists avoid the Pacific region.

**Figure I.2.4.** Exposure to the world and China




*Sources:* OECD-WTO Balanced Trade in Services Statistics; World Integrated Trade Solutions.
*Note:* Services exports include data for the 2010–12 period.

**Figure I.2.5.** Exposure to the world and China: Specific commodities



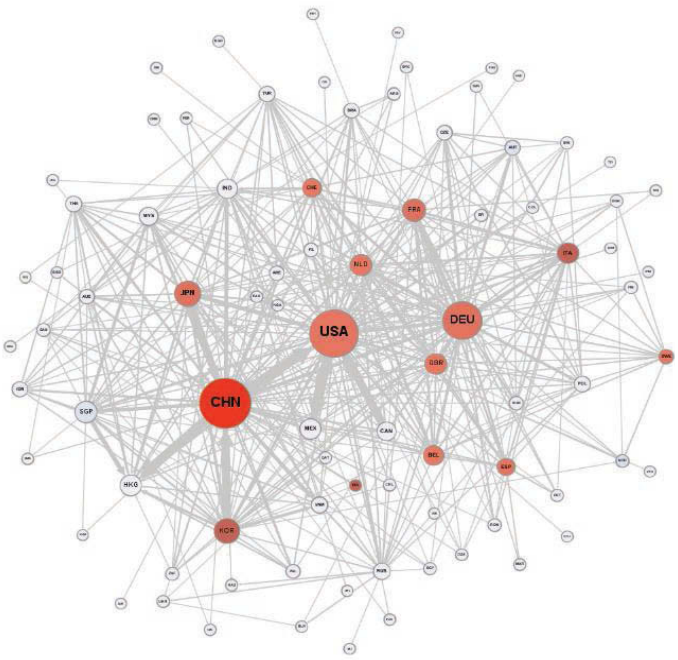

*Sources:* CEIC; World Development Indicators; World Travel and Tourism Council Data; World Integrated Trade Solutions.
*Note:* Data are for the latest year available. Estimated income from Chinese tourists is calculated as the share of tourism to GDP for each country multiplied by the share of Chinese tourists to total incoming tourists.

## 3. The GVC dimension

The world is interconnected as never before, with multitudes of products and people crisscrossing the planet at any point in time. This traffic is particularly intense between global centers of economic activity. It is therefore not surprising that the virus has almost simultaneously hit all the largest world economies. The most affected countries account for about 70 percent of global trade and include all dominant and essential nodes of the global economic system (Figure I.2.6).

These countries are essential to the global trading system in three distinct and reinforcing ways. First, they are the most connected to trade partners (i.e., they have high degree centrality). Second, they often constitute the shortest (or most efficient) route between most other pairs of countries that are not directly connected (i.e., they have high betweenness centrality). Third, they are connected to other well-connected countries (i.e., they also post high clustering coefficients).

**Figure I.2.6.** Position in the global network of intermediate trade of the 17 nations with the highest number of contagions



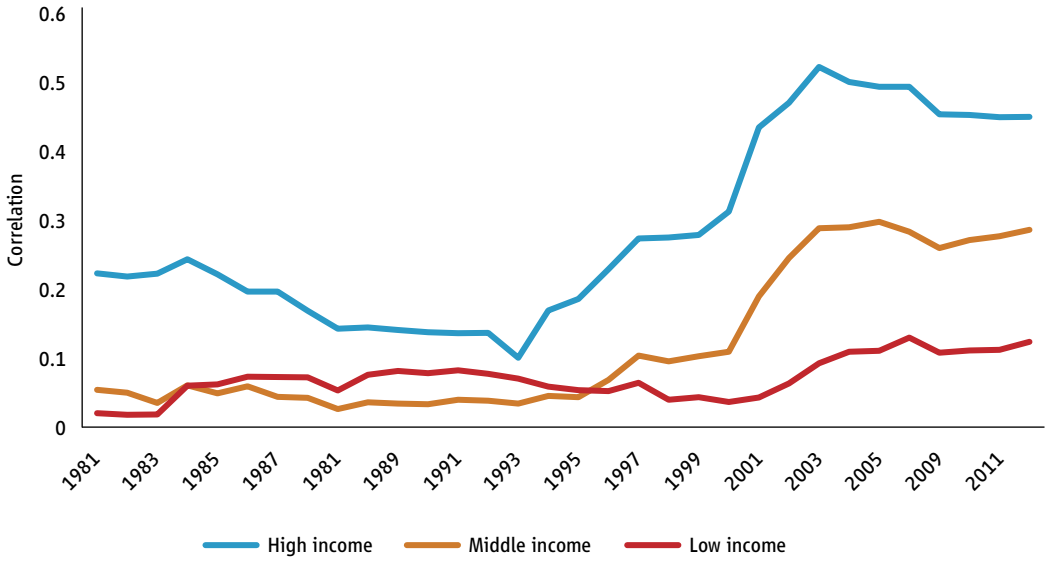

*Source:* Comtrade database and authors' calculations.
*Note:* The connecting lines illustrate the strongest trade flows in intermediates for each node (country). The most connected countries—the central nodes, or "roots" of the tree—are the main trade partners for several countries, distinguished from the peripheral countries, or the "leaves." The size of the node represents a country's centrality to the network, and countries strongly connected appear clustered together. Dots in red indicate countries with more than 100 cases of COVID-19 registered as of March 9, 2020. Trade data are from 2018.

We should be concerned because countries' economic fates are increasingly tied to one another. The World Bank's World Development Report 2020 shows that historically countries that trade with one another see their national business cycles converge (Figure I.2.7). This association is driven explicitly by input-output linkages. While GVCs are not the only factor explaining the surge in GDP correlation across countries, evidence towards their role is growing. From both a micro-data and firm perspective[5] and a more macro aggregate perspective,[6] many studies have shown that the recent increase in input-output linkages increased the co-movements in economic activity.

Not all countries are exposed in the same way, however. And this may matter for whether they should fear demand or supply shocks more. The World Development Report (WDR) 2020 finds that countries that specialize in manufacturing tend to integrate predominantly via backward linkages in the global economy, i.e., they import large amounts of inputs from abroad that they use to produce their exports. Backward linkages make a country more susceptible to supply shocks since vital sources of inputs may be shut down or countries may start imposing export restrictions. Many countries in EAP, such as Vietnam, have high backward linkages (Figure I.2.8).

5 di Giovanni, Levchenko, and Mejean (2017); Boehm, Flaaen, and Pandalai-Nayar (2019); Liao and Santacreu (2015).
6 de Soyres and Gaillard (2019a); de Soyres and Gaillard (2019b).

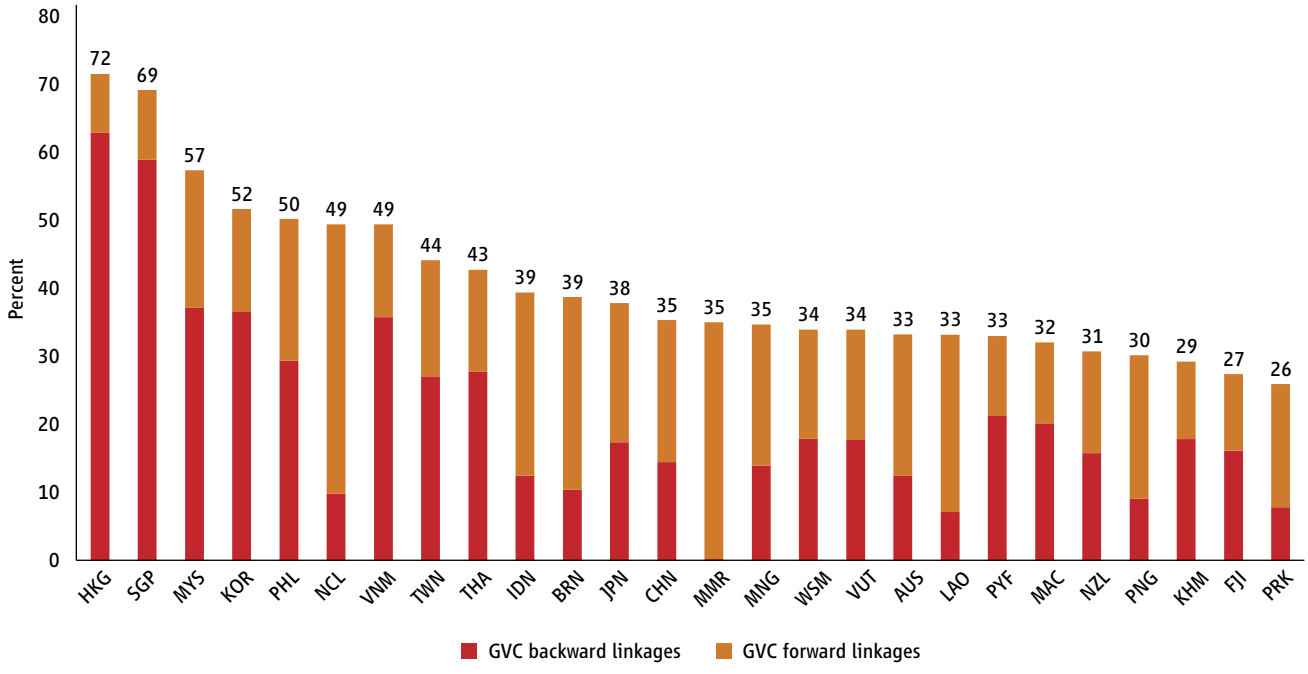
**Figure I.2.7.** Countries' economic activities are more synchronized than ever




*Source:* WDR 2020 team, based on the World Bank's World Development Indicators (database).
*Note:* Each date represents the midpoint of a 10-year moving window. Each line represents the average of all country-pair GDP correlations, taken over all country pairs containing at least one country in the income group considered (high/middle/low).

Meanwhile, countries that specialize in commodities and services tend to integrate into the GVCs predominantly via forwarding linkages, i.e. their exports enter the production and export of many other countries. Forward linkages make a country very susceptible to demand shocks. Several countries in EAP, especially Myanmar and Mongolia, have high participation in GVCs via forwarding linkages (Figure I.2.8). They are likely to be hit by a demand shock.

**Figure I.2.8.** Most Asian countries have high backward linkages, making them highly susceptible to supply shocks, but some of the large economies also have significant forward linkages which make them susceptible to demand shocks




*Source:* EORA.
*Note:* Data are in millions of current U.S. dollars. All the measures of GVC participation are computed using *icio*, a new Stata command for value-added trade and global value chain analysis (Belotti et al., 2020).

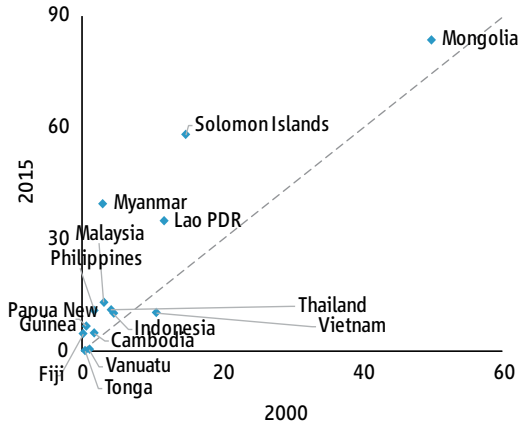
## China has increased in importance for EAP value chains

China's growing importance as an export destination, for both consumption and intermediate goods, means that disruptions in China also hurt the region. EAP countries have been trading intermediate goods with China. Indonesia and the Philippines are among the countries that trade the most manufacturing goods with China, at about 50 percent of total manufacturing exports, followed by Lao P.D.R. with about 25 percent of its manufacturing exports to China. Cambodia has been experiencing a shortage of demand for labor in its garment factories in the aftermath of the COVID-19 epidemic. This dependence has been increasing over time (Figure I.2.9).

**Figure I.2.9.** China's importance in the region's value chains

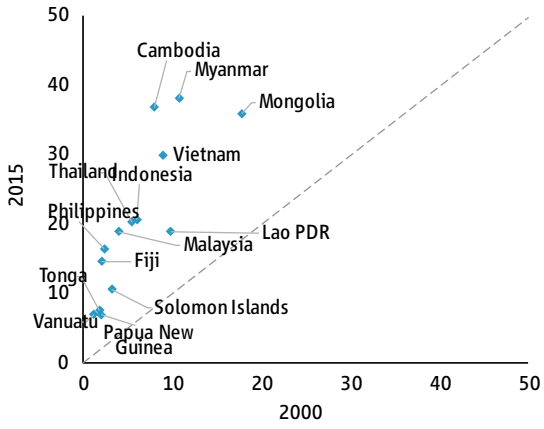
**a.** Goods exports to China over time

*(percent of total goods exports)*

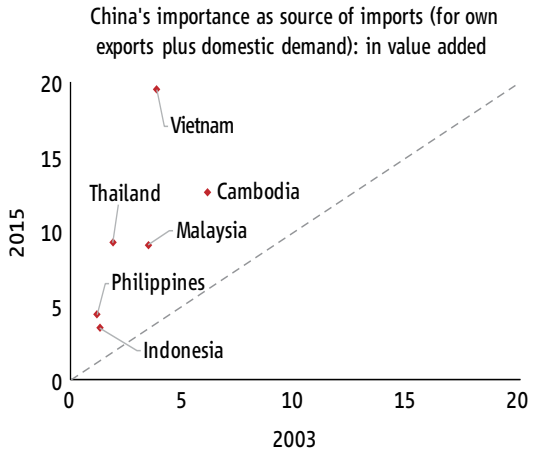



**b.** Goods imports from China over time

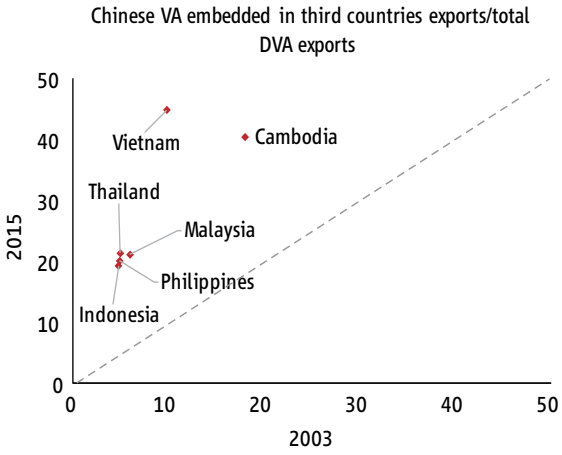
*(percent of total goods imports)*




**c.** Value-added (VA) in Chinese imports




**d.** Chinese value-added in value chains




*Source:* World Integrated Trade Solutions.

## What happens when a supply-side disruption occurs?

The recent years have seen a number of extreme events, mostly disruptions to supply chains due to environmental shocks. Studies that have investigated the implications for Global Value Chains offer important insights on the effects of supply shocks.

The most important lesson is that when production is organized around Global Value Chains, extreme events can have greater and more widespread unanticipated cascading effects, at times in surprising directions. Besides direct impacts, there are indirect impacts due to defensive purchases by consumers and inventory hoarding by resellers and wholesalers, as happened with the Thai floods in 2011 (Ye and Abe, 2012). What is certain is that in the aftermath of an unexpected shock, key inputs to many common mass production goods will be difficult to substitute.

A second important lesson is that propagation effects can be orders of magnitude larger and longer-lasting than the direct shock. This is the case because the substitutability of inputs is a critical determinant of supply chain shocks. In one study on the propagation of twenty idiosyncratic shocks that took place in the United States between 1980 and 2003, disruptions to suppliers' production strongly affected the sales growth of downstream buyers by a little over 25 percent, with respect to the average firm in the sample (Barrot and Sauvagnat, 2016). These estimates suggest that the propagation effect is very large since suppliers in the sample represented only 2.5 percent of those firms' overall costs of production (Figure I.2.10). This study had other surprising results. One would expect that the reduction in sales growth is temporary and that it resumes once a supplier capacity goes back to normal. But the evidence from the paper showed that sales growth for buyers of inputs from affected suppliers took up to four additional quarters to recover after the restoration of their suppliers' capacity. What is more, the shock can also have a horizontal dimension of propagation: suppliers that are not directly affected by the extreme event can face indirect consequences if they supply a common customer.

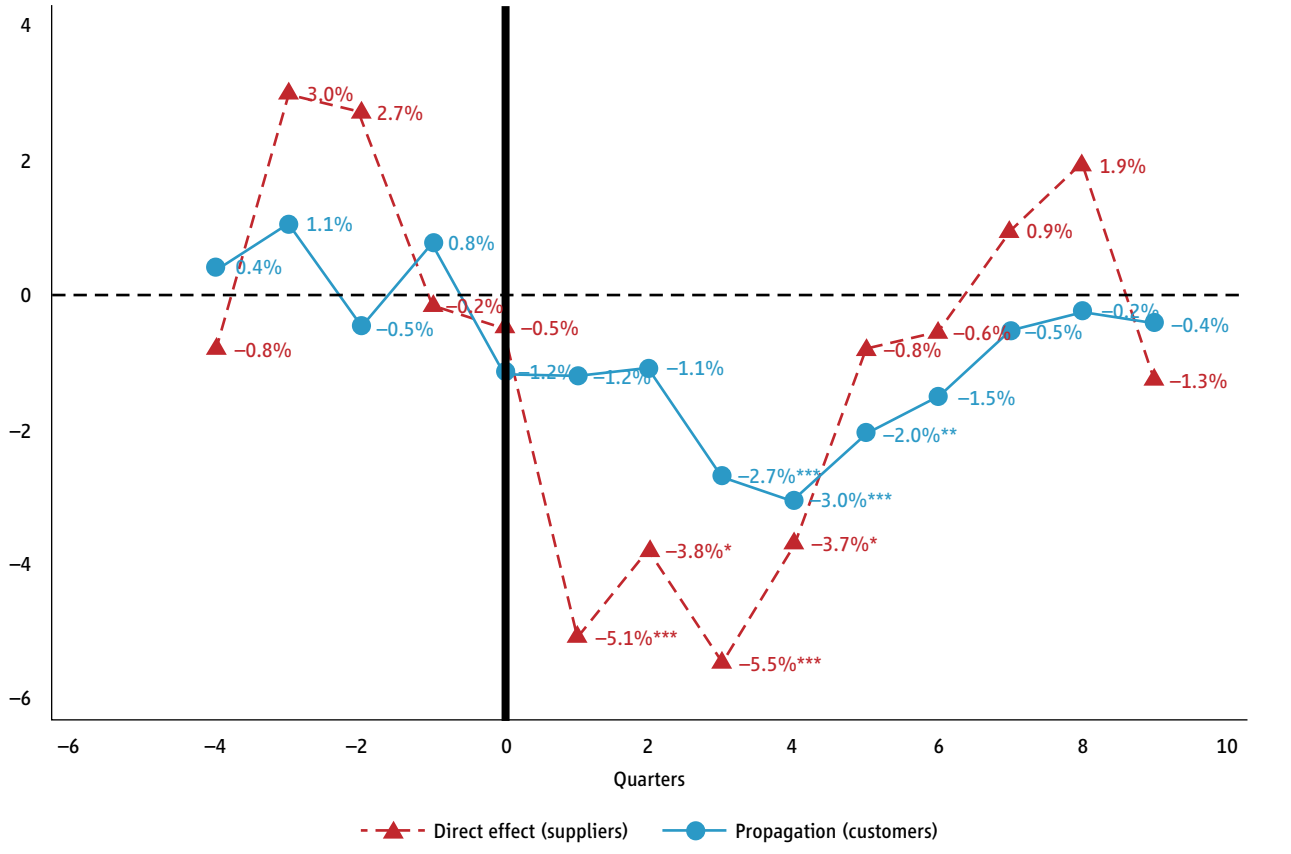
## What does this tell us about the COVID-19 likely effects in the era of GVCs?

Speculations based on past evidence risk can be inaccurate. On the one hand, disruptions due to the COVID-19 are temporary in nature. No industrial capacity was destroyed and mortality rates are not high. A large proportion of big industrial firms in China have already resumed operations,[7] although small and medium enterprises continue to face problems. And even in locations that were locked down, economic activity continued, although at a slower pace. Hence, evidence of sudden stops from the past may exaggerate the direct effects of the current virus.

On the other hand, this time the shock is affecting many locations suddenly and simultaneously. Because of the high level of interconnectedness of the global economy and its web-like structure, it is spreading the fastest to the global hubs of the world economy. This leads to a mutual amplification of reverberations. The health of any one economy depends on the health of other economies supplying inputs or buying outputs, directly or indirectly. Therefore, the gains from coordinated action for mitigating the effects of the virus are even greater than before.

7 One market report suggests that 53 percent of industrial firms (with revenues exceeding 20 million yuan a year) have restarted operations as of February 17, 2020. Additionally, according to the government agency that oversees state-owned enterprises (SOEs), more than 80 percent of the production-oriented subsidiaries of central government SOEs had resumed operations by February 12, 2020.

**Figure I.2.10.** Natural disasters propagate to business partners, with longer-lasting effects




*Source:* Barrot and Sauvagnat (2016).

## 4. Quantifying the real impact

The total expected costs of an influenza-like pandemic are substantial. The economic costs of infectious disease fall into two categories: (a) the direct and indirect effects of illness and (b) the costs induced by preventive (avoidance) behaviors adopted by citizens and by the transmission control policies implemented by governments. The cost of illness approach measures the resources used in the treatment of infection (resources that would be free for elsewhere if the infection was averted) and the resources lost to morbidity and premature mortality. The costs incurred by preventive action largely reflect the reduced number of transactions due to lowered demand for goods and services, interruptions in the supply chain, and increased capital risk premiums. While some postponed transactions will take place when uncertainty about disease transmission is resolved and risk reduced, there are often long-run economic effects from such avoidance behaviors.

Various attempts to model the total economic costs of an influenza-like pandemic range from 0.8 to 10.7 percent of global GDP, with excess mortality varying from 1.4 to 140 million, depending on the severity of the outbreak (McKibben and Sidorenko, 2006). Even though a major influenza pandemic is rare, Fan et al. (2016) estimate the expected annual

cost of an influenza pandemic in any given year to be roughly 0.7 percent of global GDP, on the same order of magnitude as the Intergovernmental Panel on Climate Change (IPCC) annualized estimates of the cost of climate change.

With emergent illnesses where epidemiological aspects are not fully known, the prevention costs due to avoidance behavior and transmission control policies are likely to exceed the costs of illness, at least in the initial periods of the outbreak. Indeed, for two cases in the recent past, the prevention-related costs derived from emergent diseases have far exceeded the direct and indirect health costs. For example, the 1994 Plague Outbreak in Surat, India, resulted in an export loss of US$420 million (1994 prices), tourist bookings fell by 2.2 million, and overall economic losses stood at US$2 billion. However, the actual health consequences were relatively minor with 52 deaths. A similar course of events occurred with the 2003 SARS epidemic. Avoidance costs were driven by large negative demand shocks to foreign and domestic tourism, delayed purchases, increased production costs due to supply-side disruptions, and an increased risk premium in international capital markets. Aggregating across different SARS-related studies, Brahmbhatt and Dutta (2008) estimate losses between 0.1–1.0 percent in China, Hong Kong, SAR, China, Singapore, and Taiwan, China during the year of the SARS outbreak. The health costs, with ultimately 7,000 likely cases of infection and 700 fatalities, were decidedly lower. In both these examples, avoidance behavior costs were an order of magnitude greater than the direct and indirect costs of illness.

In the rush to produce numerical estimates of the economic impact of the COVID-19, economists are recognizing one central issue and ignoring another. First, they recognize the economic consequences in the short run are primarily driven by the precautionary actions of governments and individuals rather than the health costs. But they ignore the fact that these actions are not exogenously given but influenced by the economic costs of the actions. Thus, any meaningful assessment must also address how far the observed preventive actions balance the cost of prevention against the benefits of containment. More importantly, any prescriptive action should concern itself not only with the mitigating macroeconomic interventions but also the design of preventive actions, especially as disease ebbs and flows and as we learn more about the nature of the disease. We postpone the examination of these issues until the next section.

This exercise presents an attempt to illustrate the transmission channels and potential consequences of various scenarios of the outbreak of COVID19. The results presented here should be regarded as scenario analyses, not as projections. The implemented shocks are illustrative and based on previous episodes of global epidemics or preliminary data. The assumptions on the spread of the disease are not grounded in epidemiological projections, they do not take into consideration the quality of the health systems in the affected countries, transport connections to affected countries, health policy responses to the outbreak etc. The model incorporates the decline in demand due to reduced production and incomes but does not fully capture the independent contraction in demand, except for the reductions in tourism and other services that require close human contact. It also does not include the decline in investor confidence and any financial repercussions.[8] We capture some aspects of global value chains trade, but a fuller analysis will require a richer data set. This analysis will evolve as we fine tune assumptions in line with early impacts and evaluate potential scenarios of spread of the virus.

## CGE methodology, transmission channels, and scenarios

### *a. Global computable general equilibrium model Envisage*

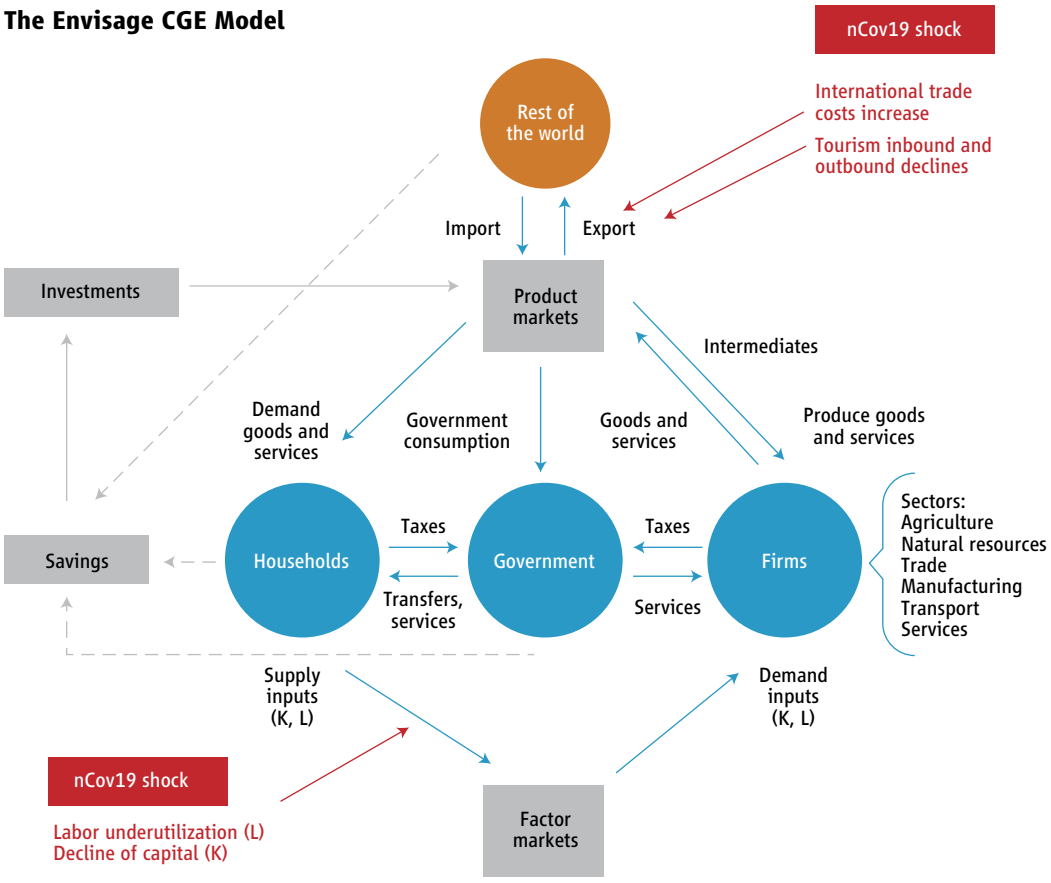
The quantitative findings in this are based on simulations using a version of the Envisage model calibrated to GTAP Version 10A (Aguiar et al., 2019), see Annex 1 for aggregation mappings). The latter has a 2014 reference year and

8 We estimated the effects of raising domestic trade costs as well as demand switching away from activities requiring direct contact with other people, but they are not included here for the economy of presentation.

the model is being used in its comparative static specification. Envisage is a relatively standard computable general equilibrium (CGE) model.[9] The model has been configured for a short-term closure with the following assumptions (Figure I.2.11):

- Production elasticities have been reduced to near zero so there is little substitution possibility across inputs in production.
- In order to capture the typically durable relationship within global value chains, trade elasticities for goods have been reduced from their standard values to represent the short run inability to replace imported components and final goods with products from other countries. The elasticity between domestic and imported goods has been set to 0.4. The elasticity of substitution across import sources has been set to 0.8.
- Labor supply is exogenous while wages adjust to equate demand and supply of labor. The return to capital is fixed, while supply of capital is endogenous.

**Figure I.2.11.** Implications of the COVID-19 as implemented in the Envisage model




*Source:* World Bank staff illustration.

9 A full description of the Envisage model is available at https://mygeohub.org/groups/gtap/File:/uploads/ENVISAGE10.01_Documentation.pdf.

### *b. Transmission channels*

The shocks have been divided into four sets but all are assumed to occur simultaneously, i.e. the final shock encompasses all shocks.[10] The duration of the shocks is currently unknown, though, based on prior events, likely to last from 4-12 weeks and most likely unsynchronized across countries.

**1.** The first shock is a drop in employment by 3 percent. With lower availability of labor, we would expect wages, ceteris paribus, to rise, while return to capital is unchanged under our assumptions. Lower labor means also means lower demand for capital as firms need a combination of labor and capital to produce goods and services.

Underutilization of capacity takes place due to factory closures (workers stay home, leaving capital and natural resources idle) as well as social distancing forcing workers to stay at home. Due to higher rates of contagion, immediate unemployment consequences of COVID-related business closures and negative demand shock, we conservatively assume that the underutilization of the labor force to be 3 percent on average over the whole year across all sectors of the economy.

**2.** The second shock (cumulative with the supply shock), raises the international trade costs of imports and exports by 25 percent. The shock is applied across all goods and services. Trade costs arise when goods cross borders.

The assumed increase in transport and transactions costs in foreign trade is driven by additional inspections, reduced hours of operation, road closures, border closures, increases in transport costs etc. Evans et. all (2015) estimated that the outbreak of Ebola could lead to an increase in trade costs of 10 percent. Since the COVID-19 is affecting more countries and the containment measures seem more severe due to the efforts to contain the virus, we amplified the shock increasing international trade costs of imports and exports to 25 percent.

**3.** The third shock entails a sharp drop in international tourism. This is captured via a 50 percent consumption tax on international tourism-related services, such as transport, accommodation etc. This generates a typically small revenue for the relevant countries that is rebated back to households with a lump sum.[11] The export tax is applied to both outbound and inbound (tourist) services that include: accommodation, food and service activities; water, air and other transport; recreational and other services.

The effects of COVID-19 in the tourism, hospitality and recreation sectors have been unprecedented. In the accommodation and lodging sectors, quarterly revenues are down 75 percent. Travel agents see a slowdown in bookings of 50 percent in March of 2020. Airlines worldwide are expected to lose $113 billion in revenues for 2020. In the peak of the outbreak 70 percent of scheduled flights in China have been canceled. As of mid-March 2020, international travel has ground to a halt with the World Travel and Tourism Council (WTTC) estimating that global travel would decline at least 25 percent in 2020. To capture the effects of drop-in tourism, hospitality and recreation services, we implemented a 50 percent tax on the export of trade related services, resulting in a drop of exports of tourism services at a global level of 20–32 percent.

10 The shocks are scaled down as compared with the shocks derived for Liberia under Ebola epidemic as in (Evans et. al. (2014)the Ebola epidemic currently afflicting West Africa is already having a measurable economic impact. This paper uses two computable general equilibrium models to estimate the impact of West Africa as a whole, as well as specific impacts for Liberia. Two alternative scenarios are used to estimate the medium-term (2015.

11 There are a number of ways to affect demand choices by increasing the cost of purchasing the relevant good. The solution in this case has been to impose export taxes that directly affect the price of the targeted services. The revenues generated by this tax are rebated back to households.

4. The fourth shock represents a demand switch by households who purchase less services requiring close human interaction such as mass transport, domestic tourism, restaurants, recreational activities, while redirecting demand towards consumption of goods and other services. Demand for the targeted services is assumed to drop by 15 percent. This results in a reallocation of household demand across sectors, while total expenditures are still driven by previous shocks and relative prices of goods in the consumption basket.

   It is difficult to estimate the impact of social distancing and overall decline of economic activity on those selected sectors, but anecdotal evidence suggests that it is likely to be significant. With social distancing measures and closures of non-essential businesses, the bookings through Opentable network declined by 100 percent in the second half of March (data form US, UK and Germany). Depending on the length of the business closures, the annual impact could vary drastically. The decline of 15 percent at an annual level seems like a mid of the road estimate.

### *c. Scenarios*

We start by considering that COVID-19 effect on world' supply capacity, trade costs, international tourism, and a demand switching as discussed above. Then we study the consequence of similar shock under "global pandemic amplified" scenarios, but will double the magnitude.

**"Global pandemic" scenario:**

In the global pandemic scenario we aim to capture relatively rapid recovery and limited contagion, where the shocks are implemented to the full degree in China, but other countries experience shocks amounting to only halve of the shocks described below:

- Underutilization of labor by 3 percent across all sectors in the global economy results in declining capital usage
- Trade costs of global imports and exports increase by 25 percent applied across all goods and services
- Sharp drop in international tourism (captured via a 50 percent tax on inbound and outbound tourist-related services such as transport, accommodation, etc.)
- Reallocation of demand away from sectors requiring human interaction

**"Amplified global pandemic" scenario:**

In the amplified global pandemic scenario we capture a bigger reduction in annual output due to a deeper and more prolonged pandemic. The same shocks are assumed in all countries, effectively doubling the shocks for all countries and keeping China shock unchanged.

## Macroeconomic impact

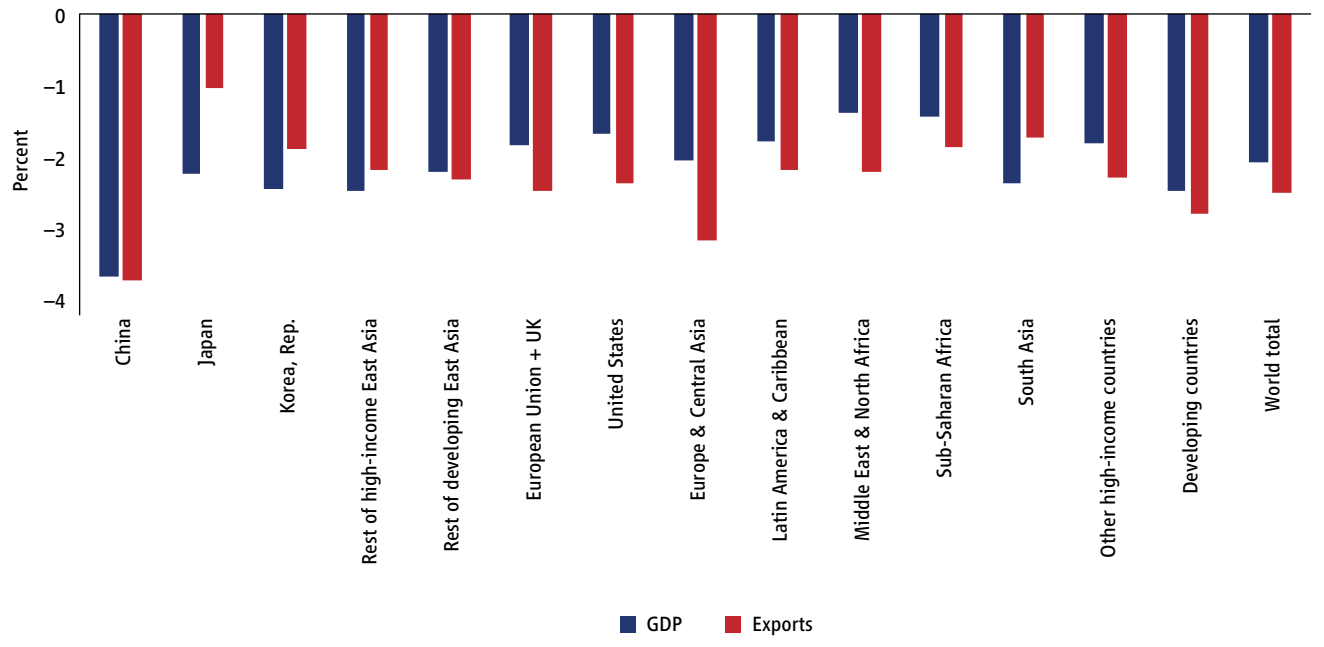
The global pandemic scenario assumes that the pandemic hits China the hardest but also hurts other countries, so we use it as an example to explain the impacts on other countries. Global pandemic is expected to reduce Chinese GDP

by 3.7 percent (all percentage changes are reported in relation to the benchmark). The impact on China becomes progressively more negative as impacts of the shocks accumulate. First, the supply shock reduces GDP through reduction in employment (and capital) leading to lower production and exports, as well as lower imports due to lower income of households and shrinking production.

Second, with higher trade costs, the price of a unit of imports and exports increases and competitiveness of Chinese production declines due to higher costs of exporting and higher costs of inputs; final goods' prices also increase. The raising trade costs represent a productivity loss since additional inputs are needed to bring goods to their consumers, instead of being available for consumption and investment. Further, inbound and outbound tourism decreases significantly resulting in further decline of Chinese GDP and exports. Finally, with the composition of expenditures changing with lower demand for sectors hit by social distancing (transport, hospitality) and relatively higher demand for goods, the composition of output tilts towards manufacturing. Loss of competitiveness and lower income result in a decline of total exports by 3.5 percent, while imports decline by 3.2 percent. China exports of tourist related activities decline by 29 percent, while imports of tourist related activities decline by 37 percent. Real consumption by households declines by 7.2 percent.

Global GDP is expected to decline by 2.1 percent, while developing countries' GDP is expected to decline by 2.5 percent and high-income countries by 1.9 percent Figure I.2.12 The biggest GDP losses under the global pandemic scenario are expected in EAP countries due to their relatively deep integration through trade and direct impact on tourism, e.g., Cambodia (3.2%), Singapore (2.1%), Hong Kong, SAR, China (2.3%), Thailand (3%), Vietnam (2.7%), and Malaysia (2.1%).

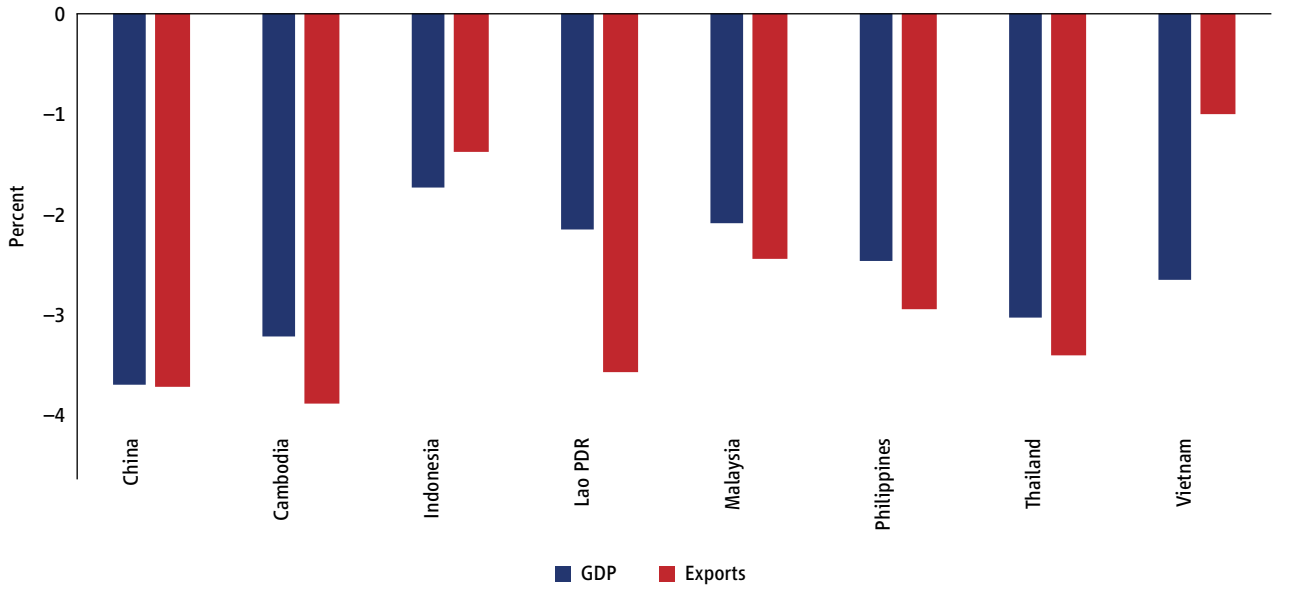
**Figure I.2.12.** GDP and export implications of the global pandemic scenario (% deviation from the benchmark)




*Source:* Envisage simulations.

Exports at the global level are expected to decrease by 2.5 percent. China, considered to be the "world factory", suffers a decline in production across all sectors and goods, due to an underutilization of labor and capital, and together with an increase of its trade costs, increases the import costs for the rest of the world, which translates into a decline in global exports. China sees a contraction in exports of 3.7 percent. Vietnam sees a decline in its total exports by only 1 percent, because it benefits to an extent from the gap left by the decrease in Chinese exports (Figure I.2.13.). Some countries in the East Asia and Pacific region are the most affected in terms of exports declines, with Hong Kong, SAR, China suffering the biggest losses (5.2%), followed by Laos (3.6%), Cambodia (3.9%) and Singapore (4.4%). Selected countries see an increased demand for their tourism exports due to diversion of tourism from the EAP region with some flows increasing by 2–3 percent between countries outside of the EAP region, but in all countries total tourism flows decline across the board with exports from the EAP region declining by about 30 percent. These small bilateral tourism exports gains disappear, as the shock spreads from China and East Asia to other parts of the world.

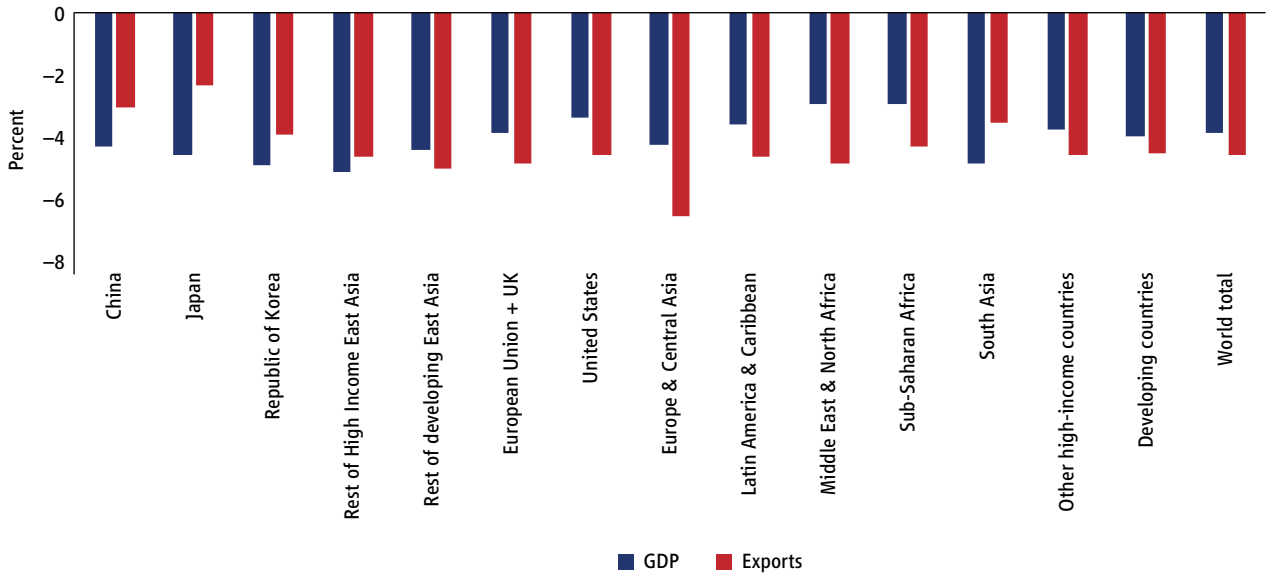
**Figure I.2.13.** GDP and export implications of global pandemic scenario for EAP countries (% deviation from the benchmark)




*Source:* Envisage simulations.

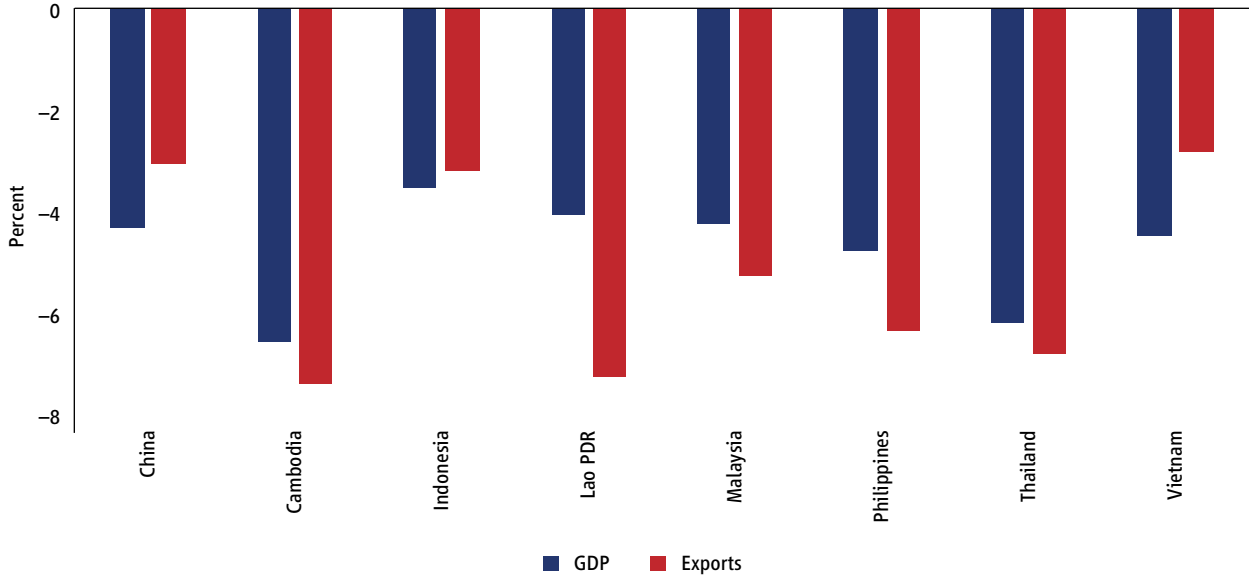
Under amplified global pandemic scenarios, global GDP loss reaches 3.9 percent, while Chinese GPD declines by 4.3 percent (Figure I.2.14 and Figure I.2.15). The biggest GDP losses are reported in the regions most integrated through trade and/or where tourism trade plays a big role in the economy. Cambodia and Thailand are expected to record GDP losses of over 6 percent, while Singapore, Hong Kong, SAR, China, Taiwan, China, Republic of Korea, Malaysia and the Philippines see losses of over 4.5 percent, which are also of higher magnitude than in China. High income countries could see significant losses of GDP with the estimated loss in the EU over 3.4 percent, Japan –4.6 percent, US –3.4 percent and Canada –3.2 percent. Countries in SSA, or MENA are the least affected, and under the global and amplified global pandemic scenarios, the estimated loss of GDP is estimated to be around 3 percent. (Table I.2.1)

**Figure I.2.14.** GDP and export implications of amplified global pandemic scenario (% deviation from the benchmark)




*Source:* Envisage simulations.

**Figure I.2.15.** GDP and export implications of amplified global pandemic scenario for EAP countries (% deviation from the benchmark)




*Source:* Envisage simulations.

**Table I.2.1.** GDP implications of various scenarios—cumulative impacts (% deviations from the benchmark)

| | *Global pandemic* | *Amplified global pandemic* |
|---|---|---|
| China | –3.69 | –4.31 |
| Developing East Asia and Pacific /x CHN | –2.38 | –4.76 |
| Cambodia | –3.21 | –6.57 |
| Laos | –2.15 | –4.05 |
| Malaysia | –2.09 | –4.23 |
| Thailand | –3.03 | –6.21 |
| Vietnam | –2.65 | –4.49 |
| Philippines | –2.46 | –4.80 |
| Indonesia | –1.74 | –3.51 |
| Hong Kong, SAR, China | –2.31 | –4.82 |
| Republic of Korea | –2.44 | –4.89 |
| Singapore | –2.08 | –4.45 |
| Taiwan, China | –2.81 | –5.67 |
| Canada | –1.57 | –3.18 |
| Europe | –1.85 | –3.85 |
| Japan | –2.23 | –4.57 |
| United States | –1.67 | –3.40 |
| Middle East & North Africa | –1.38 | –2.95 |
| Sub-Saharan Africa | –1.44 | –2.95 |
| Brazil | –1.71 | –3.42 |
| Rest of Latin America & Caribbean | –1.85 | –3.73 |
| Russia | –1.94 | –3.99 |
| Rest of Europe & Central Asia | –2.21 | –4.60 |
| India | –2.41 | –4.93 |
| Rest of South Asia | –2.31 | –4.68 |
| Oceania | –1.70 | –3.37 |
| Developing countries | –2.49 | –4.00 |
| High-income countries | –1.84 | –3.77 |
| World total | –2.09 | –3.86 |

*Source:* Envisage simulations

Under the amplified global pandemic scenario global exports decline 4.6 percent. Several countries that experience larger than global average losses of exports are in the EAP region such as Hong Kong, SAR, China (9.8%), Cambodia (7.4%), Singapore (8.5%), Laos (7.3%), Thailand (6.8%), but also Russia and the Philippines see losses up of 6.4 percent, while Canada, Europe, USA see declines of around 4.5 percent. With the amplified global spread of the virus, all countries see their total exports decline, but the least integrated regions through trade and tourism such as MENA, SSA, LAC are least affected. Some EAP countries tend to be relatively less affected in this scenario than others, but all countries' exports decline the most under amplified global pandemic scenario e.g. Vietnam, Japan, and Republic of Korea (Table I.2.2).

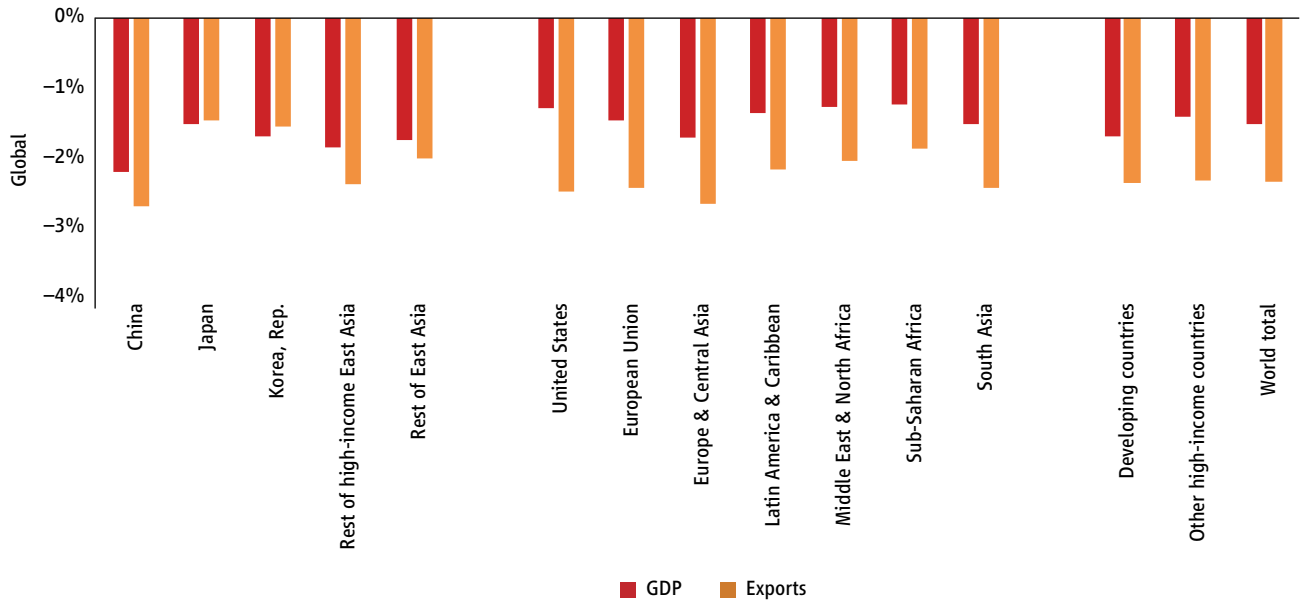
**Table I.2.2.** Real exports implications of various scenarios—cumulative impacts (% deviations from the benchmark)

| | *Global pandemic* | *Amplified global pandemic* |
|---|---|---|
| China | –3.73 | –3.08 |
| Developing East Asia and Pacific /x CHN | –1.75 | –4.07 |
| Cambodia | –3.89 | –7.40 |
| Laos | –3.57 | –7.29 |
| Malaysia | –2.45 | –5.28 |
| Thailand | –3.40 | –6.81 |
| Vietnam | –1.00 | –2.82 |
| Philippines | –2.94 | –6.35 |
| Indonesia | –1.38 | –3.21 |
| Hong Kong, SAR, China | –5.18 | –9.80 |
| Republic of Korea | –1.90 | –3.95 |
| Singapore | –4.39 | –8.48 |
| Taiwan, China | 1.14 | 1.07 |
| Canada | –2.30 | –4.73 |
| Europe | –2.48 | –4.86 |
| Japan | –1.04 | –2.33 |
| United States | –2.37 | –4.60 |
| Middle East & North Africa | –2.22 | –4.87 |
| Sub-Saharan Africa | –1.87 | –4.29 |
| Brazil | –2.03 | –4.27 |
| Rest of Latin America & Caribbean | –2.21 | –4.76 |
| Russia | –3.49 | –7.44 |
| Rest of Europe & Central Asia | –2.89 | –5.72 |
| India | –1.68 | –3.45 |
| Rest of South Asia | –1.99 | –4.12 |
| Oceania | –2.32 | –4.98 |
| Developing countries | –2.80 | –4.54 |
| High-income countries | –2.30 | –4.59 |
| World total | –2.50 | –4.57 |

*Source:* Envisage simulations

Each transmission channel results in somewhat different sectoral reallocation of output due to changes in demand and supply. The first shock affects all sectors in a similar fashion, by limiting the availability of labor and capital, though labor-intensive sectors are likely to be hit harder. The trade costs impact tradeable sectors, as well as goods and services that rely heavily on imported inputs. The increase in the tourism tax results in a decline of tourism, but all other industries that supply inputs needed to generate tourism services will be impacted by a negative demand shock as well (Figure I.2.16). Finally, social distancing results in lower demand for selected sectors, but some substitution towards goods and remaining services sectors. Overall, the sectoral impact of the amplified global pandemic scenario (Table I.2.3) leads to a steeper decline of services as compared to agriculture and manufacturing. The biggest negative shock is recorded in the output of domestic services affected by pandemic, as well as traded tourist services. At the global level, output of services affected by pandemic could decline by 9.3 percent, tourism services could decline by 8.8 percent, with a decline of agricultural and manufacturing output of about 3 percent.

**Figure I.2.16.** Output implications of amplified global pandemic scenario for Thailand (difference and % deviation from the benchmark)




*Source:* Envisage simulations.

Under the amplified global pandemic scenario, Thailand for example is expected to record an aggregate output loss of 5.3 percent, the largest drop among the developing countries covered by our analysis. All sectors would see a decline of output, but the biggest percentage drops are recorded in transport services recreational activities, and accommodation (between 10% and 20%). However, the sectors that suffer the most in absolute terms include trade and selected agricultural (crops) and manufacturing goods (chemicals, electronics, refined oil). These are the real impacts on the volume of output. The declining commodity prices and changing relative prices would result in a somewhat different ranking of the most impacted sectors. These are only illustrative impacts, that rely on the type and the size of the assumed shocks. They however serve a useful representation of distributional impacts across sectors with likely diverse impacts on employment and wages of skilled and unskilled workers, as well as female and male workers. Further, analysis will be conducted to understand the potential distributional impacts of the pandemic.

## Other studies on the impacts on COVID-19

Our estimates are broadly in line with previous studies. Annex 2 reviews several analyses by OECD, Brookings and S&P quantifying the potential impacts of the COVID-19 outbreak. The studies use a variety of tools with OECD relying on a macroeconomic model and Brookings applying a hybrid CGE/DSGE model with rational expectations. Most estimates on the impacts on China range from 0.5 to 2 percent of GDP. World GDP is expected to decline between 0.1 to 1.5 percent, while global trade is expected to decline between 0.2 to 3.75 percent. The biggest impacts are reported in the extreme scenarios by McKibbin and Fernando (2020) with Chinese GDP declining by up to 6 percent, with GDP declines in the US and Japan reaching respectively 8 and 10 percent.

**Table I.2.3.** Output implications of amplified global pandemic—cumulative impacts (% deviations from the benchmark)[12]

| | *Agriculture* | *Manufacturing* | *Services* | *Other* | *Domestic services affected by pandemic* | *Traded tourist services* | *Total* |
|---|---|---|---|---|---|---|---|
| China | –3.12 | –3.61 | –3.67 | –1.08 | –4.85 | –4.64 | –3.54 |
| Developing EAP excluding China | –2.70 | –3.21 | –5.40 | –1.04 | –9.45 | –11.28 | –4.12 |
| Cambodia | –2.87 | –2.69 | –9.66 | –3.98 | –14.96 | –19.00 | –5.11 |
| Lao PDR | –2.41 | –2.60 | –5.85 | –3.89 | –12.18 | –15.02 | –3.57 |
| Malaysia | –4.19 | –4.11 | –4.34 | –0.79 | –7.30 | –9.73 | –4.03 |
| Thailand | –3.06 | –4.43 | –6.84 | –2.91 | –11.53 | –14.64 | –5.29 |
| Vietnam | –3.06 | –3.34 | –3.93 | –0.72 | –8.52 | –8.99 | –3.37 |
| Philippines | –2.51 | –3.93 | –5.16 | –2.65 | –11.10 | –13.30 | –4.44 |
| Indonesia | –2.70 | –3.03 | –3.67 | –0.61 | –7.65 | –8.84 | –3.15 |
| Hong Kong, SAR, China | –1.29 | –1.33 | –6.06 | –3.24 | –8.46 | –9.23 | –5.35 |
| Republic of Korea | –3.91 | –3.68 | –4.53 | –4.25 | –6.87 | –6.15 | –4.10 |
| Singapore | –2.61 | –4.32 | –4.01 | –3.47 | –7.18 | –6.28 | –4.11 |
| Taiwan, China | –1.04 | –1.80 | –6.84 | –7.75 | –7.82 | –7.17 | –4.15 |
| Canada | –4.30 | –3.25 | –3.02 | –1.10 | –8.95 | –9.16 | –2.96 |
| Europe | –3.00 | –2.89 | –4.02 | –1.02 | –9.04 | –9.06 | –3.65 |
| Japan | –4.71 | –2.77 | –4.62 | –2.85 | –8.75 | –8.35 | –3.98 |
| United States | –3.60 | –2.45 | –3.80 | –0.21 | –9.99 | –11.27 | –3.38 |
| Middle East & North Africa | –2.76 | –2.67 | –3.02 | –1.65 | –9.11 | –10.03 | –2.65 |
| Sub-Saharan Africa | –2.51 | –2.95 | –3.02 | –1.72 | –6.35 | –8.13 | –2.79 |
| Brazil | –3.40 | –2.86 | –3.14 | –1.20 | –8.55 | –9.28 | –2.99 |
| Rest of Latin America & Caribbean | –2.64 | –2.94 | –4.05 | –1.21 | –10.51 | –11.87 | –3.49 |
| Russia | –3.00 | –3.73 | –3.86 | –2.19 | –8.72 | –9.62 | –3.58 |
| Rest of Europe & Central Asia | –2.20 | –3.53 | –5.07 | –0.59 | –10.20 | –11.36 | –4.20 |
| India | –3.36 | –3.98 | –4.35 | –0.84 | –8.23 | –8.76 | –4.03 |
| Rest of South Asia | –2.62 | –3.25 | –5.23 | –2.64 | –8.04 | –9.28 | –4.14 |
| Oceania | –3.93 | –3.10 | –3.20 | –1.89 | –8.21 | –8.07 | –3.11 |
| Developing countries | –2.90 | –3.47 | –3.87 | –1.42 | –7.98 | –8.63 | –3.51 |
| High-income countries | –3.49 | –2.78 | –4.00 | –0.95 | –9.20 | –9.60 | –3.59 |
| World total | –3.04 | –3.13 | –3.95 | –1.29 | –8.77 | –9.26 | –3.56 |

*Source:* Envisage simulations.

12 Agriculture—Crops, Livestock; Manufacturing - Meat products (inc. fisheries), Other food, Textiles, Wearing apparel, Leather products, Wood and paper products, Refined oil, Chemical products (incl. rubber and plastics), Non-metallic minerals, Metals, Computer, electronic and optical products, Machinery and equipment nec, Motor vehicles and parts, Transport equipment nec, Other manufacturing; Services—Electricity, Construction, Trade incl. warehousing, Accommodation, food and service activities, Water transport, Air transport, Other transport, Communications, Recreational and other services, Other services; Other—Natural resource products, Fossil fuel extraction; Domestic services affected by pandemic—Trade, Accommodation, food and service activities, Water transport, Air transport, Other transport, Recreational and other services; Traded tourist services—Accommodation, food and service activities, Water transport, Air transport, Other transport, Recreational and other services

### Conclusion

COVID-19 is spreading fast across the globe. At the time of writing,[13] the WHO reported cases of COVID-19 in 199 countries with tragic deaths of more than 20 thousand people. The primary focus is necessarily on containment, treating the ill and helping communities cope with the epidemic. Our illustrative scenarios indicate that the potential loss of income in affected countries could be significant, with global GDP declining by up to 3.9 percent, and developing countries hit the hardest (4% on average, but some over 6.5%). Governments will need to offer significant support to affected businesses and households.

Our analysis is likely to underestimate the potential economic costs of the epidemic. We do not fully capture several important channels, such as the uncertainty-driven contraction in demand and FDI, and other real effects of a financial shock. We capture some aspects of global value chains trade through input-output linkages and assumptions that mimic the durability of relationships between firms in value chains but plan to extend the analysis using a richer data set. We have examined, but not yet finalized, the effects of raising domestic trade costs as well as of demand switching away from activities requiring direct contact with other people. Our analysis will evolve as we bring assumptions and scenarios in line with more recent health and economic indicators.

Early indications of the economic costs and the magnitude of estimated impacts demonstrate the need for a coordinated international response to the crisis. A global crisis requires a global response and there is a need for global collaboration not just on health, but also on trade, finance and macroeconomic policies. Fortunately, global institutions, are beginning to catalyze and coordinate global efforts, as well as to provide technical and financial support countries coping with health and economic consequences of the outbreak.

## 5. Assessing the welfare and poverty impact

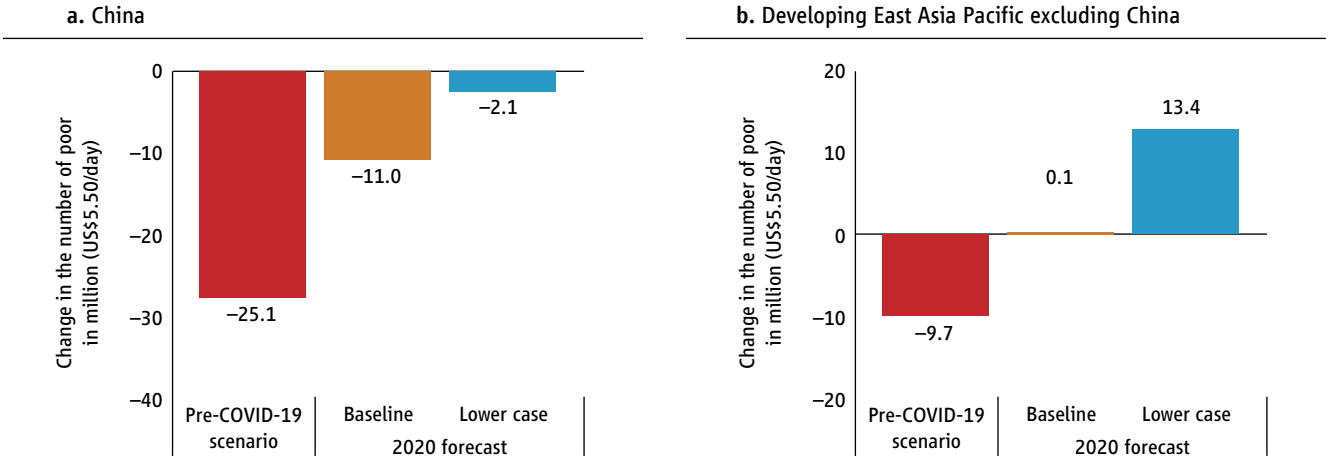
### Poverty impacts in the region

**Poverty reduction in East Asian and Pacific countries is expected to slow significantly or possibly even reverse as a result of the pandemic.** Prior to the onset of COVID-19, 35 million people were projected to escape poverty in the region in 2020, with almost 25 million of those coming from China. Since then, GDP growth forecasts have been revised downward relative to the forecasts made last year. These downgrades are largely due to lower-than-expected economic activity as the outbreak continues. Under the baseline growth scenario for the region, and using the US $5.50/day per person poverty line (typically found in upper-middle income countries), it is estimated that 24 million *fewer* people will escape poverty in the region in 2020 than would have in the absence of the outbreak (Figure I.2.17). If the economic situation were to deteriorate further, under the lower-case growth scenario, it is estimated that poverty would *increase* by about 11 million people across developing East Asia and the Pacific.

13 March 25, 2020.

**Figure I.2.17.** COVID-19 will severely slow poverty reduction in the region, and may even reverse the trend

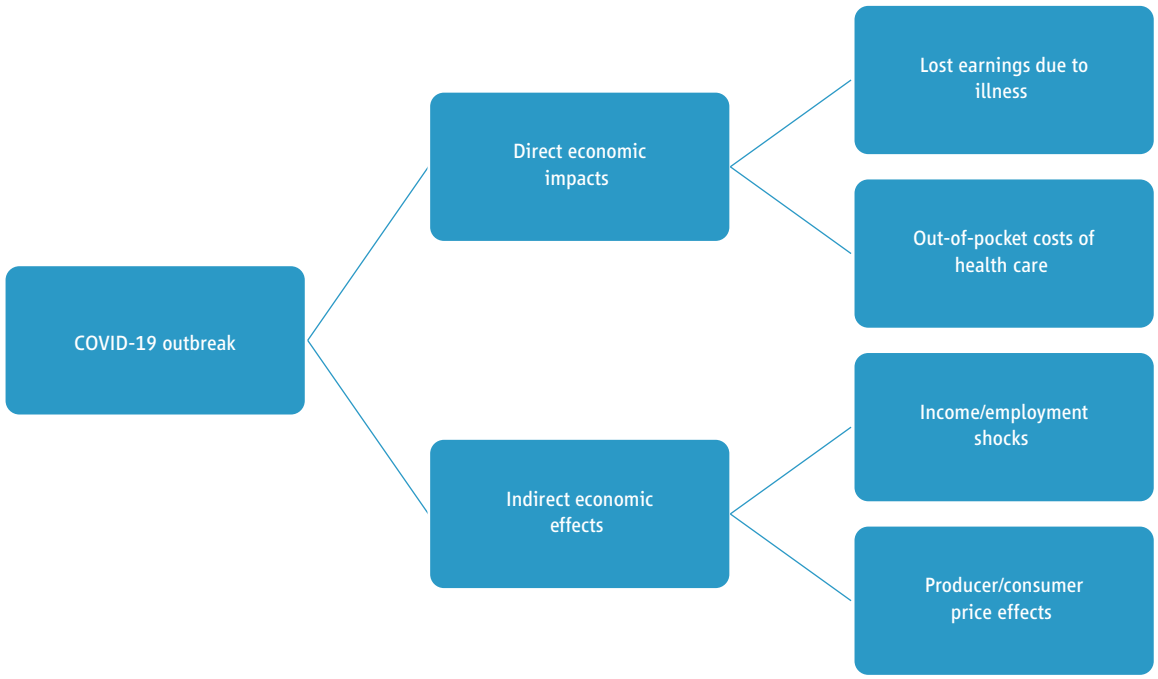
*Change in the number of poor in 2020 under alternative scenarios (in million)*




*Source:* World Bank East Asia and Pacific Team for Statistical Development.
*Note:* Poverty rate measured using a poverty line threshold of US$5.50 per person per day (2011 PPP).

**There are several channels through which COVID-19 is affecting people's economic welfare and, as a result, poverty in East Asia and the Pacific.** First, there are the direct effects of the health shock with respect to contracting the illness and associated lost earnings, as well as out-of- pocket costs associated with obtaining medical care, especially for those who have no insurance or other forms of financial protection in health (Figure I.2.18). Second, there are indirect

**Figure I.2.18.** COVID-19 will impact people's economic welfare and poverty through several channels




*Source:* World Bank staff elaboration.

effects of the shock related to reduction in incomes, as public and private responses to the outbreak disrupt economic activity and affect people's employment and earnings. Such effects may be particularly acute in several services sectors, including retail, transportation, and tourism. Indirect effects of the shock can also be felt through changes in producer and consumer prices in the economy. For example, as global and regional growth slows, prices of agricultural and other commodities may go down, reducing people's real incomes. Conversely, to the extent that supply chains are disrupted by the crisis, prices for manufactured goods may go up, reducing people's real incomes.

**Government actions can both reduce and increase the impact on people's economic welfare and affect poverty.** These actions include containment policies intended to contain spread of the virus, including restrictions on public gatherings, transport, and travel, that can also disrupt economic activity; they also include provision of public services to support individuals or enterprises affected by the outbreak. Short-term actions—or lack thereof—can evolve into longer-term impacts of the outbreak if, for example, food price increases result in adverse nutritional outcomes for children in poor or vulnerable households or school closures lead to long-term loss of human capital.

## Poverty impacts in specific groups

**Yearlong, aggregate estimates of the poverty impacts of COVID-19 conceal that the outbreak will likely have significant economic impacts on specific population groups during the course of the outbreak.** These effects are expected to materialize largely from economic disruptions—and the related income and employment effects—resulting from countries' efforts to contain the virus. Workers in services sectors, such as tourism and transport, food and accommodations, as well as retail are likely to be among those most affected by economic disruptions in the short-term. Manufacturing workers will likely also face employment and income shocks due to supply chain disruptions and reduced external demand resulting from economic slowdowns in China and other major economies. To the extent that supply chains of agricultural commodities get disrupted, rural agricultural households may also be adversely affected by the effects of the outbreak. While evidence from former outbreaks suggests that manufacturing sector workers may be able to make up some of their lost earnings by working overtime as factories ramp up once the outbreak passes, making up lost earnings among agricultural or service sector workers may be more difficult.

### *Poverty impacts in specific sectors*

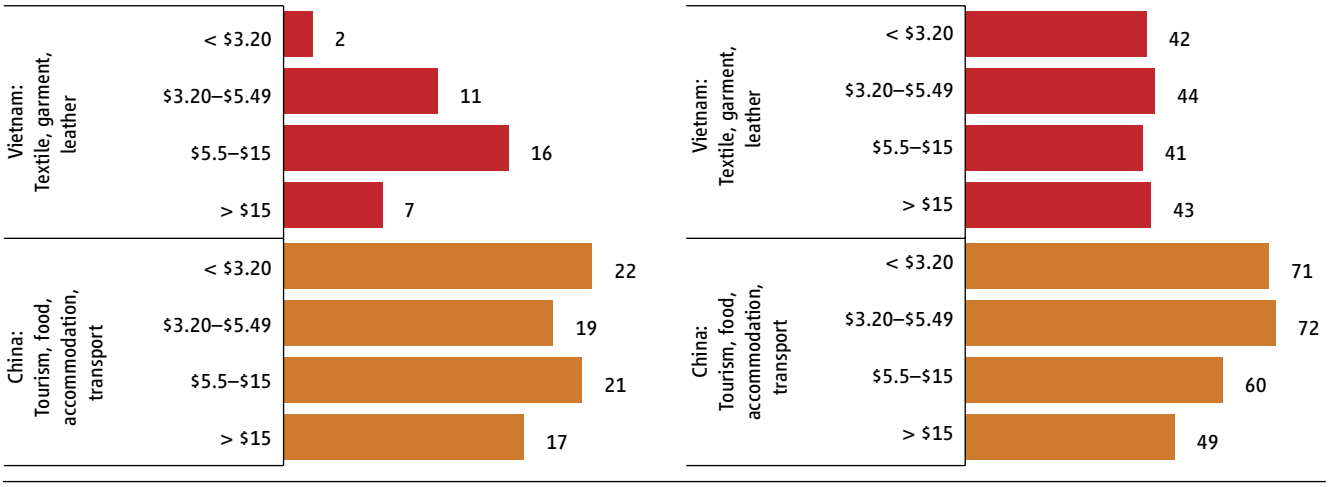
**Households that have at least one member engaged in activities in the affected sectors rely on these earnings for their subsistence.** One-fifth of the poor in China (defined here as living on less than US$5.50 per person per day) have a household member working in the hospitality sector. Among households working in that sector, 70 percent of their income, on average, comes from activities in that sector (Figure I.2.19). In Vietnam, more than 12 percent of individuals rely on income coming from employment in the production of textiles, clothing and leather good—geographically concentrated in the Southeast and Red river delta regions. Households engaged in these activities tend not to be among the poorest in the region (defined here as living on less than US$3.20 per person per day), but rather are moderately poor or economically vulnerable, and thus a shock to these activities could drive some households into poverty or more severe material deprivation.

**Figure I.2.19.** Tourism, retail, and manufacture industries are a significant source of household income in China and Vietnam

*Population engaged in specific sectors*

**a.** Percentage of individuals in households with at least one member engaged in the sector

**b.** Percentage of total household income coming from activities in the sector




*Source:* WB staff calculations based on projections using China Household Income Project and Vietnam Living Standard Survey.

**Demand shocks to different sectors could have important short-term poverty impacts with respect to specific segments of the population.** This can be seen in the results of new poverty simulations using the US$5.50/day poverty metric and presented in Figure I.2.20. The figure shows the effects of two possible demand shocks to selected sectors across 11 countries in developing East Asia and the Pacific: (i) a 50 percent income loss that lasts for 1 quarter (3 months), and (ii) a 50 percent loss that lasts for 2 quarters (6 months).[14] The poverty impacts of the shock are shown in the figure as differences from the baseline poverty situation. Only incomes earned from the specified sector are being simulated to decline. The US$5.50/day poverty line (typically found in upper-middle income countries) is used to enable comparability of the estimates across countries. The estimates would differ if one were to use national poverty thresholds. In addition, the figures only show changes in the percent of people who are poor, that is, the share of people who would fall into poverty as a result of the income shock associated with the COVID-19. It is important to note, however, that people who are already poor are also likely to see a worsening of their economic situation, but this is not captured by the figures presented here.

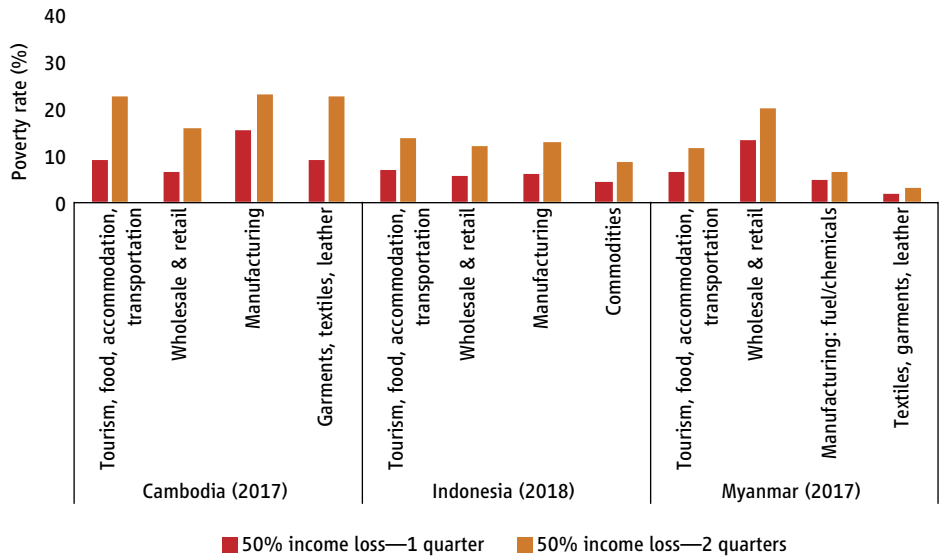
**Across most countries in the region, a prolonged disruption (i.e.,** 6 months) in the hospitality sector is estimated to raise the poverty rates among associated households by between 10–20 percentage points from baseline. In the absence of other sources of growth or remedial transfers, large impacts are expected in the Pacific Islands of Fiji, Samoa and Tonga, where tourism provides jobs directly through employment at hotels or airlines, as well as indirectly through jobs in transportation, agriculture, construction, among other sectors. A 50 percent income loss to households in those sectors over a three-month period would increase the absolute poverty rates among those households from around 40–50 percent to 50–60 percent. Assuming economic activity picks up again after the outbreak, it is possible that poverty rates among these could revert to their pre-COVID-19 levels. It is less clear, however, how easily households in these sectors could recoup income foregone during the outbreak period.

14 Simulations are performed by, first, decreasing labor income in households that have at least one member engaged in the specific activity. Second, the household income change is passed through to household consumption considering the household's propensity to consume prior to the shock.

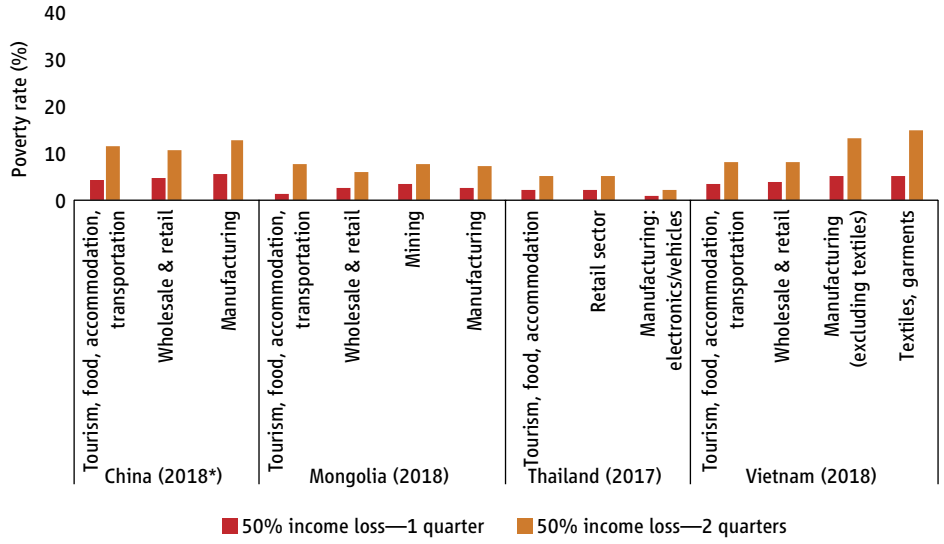
**Figure I.2.20.** Demand shocks could have important poverty impacts on selected groups of households

***Estimated Changes in Poverty Rates from Baseline due to Income Shocks, Selected Economic Sectors in developing East Asian and Pacific Countries***

*a.*




*b*




*Source:* World Bank staff calculations. Notes: Poverty rates measured using the Upper-Middle Income Class poverty line (US$5.50 per person per day 2011 PPP). *For China, calculations are based on the 2013 China Household Income Project. Household incomes and expenditures are extrapolated to 2018, based on the reported growth rates of per capital household disposable income and per capita household expenditure, as reported in 2019 China Statistical Yearbook (National Bureau of Statistics). For Indonesia, the category "commodities" includes agriculture products, horticulture, plantation, fishery, livestock, forestry, mining and quarrying.

**Similar demand shocks to selected manufacturing sectors across the region could also have significant short-term poverty impacts for households linked to those sectors.** In Vietnam, among households linked to textiles, clothing and leather goods, an income loss of 50 percent over a six-month period could more than double the poverty rate for households working in that sector. Similarly, in Cambodia, under the scenario of prolonged disruption, poverty rates for this group could increase by over 20 percentage points. In China, similar disruptions in manufacturing could raise poverty among households engaged in the sector 13 percentage points, from 27 percent to 40 percent.

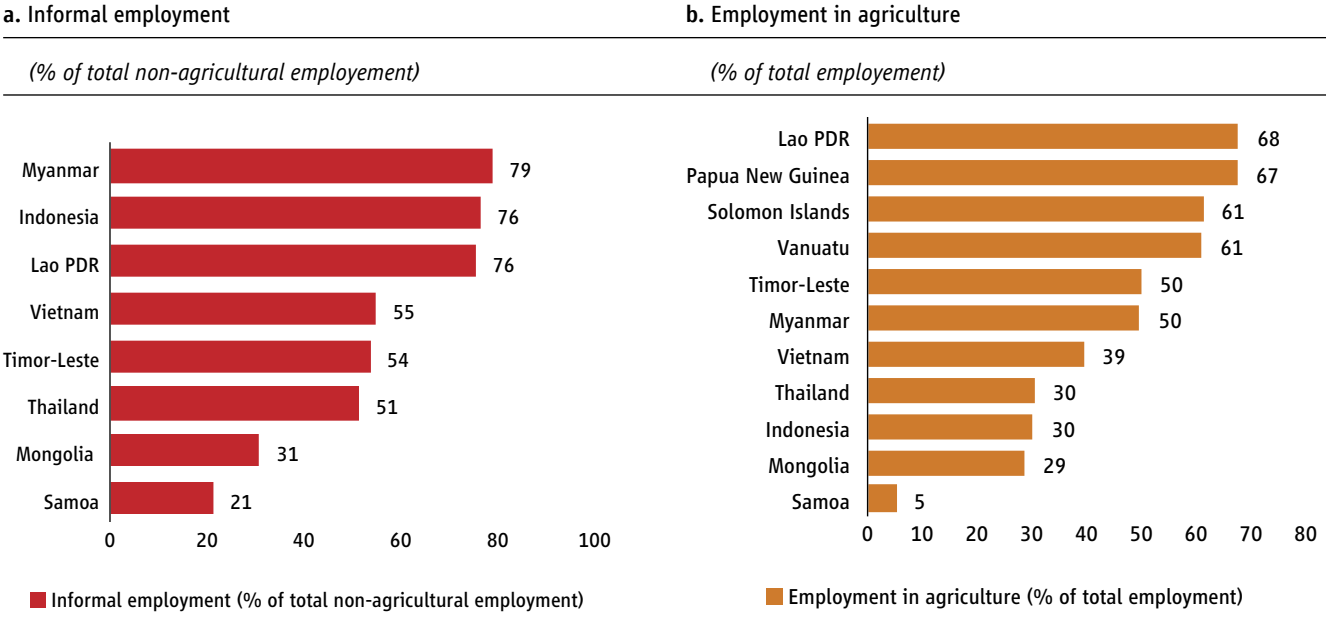
**For households engaged in sectors with large commodity price swings, the net impact of COVID-related disruptions and the associated economic slowdown is less clear cut.** Prices of non-agricultural commodities, as well as some agricultural commodities, including rice, have been increasing in the region, which could potentially benefit those working in these sectors, albeit with negative effects on consumers of those products. In contrast, prices of other agricultural commodities, such as wheat and soy, are starting to decline. This could negatively affect farmers producing these crops, including a share of the already poor population—although it could potentially increase the purchasing power of others in the population who are net consumers of these products. Mining in Mongolia and Indonesia are important for their respective economies and may be affected falling prices due to by downturns in global demand; the overall poverty impacts associated with mining employment may not be that large, however, as the sector employs a relatively small share of these countries' populations.

**Informal employees and agricultural workers will be more vulnerable to the impacts of the shock, as they commonly lack employment protection, health insurance, or paid leave.** Informality is widespread in much of developing EAP. For example, more than three-quarters of all non-agricultural workers in Myanmar, Indonesia, and Lao PDR are unregistered or work in an unincorporated enterprise (Figure I.2.21). Informal workers are more vulnerable to a range of shocks, with little or no access to formal social insurance mechanisms. When affected firms downsize or household enterprises face adverse demand shocks, informal workers can face a significant income loss with no immediate access to compensation or social protection. Without sick leave, informal workers may be unable to afford

taking a day off, even when they are sick, endangering their health and the health of others. Similar challenges are faced by those engaged in small-holder and family farming in the region. Indeed, more than half of the active labor forces in Lao PDR, Papua New Guinea, Solomon Islands, Vanuatu, Timor-Leste, and Vanuatu still work in agriculture.

**Figure I.2.21. Informal and agricultural workers will be more vulnerable to the shock**

***Informal employment and employment in agriculture in selected East Asia and Pacific countries***



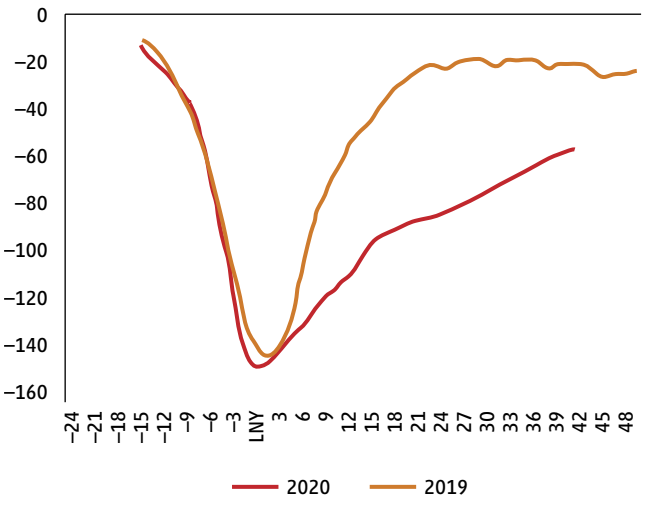

*Source:* WDI based on ILO. Informal employment includes unregistered and/or small-scale private unincorporated enterprises, including self-employed such as street vendors, taxi drivers and home-based workers that produce goods or offer services for sale or barter. Informal employment statistics are not available for Papua New Guinea, Solomon Islands and Vanuatu. Employment in agriculture is the ILO modeled estimate

### *Migration, remittances, and COVID-19*

**Internal and international migrants and their families are being severely impacted by the COVID-19 outbreak.** In many countries, migrants are more likely to work in informal or precarious activities and are, thus, more vulnerable during times of shocks or crises. In China, the outbreak coincided with the celebration of the Lunar New Year, when many migrants had left their places of work to visit their families and were unable to return to work for a substantial period to time. Data indicate that a full 40 days after the Lunar New Year, only between half and two-thirds of the migrants had returned to Tier-1 cities such as Beijing, Guangzhou, Shanghai and Shenzhen (Figure I.2.22). This contrasts with the pattern seen in 2019 in which 100 percent of migrants had returned to these cities after 15 days.

**Figure I.2.22.** Migrants unable to return to their jobs are particularly vulnerable to the economic effects of COVID-19

**Migrant flows in and out of Shanghai**
**Baidu Migration Index, index on population size**

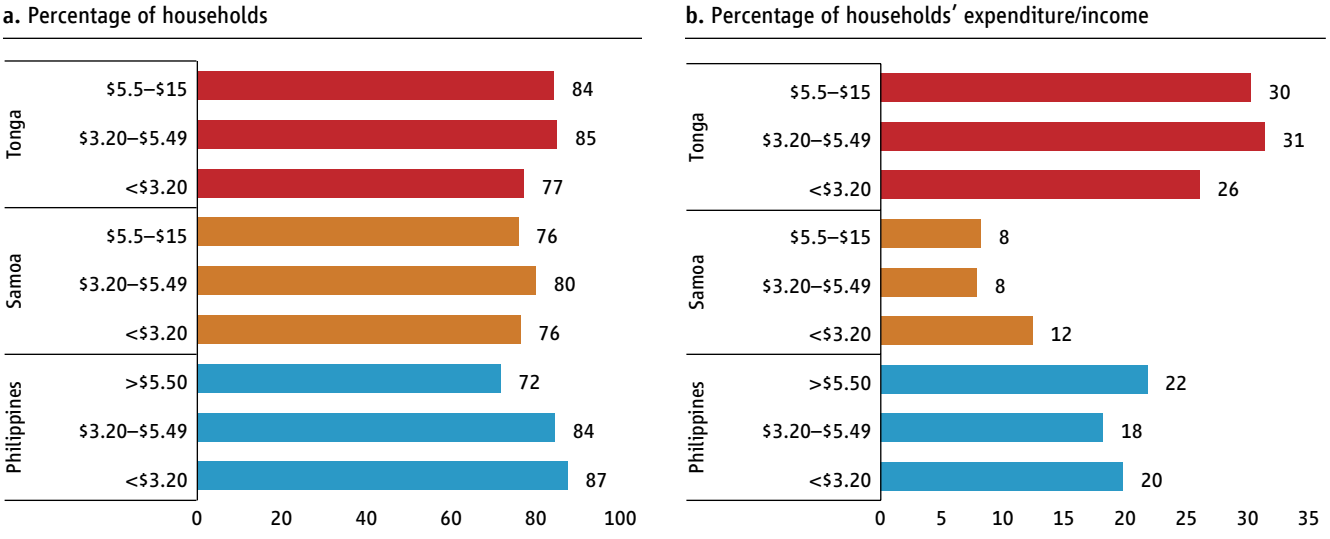



*Source:* Baidu Map Smart Eyes-Baidu Migration.

**In addition to impacts on households' earnings, domestic and international remittances are expected to decline as a result of the measures to contain COVID-19.** Across the region, many households rely on transfers from migrant family members for their subsistence. For many of the small Pacific Islands countries, (e.g., Tonga, Samoa) remittances represent a sizeable share of their economies; and larger countries such as China, the Philippines and Vietnam are among the top recipient of remittances worldwide. In several countries across the region, over three-quarters of poor households rely on remittances to complement their own earnings (Figure I.2.23). However, countries that are the main sources of remittances (e.g., United States, Australia, Japan and Hong Kong, SAR, China) are also seeing their economies significantly disrupted by the outbreak. As a result, a substantial share of households in East Asian and Pacific countries could be at risk of seeing this important source of income decline during this period.

**Figure I.2.23.** Remittances are an important source of income to families across the region

*Importance of remittances for households*




*Source:* Authors' calculations based on 2012-13 Samoa HIES, 2015/16 Tonga HIES, and 2018 Family Income and Expenditure Survey for Philippines. For Samoa and Tonga, share of income from remittances are calculated over total household expenditure, while for Philippines, it is the share of total household income.

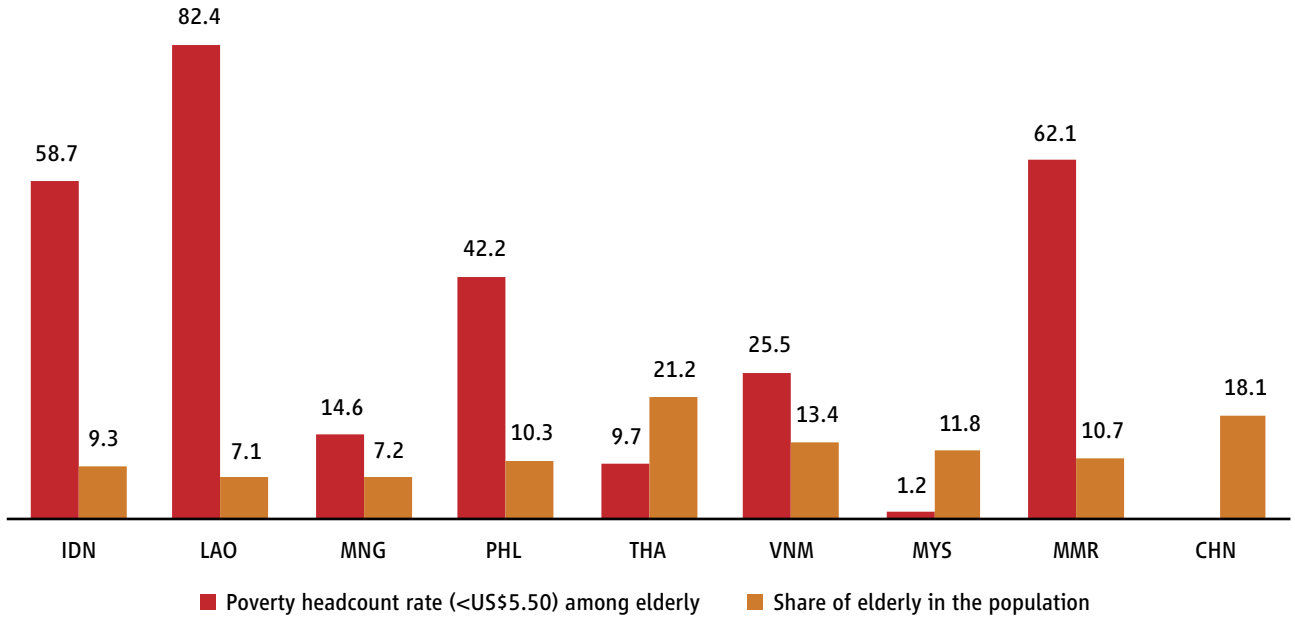
## Health related impoverishment

**While the main poverty impacts of the COVID-19 outbreak are expected to come via income or employment shocks to specific economic sectors, households—particularly those with elderly members who are most vulnerable to the health effects of COVID-19—may also face the risk of impoverishing health care costs.** Over 21 percent of the Thai population is age 60 or above, as is over 18 percent of the Chinese population, 13 percent of the Vietnamese population, and over 10 percent of the Myanmar and Philippines populations (Figure I.2.24).[15] The evidence to date indicates that the elderly are particularly vulnerable to the health effects of COVID-19, often requiring urgent medical attention. Significant shares of the elderly populations in the region are also poor (Figure I.2.23).[16] This creates the risk, particularly among the elderly, of being pushed into poverty as a result of high out-of-pocket health care costs.

15 For China, the source is National Bureau of Statistics, 2019 Yearbook.
16 In Thailand and Indonesia, the poverty rate for the elderly persons is actually higher than for the non-elderly.

**Figure I.2.24.** Aging economies are more at risk of direct health shocks

***Poverty rate and Share of the Population among the Elderly***

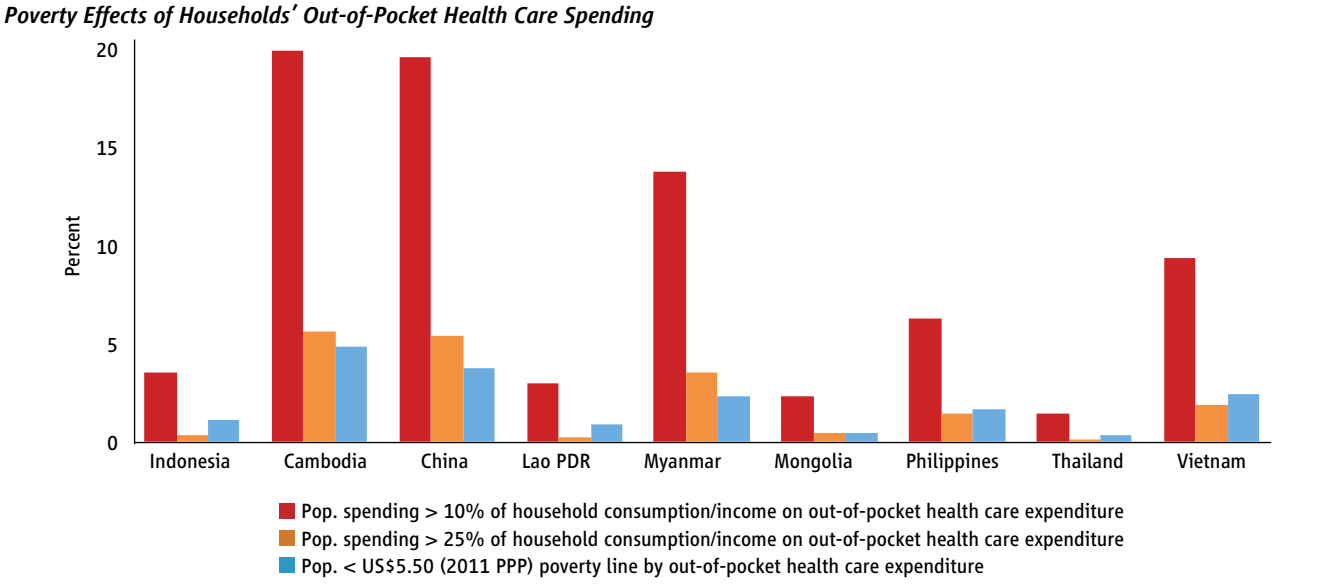



*Source:* World Bank East Asia and Pacific Team for Statistical Development.
*Notes:* Elderly defined as those 60 and above.

**Roughly 20 percent of households in Cambodia and China and about 14 percent of households in Myanmar spend more that 10 percent of household consumption (or income) on out-of-pocket health care expenditures (Figure I.2.25).** Moreover, roughly 5 percent of households in Cambodia, 4 percent of households in China, and 2 percent of households in Myanmar and Vietnam have been pushed into US $5.50/day poverty as a result of high out-of-pocket health spending.[17] The extent to which direct costs of health care during the COVID-19 outbreak results in greater poverty will depend on several factors, including the extent of community spread in East Asian and Pacific countries outside of China and the extent to which governments in the region intervene to help households defray health care costs. Since February, for example, the Government of China has waived medical fees for individuals seeking treatment for COVID-19.

17 Estimates come from the World Bank Health Equity and Financial Indicator database. These estimates are based on countries' nationally representative surveys, including income and expenditure household surveys, demographic and health surveys (DHS), and multiple indicator cluster survey (MICS). For a methodological description of indicators, see Wagstaff, Eozenou, Neelsen, and Smitz. 2019. *The 2019 Update of the Health Equity and Financial Protection Indicators Database. An Overview*. Policy Research Working Paper 8879. World Bank: Washington, DC.

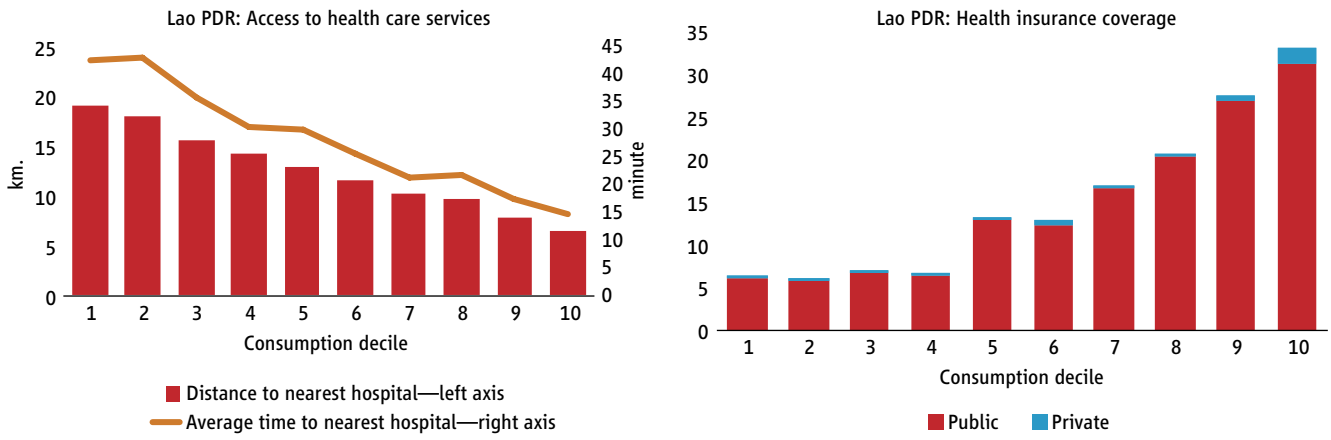
**Figure I.2.25.** Without compensation or subsidies, some families may fall into poverty due to increase in health costs




*Source:* World Bank Health Equity and Financial Protection Indicator Database, accessed on March 12, 2020

**Beyond out-of-pocket expenses, low-income households may also be disproportionately affected by the outbreak due to inadequate access to health care services and lack of health insurance.** Across the region, low-income households typically face greater barriers to accessing health care, with some households unable to afford transportation cost to the nearest hospital. In Lao PDR, for instance, only 6 percent of the poorest 40 of the population are covered by health insurance, compared to 33 percent in the top decile (Figure I.2.26). In the absence of an effective social protection system, with the capacity to scale up in response to the crisis, vulnerable households experiencing health shocks that disrupt their income-generating activities are at elevated risk, both of experiencing adverse health effects and of falling into poverty.

**Figure I.2.26.** The poor have more limited access to health care services and health insurance




*Source:* World Bank East Asia and Pacific Team for Statistical Development.

## Long-term effects on accumulation of human capital

**In the long-run, the COVID-19 outbreak could impact the accumulation of human capital, particularly among worse-off children.** There is vast literature on the effects of price shocks and or economic crises on nutritional status of children in the first 3 years of their life, with could impact life-long development prospects. In cases where the relative price of food with high content of protein (such as eggs and meat) rises, households may modify the diversity of diet away from these items with a potential long-term impact of children's nutritional status. While there is no evidence that such sizeable price hikes are occurring, closer inspection may reveal pockets of such effects in the regions or sectors vulnerable to the shock. In addition, school closures may compromise nutrition for students relying on free or discounted meals provided at educational establishments. According to World Food Program, 33 percent of children in Cambodia benefit from school feeding programs, and over 3 million children in Vietnam and more than 26 million in China do so.[18]

**UNESCO estimates that almost 1.5 billion students worldwide are currently out of school due to COVID-19 students or 75 percent of children enrolled in schools globally.**[19] By World Bank estimates at the time of writing, 149 countries are now reporting school closures with 130 at national level and the remaining 13 at the local or regional levels. The period of school closures in East Asia and Pacific countries range from more than two months (China, Vietnam, Mongolia) to a few weeks (Philippines, Indonesia, Thailand, Malaysia, Lao PDR). The impact in some countries is minimal at this time since the school closure coincides with breaks already planned in the academic calendar (Thailand, Myanmar, Philippines). The effectiveness of school closures as a measure to slow down the spread of contagion will depend on the timing of the closures, the age structure of the population and the length of the closure.

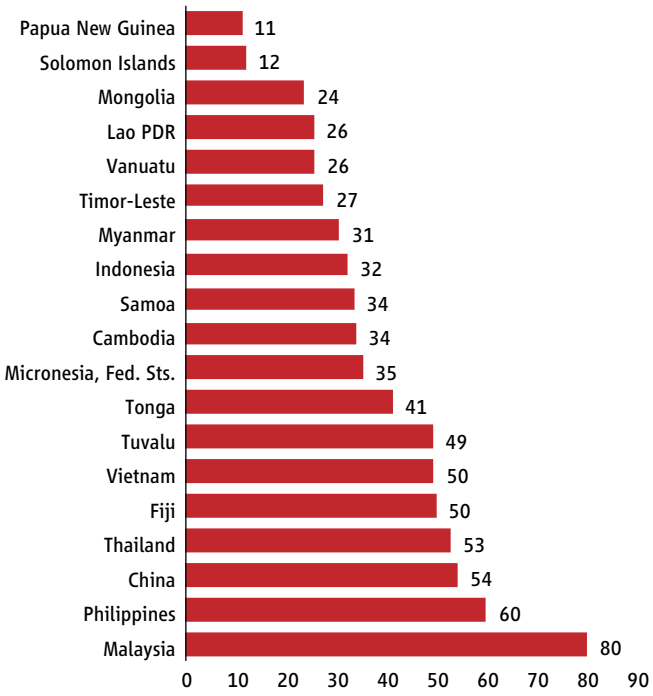
**The adverse effects of school closure may affect more disadvantaged students, for which alternative arrangements for care and instruction may be more limited.** Beyond school feeding, an even higher cost comes from the disengagement of students with learning disadvantages (academic or socioeconomic) who may not cope effectively with remote learning strategies. Many countries are experimenting with distant education programs. In China, over 200 million students are receiving instruction from their home using Internet.[20] Yet, access and effectiveness may vary across geographic areas and socioeconomic groups, depending on access to technology and network coverage, quality of the design of the online instruction, and support that parents can provide at home. Despite progress in Internet usage in the past decade, about one billion people in developing East Asia and the Pacific are still not online. Internet penetration ranges from 11 percent in Papua New Guinea to 80 percent in Malaysia (Figure I.2.27). The digital divides within countries can also be dramatic. In Indonesia, for example, two-third of the extreme poor—those living on less than US$1.90 per person per day, do not have Internet subscriptions in the household, while 9 out of 10 people with incomes above $15 per person per day do. This means that the move to distance learning typically benefits more advantaged students.

18 World Food Program (2013). State of School Feeding Worldwide 2013.
19 UNESCO: Coronavirus Impacts Education https://en.unesco.org/themes/education-emergencies/coronavirus-school-closures
20 https://www.cgdev.org/blog/containing-epidemic-should-schools-close-coronavirus

**Figure I.2.27.** Access to Internet is not widespread in the region, particularly among the poor

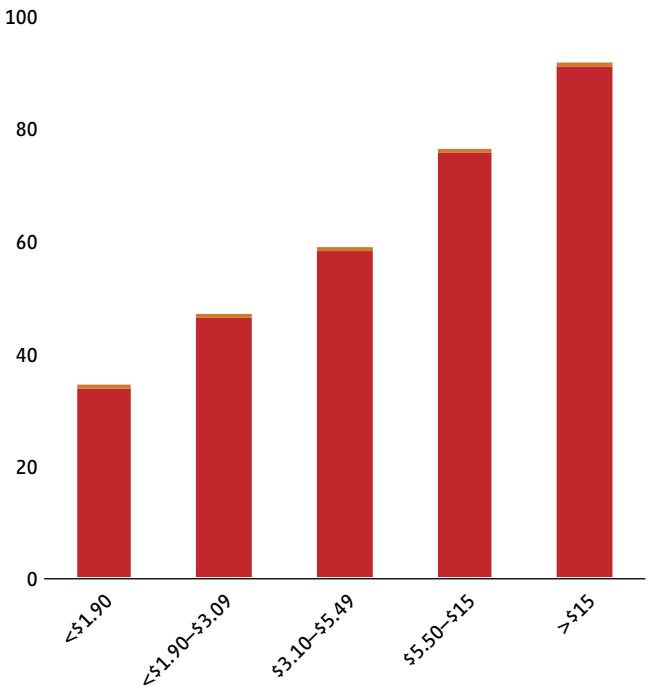
**a.** Internet Usage

*(percentage of population, 2017)*




b. Access to Internet in Indonesia

*(percentage of population, 2017)*

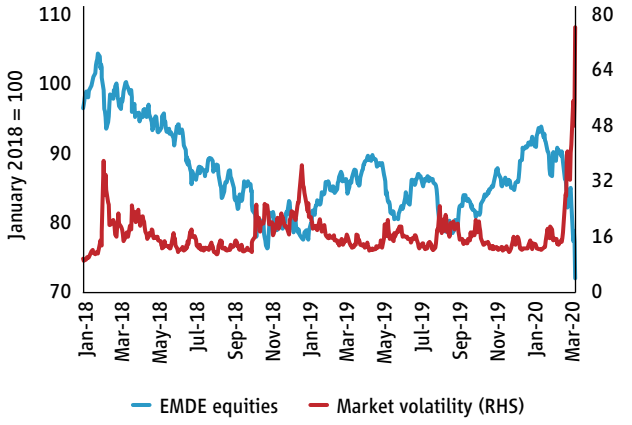



*Source:* Panel A: World Development Indicators. Panel B: World Bank East Asia and Pacific Team for Statistical Development.

## 6. Vulnerability to a global financial shock

Recent financial market turmoil, triggered by the global spread of Covid-19, raises concerns about the vulnerability of EAP economies to disorderly global financial market developments. Global financing conditions tightened abruptly in early-March, triggering sudden capital outflows from emerging markets and significant corrections across global equity and debt markets while pushing down U.S. treasury yields as investors withdrew from riskier assets into the safety of sovereign bonds (Figure I.2.28).

**Figure I.2.28.** Equity and financial stress indicators




*Source:* Bloomberg; IIF; World Bank.
*Note:* Panel A. Emerging markets equities is EM MSCI Index; Market volatility is CBO VIX Index.

EAP is deeply integrated into global trade and global value chains, and heavily reliant on FDI, but its reliance on short-term external financing is more limited.[21] EAP accounts for 17 percent of global trade, is the recipient of 12 percent of global FDI inflows, and the recipient of 17 percent of global remittance inflows (17.0 percent) (Figure I.2.29). In contrast, EAP accounts for only 3.8 percent of global portfolio liabilities, largely reflecting capital account restrictions in China, and to a lesser extent in Indonesia, [Malaysia, and Thailand]. However, growing intraregional financial links, high leverage rates of major EAP economies, and their increasingly complex and interconnected financial sectors, increase the potential of within-region amplification of global financial shocks.

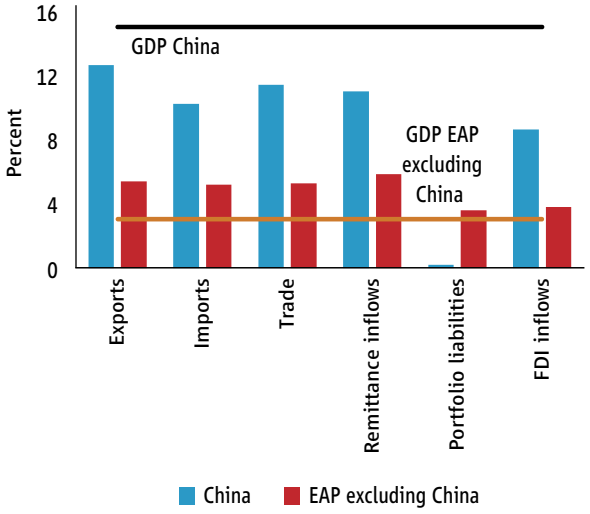
Against this backdrop, this note discusses the following questions:

- Through which channels can global financial stress affect EAP?
- How do EAP economies' vulnerabilities compare with those in 2007?

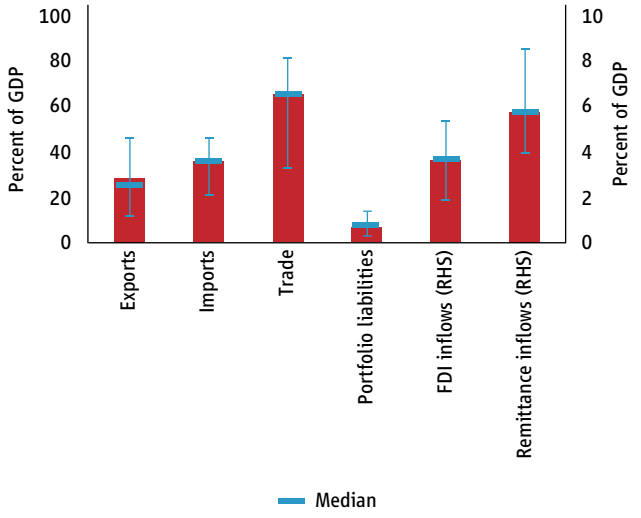
21 EAP refers to the region's EMDEs, which are: American Samoa, Cambodia, China, Fiji, Indonesia, Kiribati, Lao PDR, Malaysia, the Marshall Islands, Micronesia, Mongolia, Myanmar, Palau, Papua New Guinea, the Philippines, Samoa, the Solomon Islands, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, and Vietnam.

**Figure I.2.29.** EAP region: Global financial and cross-regional integration

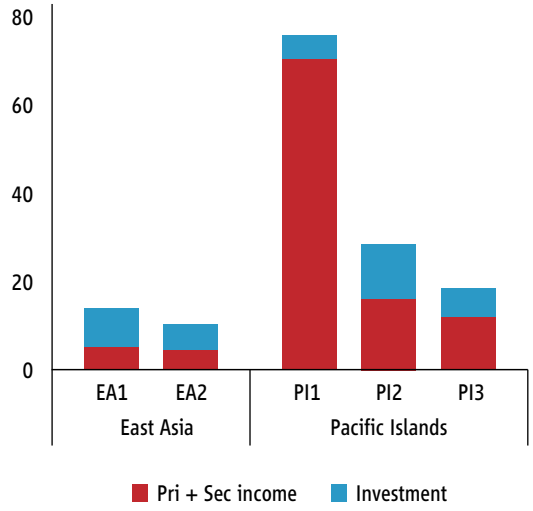
**a.** EAP EMDEs: Shares of global activity, trade, and finance



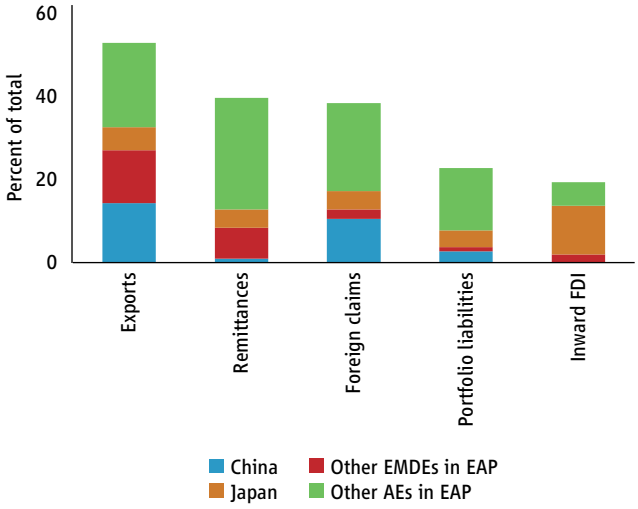

**b.** EAP EMDEs: Trade and finance in comparison with other EMDE regions




**c.** EAP region, foreign income, and investment




**d.** Within-region financial integration




*Sources:* BIS; Haver Analytics; IMF; World Bank.
*Note:* Data are for 2017
*Panel* A. Solid lines indicate shares of GDP in the world's total.
*Panel* B. The red bars show exports, imports, trade, remittance inflows, portfolio liabilities and FDI inflows in percent of GDP on average across EAP EMDEs. The vertical lines show the ranges of averages for all six EMDE regions.
*Panel* C. EA = East Asia. PI = Pacific Islands. EA1 includes Brunei Darussalam, Cambodia, Malaysia, Mongolia, Thailand and Vietnam; EA2 includes China, Indonesia, Lao PDR, Myanmar and Philippines. PI1 includes Kiribati, Marshall Islands, Micronesia, Timor-Leste, Tonga and Tuvalu; PI2 includes Palau and Vanuatu; PI3 includes Fiji, Papua New Guinea, Samoa and Solomon Islands. The linkages presented in this chart only present direct channels. Spillovers may propagate via indirect channels such as global and regional value chains. Last observation is December 2018.
*Panel* D. AEs – advanced economies. The AEs in EAP are Australia, Japan, Hong Kong SAR, China, New Zealand, Singapore, and Republic of Korea. Exports: each bar indicates the EAP destinations of total EAP exports in 2017. Remittances: each bar indicates the EAP sources of total remittances received by EAP in 2017. Foreign claims, portfolio liabilities and inward FDI are total EAP stocks at the end of 2017; each bar indicates the intra-regional origins of these claims on EAP.

## Transmission of global financial shocks

About half of EAPs' economies (including China, Malaysia and Thailand) are running current account surpluses, thus dampening the transmission of external financial shocks to the region. However, current account deficits exceed 10 percent of GDP in Laos, Mongolia and Palau and exceed 8 percent of GDP in Cambodia and Tonga. The need to finance such sizable current account deficits opens these economies to risks from global financial market disruptions. Global financial shocks can reach EAP through direct and indirect links and can be amplified by intraregional links.

**Direct financial links.** These include especially EAP's heavy reliance on foreign direct investment inflows, and more limited exposure to portfolio inflows, from major economies affected by severe covid-19 outbreaks.

- *Foreign direct investment.* EMDEs in EAP account for about a third of all FDI inflows to the world's EMDEs. With an exception of several smaller EAP economies, FDI inflows finance current account deficit in all EAP countries that have current account deficits.

- *Remittances*. Many EAP economies, especially smaller ones, rely on remittances from within the region and with the rest of the world. Remittance inflows amounted to 6 percent of GDP in 2017 in the average EAP economy, but more than 10 percent of GDP in several smaller EAP economies (Samoa, Tonga and Tuvalu).

**Indirect effects.** In addition to direct financial links, global shocks could transmit a significant shock to regional economies by depressing confidence and raising borrowing cost.

- *Capital markets.* Indonesia and Malaysia have sizeable and deep capital markets that are financially integrated with the global financial hubs (Park and Shin 2015; Kim et al. 2014). Nonresident bond holders now account for about 40 percent of local government bond holdings in Indonesia, and over 22 percent in Malaysia. Equity markets are small in most EAP economies, with their market capitalization accounting for about 50 percent of GDP in 2018—or less than half compared to OECD economies.

- *Banking systems.* A sudden stop in capital inflows could sharply raise funding cost for EAP financial systems. That said, EAP's banking systems are generally well capitalized and largely deposit-funded with an average [deposit-to-loan ratio above 100 percent].

- *Depreciation.* Sharp depreciations could increase the debt service cost on foreign currency debt. That said, foreign currency lending is rare in EAP and the average foreign currency share of corporate debt is just a fifth of total.

- *Household and corporate balance sheets.* EAP's private sectors are heavily indebted (Kose et al. 2019). Including China, average household debt stands at 45 percent of GDP and average nonfinancial corporate debt at 65 percent of GDP. While most of this debt is to domestic banks and in local currency, it makes the private sector vulnerable to domestic financing shocks (Kose and Ohnsorge 2019).

**Within-region amplification of external shocks.** The region has become financially more interconnected over the past decade, which could amplify the regional impact of external financial shocks. About one fifth of all portfolio liabilities and foreign direct investments to EAP originate from within the region and about 40 percent of all cross-border claims on EAP banks have regional origins (Figure I.2.29). The majority of these within-region capital flows originate from Japan, Australia, New Zealand, and Republic of Korea, as well as the region's financial hubs: Singapore and Hong Kong, SAR, China.

- *FDI.* Especially China's outward foreign direct investment has also expanded rapidly, from about 1 percent of global outward FDI in the early 1990s to about 10 percent today. Chinese investors have been heavily involved in pan-Asian infrastructure projects, power projects in Lao PDR, garment manufacturing, construction, and real estate sector projects in Cambodia, and mining in Mongolia (Hurley et al. 2019). Japan has historically been a big investor in the EAP region and, remains the single largest source of FDI in Thailand. US is important sources of inward FDI in selected EAP economies (e.g., Malaysia, the Philippines, Thailand, Vietnam). Republic of Korea remains by far the largest foreign investor in Vietnam followed by Japan (Table I.2.4).

- *Remittances.* Australia is the main destination country for the region's migrants, followed by the United States. The largest recipients of remittances in the region are Thailand and the Philippines. Several smaller Pacific islands (Kiribati, Tonga, Tuvalu) rely heavily on remittances from Australia. However, remittances to EAP have already been slowing since 2016, and, in the event of a wide-spread and protracted stress in the source countries, many EAPs may face a sharp drop in remittances again.

- *Regional banking links.* With overall banking sector assets, including policy banks, exceeding US$ 40 trillion in 2018, China is home to one of the largest banking systems in the world. The five largest commercial banks in China had by 2019 established multiple branches and subsidiaries across the region. According to some estimates, the overseas business portfolio of large Chinese banks was associated with US$ 1.6 trillion in overseas assets in 2019 and included investment and project loans, trade financing, and consulting services (Horn et al 2019). In addition, Chinese banks participated in lending syndications and cross border security issuances in various sectors including infrastructure, energy, and natural resource extraction.

## The EAP economies most vulnerable to global financial stress

Episodes of global financial market stress could disrupt access to financing, in the event of a sudden stop, or steeply raise borrowing cost. This could have adverse impacts on countries with high indebtedness, large financing needs, or heavy reliance on short-term funding. Several EAP economies have pockets of vulnerabilities, including: elevated external debt (Lao People's Democratic Republic, Malaysia, Mongolia, Vietnam); sizable fiscal deficits (Cambodia, Lao PDR, Vietnam); or heavy reliance on volatile capital flows (Cambodia, Indonesia) (Figure I.2.30 and Figure I.2.31).

Since 2007, external, corporate sector and sovereign vulnerabilities have risen in many EAP economies, including in China, Malaysia, Lao PDR, and Mongolia, leaving them less well prepared for the next financial shock. Total debt in EAP has risen from 133 percent of GDP in 2007 to 233 percent of GDP in 2018 (the ratio has increased from 93 percent of GDP to 118 percent of GDP for the region excluding China); current account deficits have opened in [one-half] of EAP economies compared with [none] in 2007; fiscal balances have turned from surplus in 2007 to deficits in 2019 in [one-half] of EAP economies (Figure I.2.32). While the foreign currency share of debt is generally less than 30 percent of government debt in 2019 in all major economies; nonresident holdings of domestic government bonds have risen to 3.7.7 percent of government debt in Indonesia and 24 percent in Malaysia, although they have decline from their peak levels in both countries.

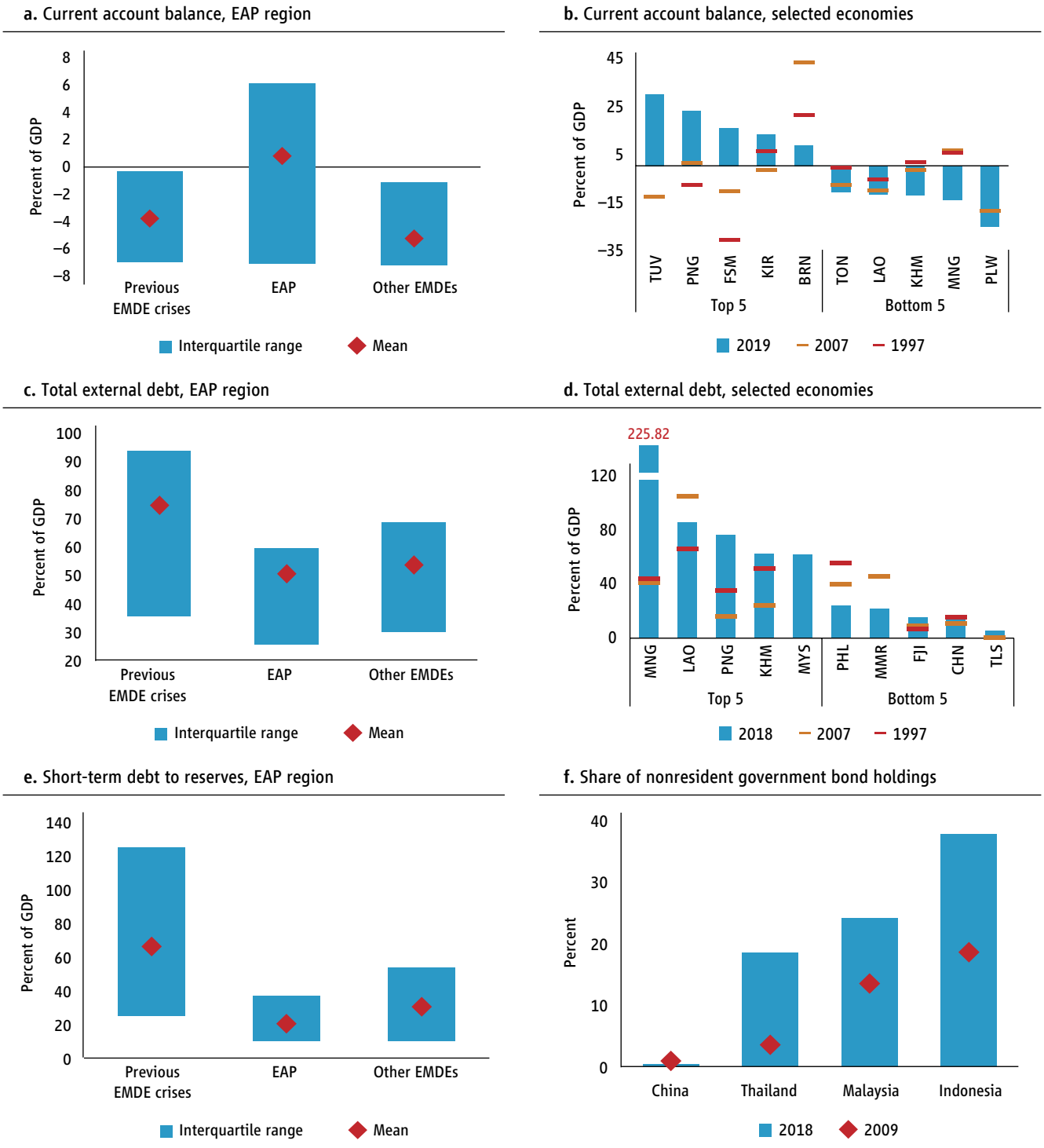
These vulnerabilities may be partly mitigated by greater exchange rate flexibility and more robust monetary, prudential and fiscal policy frameworks compared to previous crises. In addition, financial sector reforms and the expansion of country-specific, regional, and multilateral financial safety nets since the global recession may offer buffers in the event of financial stress.

**Table I.2.4.** EAP's FDI, portfolio, and banking assets and liabilities

| *Percent of the total stock* | *EAP* | *IDN* | *THA* | *MYS* | *PHL* | *KHM* | *CHN* |
|---|---|---|---|---|---|---|---|
| | | | *Inward FDI* | | | | |
| EAP EMDEs | **2.0** | 9.5 | 3.7 | 3.3 | 2.6 | 37.9 | 0.5 |
| *China* | ***0.9*** | *2.3* | *2.1* | *3.2* | — | *22.8* | — |
| United States | **3.7** | 10.0 | 6.6 | 5.9 | 9.3 | 4.0 | 2.7 |
| United Kingdom | **1.7** | 9.0 | 3.2 | 3.4 | 1.6 | 4.2 | 1.0 |
| Japan | **9.0** | 9.4 | 36.4 | 12.6 | 24.2 | 8.0 | 6.0 |
| Republic of Korea | **2.6** | 1.8 | 1.7 | 2.3 | 2.0 | 6.4 | 2.7 |
| Singapore | **7.1** | 24.2 | 14.7 | 20.4 | 8.2 | 6.4 | 4.0 |
| Hong Kong, SAR, China | **38.0** | 3.4 | 6.7 | 9.0 | 7.9 | 12.5 | 46.2 |
| | | | *Inward portfolio liabilities* | | | | |
| | *EAP* | *IDN* | *THA* | *MYS* | *PHL* | *VNM* | *CHN* |
| EAP EMDEs | **1.2** | 3.2 | 1.4 | 1.1 | 0.8 | 2.3 | 0.6 |
| *China* | — | — | — | — | — | — | — |
| United States | **21.0** | 34.2 | 37.8 | 29.3 | 35.4 | 20.7 | 14.2 |
| United Kingdom | **5.5** | 5.1 | 11.4 | 5.1 | 5.9 | 8.3 | 5.0 |
| Japan | **3.0** | 4.6 | 6.0 | 5.6 | 3.7 | 3.0 | 2.0 |
| Republic of Korea | **1.3** | 0.6 | 0.5 | 0.7 | 0.5 | 11.9 | 1.6 |
| Singapore | **10.0** | 9.8 | 6.9 | 14.7 | 8.0 | 12.4 | 10.0 |
| Hong Kong, SAR, China | **21.6** | 1.6 | 2.2 | 3.1 | 3.0 | 3.8 | 31.5 |
| | | | *Cross-border lending, outstanding claims* | | | | |
| Japan | **12.0** | 34.0 | 49.3 | 22.3 | 21.2 | 27.0 | 7.0 |
| Republic of Korea | **5.0** | 5.6 | — | 1.2 | 3.0 | 14.7 | 5.3 |
| Taiwan, China | **5.9** | 2.0 | 1.7 | 3.5 | 6.2 | 7.9 | 6.8 |
| Hong Kong, SAR, China | **33.0** | 6.6 | 18.7 | 13.2 | 15.2 | 6.8 | 41.2 |
| United Kingdom | **9.7** | 9.1 | 10.7 | 15.3 | 19.4 | 7.1 | 9.0 |
| Australia | **5.2** | 3.0 | 1.6 | 6.5 | 3.5 | 1.2 | 5.6 |
| United States | **4.0** | 4.2 | 3.2 | 6.0 | 5.1 | 1.6 | 3.6 |
| | | | *Remittance inflows* | | | | |
| EAP EMDEs | **7.7** | 25.8 | 18.0 | 1.3 | 8.6 | 3.9 | 3.7 |
| *China* | ***0.7*** | *1.2* | — | — | *1.6* | *1.1* | — |
| *Malaysia* | ***4.0*** | *24.0* | *8.7* | — | *6.0* | *1.0* | — |
| United States | **29.0** | 2.8 | 27.6 | 3.8 | 33.8 | 56.1 | 25.3 |
| Hong Kong, SAR, China | **13.0** | 3.4 | 2.0 | 1.0 | 2.0 | — | 24.3 |
| Singapore | **3.4** | 4.2 | 1.9 | 64.3 | — | — | 4.3 |
| Japan | **4.6** | 0.7 | 4.6 | — | 3.6 | 1.4 | 6.6 |
| Australia | **4.6** | 1.9 | 5.7 | 8.3 | 3.1 | 8.6 | 4.6 |

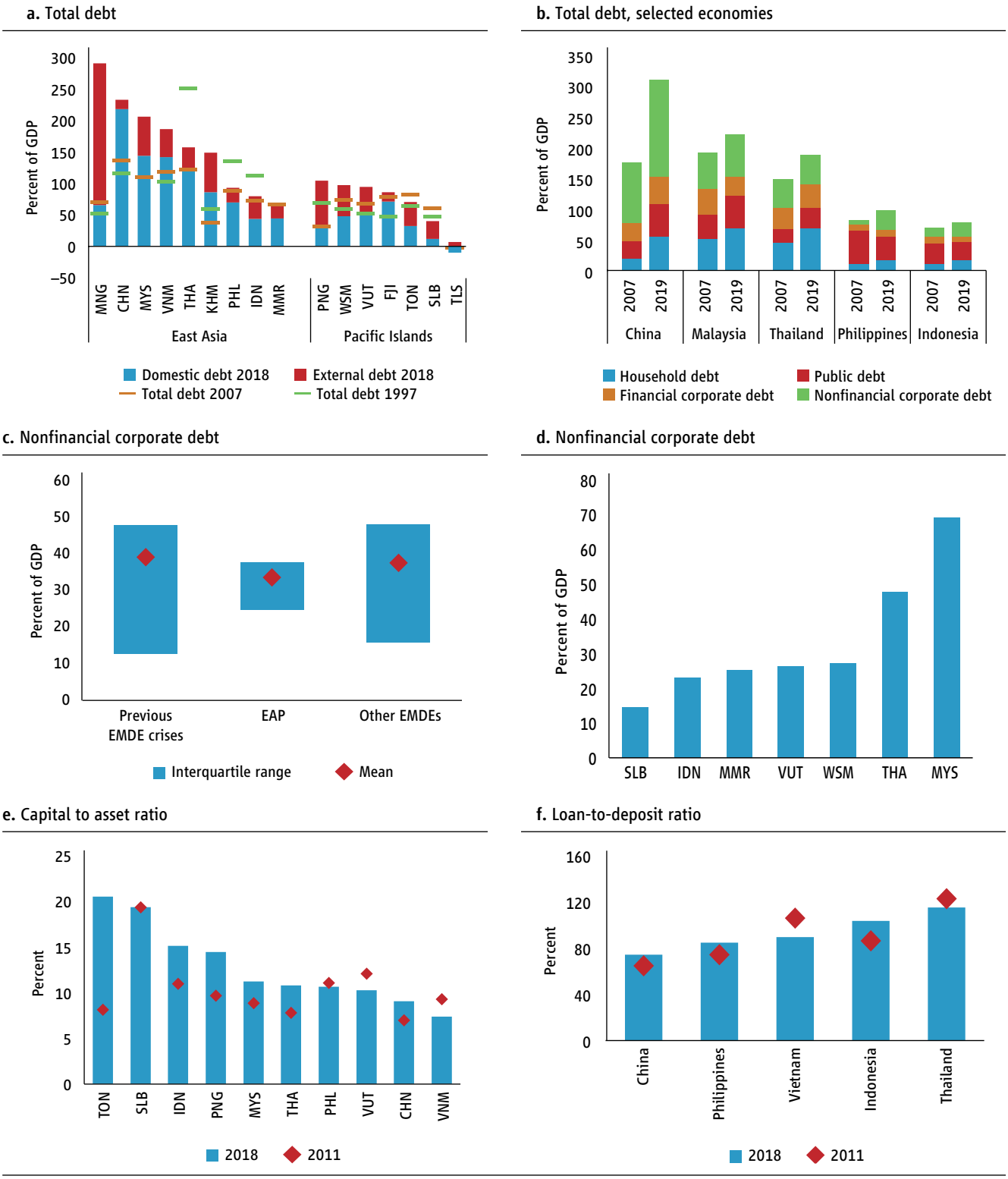
*Sources:* Bank for International Settlements, International Monetary Fund, World Bank.
*Note:* End of 2017. EAP = East Asia and the Pacific. CHN = China, IDN = Indonesia, KHM = Cambodia, MYS = Malaysia, PHL = Philippines, THA = Thailand, VNM = Vietnam.

**Figure I.2.30.** EAP region: External vulnerabilities



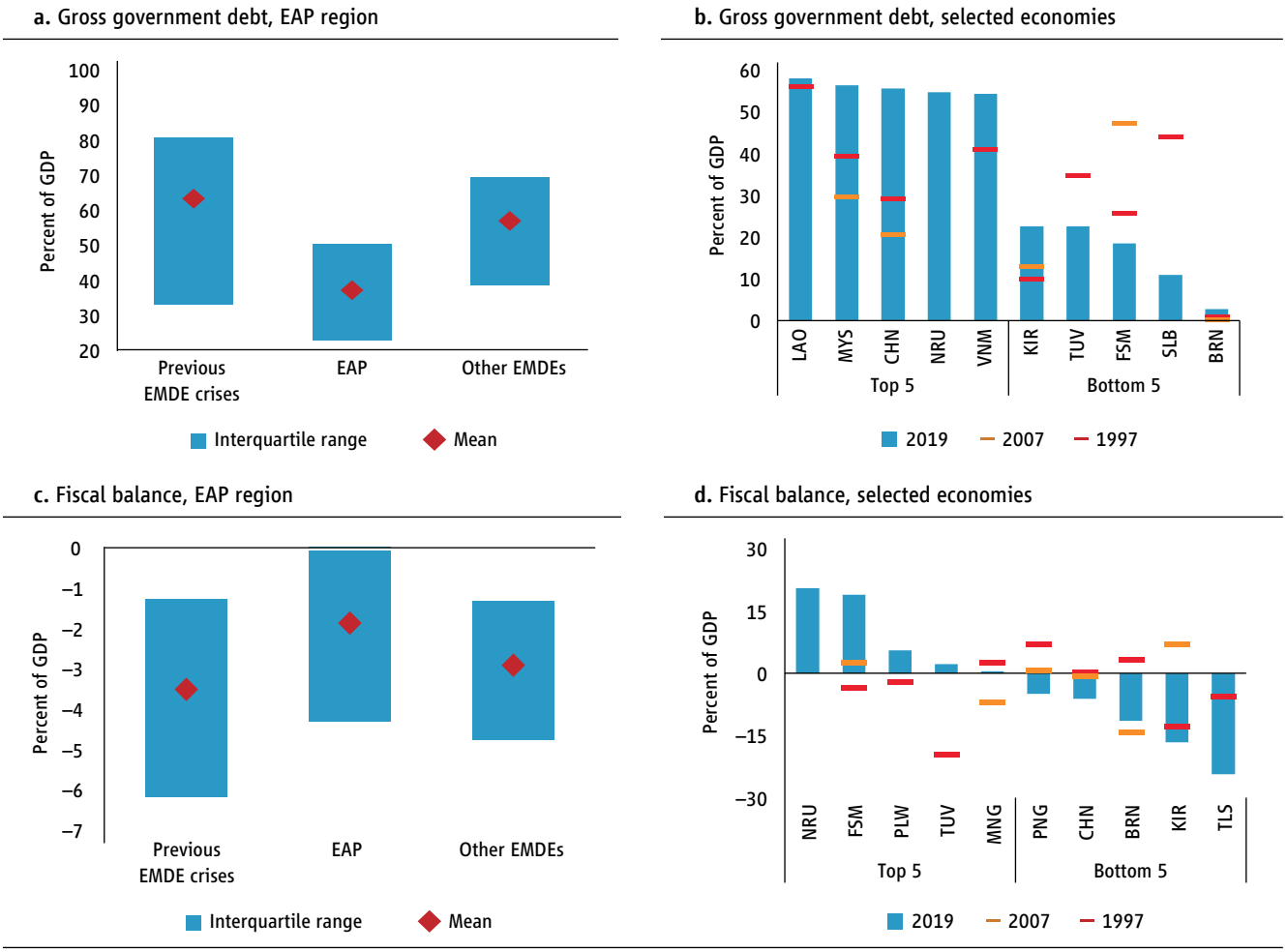

*Sources:* Laeven and Valencia (2018); IMF; World Bank
*Note:* Panel A. Unweighted averages. Based on data for 2019. Previous EMDE crises based (the year of crisis) on 295 previous events between 1983 and 2015.
*Panel* C. Unweighted averages. Based on data for 2018. Previous EMDE crises based (the year of crisis) on 170 previous events between 1983 and 2015.
*Panel* E. Unweighted averages. Based on data for 2018. Previous EMDE crises (the year of crisis) based on 136 previous events between 1983 and 2015.

**Figure I.2.31.** EAP region: Debt vulnerabilities




*Sources:* Laeven and Valencia (2018); IMF; World Bank.
*Note:* Panel C. Unweighted averages. Based on data for 2018. Previous EMDE crises (the year of crisis) based on 31 previous events between 1983 and 2015.

**Figure I.2.32.** EAP region: Fiscal vulnerabilities



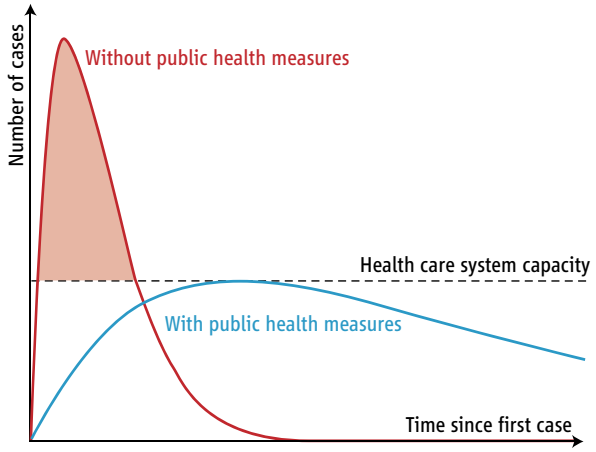

*Sources:* Laeven and Valencia (2018); IMF; World Bank.
*Note:* Panel A. Unweighted averages. Based on data for 2019. Previous EMDE crises based on 94 previous events between 1983 and 2015.
*Panel* C. Unweighted averages. Based on data for 2019. Previous EMDE crises (the year of crisis) based on 156 previous events between 1983 and 2015

## 7. The policy response

Policymakers and economists see the flattening of the pandemic curve as the first objective to be attained by containment policies, and, up to a specific extent determined by, say, hospital capacity. The goal is to slow the acceleration of the number of cases to save lives by placing less of a strain on the health system and possibly reducing the number of overall cases. It is recognized that flattening the pandemic curve will have a significant economic cost and could lead to a recession. Therefore, policymakers are in parallel using fiscal and monetary policy to meet the second objective of flattening the macroeconomic recession curve (Figure I.2.33 and Figure I.2.34).

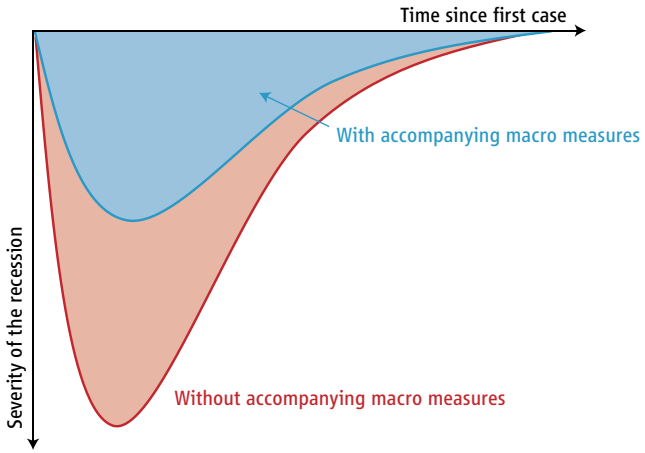
There are several issues with this compartmentalized approach. First, there is no clearly defined limit to the flattening: even hospital capacity is endogenous, as China has demonstrated by building new hospitals in a couple of weeks. Therefore, in any case, other (economic) considerations are limiting how far containment goes. Second, there are

**Figure I.2.33.** Flattening the pandemic curve through containment policies is the first objective




*Source:* Gourinchas (2020).

**Figure I.2.34.** Flattening the recession curve through macroeconomic policies is the second objective




*Source:* Gourinchas *(2020).*

multiple instruments of containment, which vary in effectiveness and economic cost. Some like lockdowns and travel bans create costs by affecting economic activity; others, e.g., health intervention such as testing, and fiscal interventions such as sick pay to encourage people to stay home, involve direct costs. Third, a dichotomous approach does not exploit the benefits of using combinations of both preventive and macroeconomic policies to achieve even health goals. For example, it is conceivable that any desired level of containment may more efficiently be achieved by combining social distancing policies with fiscal instruments like subsidies for testing and contact tracing.

In other words, since the infection curve and the recession curve are linked, the flattening of the first steepens the second. And the policy instruments are not separate; most measures have both health and economic implications. Therefore, governments should frame the issue as a broader, integrated challenge: to maximize social welfare, which depends on health and income (we know that poverty and recessions also increase mortality); using a combination of containment policies (restrictions, health care, testing) and macroeconomic policies (fiscal, monetary, financial). Then transmission control policies would not be pushed beyond the point where their precautionary benefit outweighs their economic cost, and macroeconomic policies would also be designed to achieve immediate and longer-term health benefits.

We now focus on five types of policies: transmission control and health; fiscal and monetary; financial sector; trade; and poverty. In each case, we describe what countries are doing and suggest ways in which they might do better by taking an integrated view of policy.

## Transmission control and health policies

Governments have a range of possible interventions (Table I.2.5), both pharmaceutical and nonpharmaceutical (NPIs), to treat infected individuals and inhibit transmission. Pharmaceutical interventions are largely the development and distribution of drugs and vaccines, while NPIs comprise the encouragement of hygienic practices, social distancing efforts such as school closure, and restrictions on public gatherings, transport, and trade.

Drug or vaccine development would likely be a highly cost-effective way to avert COVID-19 infections or reduce morbidity, but the existence of a vaccine ready for mass distribution is likely at least 12–18 months away. NPIs can also lower the rates of transmission. Two parallel studies of the local response to the 1918 influenza pandemic found that U.S. cities with the early imposition of NPIs had greater delays in reaching peak mortality and experienced lower cumulative mortality (Hatchet et al., 2007; Markel et al., 2007). For a more contemporaneous example, China instituted extreme restrictions on population movement, especially in the province of Hubei, in the weeks after the emergence of the new COVID-19 virus. It appears those extreme efforts were effective in reducing the attack rate of the COVID-19 virus from 3.86 to 0.32 over a 37-day period (Wang et al., 2020).

**Table I.2.5.** Nonpharmaceutical interventions (NPI) for personal and community preparedness to prevent pandemic influenza[i]

| *Reserved for pandemics* | | | | |
|---|---|---|---|---|
| ***NPI category*** | ***NPI*** | ***Evidence*** | ***Socioeconomic consequences*** | ***Mitigations*** |
| ***Personal*** | | | | |
| **Personal protective measures reserved for pandemics** | • Home quarantine of non-ill exposed household members (staying home for the duration of incubation period when a household member is ill)<br>• Use of face masks in community settings when ill<br>• Extensive contact tracing: detail interview of patients about recent contacts and whereabouts | • Systematic literature review, historical analysis of 1918 pandemic, mathematical modeling<br>• Some trials conducted during the 2009 H1N1 pandemic found that early combined use of face masks and other NPIs (such as hand hygiene) might be effective<br>• https://stacks.cdc.gov/view/cdc/44313<br>• https://stacks.cdc.gov/view/cdc/44314 | • Isolation from specific needs<br>• Missed work and loss of income | • Home-delivered meals<br>• Transportation to health care services<br>• Paid sick leave including home quarantine during pandemics |
| ***Community-level*** | | | | |
| **School closures and dismissals** | • Temporary, preemptive, coordinated dismissals of child care facilities and schools for grades K–12, universities | • Data from the United States, Canada, and Mexico suggest that earlier school closures and dismissals reduced the spread of the H1N1pdm09 virus. E.g., a study of Texas school districts during the 2009 H1N1 pandemic found that school closure was associated with a 45%–72% reduction in acute respiratory illness in households with school-aged children.[ii] | • Missed learning time, change in school calendar<br>• Loss of income for parents who stay home from work to care for their children | • Distance learning<br>• Paid family leave<br>• Alternative child care systems, potentially in schools |

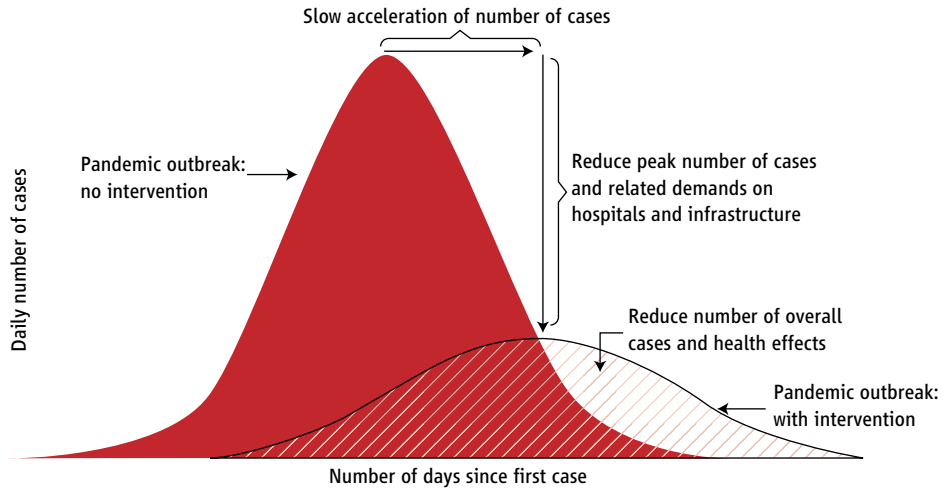
| *NPI category* | *NPI* | *Evidence* | *Socioeconomic consequences* | *Mitigations* |
|---|---|---|---|---|
| *Community level* | | | | |
| **Social distancing measures (examples)** | • Dividing classes into smaller groups and creating opportunities for distance learning (e.g., via the Internet or local television or radio stations)<br>• Telecommuting and remote-meeting options in workplaces<br>• Mass gathering modifications, postponements, or cancellations | • Multiple social distancing measures can be implemented simultaneously. Although there is limited empirical evidence supporting the effectiveness of implementing any individual measure alone (other than school closures and dismissals), the evidence for implementing multiple social distancing measures in combination with other NPIs includes systematic literature reviews, historical analyses of the 1918 pandemic, and mathematical modeling studies<br>• E.g., a systematic literature review of respiratory disease outbreaks related to mass gatherings in the United States during 2005–2014 indicated that 40 of 72 different outbreaks were associated with state or county agriculture fairs and (zoonotic) transmission of influenza A H3N2v, and 25 outbreaks were associated with residential youth summer camps and person-to-person transmission of influenza A H1N1[iii] | • Missed work, loss of income, and business opportunities<br>• Specific industries particularly hit: travel, hospitality, and entertainment | • Unemployment benefits<br>• Safety nets<br>• Industry-specific support measures |
| *Travel-related nonpharmaceutical interventions (NPI)*[iv] | | | | |
| | • Screening travelers for infection | • Systematic review: Some studies reported that they could delay the introduction of the influenza virus. However, no available evidence indicated that screening of inbound travelers would have a substantial effect on preventing the spread of pandemic influenza. Once infection begins spreading in a local community, identifying additional inbound travelers with the infection will do little to limit local spread. | • Entry screening consumes considerable public health resources, including trained staff, screening devices, and laboratory resources | |

| NPI category | NPI | Evidence | Socioeconomic consequences | Mitigations |
|---|---|---|---|---|
| *Travel-related nonpharmaceutical interventions (NPI)* | | | | |
| | • Travel restrictions and border closures | • Because the volume of transportation is associated with the spread of influenza, travel restrictions have been considered as a measure to reduce international spread. Although previous expert surveys and reviews suggested that travel restrictions are less likely to be effective, international travel restrictions are still included in some national pandemic plans. Several of the studies reviewed predicted that international travel restrictions might delay the importation of newly infected persons from other affected areas, slow the international spread of the epidemic, and delay the epidemic peak. | • Missed work, loss of income, and business opportunities<br>• Specific industries particularly hit: travel, hospitality, entertainment<br>• Legal and ethical issues regarding mobility restrictions; discrimination according to nationality rather than exposure | • Unemployment benefits<br>• Safety nets<br>• Industry-specific support measures |
| | • Mandatory quarantine for travelers from affected areas. At home or in designated areas like converted hotels or hostels. | • Early evidence from Singapore, Taiwan, China, and Hong Kong, SAR, China suggests that might have contributed to the containment[v] | • Isolation from specific needs<br>• Missed work and loss of income | • Home or hostel-delivered meals<br>• Transportation to health care services<br>• Government compensated individuals and employers for workdays lost (Singapore) |

*Source:* [i]https://www.cdc.gov/mmwr/volumes/66/rr/pdfs/rr6601.pdf
[ii]*Copeland* et al. (2013) https://doi.org/10.1093/cid/cis890
[iii]*Rainey,* Phelps and Shi. (2016) https://doi. org/10.1371/journal.pone.0160378
[iv]*Source:* Ryu et al. (2020) https://doi.org/10.3201/eid2605.190993
[v]*Source:* Cowling, Benjamin and Lim (2020) https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6911e1-H.pdf

The objectives of effective NPIs are not only to reduce cumulative exposure in the population to a new illness but to lower the rate of spread and distribute total infections over a longer period of time (see Figure I.2.35 for a stylized depiction of disease spread with and without NPIs). The same number of infections as in an uncontrolled scenario, but distributed over a longer time interval and with a delayed peak, will impose fewer congestion costs on a burdened health system and avail higher quality care to a large fraction of infections. It is believed that case fatality rates were much higher in Wuhan than in other Chinese cities because the number of seriously ill patients exceeded local hospitals and, especially, ICU capacity for over a month (Li et al., 2020). The delay should also allow for the development of any effective treatment strategies to be applied to a greater share of cumulative infections.

**Figure I.2.35.** Goals of community mitigation for pandemic influenza




*Source:* https://www.cdc.gov/mmwr/volumes/66/rr/pdfs/rr6601.pdf

However, population fears of the emergent illness combined with the presence of NPIs, and perhaps even exacerbated by them, may result in distorted beliefs of susceptibility and severity. These distorted beliefs, in turn, can impose costs that far exceed the direct and indirect costs of illness that would arise with widespread exposure. The 2003 outbreak of SARs is one example of such a phenomenon. It is the individual's subjective probability of infection and the perceived consequence of infection that drive avoidance behavior. Further, official policies can exacerbate such a response if the reasoning for adopted NPIs is opaque to the public or appear unexpectedly draconian. Without other available sources, people look to the behavior of others for information, which in turn can lead to mass panic. This points to the critical roles of expert risk communication, the openness of information, and public trust in official information sources for minimizing unnecessary avoidance costs. To better confront population health needs in a pandemic, communication should be open, trusted, and follow the best practices of effective risk communication. It is important for transmission control efforts in the first stages of an outbreak not to be misinterpreted.

Regarding the exact composition and magnitude of actions, standard policy analysis would proscribe that efficient transmission control policies equate the marginal costs imposed by the control interventions with the marginal benefit from cases averted. However, in the beginning, stages of an outbreak of an emergent illness, such as that which confronted the world in the first months of 2020 with COVID-19, it is unclear what the course of transmission would be with (and without) distancing interventions. Therefore, the optimal policy response is a function of a host of factors, including the stage of the epidemic, the level of knowledge around transmission mechanisms and disease severity, and the conditions of the affected population.

## Optimal policy in the time of pandemic (during the pandemic interval)

During a widespread outbreak of illness, the potential policy actions of national health (and health security) systems are numerous, including public messaging and risk communication, containment and contact tracing, health system support, and incentive programs to promote either beneficial health or economic behavior (i.e., incentivizing the payment of sick leave to workers who self-isolate on suspicion of infection). Let's call this vector of policy choices, $a$.

The function *v* relays the severity of the illness, a summary of various epidemiological aspects such as the attack rate, case fatality rate, expected total cumulative cases in the absence of abatement actions, and so on. The realized severity of an illness is a function of policy choices, *a*, and the maximum epidemiologic severity determined by the disease characteristic vector, *z*. The maximum severity of illness terms, *z*, are drawn from a power-law distribution to more realistically capture the possibility of severe outbreaks (Barro and Jin, 2011).

The total cost of a pandemic outbreak is relayed by the expression below, which combines direct and indirect health costs (*cases*) and costs from distancing behaviors and policies (*avoidance*). Both cost types are increasing in elements of *z* and decreasing in elements of *a*. In addition, initial conditions at the start of the outbreak also affect the two cost categories. These conditions encompass both the state of pandemic management readiness at the time of the initial outbreak, $P_0$ and the extent of population susceptibility to costly infection, $E_0$, which is a function of the interaction between population and disease characteristics. The full cost of illness function is given in the expression below:

$$f\,[cases(v(z,\,a),\,P_0,\,E_0) + avoidance(v(z,\,a),\,P_0)]$$

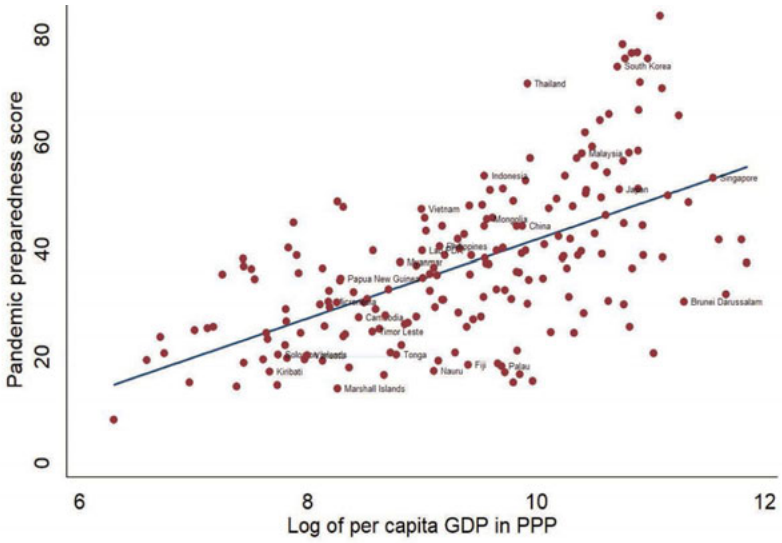
Policy actions themselves consume economic resources through a variety of channels, including shifting scarce resources away from alternative productive uses and increased capital costs from debt financing. Allow this cost function, *cost*, to be an increasing function of *a*. The first-order condition equating the marginal costs of policy choices with the marginal gain in health costs averted is then given by the following:

$$cost_a(a) = f_a[cases(v(z,\,a),\,P_0,\,E_0) + avoidance(v(z,\,a),\,P_0)]$$

The initial level of preparedness, $P_0$, helps determine how effective the control actions, *a*, will be in averting cases and reassuring the general public. Investments in $P_0$ during non-outbreak periods—actions such as ensuring a robust health system with the capabilities to surveil, diagnose, and treat emergent illness—will lead to more economically optimal control interventions during a time of the outbreak. Four main areas of pandemic preparedness investment are diagnostics, surveillance, risk communications, and emergency operating systems. We have extracted information from the Global Health Security Index (https://www.ghsindex.org/), a country-level measure developed by a consortium of institutions, to develop a pandemic preparedness index as a proxy of $P_0$, based on these and related dimensions. Figure I.2.36 relates the Pandemic Preparedness Index to the per capita GDP of a country. While there is a clear positive association between national income and the Preparedness Index, there is also much variation within income levels.

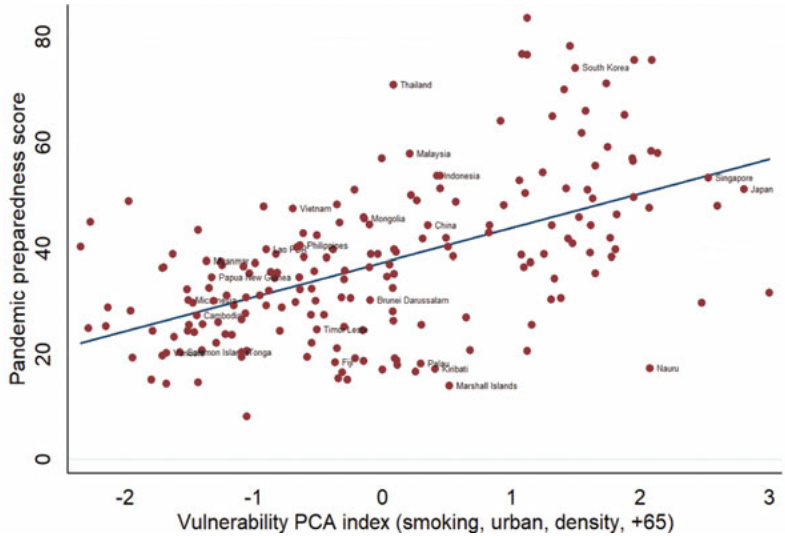
We can also leverage what is currently known about COVID-19 transmission patterns to develop an estimate of *E*0, the vulnerability of a population to an emergent illness, both in terms of severity and extent of spread. To inform our vulnerability index, we currently have included two measures related to expected disease severity, the age of the population and the smoking prevalence, and two measures related to ease of transmission, the population density and the percent living in urban areas. Figure I.2.37 relates the Preparedness Index with the Vulnerability Index. The bottom right quadrant contains the countries that are below the median in preparedness and above the median in vulnerability risk, and involve countries from a variety of regions including ECA and LAC.

**Figure I.2.36.** Pandemic preparedness and GDP per capita




*Source:* Pandemic preparedness score extracted as a subset of indicators from the Global Health Security Index, https://www.ghsindex.org/. National income from World Development Indicators.

**Figure I.2.37.** Pandemic preparedness and vulnerability index




*Source:* Pandemic preparedness score constructed from a subset of indicators from the Global Health Security Index, https://www.ghsindex.org/. Vulnerability index constructed by principal components analysis with data from World Development Indicators, United Nations Population Division, and WHO Global Health Observatory.

Given that effective health treatment may be able to reduce the most adverse COVID-19 infection outcomes, particularly efficient policies can involve the strengthening of a country's ability to provide critical care to a larger number of cases. In addition, as transmission shifts to occur within countries rather than across, the relative importance of international restrictions for disease control diminishes. With sustained within-country spread, as the COVID-19 health burden falls on

older populations and those with pre-existing conditions, it may be more effective to focus resources on the protection of the most vulnerable groups rather than promote broader restrictions that involve the containment of the entire susceptible population. However, an approach such as this would likely only be effective when overall transmission rates are relatively low, and a sufficient testing and tracing system is operational so that new infections can be quickly identified and quarantined. These are questions to consider in order to ensure resources are devoted to the most efficient channels that dramatically reduce the disease burden without imposing avoidable external economic costs. Policymakers also need to recognize that it is difficult to shift private avoidance behavior, and therefore they need to ensure as much as possible that the public conducts an informed consideration of risk not subject to rumor and misinformation.

## Optimal policy around emergent illness with the risk of pandemic (the pre-pandemic interval)

There is a somewhat different logic to understanding optimal policy at the initial stage of an outbreak of a possible epidemic due to the high degree of initial uncertainty around $z$. Important unknowns are accompanying the outbreak of a new infectious agent, and key disease characteristics need to be investigated. These characteristics include the attack rate, mode of transmission, degree of asymptomatic contagiousness, and so forth. It is imperative to marshal resources to monitor and understand disease dynamics at the very start of a suspected outbreak. Note that Fraser et al. (2004) find that a novel disease outbreak with a high attack rate and a high proportion of asymptomatic spread (factors thought to characterize COVID-19) can still be limited through isolation and contact tracing if isolation is fully effective and implemented at the very start of the outbreak. This is one reason why secrecy and suppression of information about an initial outbreak may have severe costs at later periods. It is critical to act with all known information in a coordinated and prompt manner.

We can model this initial outbreak period as a learning period where $z$ is unknown at the outset. The actions that are taken in this period, $a_0$, can include case tracing, containment, restrictions on international and domestic travel, and even forced quarantine. These actions, especially if not properly communicated, may appear to the populace as severe or even draconian and can induce a strong avoidance cost in the initial period, including capital losses from increased asset sales. Some of the losses may be recouped in later periods as the population understanding of the course of illness grows. However, some share of the loss will be permanent. The value of learning, however, can result in a more effective choice of actions, $a$, in the steady-state when $z$ is known, including the possibility of a pandemic avoided.

For simplicity, let us assume a risk-neutral policymaker and that the only cost in the initial period of outbreak arises from avoidance costs, as these would likely be far greater than the economic costs of initial infections. Total initial avoidance costs are increasing in $a_0$, but subsequent health costs are decreasing in $a_0$ as $z$ is revealed at an earlier date. Presumably, the greater the level of $a_0$, the less severe the realized pandemic values of $z$ and (subsequent) $a$, as information on $z$ and consequent optimal policy are revealed over a shorter period and the magnitude of the eventual pandemic can be curtailed or even averted. The optimal level of $a_0$ would be determined by equating the first-order conditions of costs of action with benefits, in terms of averted infections and reduced avoidance costs from less health risk as shown below:

$$cost_{a0}(a_0) + avoidance_{a0}(a_0) = \iint_{a,z}^{\infty} f_{a0}[cases(v(z, a), P_0, E_0) + avoidance(v(z, a), P_0)]dzda$$

Optimal risk communication strategies in the pre-pandemic period, conditional on ensuring the protection of the infected and the susceptible, should minimize the behavioral responses of the public that drive prevention costs. Some level of

short-term costs should be expected. Indeed, one likely consequence of avoidance behavior is the reduced transmission, which may be the critical factor in avoiding a subsequent pandemic. However, the costs of avoidance can be excessive, and it is the role of effective risk communication to build and maintain public trust in the institutions tasked with disease investigation and health policy setting and to accurately convey risk without unduly increasing fear and uncertainty.

### *Understanding national COVID-19 control policies in the first months of the outbreak*

Given this general framework of policy choice in the early stages of an outbreak, a period characterized by uncertainty around key disease characteristics, we turn now to an analysis of the restrictions imposed (circa March 1, 2020) by 194 countries on population contact with China, the country of COVID-19 emergence. Table I.2.6 lists the types of responses issued and the number of countries adopting each response.

Two general categories of contact restriction on the hope to contain transmission across international borders are apparent. The first category involves outright bans on the admission of individuals from the target country or bans on individuals who have transited through the target country. These restrictions take the form of visa restrictions or the interruption of air transport linkages. The second approach is more permissive in so far as it allows entry to individuals of target nations but under certain restrictions, such as airport screening and the imposition of a quarantine period. These two approaches, which we term restriction and screening, are substitute approaches in so far as a country that adopts one strategy generally does not adopt the other.

An effective restriction approach will reduce population mixing between infected and susceptible individuals, but this level of prevention comes with a higher economic cost, especially for countries with strong trade and tourism linkages to China. In contrast, the screening approach may lead to greater disease transmission risk from China but will impose lower economic costs on tourism-related and import-dependent sectors.

In the period of the initial COVID-19 outbreak, facing trade-offs between transmission risk and economic risk, and characterized by much uncertainty over key disease characteristics, what policies did countries implement? Did they accept economic costs and impose stronger protective measures, or did they tolerate higher disease risk and minimize economic losses? To investigate this trade-off, we correlate the disease control policies with the strength of trade and tourist linkages to China.

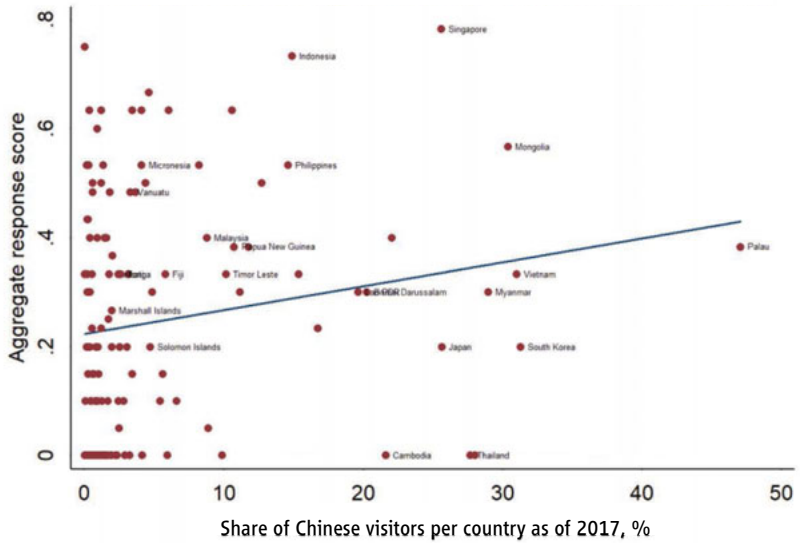
First, we create a general response index that encompasses all policy actions in Table I.2.6. Figure I.2.38 plots the general response index against one measure of economic linkage, the share of total tourists that originate in China. This response index is generally positively related to the linkage, although the slope of the regression line is not especially steep. However, this general index combines the likely substitutable approaches to travel restriction and travel screening. When focusing only on the more restrictive policies, as in Figure I.2.39 which plots the restriction-only index against the share of tourists that originate in China, countries with greater economic linkage (and hence exposure) to China choose to restrict travel and sacrifice short-term economic gain. In contrast, countries with fewer links to Chinese trade and tourism tended to choose the less restrictive screening approaches—depicted in Figure I.2.40.

**Table I.2.6.** Disease transmission control policies adopted at international borders for 194 countries

| *Control category* | *Control type* | *Number of countries imposing control type* |
|---|---|---|
| **None** | No restriction | 43 |
| **Restriction** | No entry if transited through China's Hubei Province or Zhejiang Province within past 14 days | 6 |
| | No entry if transited through China within the past 14 days | 38 |
| | No direct flight entry from China | 9 |
| | No entry for foreigners from Hubei Province | 1 |
| | No direct ground transportation from China (but flights allowed) | 2 |
| | Reduced direct commercial flights from China | 11 |
| | Visa restrictions to Chinese nationals or residents | 14 |
| **Screening** | Enhanced screening measures at ports of entry | 68 |
| | Quarantine for recent travelers from Hubei already in the country | 2 |
| | Quarantine for citizens or visa holders who have visited China in the past 14 days | 16 |
| | Self-quarantine for citizens or visa holders who have visited China in the past 14 days | 20 |
| | Quarantine only if exhibiting symptoms during entry | 18 |
| | An outright ban of noncitizens who have been to China/Chinese citizens | 8 |

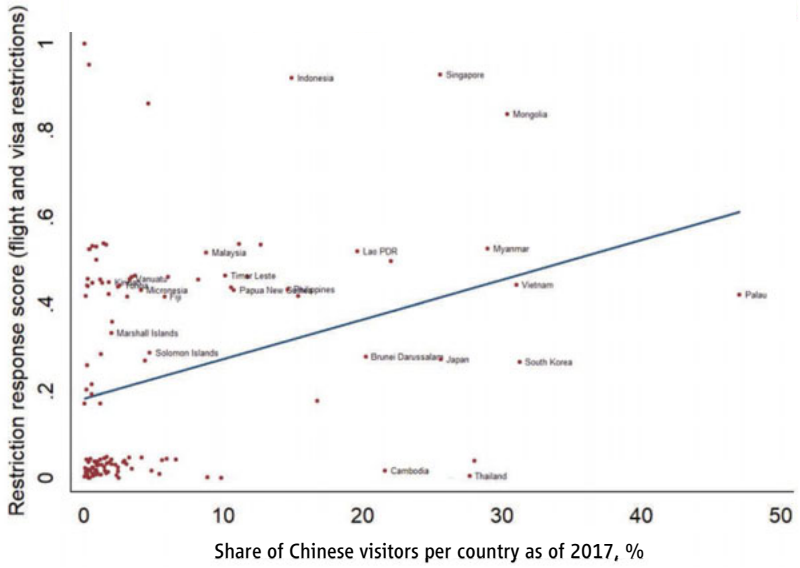
*Source:* Travel control policies collected by World Bank staff from national government statements.
*Note:* Based on responses from 194 countries as of March 3, 2020. Numbers do not sum to 194 as countries can adopt more than one control action.

**Figure I.2.38.** Dependence on China's tourism and response score



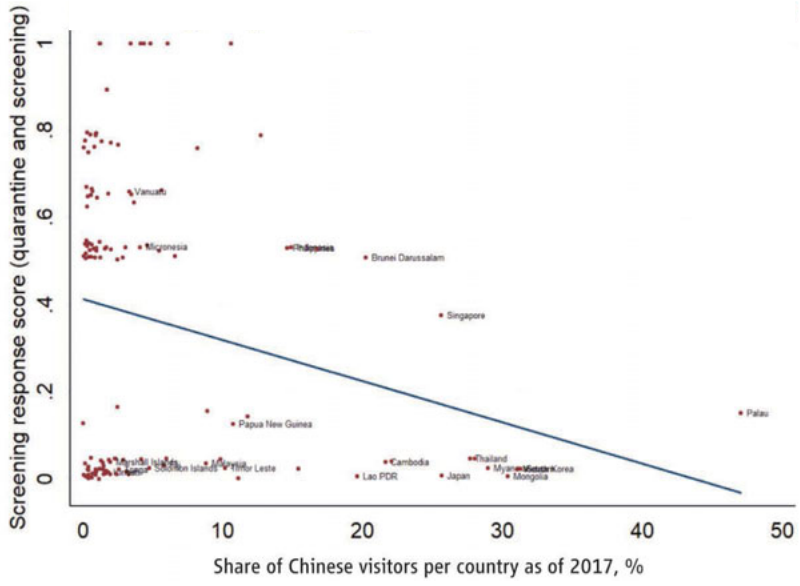

*Source:* Travel policy responses collected by World Bank staff from national government statements. Visitor data from Lopez-Cordova (2020).

**Figure I.2.39.** Flight and visa restrictions and dependence on China's tourism




*Source:* Restriction responses collected by World Bank staff from national government statements. Visitor data from Lopez-Cordova (2020).

**Figure I.2.40.** Screening response and visitors from China




*Source:* Screening responses collected by World Bank staff from national government statements. Visitor data from Lopez-Cordova (2020).

To explore this relationship further, while also controlling for potential confounding variables, we separately regress the restriction and screening indices on various measures of economic proximity—tourist linkages as well as import and export shares with China—in addition to per capita national income and the pandemic preparedness score. National income may be an important mediating variable for various reasons, while the extent of pandemic preparedness in a country may influence the chosen control policies if confidence in national preparedness leads to a greater tolerance of infection risk. Table I.2.7 presents this analysis, in the first column for the restriction index and then in the second column for the screening index. Several measures are significantly related to the restriction response. The share of country imports from China and the share of Chinese visitors in total tourism are both positively and significantly related to the establishment of travel restrictions. On the other hand, pandemic preparedness is significantly negatively related, suggesting perhaps that travel bans are more likely to be imposed if a national health system is less able to effectively confront a pandemic risk within its borders. Regarding the (weaker) screening response, the share of Chinese in total tourism is significantly and negatively related to the screening of travelers.

While these findings suggest that the average country with stronger linkages to the outbreak country imposed economic costly policies in the hopes of forestalling the spread of an emergent infection, they are not definitive. One potential confounder is the importance of tourism in the national economy—if this sector plays an outsize role in national income, then a country may be more hesitant to impose travel restrictions. Controlling for the share of tourism in GDP, however, does not appreciably change the results (columns 3 and 4 of Table I.2.7). The restriction choice is still significantly and positively associated with the Chinese share of imports and tourism, and now the share of total exports to China is also significantly associated with the decision to impose travel restrictions. Pandemic preparedness is still negatively associated with restrictions, but this association is no longer statistically precise.

**Table I.2.7.** Emergent pandemic response as a function of economic linkages, national income, and pandemic preparedness score

| | *Restriction response (stricter) coef/se* | *Screening response (weaker) coef/se* | *Restriction response (stricter) coef/se* | *Screening response (weaker) coef/se* |
|---|---|---|---|---|
| Share of country's exports going to China out of all world exports | 0.283 | 0.158 | 0.334* | 0.174 |
| | (0.196) | (0.275) | (0.201) | (0.283) |
| Share of country's imports coming from China out of all World imports | 0.642* | 0.204 | 0.733** | 0.234 |
| | (0.349) | (0.490) | (0.357) | (0.505) |
| Share of Chinese visitors per country as of 2017, % | 0.006** | –0.012*** | 0.005* | –0.012*** |
| | (0.003) | (0.004) | (0.003) | (0.004) |
| Tourism as % of GDP, as of 2016–2018 | — | — | 0.003 | 0.001 |
| | | | (0.003) | (0.004) |
| Log of per capita GDP in PPP | 0.044 | 0.026 | 0.040 | 0.025 |
| | (0.030) | (0.042) | (0.030) | (0.042) |
| Pandemic Preparedness score (0–100) | –0.004* | –0.003 | –0.003 | –0.003 |
| | (0.002) | (0.003) | (0.002) | (0.003) |

*Source:* World Development Indicators. Travel restriction responses collected by World Bank staff from national government statements. Visitor data from Lopez-Cordova (2020). Pandemic preparedness score constructed from a subset of indicators from the Global Health Security Index, https://www.ghsindex.org/. National income and trade data from World Development Income.
*Note:* *** = .01; ** = .05; * = .10.

In the initial period of the COVID-19 outbreak characterized by much uncertainty, countries with a high degree of exposure chose to impose relatively severe restrictions with higher economic costs rather than maintain economic linkages and risk higher disease exposure. However, there is a good deal of variation at the country level. For example, Thailand and Cambodia with strong economic linkages to China choose no official restrictions, while Singapore and Mongolia choose some of the most restrictive approaches. Further exploration into this country-level heterogeneity would be an important direction of inquiry to better understand national responses to pandemic risk.

## Fiscal and monetary policy

Since preventive action has paid less attention to economic costs, the burden of mitigation has fallen primarily on macroeconomic policies. Even if no containment measures were implemented, a decline in economic activity would occur as a response to the precautionary behavior of households and firms faced with the uncertainty of dealing with a pandemic. Economic policy can limit the economic damage.

Where the supply disruptions are binding, for example, because of social distancing policies, expansionary fiscal and monetary policy may have a limited impact. Targeted fiscal policy has an important role: sick pay not only alleviates social distress but can dramatically reduce the spread of the disease by creating stronger incentives for people to self-isolate. Similarly, providing liquidity and exercising regulatory forbearance can reduce business distress and the disruption of long-term economic relationships, e.g., in the context of global value chains.

**Fiscal measures should support public health policy and protect people from the economic impact of the pandemic.** Immediate efforts should fund health care workers, medicines, equipment, and facilities to cope with the suspected cases of COVID-19 patients. Resources should also be allotted for the public advisory to educate the public and allay fear, to use contact tracing to stem the spread of the virus and to implement preventive measures. Fiscal policy cannot increase production where the source is firm closures or supply chain disruptions, but it can help bring the production back on track after the epidemic is over—example, China funding travel for workers to get to work. If panic leads to a large decrease in demand, a fiscal expansion may be able, if not to get output back to its previous level, at least to maintain higher output.

**Provide timely and targeted cash flow relief.** Policymakers should move swiftly to provide cash transfers, wage subsidies, and tax rebates to households and businesses hit by supply disruptions and a decline in demand, in order to help people meet their needs and help businesses to stay afloat.[22] Italy has extended tax deadlines for companies in affected areas and broadened the wage supplementation fund to provide income support to laid-off workers, Republic of Korea has introduced wage subsidies for small merchants and increased allowances for homecare and job seekers, and China has temporarily waived social security contributions for businesses.[23] Safety nets should be broadened in the form of enhanced unemployment insurance with extended duration, increased benefits, and relaxed eligibility. In addition, governments should design schemes to pay for sick and family leave to allow affected workers or their caregivers to stay home without fear of losing their jobs during the pandemic.

**Central banks should help ease the tightening of financial conditions by injecting emergency liquidity to the financial sector.** The sharp tightening in financial conditions, along with expectations of low inflation, provide the right conditions for monetary policy action. Central banks should provide ample liquidity to banks and nonbank financial institutions, particularly to those lending to small- and medium-sized enterprises. Easing credit and liquidity conditions can help firms in trouble,

22 Gaspar, Vitor and Mauro, Paolo. (2020 March 5) https://blogs.imf.org/2020/03/05/fiscal-policies-to-protect-people-during-the-coronavirus-outbreak/
23 Gopinath, Gita. (2020 March 9) https://blogs.imf.org/2020/03/09/limiting-the-economic-fallout-of-the-coronavirus-with-large-targeted-policies/

either because of low sales or supply disruptions. Lowering interest rates will lower the cost of intertemporal credit and help the economy recover more quickly, especially once the disease has subsided. Opening credit lines through their lender of last resort (LOLR) role and engaging in asset purchases can inject confidence into financial markets if there is deterioration in financial conditions.[24] China's government has initiated a range of financial policies focused on keeping companies afloat, especially small and medium enterprises, which face major liquidity problems. Republic of Korea has expanded lending for business operations and loan guarantees for affected small- and medium-sized enterprises.

**Engage in regulatory forbearance that encourages easier borrowing terms, suspending loans or payments, or providing direct financial assistance where needed.** Regulators and supervisory authorities should work closely with banks and financial institutions to ensure that they adjust quickly and help soften the negative effects of the shock. The goal must be to preserve the financial strength of the system and transparency across the financial sector. A further tightening of the available finance coupled with panic in financial markets can stress the system and lead to a banking crisis. The good news is that banks in the EAP region are well-capitalized and more resilient than in previous crises. Financial market regulators and supervisors could encourage, on a temporary and time-bound basis, extensions of loan maturities. That is, supervisory authorities could engage in regulatory forbearance to levy as much pressure as possible from households and businesses struggling to repay their loans. Given the temporary nature of the pandemic, banks could consider a temporary restructuring of loans for affected borrowers.

**Policymakers should move quickly to support affected people.** These measures can occur through available fiscal space or emergency budgets (Table I.2.8). To support governments requiring financial assistance, the World Bank and the International Monetary Fund have made several facilities available that can help the government, including emergency financing, augmenting existing lending programs, grants for debt relief, new financing arrangements, and direct help training more frontline health workers to improve access to health care for the poorest and to strengthen disease monitoring.

**Table I.2.8.** Policy space across developing EAP economies

| | *Fiscal space* | | | *Monetary space* | | | *Reserves buffer* |
|---|---|---|---|---|---|---|---|
| *Period* | *2019* | *2019* | *2018* | *March 2020* | *March 2020* | *2019* | *March 2020* |
| *Select indicators* | *General government gross debt, % of GDP* | *Fiscal balance, % of GDP* | *Domestic credit to private sector, % of GDP* | *Key policy rate, in %* | *Headline inflation rate, in %* | *Inflation target, in %* | *Reserves, months of imports* |
| Cambodia | 30.0 | 0.5 | 100.2 | 1.46 | 1.7 | — | 8.0 |
| China | 39.2 | –5.8 | 207.5 | 4.05 | 5.2 | 3.0 | 16.7 |
| Indonesia | 28.0 | –2.2 | 40.5 | 4.75 | 3.0 | 2.5–4.5 | 9.2 |
| Lao PDR | 59.9 | –4.9 | 49.5 | 4.00 | 6.9 | — | 1.9 |
| Malaysia | 52.5 | –3.4 | 136.4 | 2.50 | 1.6 | — | 6.0 |
| Mongolia | 68.3 | 1.4 | 56.3 | 10.0 | 6.4 | 8.0 | 7.8 |
| Myanmar | 41.2 | –3.4 | 27.7 | 10.0 | 9.5 | — | 3.1 |
| Philippines | 35.7 | –3.5 | 49.9 | 3.75 | 2.6 | 2.0–4.0 | 9.6 |
| Thailand | 42.4 | –0.9 | 116.9 | 1.00 | 0.7 | 1.0–4.0 | 11.3 |
| Vietnam | 54.1 | –4.0 | 133.3 | 4.00 | 5.4 | 4.0 | 3.1 |

*Sources:* Fiscal data come from country teams. Domestic credit data come from Kose A., et al., "Cross-Country Data of Fiscal Space," World Bank, November 2019; IMF Article IV (Myanmar and Vietnam), Bank of Lao PDR (Lao PDR); and the National Bank of Cambodia (Cambodia). Monetary data come from World Bank country reports and various central banks' websites. Foreign reserves data come from World Bank country reports, IMF Data mapper, IMF Article IV (Myanmar), and various central bank websites.

24 Adrian, Tobias. (2020, March 11) https://blogs.imf.org/2020/03/11/monetary-and-financial-stability-during-the-coronavirus-outbreak/

## Financial sector policy

### *COVID-19 Impact on EAP financial systems*

**The initial panic of the outbreak has increased uncertainty and the demand for liquidity in the financial system, triggering a swift response from the authorities.** Regulators have responded by easing liquidity and lending requirements. The People's Bank of China (PBoC) cut the Open Market Operation (OMO) rates by 10 basis points (bps) in early February and is injecting liquidity into the banking system (PBoC conducted RMB 1.2tr of reverse repos on the first trading day in February, representing net liquidity injection of RMB 150bn). The Bank of Thailand (BoT) cut its benchmark rate to a record low of 1 percent on February 5th (down from 1.25 percent in December 2019). Bangko Sentral ng Pilipinas (BSP) cut its policy rate by a quarter-point cut to 3.75 percent on February 6th and indicated further cuts would be possible in response to the negative consequences of the virus. Bank Indonesia (BI) cut its seven-day reverse repo rate by 25 basis points to 4.75 percent on February 20th, marking the first cut in the BI policy rate since October. It also slashed its deposit facility rate to 4 percent and its lending facility rate to 5.5 percent. On March 3rd, 2020, Bank Negara Malaysia (BNM) lowered its Overnight Policy Rate (OPR)—for the second time this year—to a

**10-year low of 2.50 percent, aimed to mitigate the negative impact of the outbreak on the country's exports and tourism sectors.**

**Negative spillovers of the COVID19 pandemic to the financial sector could come through several channels and impact different parts of financial systems in different ways.** The capital flight-to-safety that is being observed so far in financial markets in response to the outbreak could continue to drive capital outflows from EAP countries to jurisdictions perceived as less risky. This in turn, threatens to drive up the cost of capital in domestic debt and equity markets, in addition to creating currency depreciation pressures. In government bond markets, higher interest costs on debt refinancing and new issuance, as well as costs of servicing FX-denominated debt (for countries experiencing significant FX depreciation), threaten to increase fiscal pressures on sovereigns. In corporate debt and equity markets, rising interest rates and declines in share prices could similarly increase debt refinancing pressures and create difficulties for firms to raise new capital, leading them to postpone or curtail planned capital investments. Finally, in credit markets, lending institutions relying more heavily on foreign deposits or foreign wholesale funding markets could face increasing funding pressures as a result of capital outflows from the region. Amidst the deterioration in domestic economic activity and corporate profitability, borrower's debt repayment capacity could be impaired and NPLs on banks' portfolios are also likely to creep higher.

**SMEs in the region are likely to be among the most impacted as a result of the COVID-19 outbreak, both in terms of their access to liquidity and their general profitability and solvency prospects.** In the face of increased borrowing costs in corporate debt and equity markets, larger firms may increase their reliance of bank funding to meet their both their short-term liquidity and long-term capital needs, which could subsequently crowd out lending to SMEs and other smaller and higher-risk borrowers. If banks themselves also choose to cut back their loan exposures and shift their assets to less risky government securities, this could further dampen lending to the private sector. Indeed, according to a recent survey of SMEs in China by China Association of Small and Medium Enterprises (CASME), millions of SMEs in China are already on the verge of collapse; 60 percent of SMEs could cover regular payments for only one to two months before running out of cash and only 10 percent could hold out for six months or more. Moreover, according to PBOC, SMEs in China account for 60 percent of the economy and 80 percent of jobs. Therefore, any major disruption to SMEs will have a major impact on China's economy overall. Similarly, recent interviews with representatives of the Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI) indicated that around 80 percent of the country's garment factories are heavily impacted by the COVID-19 outbreak and have difficulties in getting raw materials from

China and could be forced to shut down in the next couple of months, leaving around 400,000 workers unemployed. This is likely to result in increased risks of defaults among SMEs and the indebted households which will be unemployed.

**Authorities in several EAP countries have been proactive in trying to mitigate the negative impact of the COVID-19 outbreak on the SME sector.** The PBoC has made available RMB 300bn to banks to ensure liquidity support for companies being materially impacted by the outbreak. The Government of Malaysia introduced a RM20 billion stimulus package to offset the negative impact of the outbreak, of which the central bank is allocating RM3.3 billion of financing facilities for SMEs.

**The largest and more sophisticated financial systems across the region appear stronger and with larger buffers than in previous crises.** A comparison of Financial Soundness Indicators (FSIs) illustrates that in large EAP economies, the financial sectors are generally on a more solid footing before the beginning of COVID-19 outbreak relative to the time preceding other major crises such as the East Asian Financial Crisis of 1997–1998 or the SARS outbreak of 2002–2003. Indeed, on average, financial sectors in the region seem to be better capitalized, more profitable, and with better quality assets at the outset of the current outbreak than in the previous crises. As illustrated in Table I.2.9 below, in China's case, its financial sector's regulatory capital to risk weighted assets, return on equity, and NPL ratio are all in a much better shape today than they were around the SARS crisis in 2002–2003. Similarly, in Indonesia's, Republic

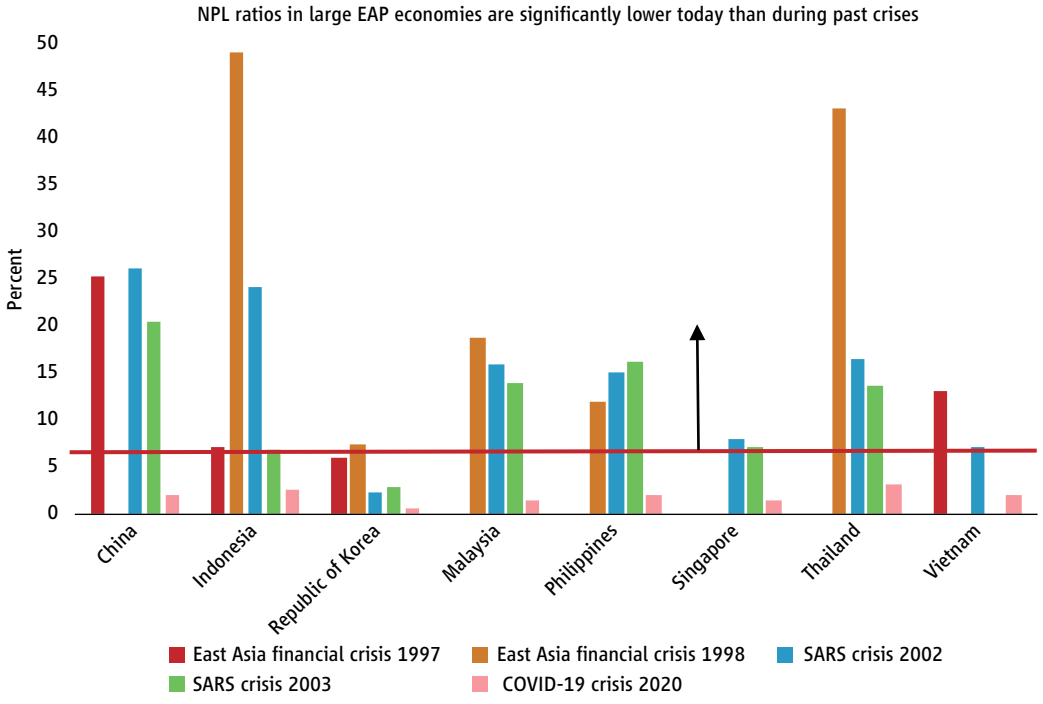
**Table I.2.9.** Select FSIs at the time of recent crises

| | *Financial soundness indicators at onset of recent crises* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Capital adequacy: regulatory capital to risk–weighted assets (percent)* | | | | | | | *Earnings and profitability: return on equity (percent)* | | | | | | |
| | *East Asian Financial Crisis end–1997* | *East Asian Financial Crisis end–1998* | *SARS Crisis end–2002* | *SARS Crisis end–2003* | *Global Financial crisis end–2007* | *Global Financial crisis end–2008* | *COVID–19 Crisis 2020–latest available* | *East Asian Financial Crisis end–1997* | *East Asian Financial Crisis end–1998* | *SARS Crisis end–2002* | *SARS Crisis end–2003* | *Global Financial crisis end–2007* | *Global Financial crisis end–2008* | *COVID–19 Crisis 2020–latest available* |
| China | | | –12.0 | –6.0 | 8.0 | 12.0 | 14.0 | 6.5 | 3.9 | 5.2 | 10.6 | 17.2 | 20.3 | 11.6 |
| Indonesia | | –13.0 | 20.0 | 22.0 | 20.0 | 18.0 | 23.0 | 5.6 | –500.0 | 21.7 | 24.0 | 17.3 | 12.0 | 12.4 |
| Republic of Korea | | 8.0 | 11.0 | 11.0 | 12.0 | 12.0 | | –11.2 | –74.5 | 12.3 | 3.0 | 15.7 | 7.4 | 7.7 |
| Malaysia | | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 | 2.4 | 3.1 | 13.9 | 13.9 | 14.5 | 12.0 | 10.2 |
| Philippines | | 18.0 | 17.0 | 17.0 | 16.0 | 15.0 | 15.0 | 8.0 | 5.5 | 4.3 | 9.2 | 11.2 | 6.1 | 8.9 |
| Singapore | | 18.0 | 17.0 | 18.0 | 14.0 | 15.0 | 17.0 | 5.0 | 2.7 | 6.1 | 8.9 | 12.3 | 12.9 | 11.2 |
| Thailand | | 11.0 | 13.0 | 13.0 | 15.0 | 14.0 | 18.0 | –13.6 | –106.3 | 3.9 | 11.0 | 1.2 | 10.0 | 8.6 |
| Vietnam | | | | | | 14.0 | 12.0 | 11.2 | 11.0 | 7.0 | 8.9 | 14.2 | 9.1 | 14.8 |
| | *Asset quality: non–performing loans to total gross loans (percent)* | | | | | | | *Liquidity: liquid assets to total deposits and short term funding (percent)* | | | | | | |
| | *East Asian Financial Crisis end–1997* | *East Asian Financial Crisis end–1998* | *SARS Crisis end–2002* | *SARS Crisis end–2003* | *Global Financial crisis end–2007* | *Global Financial crisis end–2008* | *COVID–19 Crisis 2020–latest available* | *East Asian Financial Crisis end–1997* | *East Asian Financial Crisis end–1998* | *SARS Crisis end–2002* | *SARS Crisis end–2003* | *Global Financial crisis end–2007* | *Global Financial crisis end–2008* | *COVID–19 Crisis 2020–latest available* |
| China | | | 26.0 | 20.0 | 6.0 | 2.0 | 2.0 | 30.1 | 24.7 | 15.2 | 16.4 | 21.0 | 25.5 | 15.6 |
| Indonesia | | 49.0 | 24.0 | 7.0 | 4.0 | 3.0 | 2.0 | 36.1 | 42.7 | 31.3 | 33.5 | 36.2 | 28.4 | 19.8 |
| Republic of Korea | | 7.0 | 2.0 | 3.0 | 1.0 | 1.0 | | 18.4 | 19.9 | 8.7 | 9.0 | 10.0 | 9.7 | 9.3 |
| Malaysia | | 19.0 | 16.0 | 14.0 | 7.0 | 5.0 | 1.0 | 25.7 | 21.9 | 25.5 | 30.1 | 33.5 | 26.5 | 18.4 |
| Philippines | | 12.0 | 15.0 | 16.0 | 6.0 | 5.0 | 2.0 | 20.4 | 22.1 | 29.7 | 33.2 | 29.9 | 24.7 | 15.0 |
| Singapore | | | 8.0 | 7.0 | 2.0 | 1.0 | 1.0 | 31.0 | 33.6 | 32.1 | 27.5 | 38.2 | 28.7 | 20.7 |
| Thailand | | 43.0 | 17.0 | 14.0 | 8.0 | 6.0 | 3.0 | 10.8 | 11.5 | 19.4 | 17.9 | 17.4 | 19.5 | 19.3 |
| Vietnam | | | | | | 2.0 | 2.0 | 64.3 | 63.7 | 64.5 | 58.5 | 52.4 | 49.3 | 19.2 |

*Source:* World Bank FinStats 2020 Database.
*Note:* all data are for end-year periods, for the COVID-19 Crisis 2020 column – latest data available is for end-2018

of Korea's, Malaysia's, and Thailand's cases, virtually all of these metrics are superior today relative to the 1997–1998 East Asian Financial Crisis. In particular, as highlighted in Figure I.2.41, NPL ratios are considerably lower today than they were around any of the previous major recent crises in EAP. One area where some banking sectors in EAP appear to be in a relatively less solid position than in previous crises is the liquid assets to total deposits and short-term funding. Nevertheless, overall banking sectors in EAP today appear more resilient and better prepared to deal with the shocks, like the COVID-19 pandemic, than they were two decades ago. According to one bank with a strong regional presence interviewed in early March, "banking systems in the region are well capitalized, even overcapitalized in countries like Malaysia and Singapore. Financial systems have strong buffers and overall risk management practices are stronger now than during the SARS outbreak."

**Figure I.2.41.** The banking system is more stable than in previous crises




*Source:* World Bank Finstats 2020 Database.
*Note:* all data are for end-year periods, except for the COVID-19 Crisis 2020—latest data available is for end-2018.

**In this context, what is necessary today may sow the seeds of instability tomorrow.** Indeed, the recent further easing of monetary policy and the stimulus packages that are being put together by governments across EAP countries to respond to the negative impact of the COVID-19 pandemic would likely increase the risks and vulnerabilities of the financial systems in the region given the already record accumulation of private sector/commercial debt in several jurisdictions. Any additional increase in private sector debt (to corporates or households) combined with potential regulatory forbearance is likely to pose two major risks to future financial stability in the region. *First*, the negative impact of growth across the region could increase the risks of defaults among the corporates and households already indebted and more negatively impacted by the pandemic (e.g. firms and households associated with the services and travel industries). *Second,* the additional private sector debt accumulation—on top of already record levels of debt—is likely to exert a drag on future growth in these countries. However, given the need to offset some of the negative impact

and stop further panic and contagion caused by the COVID-19 outbreak from impacting the economies and financial systems around the world, governments and regulators had to act decisively to deter the short-term 'bleeding'.

**These risks and vulnerabilities place a considerable pressure on policymakers to adopt swift measures aimed to limit the possible negative consequences resulting from today's necessary actions.** On the bright side, many emerging markets and developing economies (EMDEs)—including those in EAP—appear to have learned useful lessons from past financial crises. Indeed, stronger policy frameworks have been adopted in the aftermath of past financial crises in EMDEs to improve resiliency (World Bank, 2020). Across EAP countries, in particular, there is: i) stronger regulatory and supervisory regimes related to the financial sectors; ii) greater exchange rate flexibility; iii) more robust fiscal and monetary policy frameworks; iv) increased central bank transparency; and iv) considerable improvements in debt management policies and tools. On the gloomy side, however, the measures needed today to counteract the negative impact of the COVID19 pandemic would likely increase the risks to financial stability across EAP, particularly given the already-high debt levels present in the region.

**Policymakers should consider adopting a multi-pronged approach when tackling the debt challenge, from the debt management, macroeconomic, financial sector and institutional strengthening angles.**[25] Indeed, it is important for governments and policy makers to make sure they build institutions and mechanisms that can balance the benefits and costs associated with the additional increase in debt. This can be achieved by tackling the debt-accumulation challenge through a variety of angles:

- **Debt management.** Sound debt management is instrumental in lowering borrowing costs, enhancing debt sustainability and reducing risks. A prerequisite for sound debt management is balance sheet transparency. Indeed, greater transparency and closer supervisory oversight as well as sound understanding of the NPLs and potential losses is needed. In addition, current existing buffers in the banking sector (e.g. very high level of capitalization in some cases) could be used to cover the costs of debt restructuring as needed.

- **Macroprudential policies.** Sound macroprudential measures will help at mitigating the negative spillovers associated with the excessive debt accumulation. For instance, macroprudential policies restricting lending to households and corporates could slow down the rapid debt accumulation when needed. Pursuing stability-oriented and resilient monetary policy frameworks is key in reassuring markets and investors that authorities are prepared to utilize all necessary tools needed to stabilize the economy and financial markets when confronted with a potentially destabilizing shock. Strengthening monetary policy frameworks and transmission mechanisms is important to better deal with possible financial crises. For example, during periods of financial distress, EMDEs currencies tend to depreciate sharply and suddenly. However, countries with strong monetary policy frameworks, with more credible, transparent, and independent central banks, and with inflation-targeting monetary policy regimes tend to experience smaller exchange rate passthrough to inflation[26].

- **Supervisory and regulatory framework.** Improving financial system regulation and supervision is instrumental in mitigating the risks associated with the excessive debt buildup. This can be done by identifying systemic exposures and making sure appropriate capital buffers are in place; and by implementing robust prudential regulation and supervision which can limit the build-up of systemic financial weaknesses.

25 World Bank (2020).
26 Kose et. al (2019).

- **Further development of the financial systems:** A continued focus on financial market deepening plays a key role in the medium-to-long term, as it contributes to the expansion of a pool of stable long-term domestic savings that are then available for domestic investment. For this, it is important to develop an enabling environment of robust institutions, protection of creditor rights, sound regulatory quality and macroeconomic stability.

- **Crisis resolution frameworks for banks and insolvency for firms:** The use of living wills for banks and implementing robust bank bankruptcy regimes can play a major role in the orderly winding down of insolvent institutions. Having a credible and predictable bank resolution regime is essential for limiting contagion from one failing institution to others by reassuring creditors that the financial system is a whole will continue to function.

- **Leveraging banks as instruments for channeling cash to affected households and firms:** in times of crisis, banks can play a major role in both direct and indirect channeling of cash to the most affected households and firms (e.g. SMEs in services sector). Indeed, lowering interest rates, providing additional liquidity in the financial system, and implementing credit guarantee schemes are indirect ways of channeling cash to households and SMEs, whereas the widespread bank networks can be also leveraged for direct cash transfers to those most in need.

- **Institutional strengthening.** A continued focus on institutional strengthening is necessary to ensure relevant institutions are as well prepared as possible to deal with a possible debt crisis. For instance, promoting good corporate governance can help mitigate risks arising from corporate debt. Indeed, stronger corporate governance can lead to firms choosing equity rather than debt a main financing instrument, can increase hedging of foreign currency positions as a way to protect against external shocks, and can lead to more efficient operation of a company in general. Last, but not least, having an effective bankruptcy and insolvency regime can play a major role in the resolution of private debt crises, and also have benefits outside of crises.

**To conclude, while the EAP financial systems appear to be stronger and with larger buffers than in previous crises, the rapid additional expansion of debt and the economic growth slowdown associated to the COVID-19 is likely to place considerable strains on these systems in the coming months and years.** Therefore, it is essential for authorities to monitor the debt build-up and financial sector risks closely, as well as develop strong debt management tools, implement sound macroprudential policies, maintain a strong financial sector oversight, and continue focusing on institutional strengthening.

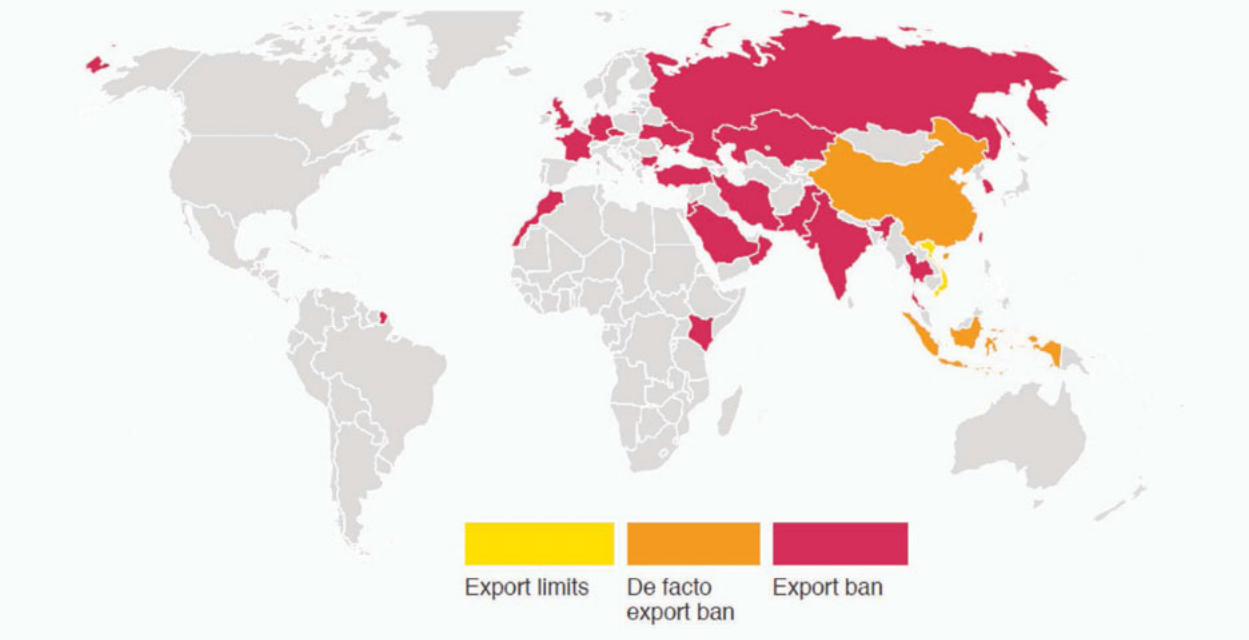
## Trade policy

Several countries are imposing restrictions on exports of medical supplies to avoid domestic shortages and keep prices stable at a critical time. Evenett (2020) found that between January 1 and March 10 of this year, 24 countries have imposed export limits, bans, or de facto bans to medical products (Figure I.2.42). Are these measures justified? What is the likely outcome? Economic theory and recent experience show that these actions are ultimately a global bad. Even at its heyday, the World Trade Organization (WTO) struggled to cope with this behavior. New initiatives are necessary.

Export restrictions in times of crisis have perverse effects. Governments acting in good faith to protect the well-being of their citizens do not consider the unintended adverse consequences of their actions. Such measures hurt importing countries, but they could also be costly for exporting countries. And in addition to the short-term effects, there can be long-term consequences as they reduce the trust in open markets.

The spread of the COVID-19 is driving up the price of medical supplies as production struggles to meet growing demand. For instance, anecdotal evidence shows that the price of face masks and respirators on Amazon have increased five times since the end of January. As prices rise, governments could be tempted to keep the production of key medical supplies for domestic consumers. Restrictive actions by exporting countries reduce global supply, leading to even higher prices. That provokes new export restrictions to insulate domestic markets, generating a "multiplier effect" on world prices.

**Figure I.2.42.** Export restricting measures of medical supplies




*Source:* Media reports, assembled by the Global Trade Alert team, University of St. Gallen, Switzerland. 10 March 2020.

Such a sequence of events is more likely in the concentrated markets for certain medical products. For example, the top seven exporting countries of ventilators for artificial respiration (HS Code 901920)—vital for the treatment of COVID-19—account for 70 percent of world exports. If even one of them were to ban exports, prices could increase by up to 10 percent in the short run,[27] and if other countries react, by much more.

Health care for importers—many of which are developing countries—will immediately suffer due to the resulting scarcity and higher prices. In the poorer countries, with limited domestic production capacity, export restrictions on medicines and equipment could be deadly. But exporters may eventually lose out too when world prices spiral up. As in a stadium, if all persons stand up to see better, everyone is less comfortable but no one gets a better view. Prices would be higher than they need to be, and supplies would be distributed neither efficiently nor equitably.

Recent experience shows how these perverse mechanisms work in practice. World food prices shot through the roof in 2006–2007 and then again in 2008–2010. While a variety of factors contributed to the sudden and rapid spikes in food

27 In the short run, there are constraints to expand production. In this context, supply is rigid and does not respond to changes in prices as one would expect in the longer term (i.e., the price elasticity of supply is equal to zero). The impact of export restrictions on world prices is therefore determined by the elasticity of import demand, which for products with the HS code 901920 is close to –1 according to Kee et al. (2008), and the export share of the exporting country imposing the restriction, which is on average 10 percent for the seven largest exporters.

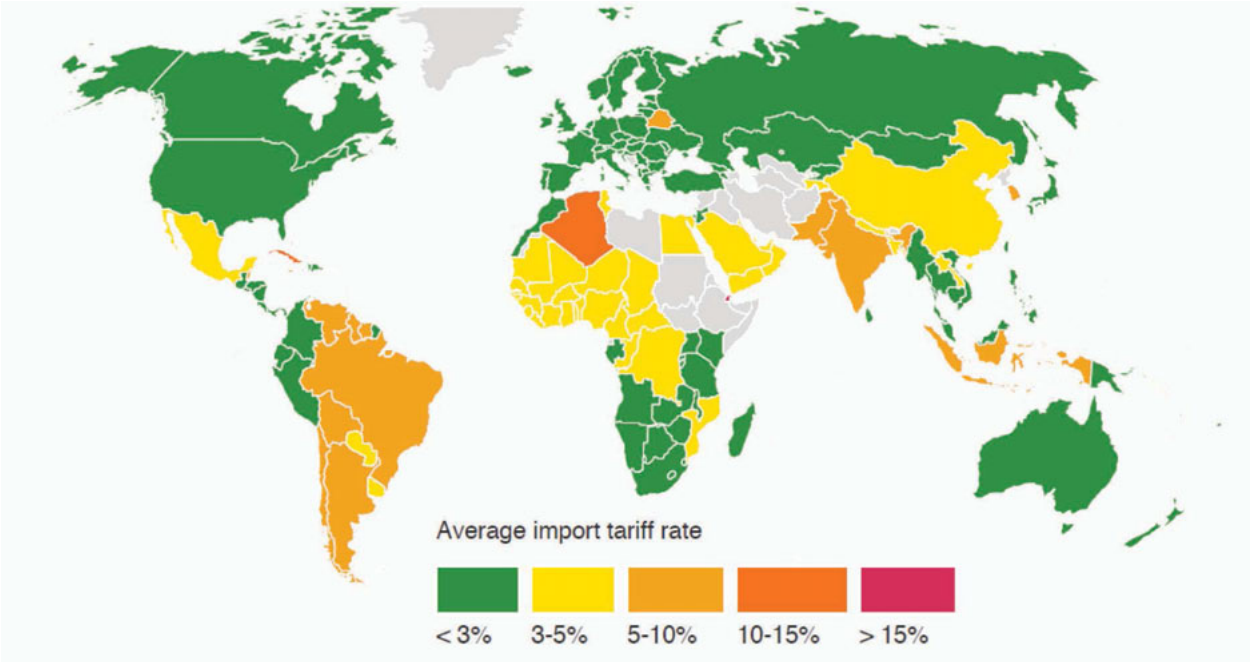
prices—a reduction in key food stocks, increasing demand in emerging economies, and speculative hoarding—export restrictions played an important role. Research at the World Bank showed that in the 2008–2010 period, governments worldwide imposed 85 new export restrictions on food products. These measures covered 20 percent of world trade in staple foods, and even more for some key products such as rice and wheat. A conservative estimate indicates that if governments had refrained from export restrictions, world food prices would have been 13 percent lower and fewer people would have been thrust into poverty (Giordani et al., 2016). For rice, the impact of trade policy distortions has been estimated to account for 45 percent of the increase in world prices (Martin and Anderson, 2012).

In addition to the short-term effects, there are longer-term consequences. If in bad times a country is subject to the export-restricting actions of producing countries, the trade will be seen as an unreliable way of maintaining access to essential products. There will be a greater pressure to move toward more self-reliance in good times as insurance against the bad times.

Any shift away from openness will be costly for all. As countries impose restrictions in one sector, the erosion of trust and reputations for restraint could lead to copycat export bans in other areas. The undermining of trade could undermine the huge benefits it generates from specialization, economies of scale, enhanced variety, and diffusion of technologies. For example, global value chains—such as the production of bulk drugs at scale in China and their incorporation into specific formulations in India—have reduced prices and improved access everywhere. In many poorer countries, where there is limited domestic capacity and heavy reliance on imports, the consequences of export restrictions, for example on vaccines, could be deadly. Initial estimates suggest that the COVID-19 shock has increased poverty even in the relatively well-off countries of South East Asia.

Consuming countries could do their part too by liberalizing imports of key medical supplies. As Figure I.2.43 shows, around 90 countries—many of which are developing countries—collect taxes on the imports of medical devices that would be needed in the response to COVID-19 (Evenett, 2020). For example, 46 developing countries tax their health care by imposing tariffs on respirators of between 5 and 25 percent. The effect of these measures is to further increase the domestic price of essential products, thus further reducing welfare.

**Figure I.2.43.** Import tariffs on medical products




*Source:* WTO, Tariff download facility (latest year available). Unweighted mean applied MFN import tariff rate.
*Note:* Countries not reporting import tariff data to the WTO are marked in grey.

It is key to ensure that both imports and exports remain free to flow in good times and bad. While the World Trade Organization has rules to limit import restrictions, it has struggled to discipline export restrictions. For example, there are few restrictions on the use of export taxes in the WTO, and the prohibitions on export bans are incomplete. Article XI of the GATT 1994 does prohibit quantitative restrictions on exports, but its paragraph 2(a) permits temporary restrictions in order to prevent critical shortages of food or other goods.[28] Even the unfinished Doha Round was devoted primarily to traditional forms of import protection. To deal with this gap, WTO members—or at least the G20 countries—could agree not to restrict exports of COVID-19-related medical products (so the first step would be to identify and agree multilaterally on what these products are). Similarly, it would be in the interest of importing countries to eliminate tariffs on essential medical products during the emergency. Mutual reform would also be an opportunity for long-term gain as it reinforces trust in the international trade system to efficiently allocate key medical products across countries.

A different example of international cooperation between international organizations and private firms in financial services could illustrate a complementary course of action. During the Great Recession, the financial crisis was propagated eastward as Western banks responded to their weakened positions in domestic markets by reducing the credit supply in emerging Europe. These developments could have undermined the role of foreign financial institutions as a stabilizing force during crises and had a chilling effect on financial liberalization.

The antidote to the virus of financial nationalism was the Vienna Initiative. This initiative brought together all the key private and public stakeholders in the EU-based cross-border bank groups active in emerging Europe, including the largest banking groups, home and host country regulatory and fiscal authorities, and major international financial institutions, such as the European Bank for Reconstruction and Development (EBRD), European Commission, IMF, and the World Bank. The initiative specifically seeks to limit the negative fallout from nation-based uncoordinated policy responses to the global crisis and to avoid a massive and sudden de-leveraging by cross-border bank groups in emerging Europe. The foreign banks that took part in the Vienna Initiative, a public-private coordination mechanism to guarantee macroeconomic stability in emerging Europe, proved to be more stable lenders.

International cooperation could also aim at supporting production that has a positive externality in a health crisis. A precedent in medicine could be adapted for the current situation. Traditionally, public-private partnerships have been established to create new drugs or improve access to drugs where prices are high because of intellectual property rights rather than export restrictions. For example, the Meningitis Vaccine Project helped develop a new vaccine that has virtually eliminated the recurring outbreaks of meningitis that devasted 26 African countries for decades.[29] Similar initiatives could also ensure access to medicines and medical equipment during the current crisis.

International organizations could catalyze collaboration to expand the supply of key medical products to deal with the COVID-19. Private companies could be directly contracted to expand production to fulfill the needs of developing countries. Some such initiatives are already underway.[30] But to generate the greatest benefits, aid for production should be given to countries based not on consumer needs but producer comparative advantage. The chosen locations would benefit from new investment and jobs but would be required to keep trade completely free. Openness would ensure that essential medical products are produced where it is most efficient and flow where they are most needed.

28 This exception appears to have been interpreted relatively broadly in justifying the application or threat of export barriers, in cases such as the U.S. proposal for an export ban on soybeans in 1973. Article 12 of the WTO Agreement on Agriculture requires that developed members and net-exporting developing country members introducing export restrictions under this provision take into account the implications for importing members' food security, and notify the committee on agriculture, preferably in advance. However, these notifications are rarely done.

29 The project was coordinated by WHO and PATH with substantial funding from the Bill and Melinda Gates Foundation. Technology was transferred from the United States and the Netherlands to the Serum Institute of India, which agreed to manufacture the vaccine at the low target price of 50 cents per dose. Since the vaccine's launch at the end of 2010, more than 230 million people in 16 countries in Africa's meningitis belt have been vaccinated against meningitis A.

30 For example, in February 2020 the Asia Development Bank provided a CNY 130 million ($18.6 million) private sector loan to Wuhan PRC-based pharmaceutical distributor Jointown Pharmaceutical Group Co. Ltd., to support the continued supply of essential medicines and personal protective equipment.

## Polices to address the poverty impact

Several countries already affected by the COVID-19, have taken effective measures to protect or cushion the effect on the poorest populations. While specific policy actions will depend on the countries' economic vulnerabilities and existing social protection and health systems, the following are general principles that apply more widely to lessen the immediate impact on families' well-being. Measures can be distinguished between those that are targeted at handling the emergency and relieving the situation of families and firms at the time of the outbreak (very short-term) and those geared towards the recovery of the economy after outbreak is substantially over, ensuring that the most vulnerable are able to quickly reengage in income-generating activities.

*Interventions towards containment and mitigation of health effects*

- **Provide and expand sick pay/leave** to both alleviate the adverse economic effects of the health shock, but also incentivize appropriate social distancing measures. For instances, Malaysia has announced financial assistance of RM 600 (around USD 150) per employee per month for up to 6 months for workers who are forced to take leave without pay, to be delivered through the existing Employment Insurance System, targeted to lower paid workers.

- **Provide free or subsidized testing and treatment of COVID-19,** to limit financial harm of health-related expenditures and ensure that families are diagnosed and treated regardless of their financial situation. In China, cost of treatment for everyone is being covered through public budget since end January. In Thailand, instead, the social security agency will cover all medical costs of those infected with COVID-19.

*Interventions to support the poor and newly unemployed affected by the economic shutdown*

- **Deploy existing safety nets and social insurance programs,** such as cash and in-kind transfers, to provide temporary monetary relief for families whose earnings have been adversely hit by the outbreak. In contexts of high labor informality, access to safety nets is particularly important, since informal workers are more exposed to the adverse economic effects of shock, than with formal employment who have social insurance as well as sick leave. Where conditional cash transfer programs exist, waiving conditionality for a period could enable expansion of coverage, where needed. China, Indonesia, and Malaysia have already expanded cash transfers as a response to the pandemic.[31]

  Even expanding existing social assistance programs could face challenges if programs lack basic information on COVID-affected individuals who are not already beneficiaries included in program information systems. In such cases, transfers targeted to specific groups—e.g., through geographic targeting or targeting to specific age groups—could facilitate expanded coverage, even if imperfectly. In Hong Kong, SAR, China, the government is providing cash transfers to all adult permanent residents and reducing public housing rents (around 45 percent of the population live in public housing) to relieve people's financial burden and boost local consumption. Although social insurance may benefit relatively few individuals in countries with large informal sectors, where unemployment benefit programs exist, temporary adjustments to the program criteria—such as easing the

31 China extended coverage and increased the benefit level of *Dibao* social assistance and temporary assistance programs, Indonesia will increase the benefit of the food assistance programs targeted to the bottom quarter of the population for six months, and Malaysia move forward the increase in cash transfer and added a supplemental payment.

conditions to receive benefits—can help expand coverage to a wider range of individuals.[32] Adjustments can also be made in the duration of benefits, as needed.

- **Support firms' efforts to retain workers,** to lessen the employment impacts of the outbreak. In Republic of Korea, for example, the Government is financing employment retention subsidies, to help firms finance continued employment of their workers in the face of sharp revenue declines. Elsewhere in the region, governments are temporarily exempting or deferring social insurance contributions to support firms and employees to weather difficult times. For instances, Cambodia has provided the tourism, garment and footwear sectors with tax relief and exemption from contributing to social security funds and provided suspended-workers with income payment co-funded by firms and government.

*Short-term measures to avoid long-term impacts of the crisis*

- **Provide school meals for families reliant on them,** by delivering to families and making them available in the event of school closures or by providing students with the money to cover for the meal (as in Bihar and Kerala in India and in Jamaica). Short-term impacts on family incomes can potentially translate into long-term impacts on children's human capital, not only via lost time in the classroom, but through adverse impacts on child nutrition, if appropriate measures are not taken on a timely manner.

*Programs to support the reintegration of workers after the emergency crisis*

- **Enhance employment support services,** helping job-seekers find employers, as well as by providing training or apprenticeship opportunities for workers to upgrade their skills. Already in China, as the outbreak is winding a, local governments have started providing incentives in the form of temporary subsidies to local businesses to prioritize poor households when filling available job opportunities. In Malaysia, the authorities are encouraging use of outbreak-induced downtime to encourage skills upgrading through deduction of training related expenses, subsidizing short courses in digital skills and highly skilled courses, and increasing the claimable training cost for affected sectors. Cambodia is to provide retraining and upskilling programs as well as job search services

- **Travel subsidies for migrants.** In China, the government has put in place measure to enhance coordination across line ministries and between migrant-sending and receiving regions to provide transportation and employment services to support return to work.

- **Strengthen measures to support school retention,** particularly among secondary school students. Across many countries, schools are being closed. The longer a child is out of school, the less likely she is to return. Measures to ensure that long-distance learning is reaching the most vulnerable, considering that access to technology might be limited to them, will be key to keep students engaged. In countries where cash transfers with conditions related to school enrolment are present, upping the benefits for those most-at-risk levels could further encourage students return once classes are resumed. Additional flexibilization of re-entry requirements might also be needed. High stakes standardized tests may need to be offered online or postponed while remote learning mechanisms are developed and rolled out (Vietnam, College Board in the US, International Baccalaureate Organization).

32 Similarly, during the global financial crisis, there was reliance on extension of unemployment benefit payment periods (Thailand), increases in both period and level of UI benefits (Mongolia and Japan) and reduction in contribution period to qualify for unemployment benefits (Mongolia). A different example is provided by the Fiji National Provident Fund post-TC Winston, where contributors were allowed to withdraw a significant amount of their savings. This provided short-term relief but has seriously impacted the value of retirement savings.

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## Annex 1 Regional and sectoral aggregations

**Annex Table I.2.10.** Regional concordance

| | *Region/Country* | *GTAP concordance* |
|---|---|---|
| 1 | Oceania (ANZ) | Australia (AUS), New Zealand (NZL) |
| 2 | Rest of Oceania (XOC) | Rest of Oceania (XOC) |
| 3 | China (CHN) | China (CHN) |
| 4 | Hong Kong, SAR, China (HKG) | Hong Kong, SAR, China (HKG) |
| 5 | Japan (JPN) | Japan (JPN) |
| 6 | Republic of Korea (KOR) | Republic of Korea (KOR) |
| 7 | Taiwan, China (TWN) | Taiwan, China (TWN) |
| 8 | Cambodia (KHM) | Cambodia (KHM) |
| 9 | Indonesia (IDN) | Indonesia (IDN) |
| 10 | Lao PDR (LAO) | Lao PDR (LAO) |
| 11 | Malaysia (MYS) | Malaysia (MYS) |
| 12 | Philippines (PHL) | Philippines (PHL) |
| 13 | Singapore (SGP) | Singapore (SGP) |
| 14 | Thailand (THA) | Thailand (THA) |
| 15 | Vietnam (VNM) | Vietnam (VNM) |
| 16 | Rest of East Asia (XEA) | Mongolia (MNG), Rest of East Asia (XEA), Brunei Darussalam (BRN), Rest of Southeast Asia (XSE) |
| 17 | India (IND) | India (IND) |
| 18 | Rest of South Asia (XSA) | Bangladesh (BGD), Nepal (NPL), Pakistan (PAK), Sri Lanka (LKA), Rest of South Asia (XSA) |
| 19 | Canada (CAN) | Canada (CAN) |
| 20 | United States (USA) | United States of America (USA) |
| 21 | Brazil (BRA) | Brazil (BRA) |
| 22 | Rest of Latin America & Caribbean (XLC) | Mexico (MEX), Rest of North America (XNA), Argentina (ARG), Bolivia (BOL), Chile (CHL), Colombia (COL), Ecuador (ECU), Paraguay (PRY), Peru (PER), Uruguay (URY), Venezuela (VEN), Rest of South America (XSM), Costa Rica (CRI), Guatemala (GTM), Honduras (HND), Nicaragua (NIC), Panama (PAN), El Salvador (SLV), Rest of Central America (XCA), Dominican Republic (DOM), Jamaica (JAM), Puerto Rico (PRI), Trinidad and Tobago (TTO), Rest of Caribbean (XCB) |
| 23 | Europe (EUR) | Austria (AUT), Belgium (BEL), Cyprus (CYP), Czech Republic (CZE), Denmark (DNK), Estonia (EST), Finland (FIN), France (FRA), Germany (DEU), Greece (GRC), Hungary (HUN), Ireland (IRL), Italy (ITA), Latvia (LVA), Lithuania (LTU), Luxembourg (LUX), Malta (MLT), Netherlands (NLD), Poland (POL), Portugal (PRT), Slovakia (SVK), Slovenia (SVN), Spain (ESP), Sweden (SWE), United Kingdom (GBR), Switzerland (CHE), Norway (NOR), Rest of EFTA (XEF), Rest of Europe (XER), Rest of the World (XTW) |
| 24 | Russia (RUS) | Russian Federation (RUS) |
| 25 | Rest of Europe & Central Asia (XEC) | Albania (ALB), Bulgaria (BGR), Belarus (BLR), Croatia (HRV), Romania (ROU), Ukraine (UKR), Rest of Eastern Europe (XEE), Kazakhstan (KAZ), Kyrgyzstan (KGZ), Tajikistan (TJK), Rest of Former Soviet Union (XSU), Armenia (ARM), Azerbaijan (AZE), Georgia (GEO), Turkey (TUR) |

| | *Region/Country* | *GTAP concordance* |
|---|---|---|
| 26 | Middle East & North Africa (MNA) | Bahrain (BHR), Iran (IRN), Israel (ISR), Jordan (JOR), Kuwait (KWT), Oman (OMN), Qatar (QAT), Saudi Arabia (SAU), United Arab Emirates (ARE), Rest of Western Asia (XWS), Egypt (EGY), Morocco (MAR), Tunisia (TUN), Rest of North Africa (XNF) |
| 27 | Sub-Saharan Africa (SSA) | Benin (BEN), Burkina Faso (BFA), Cameroon (CMR), Côte d'Ivoire (CIV), Ghana (GHA), Guinea (GIN), Nigeria (NGA), Senegal (SEN), Togo (TGO), Rest of Western Africa (XWF), Central Africa (XCF), Rest of South-Central Africa (XAC), Ethiopia (ETH), Kenya (KEN), Madagascar (MDG), Malawi (MWI), Mauritius (MUS), Mozambique (MOZ), Rwanda (RWA), Tanzania (TZA), Uganda (UGA), Zambia (ZMB), Zimbabwe (ZWE), Rest of Eastern Africa (XEC), Botswana (BWA), Namibia (NAM), South Africa (ZAF), Rest of South African Customs Union (XSC) |

*Source:* Aguiar et. al. (2019), GTAP classification.

**Annex Table I.2.11.** Sector concordance

| | | |
|---|---|---|
| 1 | Crops (crp) | Paddy rice (PDR), Wheat (WHT), Cereal grains nec (GRO), Vegetables, fruit, nuts (V_F), Oil seeds (OSD), Sugar cane, sugar beet (C_B), Plant-based fibers (PFB), Crops nec (OCR), Processed rice (PCR), Sugar (SGR) |
| 2 | Livestock (lvs) | Bovine cattle, sheep and goats, horses (CTL), Animal products nec (OAP), Raw milk (RMK), Wool, silk-worm cocoons (WOL) |
| 3 | Natural resource products (NRS) | Forestry (FRS), Other Extraction (formerly omn Minerals nec) (OXT) |
| 4 | Fossil fuel extraction (FFL) | Coal (COA), Oil (OIL), Gas (GAS), Gas manufacture, distribution (GDT) |
| 5 | Meat products (inc. fisheries) (PMT) | Fishing (FSH), Bovine meat products (CMT), Meat products nec (OMT), Dairy products (MIL) |
| 6 | Other food (OFD) | Vegetable oils and fats (VOL), Food products nec (OFD), Beverages and tobacco products (B_T) |
| 7 | Textiles (TEX) | Textiles (TEX) |
| 8 | Wearing apparel (WAP) | Wearing apparel (WAP) |
| 9 | Leather products (LEA) | Leather products (LEA) |
| 10 | Wood and paper products (WDP) | Wood products (LUM), Paper products, publishing (PPP) |
| 11 | Refined oil (P_C) | Petroleum, coal products (P_C) |
| 12 | Chemical products (inc. rubber and plastics) (CHM) | Chemical products (CHM), Basic pharmaceutical products (BPH), Rubber and plastic products (RPP) |
| 13 | Non-metallic minerals (NMM) | Mineral products nec (NMM) |
| 14 | Metals (MET) | Ferrous metals (I_S), Metals nec (NFM) |
| 15 | Computer, electronic and optical products (ELE) | Computer, electronic, and optical products (ELE) |
| 16 | Machinery and equipment nec (OME) | Electrical equipment (EEQ), Machinery and equipment nec (OME) |
| 17 | Motor vehicles and parts (MVH) | Motor vehicles and parts (MVH) |
| 18 | Transport equipment nec (OTN) | Transport equipment nec (OTN) |
| 19 | Other manufacturing (XMN) | Metal products (FMP), Manufactures nec (OMF) |
| 20 | Electricity (ELY) | Electricity (ELY) |
| 21 | Construction (CNS) | Construction (CNS) |
| 22 | Trade inc. warehousing (TRD) | Trade (TRD), warehousing, and support activities (WHS) |

| | | |
|---|---|---|
| 23 | Accommodation, food and service activities (AFS) | Accommodation, food, and service activities (AFS) |
| 24 | Water transport (WTP) | Water transport (WTP) |
| 25 | Air transport (ATP) | Air transport (ATP) |
| 26 | Other transport (XTP) | Transport nec (OTP) |
| 27 | Communications (CMN) | Communication (CMN) |
| 28 | Recreational and other services (ROS) | Recreational and other services (ROS) |
| 29 | Other services (XSV) | Water (WTR), Financial services nec (OFI), Insurance (formerly isr) (INS), Real estate activities (RSA), Business services nec (OBS), Public Administration and defense (OSG), Education (EDU), Human health and social work activities (HHT), Dwellings (DWE) |

*Source:* Aguiar et. al. (2019), GTAP classification.

## A. COVID-19 effects over GDP growth

**Annex Table I.2.12.** A literature review on the impacts of COVID-19

| *Title and authors* | *Model* | *Assumptions* | *Scenarios* | | *Results* |
|---|---|---|---|---|---|
| **"Coronavirus: The world economy at risk" (OECD, 2020)** | NiGEM macro model | Monetary policy is allowed to be endogenous. The automatic fiscal stabilizers are allowed to operate fully in all countries, implying that governments do not react to the shock by attempting to maintain a previously announced budget path. | Scenario 1: Contained outbreak (short-lived but severe downturn in China) | • Domestic demand in China and Hong Kong, SAR, China is reduced by 4% in the 1Q 2020, and 2% in 2Q 2020.<br>• Global equity prices and non-food commodity prices are lowered by 10% in the first half of 2020.<br>• Higher uncertainty is modeled via a small rise of 10 basis points in investment risk premia in all countries in the first half of 2020. This raises the cost of capital and reduces investment. | • China GDP loss = –0.2% in 2020H1; Reduction of China import demand = –6%<br>• World GDP is reduced by 0.5% in 2020; Global trade declines 0.9% in 2020 (and 1.4% in first half of 2020) |

| *Title and authors* | *Model* | *Assumptions* | *Scenarios* | | *Results* |
|---|---|---|---|---|---|
| | | | Scenario 2: "Domino" (broader contagion) | • Domestic demand in most EAP economies, including Japan and Republic of Korea, and private consumption in the advanced northern hemisphere economies is reduced by 2% (relative to baseline) in 2Q 2020 and 3Q 2020.<br>• Global equity prices and non-food commodity prices are lowered by 20% in the first nine months of 2020.<br>• Heightened uncertainty is modeled via an increase of 50 basis points in investment risk premia in all countries in 2020. | World GDP is reduced by up to 1.5%; World trade is declining by around 3.75% in 2020 |
| **"Coronavirus Casts Shadow Over Credit Outlook" (S&P, 2020)** | | • Assumption that the supply side of the economy is unchanged, meaning that output after the COVID-19 shock returns to its original path. | Scenario 1 | • Top Asia-Pacific Risk: COVID-19 restrictions set back China's growth (risk level: high);<br>• Top Global Risk: COVID-19 restrictions less systemic globally, with sector variations (risk level: elevated) | • China's GDP growth loss of 0.7% in 2020. Full recovery in 2021<br>• Global GDP growth loss of 0.3%; the United States and Europe may experience minimal reductions in growth, while the impact is largest in East Asia. |

| *Title and authors* | *Model* | *Assumptions* | *Scenarios* | | *Results* |
|---|---|---|---|---|---|
| **"The Global Macroeconomic Impacts of COVID-19" (McKibbin and Fernando, 2020)** | G-Cubed Multi-Country Model—Global hybrid DSGE/ CGE | • Six sectors and 24 countries; long-run stock equilibrium through the adjustment of asset prices; sticky nominal wages adjust over time based on country-specific labor contracting assumptions; short-run rigidities; heterogeneous households and firms | Scenario 1 | • China shock, Low severity, Temporary<br>• Attack rate for China = 1%; Case fatality rate China = 2% | GDP loss (2020): China = –0.4%; USA = –0.1%; Japan = –0.3%; Republic of Korea = –0.1% |
| | | | Scenario 2 | • China shock, Middle severity, Temporary.<br>• Attack rate for China = 10%; Case fatality rate China = 2.5% | GDP loss (2020): China = –1.9%; USA = –0.1%; Japan = –0.4%; Republic of Korea = –0.2% |
| | | | Scenario 3 | • China shock, High severity, Temporary<br>• Attack rate for China = 30%; Case fatality rate China = 3% | GDP loss (2020): China = –6%; USA = –0.2%; Japan = –0.5%; Republic of Korea = –0.3% |
| | | | Scenario 4 | • Global shock, Low severity, Temporary<br>• Attack rate for China = 10%; Case fatality rate China = 2% | GDP loss (2020): China = –1.6%; USA = –2%; Japan = –2.5%; Republic of Korea = –1.4% |
| | | | Scenario 5 | • Global shock, Middle severity, Temporary<br>• Attack rate for China = 20%; Case fatality rate China = 2.5% | GDP loss (2020): China = –3.6%; USA = –4.8%; Japan = –5.7%; Republic of Korea = –3.3% |
| | | | Scenario 6 | • Global shock, High severity, Temporary<br>• Attack rate for China = 30%; Case fatality rate China = 3% | GDP loss (2020): China = –6.2%; USA = –8.4%; Japan = –9.9% Republic of Korea = –5.8% |
| | | | Scenario 7 | • Global shock, Low severity, Permanent<br>• Attack rate for China = 10%; Case fatality rate China = 2% | GDP loss (2020): China = –2.2%; USA = –1.5%; Japan = –2.0%; Republic of Korea = –1.3% |

*Source:* OECD (2020), S&P (2020), McKibbin and Fernando (2020).

## B. COVID-19 effects in general

| *Title and Authors* | *Summary* | *Main Findings* |
|---|---|---|
| **The Economic Impact of the COVID-19 Outbreak on Developing Asia (Abiad, et al (2020)** | ADB analysis of the global, regional, and economy- and sector-specific economic impact of the COVID-19 outbreak. It lays out the various channels through which economies will be affected and quantifies the likely magnitudes of the effects under a range of scenarios. It is explicit about the scenario assumptions, and the methods used to calculate the impact. Importantly, the brief provides estimates not only of the global and regional impacts but also granular details on how individual economies—and sectors within economies—will be affected, including under an illustrative worst-case scenario for an economy that experiences a significant outbreak. The brief concludes by summarizing the actions of ADB and its developing member countries (DMCs) are taking to respond to the COVID-19 outbreak. | • The ongoing COVID-19 outbreak affects the PRC and other developing Asian economies through numerous channels, including sharp declines in domestic demand, lower tourism and business travel, trade and production linkages, supply disruptions, and health effects.<br>1. The magnitude of the economic impact will depend on how the outbreak evolves, which remains highly uncertain. Rather than focusing on a single estimate, it is important to explore a range of scenarios, assess the impact conditional on these scenarios materializing, and to update the scenarios as needed.<br>2. The range of scenarios explored in this brief suggests a global impact of $77 billion to $347 billion or 0.1% to 0.4% of global GDP, with a moderate case estimate of $156 billion or 0.2% of global GDP. Two-thirds of the impact falls on the PRC, where the outbreak has been concentrated so far.<br>3. The estimated impact on individual developing Asian economies—and on sectors within these economies—is provided in this brief, including a hypothetical worst-case scenario for a given economy that experiences a significant outbreak of its own. |
| **Monetary and Financial Stability During the Coronavirus Outbreak (Adrian, Tobias 2020, March 11)** | The COVID-19 outbreak affects monetary policy and financial stability:<br>1. Monetary policy response: Central banks can act quickly to help ease the tightening of financial conditions by injecting liquidity and cutting interest rates, thus preventing a possible credit crunch.<br>2. Financial stability policies: Sharp repricing of bank share prices indicates investor worries about profitability; however, banks are generally more resilient than before the 2008 financial crisis because they have greater capital and liquidity cushions. | Current COVID-19 conditions (cause & effects):<br>• Higher uncertainty and tighter financial conditions: a spike in option-implied volatility in equity markets signals higher uncertainty about the future.<br>• Capital flight: spreads of emerging- and frontier-market bonds have widened, indicating investors, declining appetite for riskier investments.<br>• Tightening is underway, financial conditions have tightened, spelling problems for future economic growth: Banks should consider temporary restructuring of loan terms for the most-affected borrowers. |

| *Title and Authors* | *Summary* | *Main Findings* |
|---|---|---|
| **How will country-based mitigation measures influence the course of the COVID-19 epidemic? (Anderson et al 2020)** | Governments will not be able to minimize both deaths from coronavirus disease 2019 (COVID-19) and the economic impact of viral spread. Keeping mortality as low as possible will be the highest priority for individuals; hence governments must put in place measures to ameliorate the inevitable economic downturn. Most countries are likely to have spread of COVID-19, at least in the early stages, before any mitigation measures have an impact. | • Ongoing data collection and epidemiological analysis are essential parts of assessing the impacts of mitigation strategies, alongside clinical research on how to best manage seriously ill patients with COVID-19.<br>• How individuals respond to advice on how best to prevent transmission will be as important as government actions, if not more important. Government communication strategies to keep the public informed of how best to avoid infection are vital, as is extra support to manage the economic downturn. |
| **What will be the economic impact of COVID-19 in the US? Rough estimates of disease scenarios (Atkenson, Andrew 2020)** | This note is intended to introduce economists to a simple SIR model of the progression of COVID-19 in the United States over the next 12–18 months. Where "S" stands for susceptible to the disease, "I" means actively infected with the disease (I), and "R" represents recovered (or dead) and no longer contagious. | • Constant Mitigation over 18 months: There is a substantial delay in the full impact of this disease. A rough estimate is that the health system is overwhelmed when the fraction of the population with an active infection exceeds 1%.<br>• Speed of Mitigation: There are small benefits to speedy application of mitigation measures in terms of reducing the peak fraction of the population infected. The primary benefit of speedy mitigation appears to be in delaying that period of peak infection.<br>• Temporary imposition of extremely severe mitigation measures: The epidemic comes roaring back early in its second year if mitigation is relaxed. |
| **The supply side matters: Guns versus butter, COVID-style (Baldwin, Richard 2020, March 22)** | The combination of containment policies that dampen production and stimulus policies that maintain spending will generate supply-side problems. Cost-push inflation may return, political pressures for price controls and rationing may be irresistible. | • Demand-side stimulus spending combined with public health containment policies is probably going to cause prices to rise and other supply-side problems that need to be addressed.<br>• The containment policies will need to be intelligently crafted. And the longer the containment policies last, the more important it will be for them to be intelligent, flexible and well-informed. |
| **Economics in the Time of COVID-19 (Baldwin, Richard, and Beatrice Weder di Mauro editors 2020a)** | First volume of policy compilation to mitigate the economic damage from the global pandemic | Chapters and authors:<br>1. Macroeconomics of the flu (Beatrice Weder di Mauro)<br>2. Tackling the fallout from COVID-19 (Laurence Boone)<br>3. The economic impact of COVID-19 (Warwick McKibbin and Roshen Fernando)<br>4. Novel coronavirus hurts the Middle East and North Africa through many channels (Rabah Arezki and Ha Nguyen)<br>5. Thinking ahead about the trade impact of COVID-19 (Richard Baldwin and Eiichi Tomiura)<br>6. Finance in the times of coronavirus (Thorsten Beck)<br>7. Contagion: Bank runs and COVID-19 (Stephen G. Cecchetti and Kermit L. Schoenholtz)<br>8. Real and financial lenses to assess the economic consequences of COVID-19 (Catherine L. Mann) |

| *Title and Authors* | *Summary* | *Main Findings* |
|---|---|---|
| | | 9. As coronavirus spreads, can the EU afford to close its borders? (Raffaella Meninno and Guntram Wolff)<br>10. Trade and travel in the time of epidemics (Joachim Voth)<br>11. On plague in a time of Ebola (Cormac O Grada)<br>12. Coronavirus monetary policy (John H. Cochrane)<br>13. The economic effects of a pandemic (Simon Wren-Lewis)<br>14. The good thing about coronavirus (Charles Wyplosz) |
| **Mitigating the COVID Economic Crisis: Act Fast and Do Whatever It Takes (Baldwin, Richard and Beatrice Weder di Mauro editors (2020b)** | Second volume of policy compilation to mitigate the economic damage from the global pandemic | Chapters and authors:<br>1. So far, so good: And now don't be afraid of moral hazard (Charles Wyplosz)<br>2. Flattening the pandemic and recession curves (Pierre-Olivier Gourinchas)<br>3. Limiting the economic fallout of the coronavirus with large targeted policies (Gita Gopinath)<br>4. Italy, the ECB, and the need to avoid another euro crisis (Olivier Blanchard)<br>5. The EU must support the member at the center of the COVID-19 crisis (Alberto Alesina and Francesco Giavazzi)<br>6. Helicopter money: The time is now (Jordi Gali)<br>7. What the stock market tells us about the consequences of COVID-19 (Stefano Ramelli and Alexander Wagner)<br>8. Ten keys to beating back COVID-19 and the associated economic pandemic (Shang-Jin Wei)<br>9. Saving China from the coronavirus and economic meltdown: Experiences and lessons (Yi Huang, Chen Lin, Pengfei Wang, and Zhiwei Xu)<br>10. China's changing economic priorities and the impact of COVID-19 (Jonathan Anderson)<br>11. Singapore's policy response to COVID-19 (Danny Quah)<br>12. The experience of Republic of Korea with COVID-19 (Inkyo Cheong)<br>13. COVID-19: Europe needs a catastrophe relief plan (Agnès Bénassy-Quéré, Ramon Marimon, Jean Pisani-Ferry, Lucrezia Reichlin, Dirk Schoenmaker and Beatrice Weder di Mauro)<br>14. The COVID-19 bazooka for jobs in Europe (Luis Garicano)<br>15. The monetary policy package: An analytical framework (Philip R. Lane)<br>16. Bold policies needed to counter the coronavirus recession (Christian Odendahl and John Springford)<br>17. Europe is ground zero (Ugo Panizza)<br>18. Economic implications of the COVID-19 crisis for Germany and economic policy measures (Peter Bofinger, Sebastian Dullien, Gabriel Felbermayr, Clemens Fuest, Michael Hüther, Jens Südekum, and Beatrice Weder di Mauro)<br>19. Finance in the times of COVID-19: What next? (Thorsten Beck)<br>20. How COVID-19 could be like the Global Financial Crisis (or worse) (Nora Lustig and Jorge Mariscal)<br>21. Protecting people now, helping the economy rebound later (Jason Furman)<br>22. Policy in the time of coronavirus (Pinelopi Goldberg)<br>23. Containing the economic nationalist virus through global coordination (Adam S. Posen)<br>24. The case for permanent stimulus (Paul Krugman) |

| *Title and Authors* | *Summary* | *Main Findings* |
|---|---|---|
| **The coronavirus and the great influenza epidemic: Lessons from the "Spanish flu" for the coronavirus's potential effects on mortality and economic activity (Barro, Ursua, and Weng 2020)** | Mortality and economic contraction during the 1918–1920 Great Influenza Pandemic provide plausible upper bounds for outcomes under the coronavirus (COVID-19). Regressions with annual information on flu deaths 1918–1920 and war deaths during WWI were used to estimate the economic declines for GDP and consumption using data from 43 countries besides the death rate. | • Keeping everything else constant, the flu death rate of 2.0 percent out of the total population in 1918–1920 would translate into 150 million deaths worldwide when applied to the world's population of around 7.5 billion in 2020.<br>• The regression analysis shows declines in the typical country by 6 percent for GDP and 8 percent for private consumption. These economic declines are comparable to those last seen during the global Great Recession of 2008–2009.<br>• The results also show that the 1918–20 pandemic was accompanied by substantial short-term declines in real returns on stocks and short-term government bonds, driven by declines in economic activity and also higher inflation. |
| **Tackling the fallout from the coronavirus (Boone, Laurence (2020 March 2)** | Global growth, after slowing the past two years, will further decline because of the coronavirus. High-frequency indicators such as coal demand, suggest the Chinese economy slowed sharply in the first quarter of 2020. As China accounts for 17% of global GDP, 11% of world trade, 9% of global tourism and over 40% of global demand of some commodities, negative spillovers to the rest of the world are sizeable. The OECD expects a sharp slowdown in world growth in early 2020 with a projection of 2.4%, lower than in any year since the financial crisis, with world GDP falling as low as 1.5%. The OECD Economic Outlook 2019 shows that if G20 economies implement stimulus measures collectively, rather than alone, the growth effects in the median G20 economy will be one-third higher after just two years. | • Containment measures and the fear of infection can cause sudden stops in economic activity.<br>• Beyond health, the priority should be on allowing short-time working schemes and providing vulnerable households temporary direct transfers to tide them over loss of income from work shutdowns and layoffs.<br>• Increasing liquidity buffers to firms in affected sectors are also needed to avoid debt default of otherwise sound enterprises. Reducing fixed charges and taxes and credit forbearance would also help to reduce the pressure on firms facing an abrupt falloff in demand.<br>• If countries announced coordinated fiscal and monetary support, confidence effects would compound the effect of policies. |

| *Title and Authors* | *Summary* | *Main Findings* |
|---|---|---|
| **An effective economic response to the Coronavirus in Europe (Demertzis, et al 2020 March)** | The COVID-19 pandemic represents major economic consequences and is felt through both supply and demand-side channels. A coordinated response by authorities is suggested. The aim is to protect otherwise productive capacity, so it continues to exist after the shock.<br>• First, ample national funds need to be provided to national health services.<br>• Second, targeted measures to support individuals, companies and the local communities most affected should be put in place or reinforced.<br>• Third, broad macroeconomic insurance needs to be provided because targeted measures will not cover the many second-round effects of the shock. | Brugel policy suggestions:<br>• To alleviate financial and cash-flow constraints, and to provide incentives to preserve employment, the authors recommend all EU member states agree to halve companies' social security contributions for three months or cut the payroll tax. Such measures could amount to support of some 2.5 percent of GDP and would be funded by increased national deficits.<br>• The ECB should also provide abundant liquidity, increase swap lines to ensure sufficient dollar liquidity and increase its sovereign-bond purchase program to prevent distress in sovereign bond markets.<br>• This crisis is also an opportunity to revisit business models and, perhaps also in consideration of the threat to the climate, to reassess international mobility. There is a clear role for the EU to play in terms of showing the power of cooperation to citizens. |
| **The Macroeconomics of Epidemics (Eichenbaum, Rebelo, and Traband (2020)** | We extend the canonical epidemiology model to study the interaction between economic decisions and epidemics. Our model implies that people's decision to cut back on consumption and work reduces the severity of the epidemic, as measured by total deaths. These decisions exacerbate the size of the recession caused by the epidemic. The competitive equilibrium is not socially optimal because infected people do not fully internalize the effect of their economic decisions on the spread of the virus. In our benchmark scenario, the optimal containment policy increases the severity of the recession but saves roughly half a million lives in the U.S. | • In our model, the epidemic generates both supply and demand effects on economic activity. These effects work in tandem to generate a large, persistent recession.<br>• There is an inevitable trade-off between the severity of the short-run recession caused by the epidemic and the health consequences of that epidemic. Dealing with this trade-off is a key challenge confronting policymakers. |

| *Title and Authors* | *Summary* | *Main Findings* |
|---|---|---|
| **Fiscal Policy during a Pandemic (Faria-e-Castro, Miguel 2020)** | I use a dynamic stochastic general equilibrium model to study the effects of the 2019–20 coronavirus pandemic in the United States. The pandemic is modeled as a large negative shock to the utility of consumption of contact-intensive services. General equilibrium forces propagate this negative shock to the non-services and financial sectors, triggering a deep recession. I use a calibrated version of the model to analyze different types of fiscal policies: (i) government purchases, (ii) income tax cuts, (iii) unemployment insurance benefits, (iv) unconditional transfers, and (v) liquidity assistance to services firms. | • I find that unemployment insurance benefits are the most effective tool to stabilize income for borrowers, who are the hardest hit.<br>• Unconditional transfers are likely to be less costly in terms of implementation, may be favored by savers, and deliver somewhat similar (weaker) results.<br>• Firm liquidity assistance programs are effective at maintaining employment in the affected sector. |
| **Impact of non-pharmaceutical interventions (NPIs) to reduce COVID19 mortality and healthcare demand (Ferguson et al 2020)** | In the absence of a COVID-19 vaccine, we assess the potential role of a number of public health measures—so-called non-pharmaceutical interventions (NPIs)—aimed at reducing contact rates in the population and thereby reducing transmission of the virus. In the results presented here, we apply a previously published microsimulation model to two countries: the UK (Great Britain specifically) and the US. | • The effectiveness of any one intervention in isolation is likely to be limited, requiring multiple interventions to be combined to have a substantial impact on transmission.<br>• Two fundamental strategies are possible: (a) mitigation, which focuses on slowing but not necessarily stopping epidemic spread—reducing peak healthcare demand while protecting those most at risk of severe disease from infection, and (b) suppression, which aims to reverse epidemic growth, reducing case numbers to low levels and maintaining that situation indefinitely.<br>• We find that that optimal mitigation policies (combining home isolation of suspect cases, home quarantine of those living in the same household as suspect cases, and social distancing of the elderly and others at most risk of severe disease) might reduce peak healthcare demand by two-thirds and deaths by half.<br>• We show that in the UK and US context, suppression will minimally require a combination of social distancing of the entire population, home isolation of cases and household quarantine of their family members. This may need to be supplemented by school and university closures, though it should be recognized that such closures may have negative impacts on the health system. |

| *Title and Authors* | *Summary* | *Main Findings* |
|---|---|---|
| **Coronavirus perceptions and economic anxiety (Fetzer, et al (2020)** | This column uses Google search activity and individual survey data to document a rapid increase in economic anxiety in the US in response to the initial global spreading of the virus. | • Survey respondents tended to overestimate the mortality and contagiousness of COVID-19 but underestimated the non-linear nature of how infectious diseases spread. This suggests that information and public education may play a central role in containment and in managing the negative economic impact of increased economic anxiety.<br>• Our evidence highlights a rapid increase in economic anxiety in the population at large. Because at this time a surge in unemployment numbers across several countries can be expected, measures that directly reduce economic hardship (counter-cyclical measures) and anxiety (cash transfers) will be needed. |
| **Fiscal Policies to Protect People During the Coronavirus Outbreak (Gaspar and Mauro 2020 March 5).** | The IMF believes that health spending must occur regardless of how much room in the budget a country may have. Low-income countries should be given grants or zero-interest loans to finance health spending as experience with past epidemics shows that speed in deploying concessional finance is essential to containing the spread of the disease. Further, developing a vaccine also requires public money. | Depending on their administrative capacity, governments can help people and firms right now in several ways:<br>1. Spend money to prevent, detect, control, treat, and contain the virus, and to provide basic services to people that have to be quarantined and to the businesses affected.<br>2. Provide timely, targeted, and temporary cash flow relief to the people and firms that are most affected, until the emergency abates; give wage subsidies to people and firms to help curb contagion; expand and extend transfers—both cash and in-kind, especially for vulnerable groups. Provide tax relief for people and businesses who can't afford to pay.<br>3. Create a business continuity plan. Some of these measures can occur through administrative means and others would require an emergency budget, which would also take stock of the overall fiscal cost. |
| **Feasibility of controlling COVID-19 outbreaks by isolation of cases and contacts (Hellewell et al 2020)** | The paper uses a mathematical model to assess if isolation and contact tracing are able to control onwards transmission from imported cases of COVID-19. | In most scenarios, highly effective contact tracing and case isolation are enough to control a new outbreak of COVID-19 within 3 months. The probability of control decreases with long delays from symptom onset to isolation, fewer cases ascertained by contact tracing, and increasing transmission before symptoms. |
| **Health security capacities in the context of COVID-19 outbreak: an analysis of International Health Regulations annual report data from 182 countries (Kandel, et al 2020)** | In light of the outbreak of 2019 novel coronavirus disease (COVID-19), we aimed to review existing health security capacities against public health risks and events. We used 18 indicators from the IHR State Party Annual Reporting (SPAR) tool and associated data from national SPAR reports to develop five indices: (1) prevent, (2) detect, (3) respond, (4) enabling function, and (5) operational readiness | • Of 182 countries, 52 (28%) had prevented capacities at levels 1 or 2, and 60 (33%) had response capacities at levels 1 or 2. 81 (45%) countries had prevented capacities and 78 (43%) had response capacities at levels 4 or 5, indicating that these countries were operationally ready.<br>• Half of all countries analyzed have strong operational readiness capacities in place, which suggests that an effective response to potential health emergencies could be enabled, including COVID-19. Findings from local risk assessments are needed to fully understand national readiness capacities in relation to COVID-19. |

| *Title and Authors* | *Summary* | *Main Findings* |
|---|---|---|
| **Early dynamics of transmission and control of COVID-19: A mathematical modeling study (Kucharski et al 2020)** | Combining a mathematical model of severe SARS-CoV-2 transmission with four datasets from within and outside Wuhan, the authors estimated how transmission in Wuhan varied between December 2019, and February 2020. With these estimates, they assess the potential for sustained human-to-human transmission to occur in locations outside Wuhan if cases were introduced. | • The median daily reproduction number (Rt) in Wuhan declined from 2·35 (95% CI 1·15–4·77) 1 week before travel restrictions were introduced on Jan 23, 2020, to 1·05 (0·41–2·39) 1 week after.<br>• These results show that COVID-19 transmission probably declined in Wuhan during late January 2020, coinciding with the introduction of travel control measures |
| **Real-time weakness of the global economy: a first assessment of the coronavirus crisis (Leiva-Leon, Perez-Quiros, and Rots 2020 March).** | This paper constructs an empirical framework to measure the degree of weakness of the global economy in real-time. It relies on nonlinear factor models designed to infer recessionary episodes of heterogeneous deepness, capturing the intuition that recession periods are different from each other. They introduce a mixed frequency dynamic factor model that allows for heterogeneous deepness across recessionary episodes. The proposed model is fitted to twelve of the world's largest economic regions and emerging markets. They build a Global Weakness Index with three main features. (First, it can be updated as soon as new regional data is released, shown by measuring the economic effects of coronavirus. Second, it provides a consistent narrative of the main regional contributors to the world economy's weakness. Third, it allows us to perform robust risk assessments based on the probability that the level of global weakness would exceed a certain threshold of interest in every period of time.) | • The paper finds after the release of the soft indicators on March 2nd, 2020 the Global Weakness Index has sharply increased at a speed at least comparable to the experienced in the 2008 crisis.<br>• By allowing for heterogeneous recessions turns, inferring periods of weak real activity growth associated with both advanced and emerging economies outperform frameworks previously proposed in the literature. The proposed framework for monitoring the state of the world economy can be then potentially extended in different ways. |

| *Title and Authors* | *Summary* | *Main Findings* |
|---|---|---|
| **Macroeconomic Policy in the Time of COVID-19: A Primer for Developing Countries (Loayza and Pennings, 2020)** | A viable goal for macroeconomic policy in developing countries is avoiding procyclicality, ensuring the continuity of public services for the economy, and supporting the vulnerable. Because COVID-19 is truly a global shock, international coordination is essential, in economic policy, health care and science, and containment and mitigation efforts. Critical times call for well-designed government action and effective public service delivery—preserving, rather than ignoring, the practices for macroeconomic stability and proper governance that serve in good and bad times. | The macroeconomic recovery response to the COVID-19 pandemic in developing countries may involve both monetary and fiscal stimulus. However, as monetary transmission tends to be weak, fiscal space is limited, and fiscal multipliers are often small, the effectiveness of demand-oriented macroeconomic policy may be low in many developing countries. Instead, the main goal, rather than stimulus, should be continuity of public services—including health care—and support to the vulnerable.<br>International cooperation will be needed as developing country governments see their revenues drop and their access to financial markets dry up. International coordination and cooperation may yet prevent the worst effects of the COVID-19 pandemic. |
| **How can Asia avoid fallout if COVID-19 triggers a debt crunch? (Park, Cyn-Young 2020 March).** | The coronavirus pandemic poses another global debt crisis. A pandemic-induced economic slowdown implies lower corporate earnings and greater debt servicing burdens on companies. This would lead to increasing defaults, plunging investor confidence, and potentially a widespread credit crunch. How policymakers respond now will decide whether the recovery path will be V, U, or L-shaped. But Asia's economies have generally maintained sound macroeconomic policies, making it fortunately resilient. | This article argues for three avenues of approach that policymakers can take to avoid a debt crisis.<br>• First, G20 policymakers should immediately coordinate actions to provide timely and effective policy support to avoid market panic while taking aggressive, preemptive measures to contain the spread of the virus.<br>• Second, coordinated efforts within and across borders are needed to manage business continuity, shore up confidence, prevent massive defaults through tax relief and emergency loans, and provide adequate liquidity in the financial systems.<br>• Third, regulators should carefully monitor and guide orderly reduction of undue exposures to leveraged loans and collateralized loan obligations among banks and non-bank investors, particularly those that are systemically important. |
| **Observations on Chinese GDP growth and COVID-19 (Scissors, Derek. (2020 February 28)** | The coronavirus has caused China to report honest GDP figures. The National Bureau of Statistics (NBS) described January–February's economic activity as a depression. The services index fell 13 percent. Exports dropped 16 percent, retail sales 20.5 percent, fixed asset investment 24.5 percent. Most shocking, the NBS admitted one measure of unemployment topped six percent. Yet the policy response has been muted. | Reasons behind policy response:<br>• China is heavily leveraged and has a much larger loan base than during 2009. Another is simply that it's hard to seek or offer new credit with people confined to their homes. With many producers and consumers entirely shut down in February, even partial reopening is a V-shaped recovery.<br>• International partners will become the main economic problem. As with China, it would have been helpful if the US and others were not setting extremely low policy interest rates and/or running huge fiscal deficits before COVID-19 hit since the impact of doing so is now smaller. |

| *Title and Authors* | *Summary* | *Main Findings* |
|---|---|---|
| **COVID-19 blasts the Chinese economy (Scissors, Derek. 2020 March 16)** | This blog claims that current GDP is not very important. A large amount of activity in China is being deferred, blasting poorer workers and financially weak firms. But the labor force, capital stock, and productivity are unchanged. Most firms will reopen and, soon thereafter, people will again be consuming. The second quarter will be weaker than last year, but much stronger than the first quarter, and the third quarter will see even more improvement. The Chinese economy will ultimately recover quickly from the first-quarter contraction, returning to its slow growth fade. | • China's economy is typically driven by consumption. In 2019, the National Bureau of Statistics (NBS) claimed consumption generated 65 percent of first-quarter GDP growth, the highest for the year.<br>• China's benchmark consumption measure is retail sales. But retail sales overlap with but are not the same as the consumption component of GDP. Sales and fixed investment are noted by the government as misleading about GDP. They are also publicized to show economic progress while GDP components are not. |
| **Estimation of the reproductive number of novel coronavirus (COVID-19) and the probable outbreak size on the diamond princess cruise ship: A data-driven analysis (Sheng et al 2020)** | This paper estimates the reproductive number (R0) of COVID-19 virus in the early stage of the outbreak and makes a prediction of daily new cases using Diamond Princess Cruise ship data. | The median with 95% CI of R0 of COVID-19 was about 2.28 (2.06–2.52) during the early stage experienced on the Diamond Princess cruise ship. The future daily incidence and probable outbreak size are largely dependent on the change of R0. Unless strict infection management and control are taken, our findings indicate the potential of COVID-19 to cause a greater outbreak on the ship |
| **Review of Ferguson et al "Impact of non-pharmaceutical interventions..." (Shen, Taleb and Bar-Yam 2020)** | • Ferguson, Neil, and an Imperial College team make structural mistakes in analyzing outbreak response.<br>• They ignore standard Contact Tracing allowing isolation of infected prior to symptoms and also ignore door-to-door monitoring to identify cases with symptoms<br>• Their conclusions that there will be resurgent outbreaks are wrong | • After a few weeks of lockdown, almost all infectious people are identified and their contacts are isolated prior to symptoms and cannot infect others.<br>• The outbreak can be stopped completely with no resurgence as in China, after excluding imported international travelers that are quarantined.<br>• Since lockdowns result in exponentially decreasing numbers of cases, a comparatively short amount of time can be sufficient to achieve pathogen extinction, after which relaxing restrictions can be done without resurgence.<br>• The model they use appears to be in the general class of SIR differential equations used in epidemiology and is therefore not well suited for incorporating real-world conditions at fine or large scale. |

*Note:* Summary and Main Findings extracted from each document.

**Annex Table I.2.13.** Select policy responses in the aftermath of the recent crises

| | *East Asian Financial Crisis 1997–1998* | *SARS Crisis 2002–2003* | *COVID-19 Crisis 2020* |
|---|---|---|---|
| **China** | • March 1998: Required reserve ratio was adjusted downward from 13% to 8%.<br>• August 1998: MOF proposed to issue an additional amount of foreign debt equivalent to RMB8 billion. An additional RMB100 billion of treasury bonds were issues, all for infrastructure construction.<br>• July and December 1998: Interest rates were reduced as CB continued its effort to increase the money supply.<br>• Banking system reform: State-owned commercial banks are to be managed autonomously and meet the 8% capital adequacy standard; adopt a system of auditing, classifying loans according to quality and adopt prudent accounting principles and establish provisions of bad debts. To help relieve the burden of the past and enable the commercial banks to begin operating under the new rules, the government has written off some bad loans. In 1998, it also issued RMB 270 billion in domestic bonds to recapitalize the four state-owned commercial banks. | • May 2003: MOF announced that it would allocate an additional RMB 812.6 million to improve the infrastructure and capacity of local medical institutes in a bid to prevent SARS from spreading in rural areas—which was on top of RMB 1.55 billion already channeled to the construction of a nationwide disease prevention and control network.<br>• Due to an extended public denial by local authorities, aggressive public-health measures and economic behavioral changes did not occur in a meaningful way until around the time the WHO issued its first global alert on March 13, 2003 (SARS outbreak emerged in November 2002).<br>• Government implemented various measures, including a reduction in taxes and fees between May and September 2003 for industries that were severely impacted by SARS.<br>• Official fiscal funds designated for the SARS prevention were an estimated CNY 7 billion, less than 0.5% of general government expenditure in 2003. | • The PBOC injected RMB 2.8 trillion liquidity via open market operation since February 3, though most are withdrawn.<br>• The PBOC cut medium-term lending facility (MLF) rate by 10 bps and injected RMB 200 billion (0.2% of GDP) of funds via MLF on 02/17.<br>• 1-year LPR was lowered by 10 bps to 4.05% and 5-year LPR by 5 bps to 4.75% on February 20.<br>• The PBC offered RMB 300 billion in re-lending program for business impacted by the coronavirus outbreak, at MOF subsidized rate of 1.3%.<br>• The PBC offered another RMB 500 billion via re-lending/re-discount facility to support SMEs financing; interest rate of re-lending facility was lowered to 2.5%.<br>• The NDRC allowed high-quality SMEs to issue corporate bonds for repaying loans and replenishing operating capitals.<br>• Policy banks issued RMB 26.5 billion of anti-coronavirus special bonds at low interest rates to support activities that directly link with epidemic control and will allocate special-purpose credit funds totaling RMB 350 billion to SMEs and the private sector.<br>• 02/26: China's banking system provided over RMB 953.5 billion of credit support to help companies restore production.<br>• Regulatory forbearance on the definition of NPLs to encourage banks to increase lending to most affected enterprises and make flexible repayment arrangements until June 30 with small businesses and individuals. |

| | *East Asian Financial Crisis 1997–1998* | *SARS Crisis 2002–2003* | *COVID-19 Crisis 2020* |
|---|---|---|---|
| **Indonesia** | • July 1997: Indonesia widens its trading band for the rupiah in a move to discourage speculators.<br>• August 1997: Indonesia abandons the rupiah's trading band (widening from 8% to 12%) and allows the currency to float freely, triggering a plunge in the currency.<br>• October 1997: Indonesia asks the IMF and World Bank for help after the rupiah falls more than 30% in two months, despite interventions by the country's central bank to prop up the currency. | | • February 20: BI cut its 7-day reverse repo rate by 25 bp to 4.75%. It also slashed its deposit facility rate to 4% and its lending facility rate to 5.5%.<br>• March 2: BI announced measures to stabilize the rupiah as foreign investors sold off Indonesian financial assets from stocks to bonds and after Indonesia officially reported its first COVID-19 cases. They are to stabilize the rupiah's exchange rate, increase foreign exchange liquidity and expand the scope of underlying transactions to provide alternative hedging instruments for foreign investors.<br>• Other policy measures: strengthening monetary operations strategy, adjusting the provision of macroprudential intermediation ratio, expanding the acceptance of QR Indonesian Standard and speeding up the electronification of social assistance fund and local government financial transaction. |
| **Republic of Korea** | • November 1997: The Bank of Korea abandons its effort to prop up the value of the won, allowing it to fall below 1000 against the dollar, a record low. Soon after requests IMF aid and IMF approves a USD$57 billion bailout package.<br>• Financial sector reform program implemented, with 787 insolvent financial institutions closing or merging by 2003 June. | | • February 2020: BOK kept its benchmark policy rate unchanged but is expected to cut interest rates by 25 bp at its upcoming monetary policy meeting.<br>• March 15: BOK has slashed interest rates by 50 bp to 0.75% in an emergency unscheduled meeting.<br>• MOF is preparing extra budget reported to be around USD 10 billion (or 2% of total 2020 budget) will submit to National Assembly for ratification. |
| **Malaysia** | • July 1997: Malaysia's central bank intervenes to defend its currency, the ringgit.<br>• Strict capital controls were imposed by then PM, who introduced a 3.80 peg against the U.S. dollars in early 1998.<br>• Principal measure taken were to move the ringgit from a free float to a fixed exchange rate regime to 3.8 to the dollar. | • BNM kept an accommodative stance going into the year 2003 but responded with a 50 bp cut to its 3-month intervention rate.<br>• 2Q2003: fiscal stimulus package to the size of 2% of GDP was unveiled. | • February 27: RM20 billion Economic Stimulus Package is allotted in Budget 2020. The Government is also committed towards a responsible fiscal policy that is business friendly to attract quality investments.<br>• March 3: Monetary Policy Committee of Bank Negara Malaysia decided to reduce the Overnight Policy Rate (OPR) by 25 bp to 2.50%. The ceiling and floor rates of the corridor of the OPR are reduced to 2.75% and 2.25%, respectively.<br>• March 15: New economic relief measures totaling RM650mn (0.04% of GDP).<br>• To assist businesses and households impacted by the COVID-19 outbreak, Bank Negara Malaysia (BNM) is allocating RM 3.3 billion of financing facilities to provide support for SMEs in sustaining business operations, safeguard jobs and encourage domestic investments. |

| | *East Asian Financial Crisis 1997–1998* | *SARS Crisis 2002–2003* | *COVID-19 Crisis 2020* |
|---|---|---|---|
| **Philippines** | • In response to Thailand's crisis on July 2, BSP raised the overnight rate from 15% to 32%.<br>• July 1997: The Philippine peso is devalued. The IMF announces that it will make more than a billion dollars available to the Philippines to help relieve pressure on the peso. | | • BSP to cut interest rates by another 25 bp this year, after the quarter-point cut in February that brought the policy rate to 3.75%.<br>• BSP has made available a grant of regulatory relief to banks and quasi banks (QBs) that have sustained losses due to exposures to borrowers, industries and sectors severely affected by the African Swine Flu (ASF) and the Coronavirus Disease 2019 (COVID 19). |
| **Singapore** | • MAS allowed for gradual 20% depreciation of the currency to cushion and guide the economy to a soft landing. | • 2003 July: MAS re-centered the policy band downwards, after having kept a 0% slope since 2001.<br>• Fiscally, the government unveiled an S$230 mn (0.2% of GDP) relief package which was targeted at the worst hit sectors. Measures included tax rebates (for property, fuel, foreign worker levy etc) and bringing loan program for tourism-related SMEs. | • In the February 2020 Budget statement, Finance Minister announced that Singapore would set aside S$6.4 billion to support frontline agencies, businesses, workers and households to tide through the COVID-19 outbreak.<br>• There will also be two other special packages worth more than S$5 billion: (i) A S$4 billion Stabilization and Support Package to help firms with their cash flow and retain workers, as well as support sectors that are directly affected and (ii) a S$1.6 billion Care and Support Package aims to support households with their expenses. |
| **Thailand** | • May 1997: Thailand, with the intervention of Singapore, spends billions of dollars of its foreign reserves to defend the Thai baht against speculative attacks.<br>• July 1997: Thailand devalues the baht. News of the devaluation drops the value of the baht by 20%—a record low. The Thai government requests "technical assistance" from the IMF.<br>• August 1997: Thailand agrees to adopt tough economic measures proposed by the IMF in return for a $17 billion loan from the international lender and Asian nations. The Thai government closes 42 ailing finance companies and imposes tax hikes as part of the IMF's insistence on austerity.<br>• December 1997: The Thai government announces that it will close 56 insolvent finance companies as part of the IMF's economic restructuring plan. 30,000 white-collar workers lose their jobs. | • The government resorted to various off-budget financing measures, including concessionary mortgage loans and debt moratoriums, to shore up domestic demand. | • February 05: BOT unexpectedly cut its benchmark interest rate by 25 basis point, taking it to a record low 1%, as COVID-19 puts further pressure on the struggling economy.<br>• March 02: Bank of Thailand (BOT) has relaxed foreign exchange regulations to curb the baht's strength against the U.S. dollar, at a time when most Asian currencies are depreciating against the greenback due to the coronavirus outbreak. |

# Part II. Slowing Growth and Trade Tensions

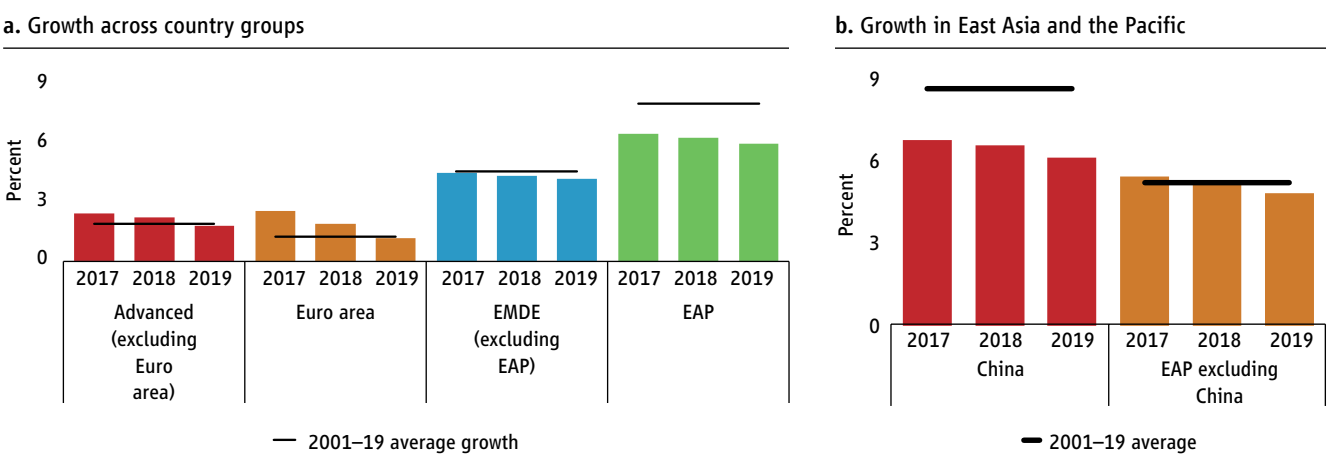
# 1. Chapter I. Trends in Growth, Poverty, and Policy

## 1. Growth trends

**Growth in the region was slowing before COVID-19.** Growth in the region's economies slowed, on average, to 5.8 percent in 2019 from 6.3 percent in 2018, with 10 out of 14 countries experiencing slower growth.[1] In China—the region's major economy—growth decelerated from 6.6 percent in 2018 to 6.1 percent in 2019. Growth in the rest of developing EAP slowed from 5.2 percent in 2018 to 4.7 percent in 2019. Despite the slowdown during the last few years, on average, growth in the EAP region remains higher than in other emerging and developing economies (Figure II.1.1).

**The recent slowdown in growth was attributable in large part to developments outside the region and in China.** Outside the region, the main adverse developments were reduced growth, especially in the Euro area; increased trade protection, especially in the United States; and augmented policy uncertainty. Slower global growth and higher protection meant lower external demand that negatively affected regional export growth (Figure II.1.2). Sluggish exports, resulting in a decline in domestic activity, and heightened policy uncertainty together inhibited regional investment growth. Meanwhile, private and government consumption has supported growth in the region (Figure II.1.3)

**Figure II.1.1.** Growth in advanced economies and developing EAP economies weakened in 2019

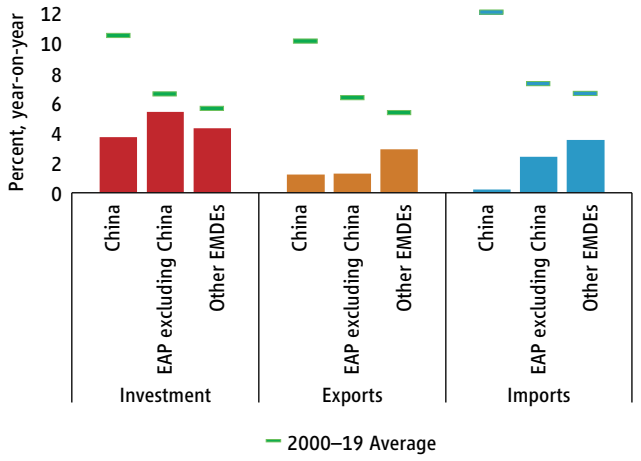



*Source:* World Bank.
*Note:* EMDE refers to Emerging Markets and Developing Economies. EAP refers to East Asia and the Pacific.

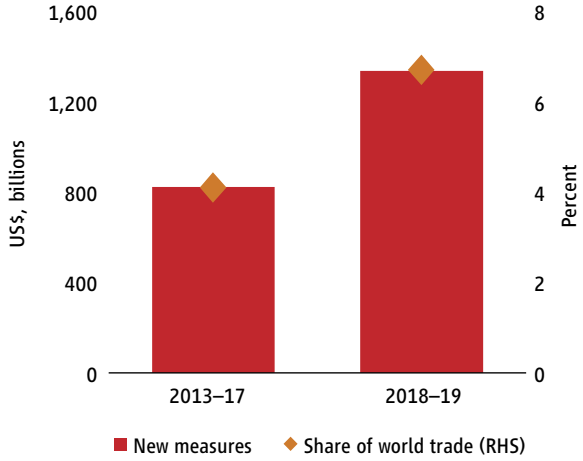
1 This excludes several small island economies for which data for 2019 is not available.

**Figure II.1.2.** Trade and investment growth declined amid increased trade protection and heightened policy uncertainty

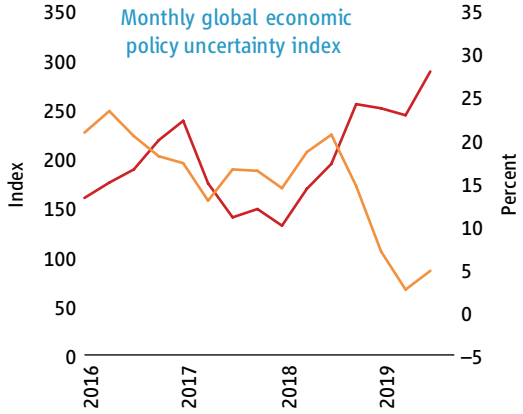
**a.** Trade and investment growth in East Asia and the Pacific



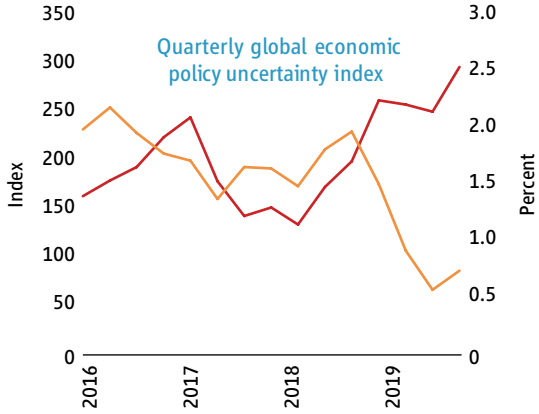

**b.** Share of global trade under new protectionist measures




**c.** Uncertainty and trade

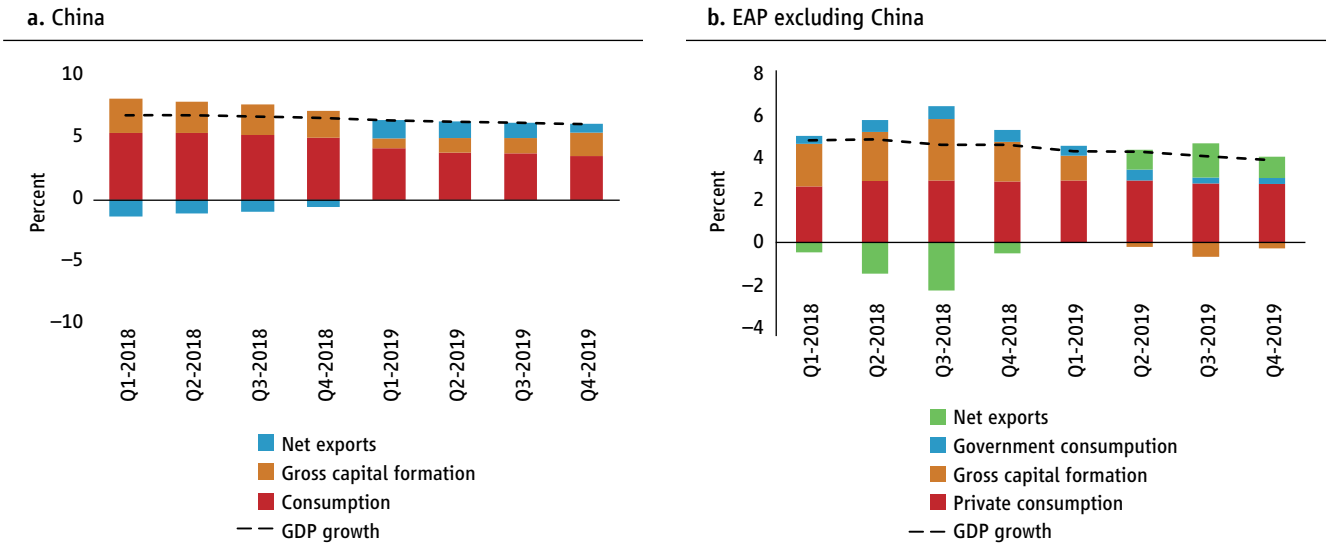



**d.** Uncertainty and investment




*Sources:* Baker et al. (2016); World Bank; World Trade Organization.
*Note:* Panel B. As shown in Global Economic Prospects, January 2020. The figure includes new import-restrictive measures, including tariff and nontariff trade barriers. Annual data are mid-October to mid-October.

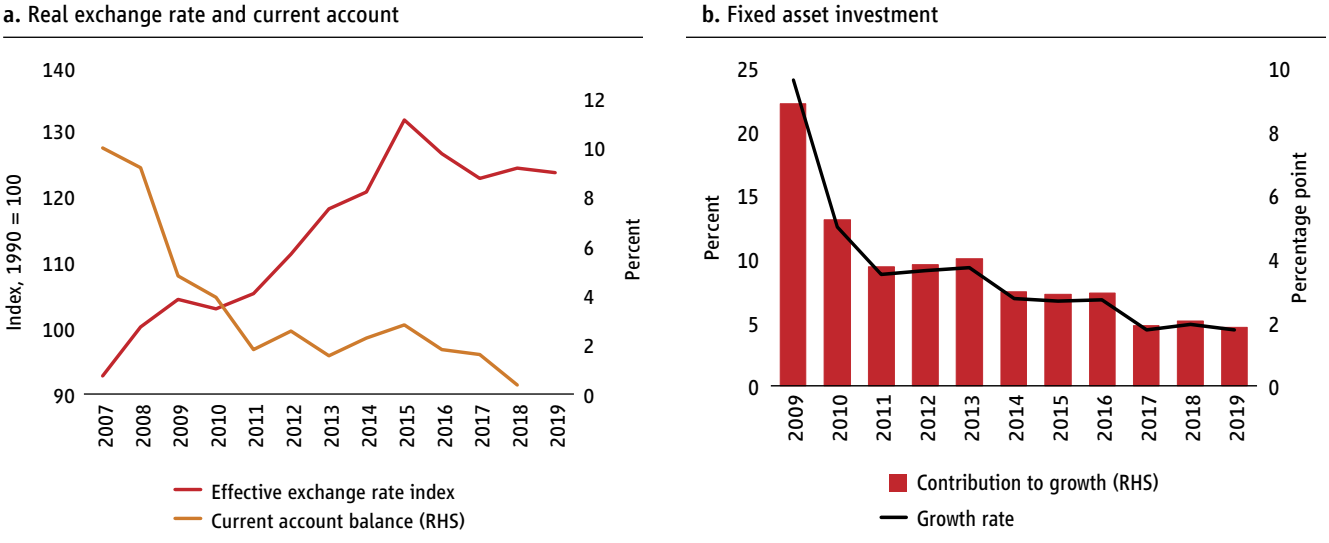
**Figure II.1.3.** Steady consumption has supported growth in the region




*Source:* World Bank staff calculations.
*Note:* For China, consumption includes both private and government consumption.

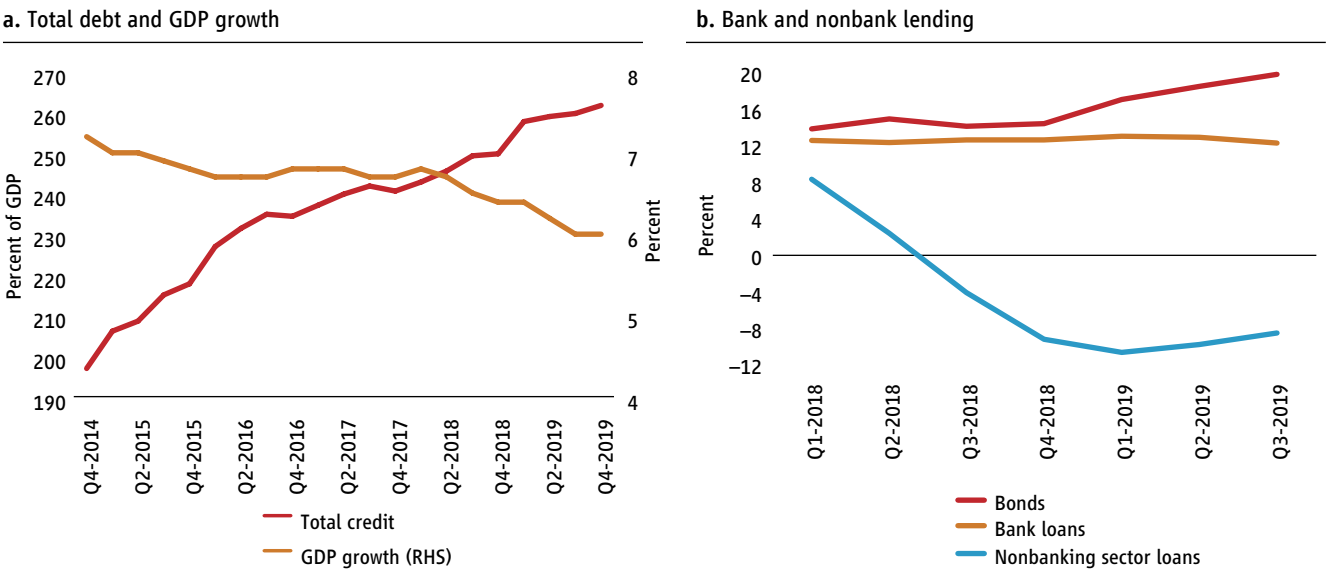
**China's slowdown reflected adverse near-term factors as well as longer-term structural challenges** (Figure II.1.4). China bore the brunt of some of the developments external to the region, especially increased trade protection. Growth also slowed down as China rebalanced its economy—from investment to consumption, from exports to domestic demand, and from manufacturing to services. Tighter regulations on nonbank credit during 2019—a result of de-risking efforts in the financial system—also weighed on domestic activity, especially private investment (Figure II.1.5).

**Figure II.1.4.** China has been rebalancing its economy




*Sources:* Haver Analytics; CEIC; World Bank staff calculations.
*Note:* Real Broad Effective Exchange Rate Index, CPI Based (2010 = 100).

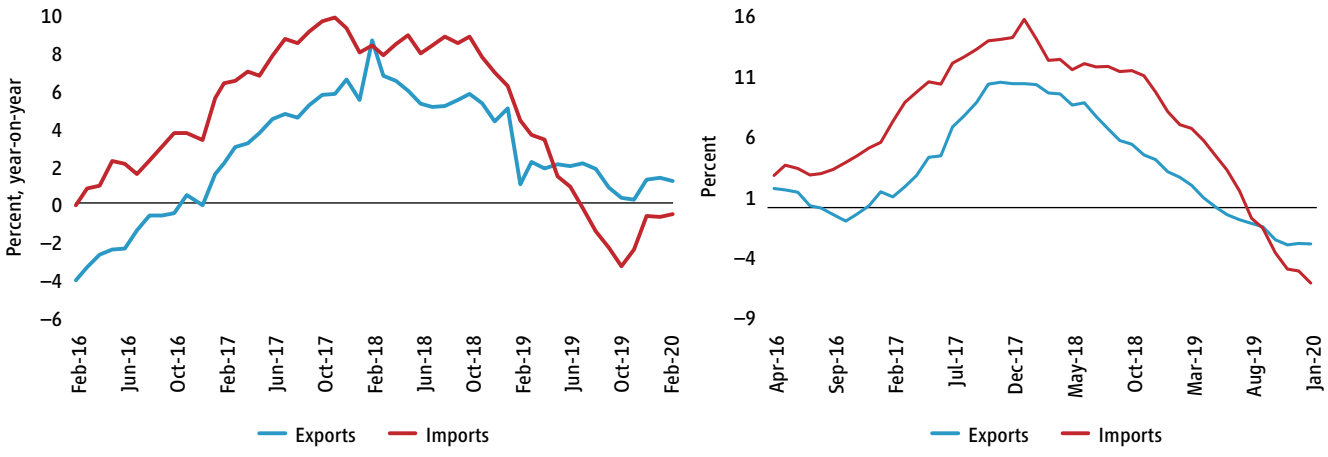
**Figure II.1.5.** Total debt in China has been rising while de-risking curtailed nonbank lending




*Sources:* Haver Analytics; CEIC; International Monetary Fund; World Bank staff calculations.

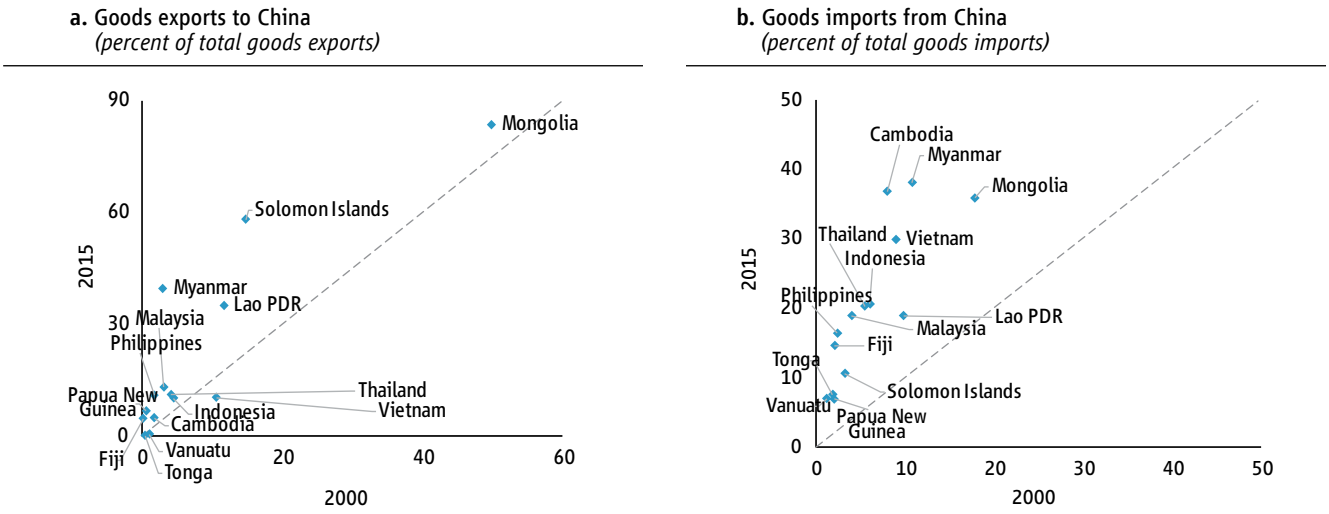
**Slowing growth in the rest of the world and China, as well as increased protection, have negatively affected exports of developing East Asian economies** (Figure II.1.6). The thesis that the rest of the EAP region might be a beneficiary of China-U.S. trade tensions turned out to have limited validity, at least in the short term. China's growing importance as an export destination, for both consumption and intermediate goods, meant that protection that hurts China also hurts the region (Figure II.1.7). Therefore, any gains from trade diversion toward the region were offset by sluggish exports due to a slowing China and the adverse effects of uncertainty generated by the trade conflict. The December 2019 China-U.S. trade agreement has not entirely dispelled this uncertainty and may have created new risks of trade diversion away from the region (see Chapter II.2).

**Figure II.1.6.** Trade in developing EAP has been declining




*Sources:* Haver Analytics; World Bank staff calculations.
*Note:* 12-month moving average. Data include only goods. January and February are estimates based on officially reported cumulative January–February trade flows. The last observation is in February 2020.

**Figure II.1.7.** China is an increasingly important export destination




*Sources:* World Integrated Trade Solutions (2018); Constantinescu et al. (2018).
*Note:* The dotted line signifies a 45-degree line.

**Policy uncertainty and sluggish exports dampened regional investment growth for much of 2019.** The contribution of gross capital formation to growth in developing EAP is estimated to have declined to 1.3 percentage point (pp) in 2019 from around 2.5 pp in 2018. Investment growth has been closely associated with export growth fluctuations in the EAP (Box II.1.1). Investment growth decelerated, particularly in those export-oriented and trade-intensive manufacturing sectors. The slowdown was particularly strong in automobile production, machines, and equipment industries (China, Indonesia, Malaysia), reflecting weaker trade prospects amid trade tensions, which weigh on the investment behavior of firms engaging in exporting or producing intermediate goods. Election-related domestic policy uncertainty and delays in large public infrastructure projects in several major economies also resulted in lower public investment growth (Indonesia, Malaysia, and Thailand).

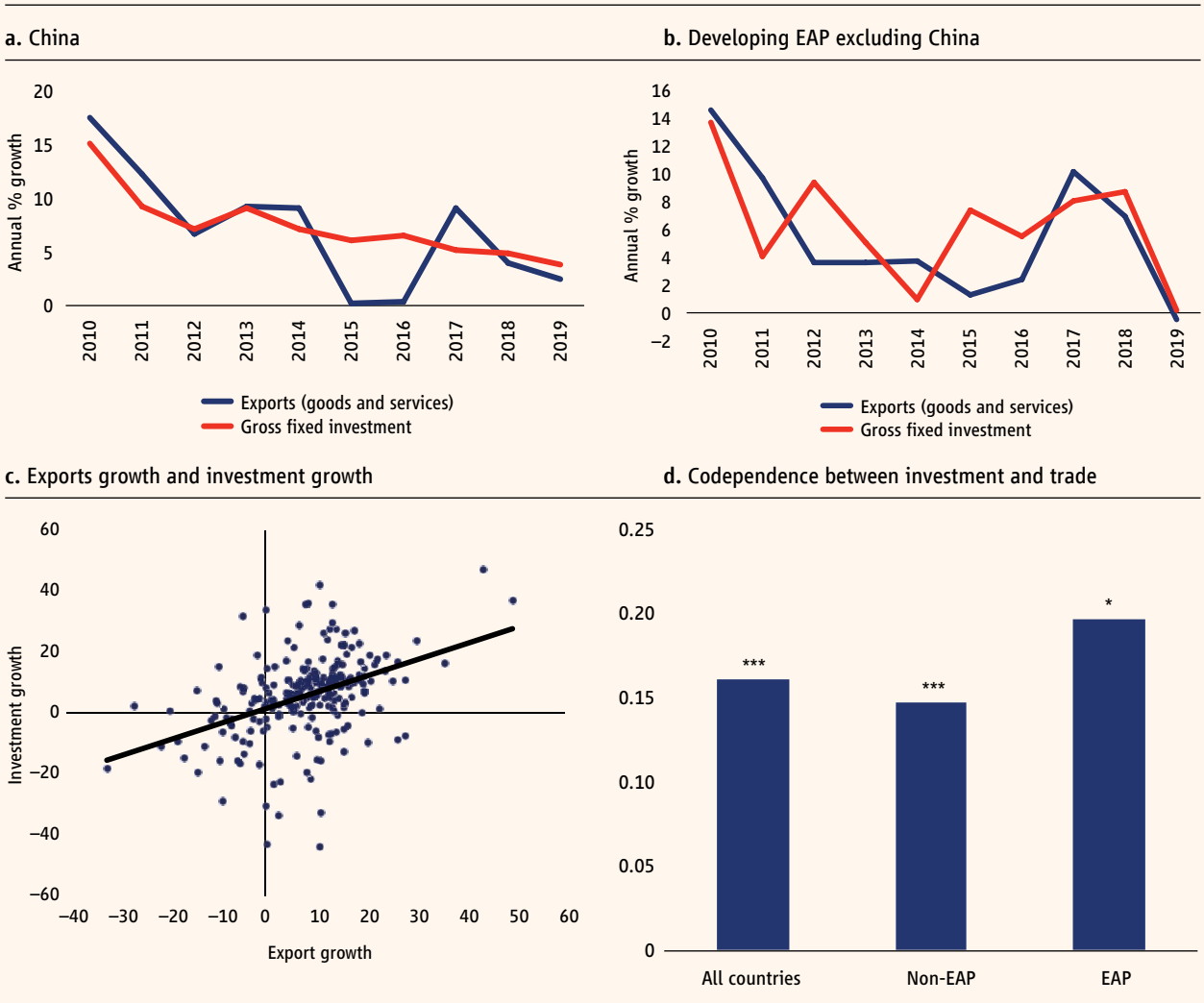
**Inventories made a negative contribution to both investment and GDP growth reflecting an accelerated pace of destocking.** Investment growth weakened across large economies of the region (Figure II.1.8). Weak investment and destocking of inventories meant that imports contracted even faster than exports in several major economies of the region for much of 2019. In China, imports, especially intermediate goods imports contracted in 2019, partly reflecting a high base effect, the drawdown of inventories, disruptions in global and regional supply chains, and a weaker renminbi. In the region's other large economies, imports have also moderated, reflecting a drawdown of inventories (Indonesia, Malaysia, the Philippines, and Thailand).

**Growth in smaller economies decelerated more than expected in the second half of 2019, reflecting country-specific factors** (Figure II.1.9). Growth in Lao PDR slowed to 5.2 percent in 2019 from 6.2 percent in 2018 due to the negative impact of severe floods on the agriculture sector combined with countercyclical fiscal policies implemented by the government to contain credit growth. In Mongolia, growth slowed to 4.9 percent in 2019 from 6.8 in 2018, reflecting multiple factors, including lower commodity prices, falling coal production, and a reduction in the quality of key mineral exports. Growth in Cambodia moderated to 7.1 percent in 2019 from 7.5 percent in 2018, partly reflecting weakened tourism activity and the easing of exports of selected garment and footwear products due to uncertainties with the "Everything But Arms" (EBA) trade preferential treatment granted by the EU. While Papua New Guinea's economic growth rebounded in 2019 driven by a rebound in the resource sector (mainly in its extractive segment earlier affected

## **Box II.1.1.** Export growth and investment growth in developing EAP

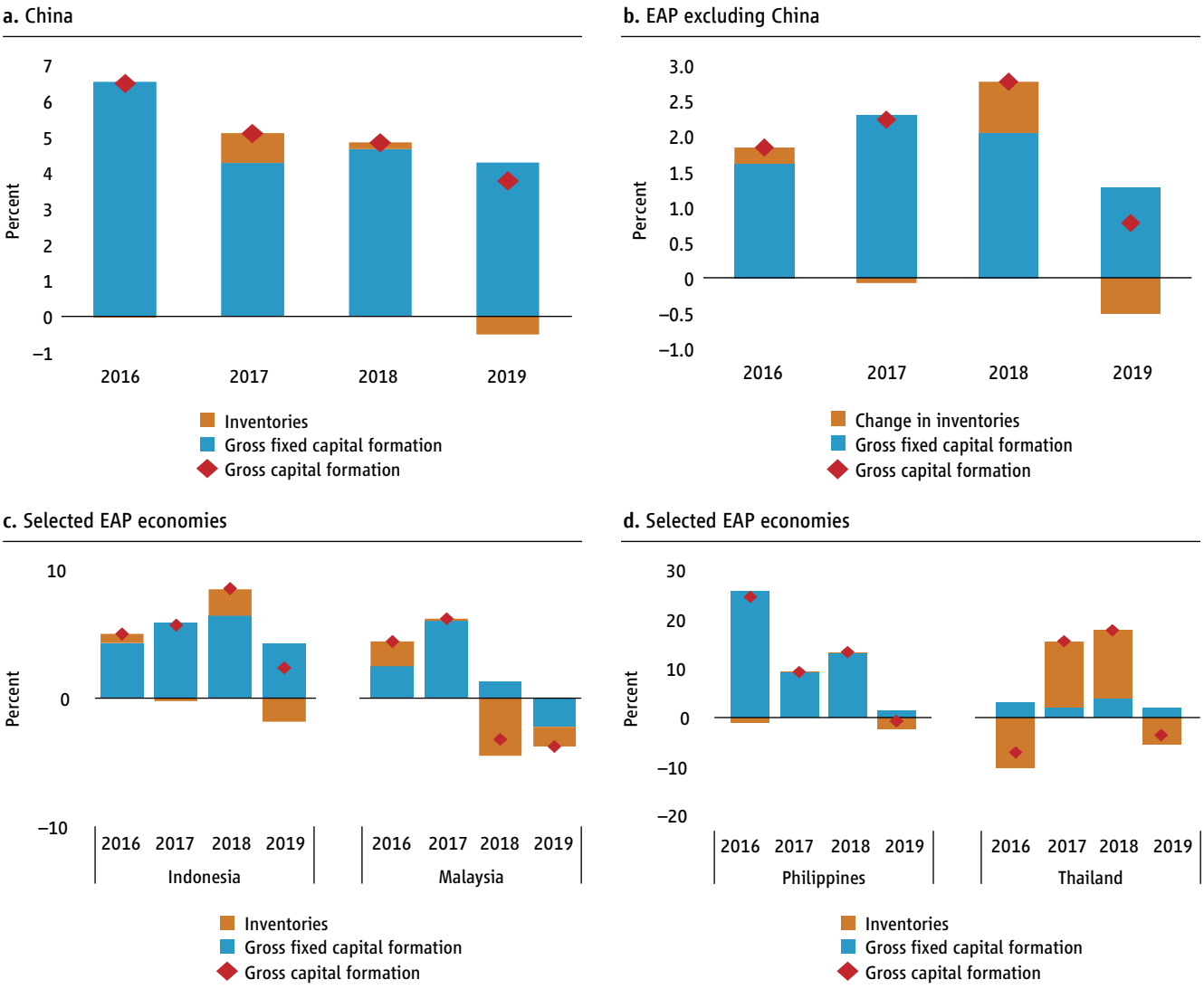
The slowdown of investment growth in the East Asia and Pacific region has coincided with a sharp decline in trade (Box Figure II.1.1). In a globalized world, tradeable goods are often produced through complex global value chains, a process that entails intermediate inputs being produced in more than one country and exported to the final destination for assembly. Thus, it is not inconceivable that the prospects of sluggish exports growth have a direct negative impact on investment growth, especially in export-oriented sectors. Indeed, evidence suggests, that for a large number of countries including in the EAP, investment growth is positively and statistically correlated with exports growth.

**Box Figure II.1.1.** The slowdown of investment growth in the East Asia and Pacific region has coincided with a sharp decline in trade




*Source:* WDI.
*Notes:* Panel B. Weighted averages. Panel C. Country-year observations. Panel D. Coefficients from a fixed effects regression of investment growth on export growth. Includes year fixed effects. Other control variables include credit to GDP (and lag), FDI to GDP (and lag), lagged investment growth, and lagged imports growth. 155 countries, 1990–2017. *** p<0.01 .* p<0.1.

**Figure II.1.8.** Investment decline in the region, exacerbated by the inventory drawdown

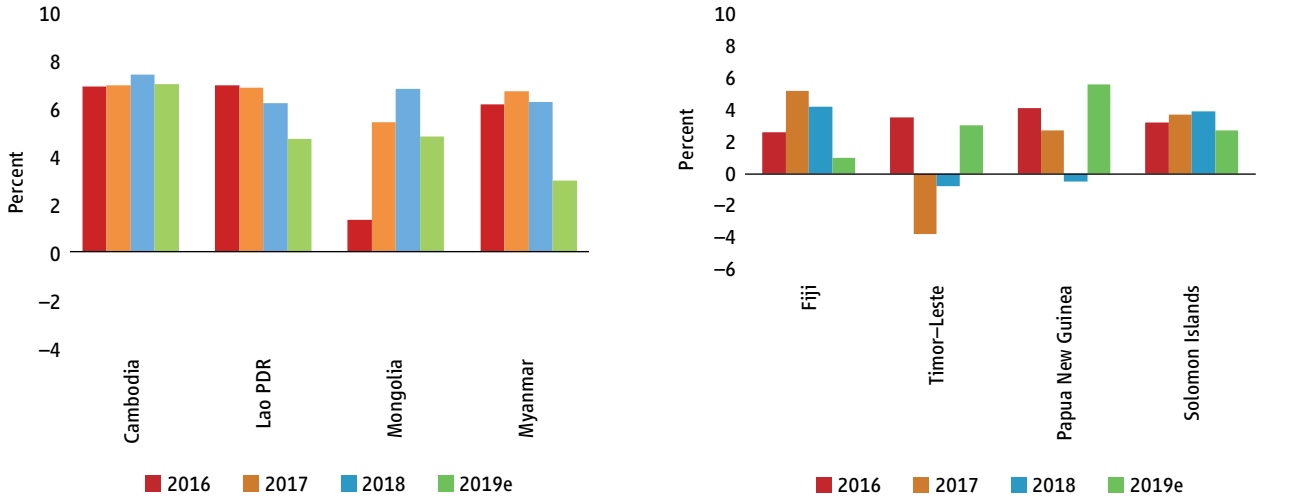



*Source:* World Development Indicators.

by an earthquake), this masked slower growth of the non-resource economy, which was owing to sluggish domestic demand as confirmed by a shortfall in non-resource tax revenue and lower inflation.

**Growth in the Pacific Island countries (PICs) has been largely influenced by natural disasters, development assistance flows, and developments in the natural resource sector.** Growth fluctuations in the PICs are to a large extent driven by natural disasters and aid flows, with economic activity bolstered by the construction of donor-funded projects, including for disaster recovery and reconstruction. Tino was the most recent severe tropical cyclone to hit the Pacific (in January 2020), with the largest impacts on Tuvalu, Fiji, and Tonga. In Fiji, other factors, including lower government spending following completion of reconstruction after Cyclone Winston, also weighed on activity and resulted in the sharp deceleration of GDP growth to a decade-low 1 percent in 2019. There have also been several health emergencies, including the measles outbreak in late 2019 in Samoa and a dengue outbreak in the Republic of the Marshall Islands (RMI).

**Figure II.1.9.** Growth in smaller economies in the region reflected country-specific factors



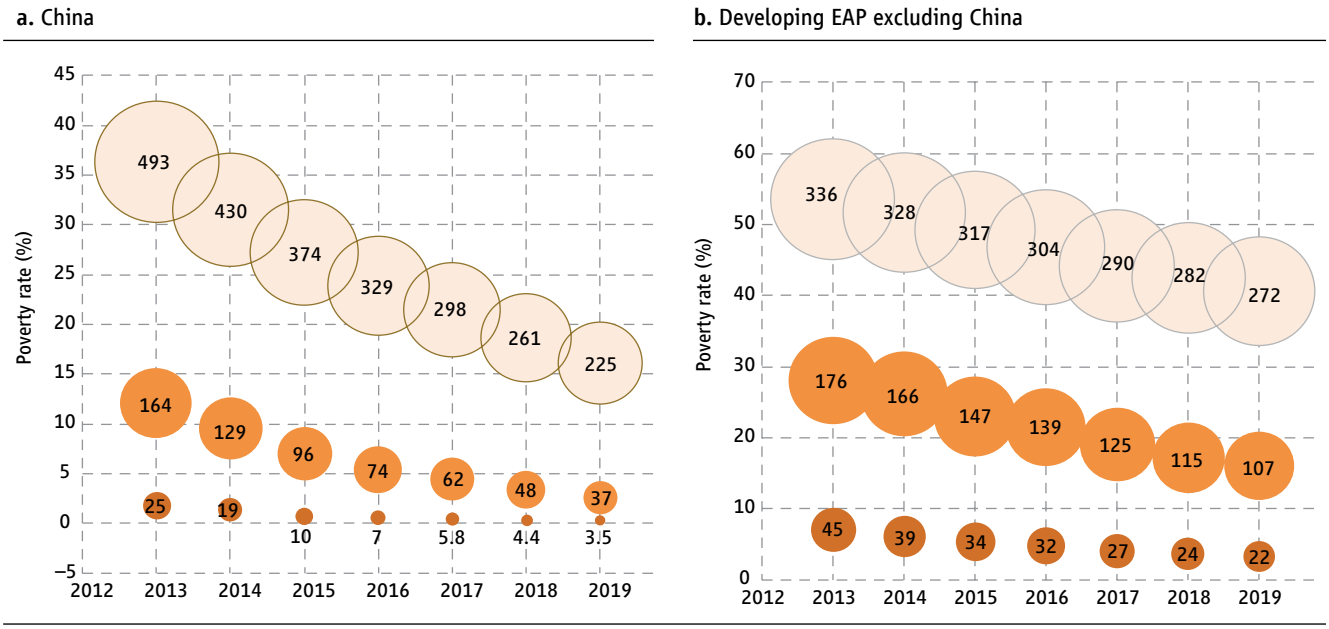

*Source:* World Bank.

## Poverty trends

**The pace of poverty reduction declined in 2019, reflecting slower GDP and household income growth.** Slower growth in the region during 2019 meant that the pace of poverty reduction also slowed in developing East Asia and the Pacific during the year—although the incidence of poverty and the number of poor continued to decline across the region. In 2019, the estimated number of poor in the developing EAP region and excluding China was 271 million, based on the Upper-Middle Income Class poverty line of US$5.5/day 2011 PPP. In China, there were about 225 million poor people at this threshold in 2019, roughly 46 million fewer than in the rest of the region, even though China accounts for about 65 percent of the total population of developing East Asia. Moreover, the majority of poverty reduction in the region is still due to progress in China. If one excludes China, the pace of poverty reduction in the rest of the developing EAP region is much slower at the UMIC US$5.50/day 2011 PPP poverty line (Figure II.1.10).

One noteworthy exception to the region's recent accomplishments in poverty reduction has been seen recently in Thailand, where new household survey data indicate that poverty increased in 2018 despite positive growth rates. The increase in poverty in Thailand coincided with the emergence of several economic and environmental challenges in the country. Over the past few years, for example, Thailand's growth rate has been lower than other large economies in the developing East Asia and Pacific region (World Bank, 2019). At the end of Q3 2019, Thailand, along with Fiji and the Solomon Islands, had the lowest GDP growth rate in the region, at 2.7 percent. Declines in tourist arrivals and exports also affected the economic well-being of the Thai population, and droughts have affected the livelihoods of farmers who already experience lower average incomes and higher rates of poverty than others in the Thai economy. Wage data from Thailand show that earnings growth has also been relatively slow in Thailand, contributing to the weak links between growth and poverty reduction there.

**Figure II.1.10.** Actual and projected trends in poverty in developing East Asia and the Pacific[2]




*Source:* East Asia and Pacific Team for Statistical Development.
*Note:* The poverty rate shown on the vertical axis (in percent); the number of poor is represented by the size of the bubble (in millions). Poverty is shown for the International poverty line (US$1.90 per day 2011 PPP, dark orange bubbles), for Lower-Middle-Income Class poverty line (US$3.20 per day 2011 PPP, medium orange bubbles), and Upper-Middle Income Class poverty line (US$5.50 per day 2011 PPP, beige bubbles).[3]

## 2. Policy trends

**Authorities were proactive engaging in expansionary monetary policy support in major regional economies.** In China, the authorities have stepped up policies both to contain the spread of the epidemic and to mitigate its economic impacts. The PBOC has provided sizable liquidity support and cut policy rates to stem market sell-off, focusing on bolstering confidence and supporting affected businesses. Monetary policy in many countries has become more accommodative in response to slowing activity amid subdued inflation (Malaysia, the Philippines, Thailand) (Figure II.1.11). In Indonesia, continued capital inflows, a stable exchange rate, and low inflation have provided the necessary space for Bank Indonesia to continue policy easing. In Thailand, the Monetary Policy Committee voted to lower the interest rate to 1 percent on February 5, 2020, in light of COVID-19. In Malaysia, the central bank, BNM, lowered the policy rate by 25 basis points to 2.75 percent on January 22, 2020, as a pre-emptive measure to support the economy's growth trajectory.

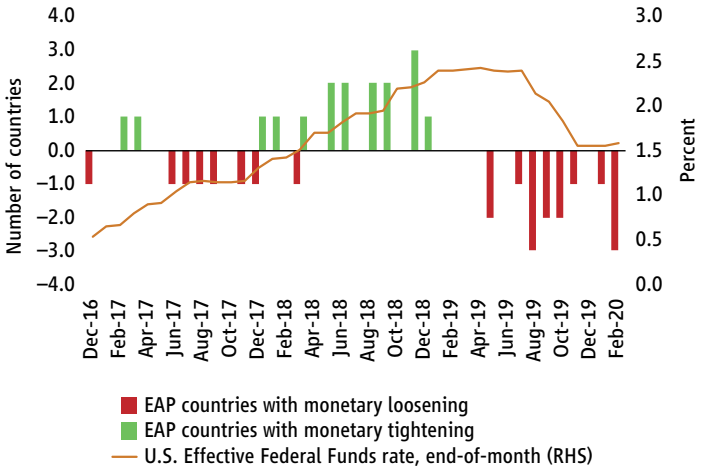
**Fiscal policy became more expansionary (Figure II.1.12) The fiscal expansion was announced as developments surrounding the COVID-19 outbreak continue to unfold.** Several countries have also provided fiscal support (China, Malaysia, Thailand). China has introduced reductions in taxes and government fees, and a higher limit for local government on-budget borrowing. Targeted fiscal measures have been adopted to mitigate the spread of the virus and include tax breaks and subsidies to affected industries. The Ministry of Finance also increased the frontloaded quota for local government bond issuance by about 0.6 percent of GDP in 2020, Q1 compared to the same period last year.

2 The International Poverty Line (IPL) was first derived from the national poverty lines of the world's poorest countries at a time when 60 percent of the global population lived in low-income countries. In 2013, the share of population living in low-income countries was much lower at 8 percent (Fantom and Serajuddin, 2016).
3 For a description of the Lower-Middle and Upper-Middle-Income Class poverty lines, see World Bank 2019, "A Broader View of Poverty in East Asia and the Pacific."

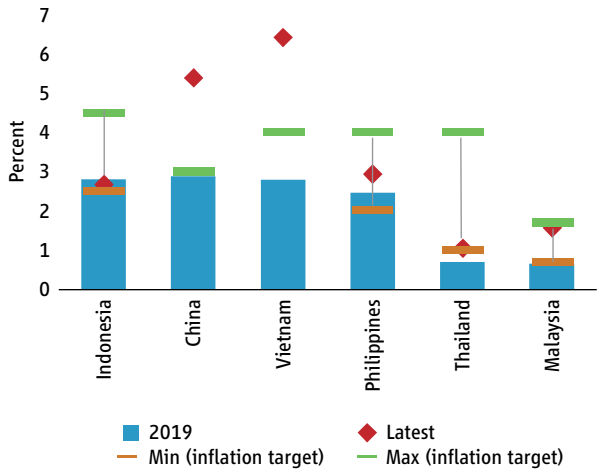
Thailand announced a broad range of stimulus measures, including a support package for farmers, SMEs, and low-income households. The economic cabinet led by the prime minister also approved various fiscal measures to support the Thai tourism industry and alleviate the effect of the outbreak. In Malaysia, an additional allocation of 0.2 percent of GDP will be channeled to revitalize public investment through infrastructure projects including the Mass Rapid Transit 2 (MRT 2) and the Pan Borneo Highway projects.

**Figure II.1.11.** Monetary policy has been supportive of growth

**a.** Monetary policy in developing East Asia (update to Jan 20)



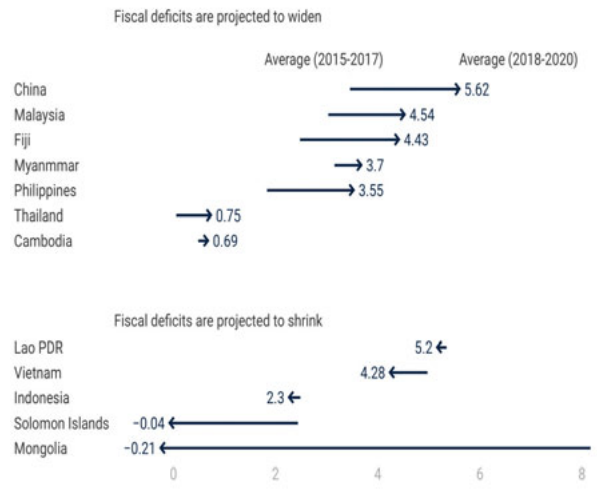

**b.** Headline inflation *(year-on-year, period average)*



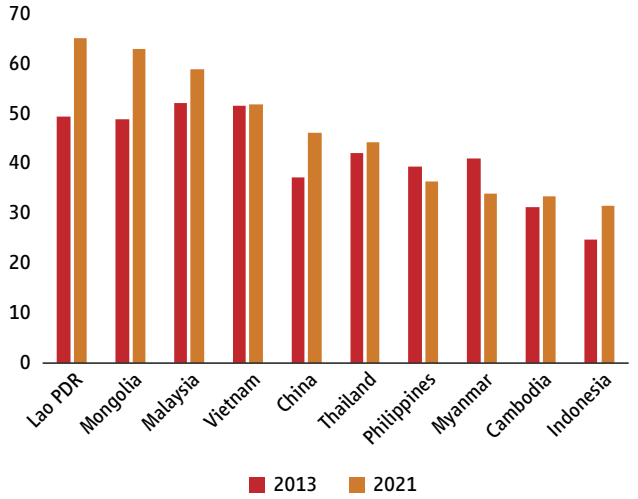

*Sources:* CEIC; Haver Analytics; World Bank.
*Note:* Panel A. The sample of countries for East Asia and Pacific includes China, Cambodia, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, and Vietnam. Panel B. Average year-on-year consumer price inflation. Mid-point of inflation target for Indonesia, the Philippines, and Thailand. Inflation target for China and Vietnam. For Malaysia, the mid-point of Bank Negara's official forecast range of 0.7–1.7 percent in 2019. The last observation is in January 2020.

**Figure II.1.12.** Fiscal policy in the region has become more expansionary

**a.** Fiscal deficits are projected to widen in many countries




**b.** Government debt, percent of GDP




*Source:* World Bank staff estimates.
*Note:* Panel A. Data refers to general government fiscal deficit, except Indonesia: central government fiscal deficit, and Cambodia general government fiscal deficit before grants. Panel B. Data refer to general government debt, except Indonesia: central government debt. Data for China exclude off-budget debts for public investment accumulated since 2015.

# 2. Chapter II. The Impact of the China-U.S. Trade Agreement[4]

***Abstract***

*Should the China-U.S. trade agreement prompt relief because it averts a damaging trade war or concern because selective preferential access for the United States to China's markets breaks multilateral rules against discrimination? The answer depends on how China implements the agreement. Simulations from a computable general equilibrium model suggest that the United States and China would be better off under this "managed trade" agreement than if the trade war had escalated. However, compared with the policy status quo, the deal will make everyone worse off except the United States and its input-supplying neighbor, Mexico. Real incomes in the rest of the world would decline by 0.16 percent, in East Asia (excluding China) by 0.30 percent and in China by 0.40 percent because of trade diversion. China can reverse those losses if, instead of granting the United States privileged entry, it opens its market for all trading partners. Global income would be 0.60 percent higher than under the managed trade scenario, and China's income would be nearly 0.50 percent higher. Most developing countries in East Asia would be also better off, despite the partial erosion in their preferential access to the Chinese market. By creating a stronger incentive for China to open its markets to all, an exercise in bilateral mercantilism has the potential to become an instrument for multilateral liberalization.*

*Keywords: Trade wars, managed trade, preferential agreements*

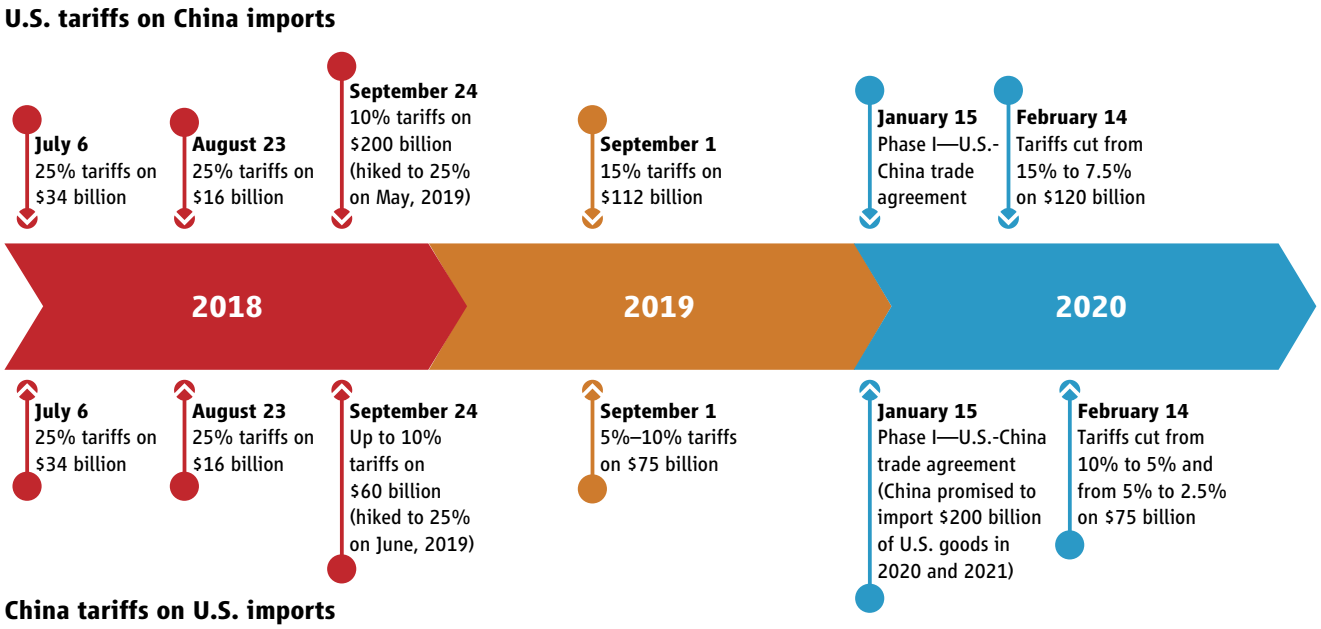
## 1. Introduction

The China-U.S. trade agreement has provoked the following contrasting sentiments: relief because the agreement averts (at least temporarily) a damaging trade war and anguish because the agreement to grant the United States selective, preferential access to the Chinese market breaks multilateral rules that prohibit (at least in principle) discrimination between trading partners. This note argues that the implications of the agreement for developing countries depend on how China implements the agreement. If China accommodates U.S. demands by granting the United States privileged access to a still-protected Chinese market, then the United States will benefit, but other countries and probably China will lose. If instead, China accommodates U.S. demands by liberalizing access to its market for all trading partners, then all countries including the United States and China would benefit. Therefore, an exercise in bilateral mercantilism can, by offering China an added incentive to open its markets to all, become an instrument for multilateral liberalization.

The China-U.S. trade agreement is a step in an evolving relationship between the two largest economies in the world. Figure II.2.1 provides a timeline of the trade tensions in the last two years. Before the agreement, the main policy tool the United States and China have used is tariffs. As noted in Bown (2020a), there have been two main breaking points in the China-U.S. relationship, both characterized by an escalation of tariffs. The first happened in the summer of 2018 when the average U.S. import tariff on Chinese goods went up from 3.8 to 12.0 percent and the Chinese import tariff on U.S. goods increased from 8.3 to 18.3 percent. The second breaking point took place in the summer of 2019, with U.S. tariffs increasing from 12 to 21 percent and Chinese tariffs also rising to 21 percent. While the China-U.S. agreement does not mention tariffs, upon its entry into force on February 14, 2020, both the United States and China have reduced their bilateral tariffs. Despite these changes, tariff protection remains high at 19 percent for U.S. tariffs on China's exports and 20 percent for China on exports from the United States.

4 A joint product of the Chief Economist Office of East Asia and Pacific, and the Trade and Regional Integration Global Unit. Claudia Hofmann assisted with the legal analysis of the text in Section 2 and Maria Pereira with the simulations in Section 4. We are grateful to Chad Bown, Erik Churchill, Bert Hofman, Antonio Nucifora, Martin Raiser, Martin Rama, and Chunlin Zhang for helpful suggestions and discussions.

**Figure II.2.1.** A timeline of China-U.S. trade tensions




*Source:* Li, M. 2018. CARD Trade War Tariffs Database. https://www.card.iastate.edu/china/trade-war-data/ (Accessed 02–06–2020).

In this evolving context, this paper looks at the Phase 1 China-U.S. trade agreement from three different points of view. First, we examine key features of the legal text of the agreement and compare it with other preferential trade agreements (PTAs) signed by the United States. Second, we draw on economic theory to analyze the implications of the agreement, especially for third countries. Finally, we use a computable general equilibrium model to quantify the effects of the agreement on trade and income under different scenarios.

The comparison of the legal text of the Phase 1 China-U.S. trade agreement with existing U.S. PTAs shows how different the current deal is from previous ones while recognizing that subsequent phases may add other dimensions to the agreement. First, despite the few novelties such as regulation of technology transfers and macroeconomic policies, the scope of the China-U.S. agreement is more limited, even in areas such as intellectual property protection, which are also covered in other PTAs. Second, the focus of the agreement is less on providing general obligations and more on specific actions by China to grant additional market access to U.S. exporters to achieve explicit import targets—admittedly, the main novelty and the most noticeable component of the deal. These elements, combined with other aspects of the agreement, such as the absence of any independent mechanism to solve disputes associated with the agreement, mark a significant departure from current practices in preferential arrangements. As discussed below, they could also pose risks to third countries.

Economic theory sheds light on some of the potential consequences of the China-U.S. trade agreement. For products that are freely traded, import targets above market-determined levels lower the welfare of the importing country more than they increase the welfare of the exporting country, and hence reduce global welfare. When trade is not free, increasing trade boosts the welfare of the importing and exporting countries, but import targets are generally inferior to a reduction in the trade barriers that impair trade flows in the first place. A key issue, especially from the perspective of third countries, is how these trade barriers are lowered: whether preferentially or on a nondiscriminatory basis. Discrimination

leads to trade diversion, implying a negative welfare effect on third countries and an ambiguous welfare effect on the importer. This analysis, therefore, supports two main policy conclusions: (i) increases in imports should be achieved through a reduction in trade barriers in protected sectors rather than pursuing quantitative targets through other means such as an explicit or implicit import subsidies (e.g., through purchases of state-owned enterprises); and (ii) expansion of imports should be implemented through non-discriminatory measures.

The computable general equilibrium model quantifies the trade and income effects of the China-U.S. agreement on the two countries and the rest of the world. Consistent with the theory, these effects depend on the way China decides to implement the agreement. When China meets the import targets through preferential treatment of the United States, the result is a positive income effect for China and the United States relative to the escalation of the trade war. However, compared to the policy status quo, the deal will make all countries worse off except the United States and its input-supplying neighbor, Mexico. Discriminatory measures, such as the preferential reduction in tariff or nontariff barriers or a subsidy for goods and services imports from the United States, disadvantage the exports of third countries in the Chinese market, leading to income losses. The biggest losses of income would be for China (0.38 percent), which will have to source some imports from less efficient sources, and for its current suppliers of manufactured goods in East Asia (0.32 percent) and commodities in Latin America (0.27 percent). But if China accommodates U.S. demands, not by granting the United States privileged entry but by liberalizing access to its market for all trading partners, then all countries would benefit. Global income would be 0.37 percent higher than under the managed trade scenario and China's income would be 0.46 percent higher.

Most developing countries in East Asia lose from the agreement relative to status quo policies because of trade diversion. Lao PDR would experience the largest losses in terms of real income (–0.49 percent), while Cambodia is the only economy in East Asia that is positively affected by the China-U.S. agreement with a real income increase by 0.03 due to positive terms of trade effect. Other countries with sizeable losses are Malaysia, Thailand, the Philippines, Indonesia and, to a lesser extent, Vietnam. If China achieves the import targets through a multilateral liberalization, there are two contrasting effects on East Asian developing countries. On the one hand, discrimination that favors U.S. producers is reduced. On the other hand, the preferential access that these countries have in the Chinese market thanks to the ASEAN-China trade agreements is in part eroded. Model simulations show that the first effect dominates, with six countries experiencing larger real incomes (between 0.90 percent for Lao PDR and 0.05 percent for Thailand) under the multilateral liberalization relative to managed trade. Indonesia is the only economy that would be slightly negatively affected by a nondiscriminatory opening of the Chinese market relative to managed trade.

To our knowledge, this is the first study that attempts to quantify the global impact of the China-U.S. trade agreement using a computable general equilibrium model. Earlier analyses focused on specific aspects of the agreement (e.g., Cohen, 2020, on issues concerning intellectual property rights) or on providing a first assessment based on existing trade patterns (Bown, 2020b; Ciuriak, 2020). Two recent notes by Chowdhry and Felbermayr (2020a, 2020b) are closer to our exercise. They use a gravity model to predict trade between China and its trading partners and compare these flows with the ones under the China-U.S. agreement. They show that, because the import targets foreseen by the deal are above-predicted trade flows, the agreement could lead to substantial trade diversion. Following a similar approach, Cali (2020) finds that the agreement would divert exports from Indonesia and other East Asian developing countries away from the Chinese market. Our study fits into the growing literature on the economic effects of the trade tensions between China and the United States and, more broadly, on the re-emergence of protectionism. A partial list of recent contributions includes Amiti et al. (2019), Blanchard et al. (2019), Constantinescu et al. (2019), Fajgelbaum et al. (2020), Freund et al. (2018), and Handley et al. (2020).

The rest of the chapter is organized as follows. Section 2 reviews the salient features of the China-U.S. agreement and compares it with other trade agreements signed by the United States. Section 3 focuses on the economics of import targets, while the results of the quantification exercise are presented in Section 4. Conclusions and policy implications are presented in Section 5.

## 2. The content of the agreement

This section briefly reviews the various chapters of the "Economic and Trade Agreement between the Government of the United States and the Government of the People's Republic of China" (henceforth referred to as, "the China-U.S. agreement" or simply "the agreement").[5] Instead of conducting a detailed legal analysis of the text, we compare the agreement with other preferential trade agreements (PTAs) signed by the United States, relying on the information on the content of trade agreements (Mattoo et al., 2020). The goal is to highlight similarities and significant points of departure of the agreement with other PTAs as a first step to understand its potential effects on the two parties and third countries.

A focus on the content of the agreement is particularly pertinent in the context of the China-U.S. deal. PTAs typically aim at lowering (or eliminating) tariffs and other duties on "substantially all the trade" between members—a condition specified by the WTO rules on PTAs.[6] These rules are designed to ensure that countries do not circumvent the most favored nation (MFN) rule against discrimination between trading partners by forming "trading blocs" for selected goods or services. The China-U.S. agreement does not mention tariff liberalization (although tariffs could be reduced to meet import targets) and focuses on regulating a set of policy areas beyond tariffs. While previous U.S. PTAs cover on average 19 policy areas,[7] the China-U.S. agreement is limited to the seven listed below, leaving the negotiation of additional areas for an undefined Phase 2. The agreement seems to be conceived of as an instrument for one-sided, selective preferential access in a limited number of sectors rather than as either a means of broad-based liberalization or a full-fledged PTA.[8]

*Chapters 1 and 2: Intellectual property and technology transfers*

Chapters 1 and 2 of the agreement regulate intellectual property rights and technology transfers. As in other U.S. PTAs, the issue of technology transfer is (occasionally) touched upon in Intellectual Property (IP) chapters. There are, however, marked differences between the agreement and other agreements signed by the United States.[9] First, for two sets of provisions, the agreement is deeper than other U.S. PTAs. These include trade secrets (Chapter 1, Section B), which are covered in the recently negotiated United States Mexico Canada Agreement (USMCA) but not in other U.S. PTAs, and technology transfers (Chapter 2), which are either absent from PTAs or feature in terms of general principles rather than concrete obligations.[10] Second, the agreement contains rules on topics such as patents, geographical indications, trademarks, and copyrights (Chapter 1, Sections C–H), but with fewer details than previous PTAs. Third, the China-U.S.

5 The agreement is sometimes referred to as the "Phase 1 Agreement." The text can be accessed here: https://ustr.gov/sites/default/files/files/agreements/phase%20one%20agreement/Economic_And_Trade_Agreement_Between_The_United_States_And_China_Text.pdf

6 See Article XXIV of the General Agreement on Tariffs and Trade (GATT), which regulates preferential trade agreements in goods, and Article V of the General Agreement on Trade in Services, which regulates preferential trade agreements in services between members of the World Trade Organization (WTO).

7 Policy areas most frequently covered in U.S. PTAs include areas that are not regulated by the WTO, such as investment, competition policy, and movements of capital. In other policy areas under the domain of the WTO, such as subsidies, technical barriers to trade, or public procurement, U.S. PTAs often include deeper commitments than those agreed at the multilateral level (Hofmann et al., 2019).

8 Indeed, the agreement does not feature on the USTR webpage showing free trade agreements.

9 See Annex Table II.2.1 for a detailed summary of findings.

10 For example, the China-U.S. agreement prevents the use of trade secrets; protects them from unauthorized disclosure, including by government authorities; and provides for criminal procedures and penalties for unauthorized disclosure and misappropriation of a trade secret (Articles 1.5–1.9).

agreement does not include detailed rules on transparency, exhaustion of patent rights, and national treatment, as well as the ratification and incorporation of existing international IP agreements—presumably relying on existing WTO rules in these areas, which are in some cases more limited than those in other U.S. PTAs.

*Chapter 3: Trade in food and agricultural products*

Differently from the chapter on IP, it is difficult to find a counterpart to Chapter 3 on trade in food and agricultural products in other U.S. PTAs. Some of these provisions can be found in chapters covering sanitary and phytosanitary (SPS) measures or agriculture. In the chapter, there are two sets of provisions. First, and similarly to other U.S. PTAs, the agreement includes provisions on general obligations, including intensified cooperation, adoption of SPS measures that are science- and risk-based, and the prohibition of disguised restrictions on international trade (Article 3.1.1) that apply on an MFN basis. The second group of provisions aimed at facilitating access for U.S. products to the Chinese market through greater acceptance in China of U.S. standards and conformity assessment procedures for agricultural products (Annexes 1–17). Examples include commitments for China to take into consideration U.S. legislation (as in the case of infant formula) and specific time frames for China to allow the importation of regulated products from the United States (as for meat, poultry, and processed meat).

*Chapter 4: Financial services*

U.S. PTAs generally contain chapters on financial services, most recently including USMCA. These chapters are typically more complex than Chapter 4 of the China-U.S. agreement, containing provisions on definitions and scope, national treatment, transparency, market access, and sector-specific dispute resolution that applies to both parties. The scope of Chapter 4 is more limited in two respects. First, it primarily focuses on providing market access to specific U.S. financial institutions in China (e.g., institutions providing securities investment fund custody, credit rating, electronic payment, financial asset management, insurance, and securities, fund management, and future services), setting specific time frames for approving licenses by the Chinese authorities (Articles 4.2–4.7). Second, the United States generally accords nondiscriminatory treatment to Chinese financial institutions, but without specific obligations or time frames to comply. This asymmetry is also reflected in the language, which is overall binding for China (e.g., "shall remove," "shall allow") and softer for the United States (e.g., "will continue to allow," "affirms"), whereas in other agreements, the United States assumes binding obligations.

*Chapter 5: Macroeconomic policies and exchange rate matters and transparency*

Issues concerning macroeconomic policies and exchange rate matters are new to U.S. trade agreements. Other than this agreement, only USMCA has a chapter dedicated to these issues. The agreement shares many similarities to the chapter in USMCA, although the latter contains additional provisions on definitions and scope and establishes an institutional framework for cooperation, i.e., a Macroeconomic Committee. Provisions in Chapter 5 apply to both parties and follow closely the language of USMCA on the same matter. Specifically, the provisions cover guiding principles and international commitments, including under the International Monetary Fund (IMF) Articles of Agreement to "avoid manipulating exchange rates or the international monetary system." Moreover, parties commit to a "market-determined exchange rate regime" and to "refrain from competitive devaluations" (Article 5.2). In case of a dispute on these issues, parties can resort to the mechanism established in Chapter 7 of the agreement or, if the latter fails to arrive at a "mutually satisfactory resolution," they can turn to the IMF for surveillance of macroeconomic policies and formal consultations (Article 5.4).

*Chapter 6: Expanding trade*

Chapter 6 outlines quantitative import commitments for China or "voluntary import expansions" (VIEs) as these measures have been called in the trade literature (explained in more detail below). The chapter sets out the general objective of improving the bilateral relationship through an expansion of trade. The chapter requires China over the years 2020 and 2021 to ensure that purchases and imports from the United States of specifically manufactured goods, agricultural goods, energy products, and services exceed the corresponding 2017 baseline amount by no less than $200 billion. The chapter provides that the United States "shall ensure to take appropriate steps to facilitate the availability of U.S. goods and services to be purchased and imported into China" (Article 6.2.4), suggesting that the United States bears some of the burdens of ensuring the targets are realized. The agreement allows China flexibility on how to achieve the targets, but states that "The Parties acknowledge that purchases will be made at market prices based on commercial considerations . . ." (Article 6.2.5). The limits of the practical applicability of this provision are discussed in the next section.

*Chapter 7: Bilateral evaluation and dispute resolution*

Chapter 7 creates an institutional structure to deal with the implementation of the agreement (Article 7.2) and potential disputes (Article 7.4). The chapter foresees the creation of a Trade Framework Group, which is led by the United States Trade Representative (USTR) and a designated Vice Premier of the People's Republic of China. The Trade Framework Group is the organ in charge of implementation and dispute resolution, with clear working procedures and time frames. Relative to recent U.S. PTAs, including USMCA, there are three main differences in this area. First, previous U.S. trade agreements establish independent panels from rosters that take full control of a dispute. Second, while the general idea of resolving a dispute through consultations and an institutional structure is in line with other U.S. PTAs, the main difference is that the USTR and its Chinese counterpart will be involved in the whole process and never hand over to an adjudicated body. Finally, the agreement lacks a "choice of forum" clause typical of other PTAs, confirming that third, independent parties are not envisioned in the dispute resolution process.

Summing up, a comparison of existing U.S. PTAs with the China-U.S. trade agreement shows that the latter has a number of significant differences: (i) while there are some new elements (e.g., trade secrets, technology transfers, and macroeconomic policies), the scope of the agreement is more limited even in areas such as IP where similar chapters can be found in other PTAs; (ii) the focus of the agreement is less on providing general obligations that can be applied on an MFN basis and more on specific actions by China to grant additional market access to U.S. exporters; and (iii) the dispute settlement framework, while reflecting some of the elements of other U.S. PTAs, departs from previous practices, as it dispenses completely with an independent mechanism.

## 3. The economics of import targets

Import targets, a defining element of the China-U.S. trade deal, aim at expanding the import of a specified set of products over a certain period. These quantitative targets are infrequent but not new tools of trade policy. In the trade literature, they are referred to as "voluntary import expansions" (VIEs)—a terminology that was first introduced by Bhagwati (1987) in the context of U.S.-Japan trade tensions of the 1980s.[11]

11 In July 1986, Japan and the United States signed an agreement in which Japan accepted that the foreign share of its semiconductor market would increase to 20 percent, from a level of 8 percent, over a period of five years. Irwin (2017) reports that Japan's government had difficulty in getting domestic firms to comply with the agreement. Indeed, eight months after the agreement was signed, the United States declared Japan in noncompliance and imposed retaliatory tariffs. Eventually, retaliatory tariffs were lifted as the foreign share of Japan's semiconductor market increased. Another agreement was signed between the United States and Japan in 1992 and concerned a voluntary import expansion in automobile parts. In early 1993, the United States considered negotiating a number of other VIEs with Japan, but the policy was not pursued. The United States focused instead on completing the negotiation of the Uruguay Round, which gave rise to the World Trade Organization.

Import targets or VIEs are the counterparts of Voluntary Export Restraints (VERs). Just like VERs, voluntary import expansions aim at directly affecting quantities traded internationally. But rather than a ceiling on a country's exports, they imply a floor on a country's imports. While the goal of expanding trade may be viewed more positively than restricting it, VIEs are considered inefficient policy tools (Irwin, 1994). The reason is that they lead to economic distortions that depend on: (i) whether trade in the specific market subject to the VIE is free or impeded by some explicit or hidden protection; and (ii) whether we focus on the exporting country, the importing country, or third countries.[12]

In this section, we briefly review the economics of import targets and informally establish a number of findings that are helpful to understand the quantification analysis in the next section. For ease of exposition, we initially focus on a world with two economies: the United States (the exporter) and China (the importer). In this simpler setting, we show that under free trade a VIE requires an (implicit or explicit) import subsidy and then studies the welfare effects of this policy. We further argue that in a market where the importing country imposes tariff and/or nontariff barriers, an increase in trade boosts welfare both for the importer and the exporter, but a VIE is generally inferior to a reduction in trade barriers that would result in the same increase in trade as the VIE. Finally, we augment the model to consider a third country, the Rest of the World (ROW), which also exports the product to China. Because now there are two exporters, it makes a difference whether the increase in imports is achieved through discrimination or nondiscriminatory policy. We informally show that a discriminatory VIE leads to trade diversion, implying a negative welfare effect on third countries and an ambiguous welfare effect for the importer.

*Under free trade, a VIE requires the use of an import subsidy, either explicitly or implicitly (e.g., through purchases of state-owned enterprises).*

Consider a market of a good that is freely traded internationally. Assuming that there are no other frictions such as transportation costs, a single price prevails to buy and sell this product independently of the location. The effect of an import target is to increase the flow of goods in China (the importing country), causing a decrease in the domestic price of the product and an expansion of its import demand. In the United States (the exporting country), the effect of the VIE is the opposite: the lower supply of the goods increases its price in the United States and its export supply. In this context, importers of the good in China would face a loss, as they would buy products in the United States for a higher price than what they could obtain in China. This implies that the only way the VIE can be implemented in practice is if the Chinese government offers an import subsidy equal to the difference between the price of the product in the United States and the price in China for each unit imported. An alternative to this explicit import subsidy is a situation where an importer, say a state-owned enterprise or another public entity, incurs the loss. This is a form of implicit subsidy, as the loss would eventually appear as a negative entry in the balance sheet of the importing country's government.

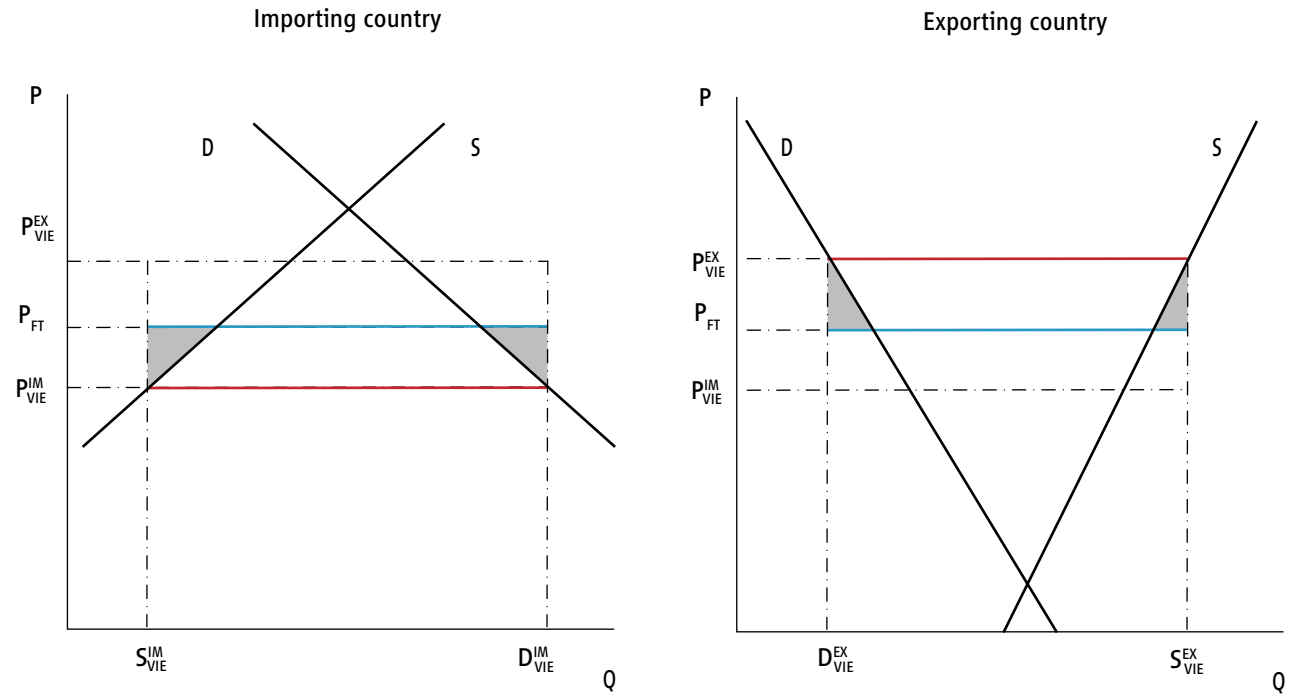
*Under free trade, a VIE lowers the welfare of the importing country more than it increases the welfare of the exporting country and hence reduces global welfare.*

As we have established, implementing an import target requires an explicit or implicit import subsidy. The subsidy/VIE lowers the price of the good in China (the importer) and increases it in the United States (the exporter). Producers are worse off in China, where they need to compete with subsidized foreign producers, and are better off in the United States, as the subsidy stimulates production to be sold in China. Consumers in China benefit from the lower prices, while the opposite is true for U.S. consumers. Finally, the Chinese government will have to bear the (direct or indirect) fiscal cost of the subsidy/VIE. Summing the gains and the losses, the net impact is a negative effect on welfare in China and a positive effect in the United States.

12 The effects of VIE also depend on whether the market operates under perfect or imperfect competition. For simplicity, we assume perfect competition, but the key results in this brief discussion generally apply also to imperfectly competitive markets. For a broader treatment of VIEs under imperfect competition, see Irwin (1994) and the references therein.

At the world level, the subsidy/VIE induces inefficiencies in production and consumption, which lower world welfare. Figure II.2.2 provides a textbook illustration of the welfare effects of a subsidy/VIE in a two-country model (Suranovic, 2010). The red and blue segments represent the quantity traded under free trade and the VIE, respectively. A higher price in the exporting country ($P^{EX}_{VIE}$) and a lower price in the importing country ($P^{IM}_{VIE}$) correspond to the new quantity (Q) under the VIE. The consumption and production distortions in the two countries (i.e., the net welfare losses) are the triangles in grey. The extent of these welfare losses depends on the slopes of the demand (D) and supply (S) curves (the demand and supply elasticities) and the size of the VIE. Larger deviations from the free trade (FT) equilibrium would be more costly, particularly when the demand or supply elasticity is larger. As the import targets in the China-U.S. agreement are defined at the aggregate level—not at the product level—there is some scope to design the policy to reduce policy distortions.

**Figure II.2.2.** Welfare effects of a VIE, two-country model




*Source:* World Bank staff elaboration.

**When trade is not free, increasing trade boosts the welfare of the importing and the exporting country, but a VIE is generally inferior to a reduction in trade barriers.**

An argument in favor of a policy that expands imports can be made when international trade is impeded by a policy barrier, whether being a tariff or a nontariff barrier. Trade barriers create a wedge between the domestic price of the good in the importing country and the price in the exporting country, causing distortions in consumption and production in both countries. Expanding imports would, therefore, lower these inefficiencies and increase welfare. To achieve this goal, lowering or eliminating the trade barrier is a more efficient policy option than setting a quantitative target through a VIE. Intuitively, since trade barriers and VIEs both create distortions, the most efficient way to increase imports is to reduce the barrier, not to combine the barrier with an offsetting VIE. One could argue that this logic does not capture the main appeal of a quantitative target: a VIE implies a precise outcome, irrespective of prevailing conditions in the

economy over the period of the agreement. The targeted outcome, however, is also its main drawback: lowering or removing a trade barrier allows market forces to shape outcomes responding to changes in fundamentals, such as demand and technology shocks, through changes in prices. Thus, the economic distortions created by complying with the quantitative targets may be magnified by the coronavirus shock. A related problem with quantitative targets is that they leave substantial discretion to a government to pick winners arbitrarily, increasing the risk of rent-seeking activities.[13]

*A discriminatory VIE leads to trade diversion, implying a negative welfare effect on third countries and an ambiguous welfare effect for the importer.*

We next move to a three-country model and consider a discriminatory VIE, in which the Chinese government commits to import from the United States only, and U.S. producers benefit from privileged access to the Chinese market. As discussed above, China will increase imports from the United States, putting upward pressure on the U.S. export price and reducing imports from the rest of the world (ROW). The decline in demand for ROW exports will put downward pressure on their export price. This trade diversion has a negative welfare effect for ROW and a positive welfare effect for the United States.[14] The impact on China's welfare is negative if the market is under free trade and ambiguous in the case of a protected product. As is well known from the economics of preferential liberalization, the ambiguity for the importing country depends on the fact that increased imports from the United States may drive out less efficient domestic producers or more efficient producers from ROW.[15] The second set of effects may result from the distortions created by the VIE in the importing market. Chinese producers, seeing the domestic price decline, may sell part of their production abroad. This form of "trade deflection" will have negative consequences for producers in third countries, which will suffer from the increased competition from Chinese exporters, and a positive effect on third-country consumers that will benefit from lower prices.

Summing up, this section supports three policy conclusions: (i) import targets should not be implemented for products that are freely traded; (ii) in protected sectors, increases in imports should be achieved through a reduction in trade barriers rather than through pursuing quantitative targets by other means; and (iii) expansion of imports should be implemented through MFN rather than discriminatory liberalization.

## 4. Quantifying the trade and income effects

In this section, we quantify the impact of import targets in the China-U.S. trade agreement on the trade and income of these two countries as well as on third countries under different scenarios.[16] The simulations are based on a global dynamic computable general equilibrium model, Linkage, which uses the Global Trade Analysis Project (GTAP) database (Freund et al., 2018). The model tracks historical GDP growth, trade balances, and investment up to 2019 and then projects the developments in the global economy up to 2025. The commitments of China to buy more U.S. goods and services as per the text of the agreement are aggregated to the CGE model sectors (Figure II.2.3).[17]

13 Moving away from perfect competition, Irwin (1994) shows that VIEs are likely to lead to forms of collusion, such as the creation of cartels, between producers in imperfectly competitive markets. Hence, also in this context, a VIE is a suboptimal tool to increase trade.

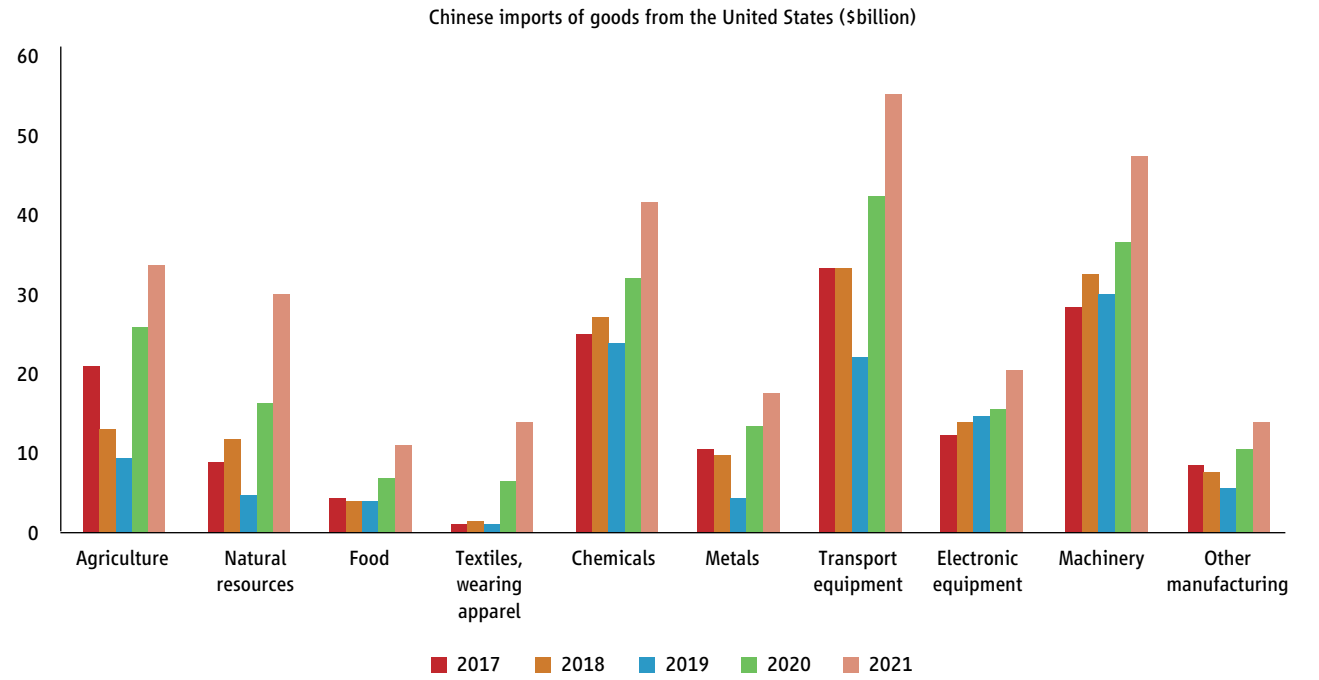
14 In a general rather than partial equilibrium model with upward sloping supply curves, as the United States expands sales to China, it is likely to sell less at home and in third markets. Other countries that are now disadvantaged in China are likely to sell more to the United States and in third countries. In this broader context, welfare declines because of the costly reallocation of exports to destination markets induced by discriminatory conditions in China's market.

15 See, for instance, Baldwin and Wyplosz (2004), Chapter 5.

16 The import targets in 2020 may be less feasible in light of the negative demand shock from the coronavirus. As the focus of the note is on the trade agreement and the extent and duration of the coronavirus shock is uncertain, the scenarios assume demand in 2020 is not affected by the virus—though that does not preclude a temporary shock. To the extent demand is lower for the year in China, the attempt to reach the import targets will lead to more trade diversion and a larger loss in income for China and the ROW.

17 "For the category of manufactured goods identified in Annex 6.1, no less than $32.9 billion above the corresponding 2017 baseline amount is purchased and imported into China from the United States in calendar year 2020, and no less than $44.8 billion above the corresponding 2017 baseline amount is purchased and imported into China from the United States in calendar year 2021."

**Figure II.2.3.** Chinese imports of goods from the United States ($billion) in 2017–2019 and estimated under the China-U.S. agreement in 2020–2021




*Source:* WITS and authors' assumptions based on the China-U.S. trade agreement.
*Note:* 2019 has been estimated based on Jan–Nov 2019 data.

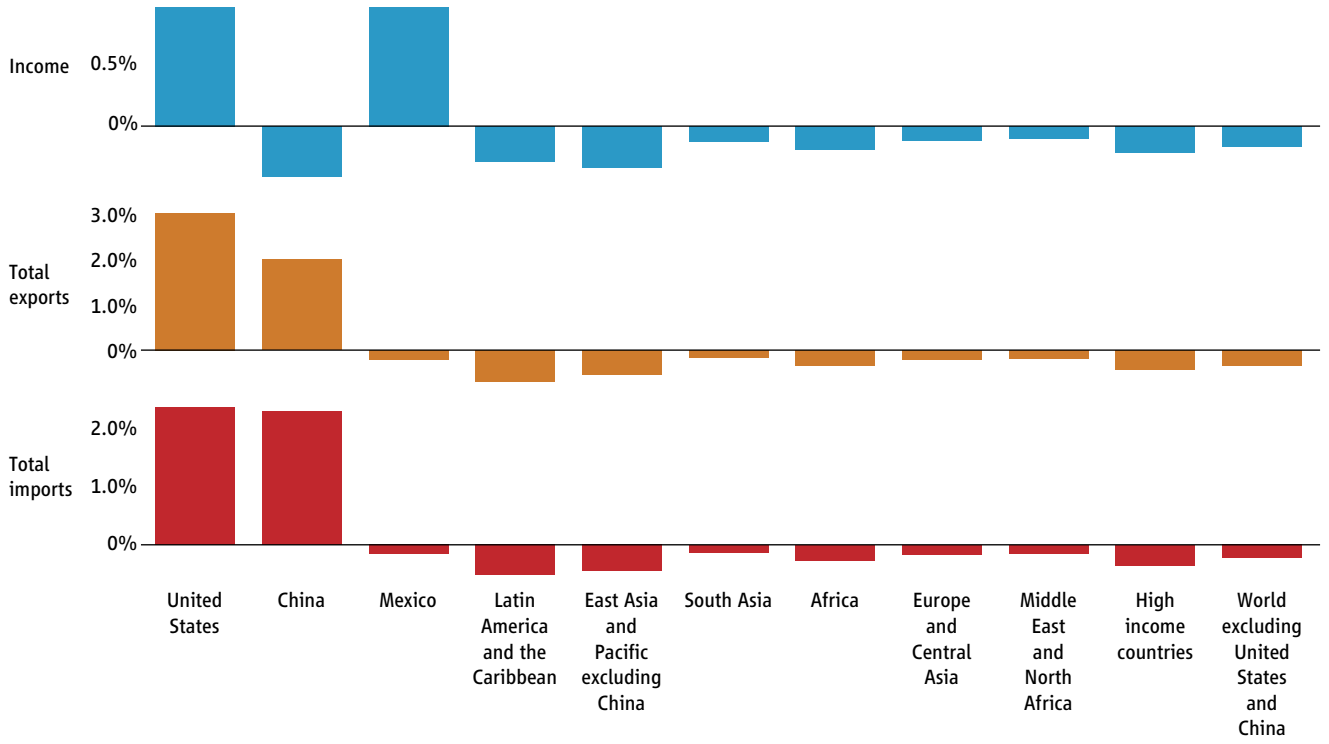
The China-U.S. agreement does not specify how the import targets should be met by China. In what follows, we present three main comparisons. First, we compare managed trade with a baseline where there is no agreement. Tariffs are assumed to remain unchanged at the end-2019 levels and China meets the import targets by subsidizing imports of goods and services from the United States. Our simulations suggest that managed trade makes the United States (and its input supplying neighbor, Mexico) better off but everyone else is worse off. Second, we compare managed trade with a trade war in which U.S.-China tariffs escalate, in order to understand what led to the agreement.[18] China and the United States are better off with the agreement than with an escalated trade war, but the rest of the world is worse off. Finally, we compare a situation in which China meets the import targets from the United States through a nondiscriminatory reduction of tariff and nontariff barriers rather than through managed trade. We show that nondiscriminatory liberalization leads to higher income for China and the rest of the world.

*Managed trade is better for the United States (and Mexico) but makes everyone else worse off (Figure II.2.4)*

Compared to the status quo, an expansion of U.S. exports to the still-protected Chinese market delivers significant benefits for the United States, with total income higher by 0.9 percent and total exports higher by 3.0 percent in 2021. But these gains come at the expense of nearly all other countries. China loses 0.4 percent of its income in 2021 because of the inefficient diversion of trade away from other more efficient sources, even though there is also significant trade creation (not just increased imports, but also increased exports due to higher growth in the United States and the balanced trade assumption in our model).

18 The "trade war" scenario assumes that both China and the United States impose 25 pp surcharges on trade from each other.

**Figure II.2.4.** Impacts of the managed trade scenario as compared to the trade policy status quo scenario (percent)




*Source:* Linkage model simulations.

The impact on the rest of the world is also negative, with income lower by 0.17 percent and trade lower by about 0.30 percent in 2021. The biggest relative loss of income and exports is in East Asia and the Pacific (excluding China) (–0.32 and –0.50 percent, respectively in 2021), followed by Latin America (–0.27 and –0.70 percent, respectively in 2021). For Mexico, the indirect benefits of improved U.S. access to China's market through strong input-output linkages with the United States outweigh the direct costs of diminished competitiveness in the Chinese market compared to the United States. The forced, partial liberalization of the Chinese market slightly enhances global income, as anticipated in the analytical discussion.

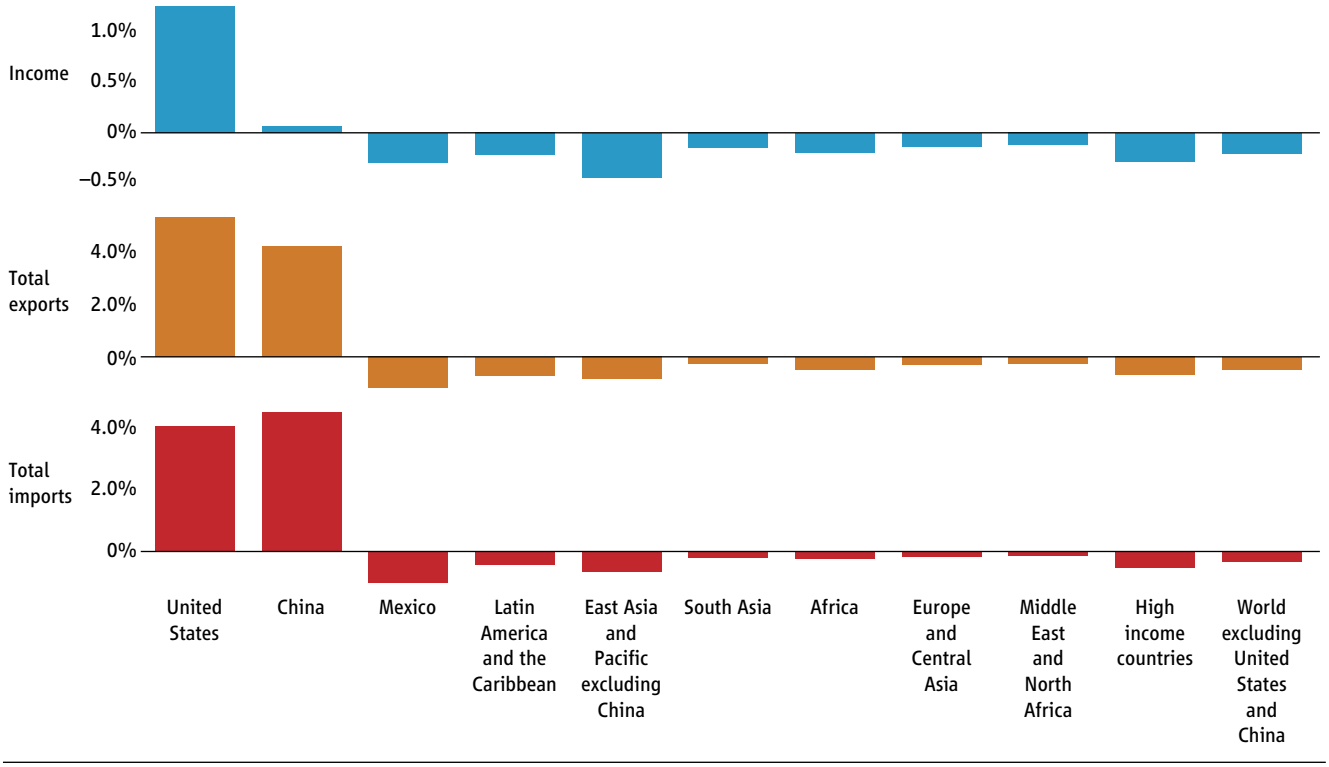
Countries that are likely to suffer losses due to trade diversion include exporters with the highest shares in the Chinese market for products targeted under the China-U.S. agreement (see Annex 3). In the agriculture sector, Brazil and Argentina are likely to export less oilseeds, meat, and cotton to China, while the Russian Federation's and Ecuador's seafood exports could suffer from trade diversion. In manufacturing, the biggest absolute market share losses are expected to be experienced by Japan and Germany, particularly in electrical equipment, aircraft, industrial machinery, optical and medical instruments, and vehicles, followed by Vietnam, the Republic of Korea, Indonesia, and Malaysia. In energy sectors, Saudi Arabia, Australia, Russia, and Republic of Korea, as well as Angola, Indonesia, Mongolia, Turkmenistan, Singapore, and Malaysia face the potential risk of losses due to China's commitment to buy more U.S. goods. Australia, Indonesia, and Mongolia supply coal, while Angola is an important exporter of crude oil.

*Managed trade is better than a trade war for the United States and China but makes everyone else worse off (Figure II.2.5).*

Relative to an escalation of the trade war, managed trade improves the outcome for both the United States and China. The impact on the United States is significant, with income higher by 1.2 percent and total exports higher by 5.0 percent in 2021. The impact on Chinese income is smaller but positive. The impact on total Chinese exports is positive, at 4.0 percent, due to a combination of the positive income effect of higher growth in the United States and the assumption of the total trade balance as a share of GDP being the same in both scenarios.

The impact on the rest of the world is negative, with income lower by 0.20 percent and exports lower by 0.45 percent in 2021. The biggest relative loss of income and exports is expected in East Asia and the Pacific excluding China (–0.43 and –0.80 percent, respectively, in 2021), followed by Latin America (–0.21 and –0.60 percent, respectively, in 2021). The negative impact on the rest of the world is predominantly due to trade diversion, as China imports less from other partners. Losses are more extensive than in the previous scenario because in the trade war scenario, exporters from the rest of the world benefit from higher effective preferences in both markets. The negative impact on Latin America is driven by agricultural goods and in East Asia and the Pacific by manufacturing goods. This effect is only in part driven by the reversal of the tariff preferences that China implicitly granted to the rest of the world as it raised tariffs on goods from the United States in 2018 and 2019. In fact, Annex 2 shows that a managed trade scenario imposed in the pre-trade war setting would have reduced income for third countries (although less than when the starting point is the high tariffs imposed during 2018 and 2019 on bilateral trade between China and the United States).

**Figure II.2.5.** Impacts of the "managed trade" scenario as compared to the "trade war" scenario (percent)

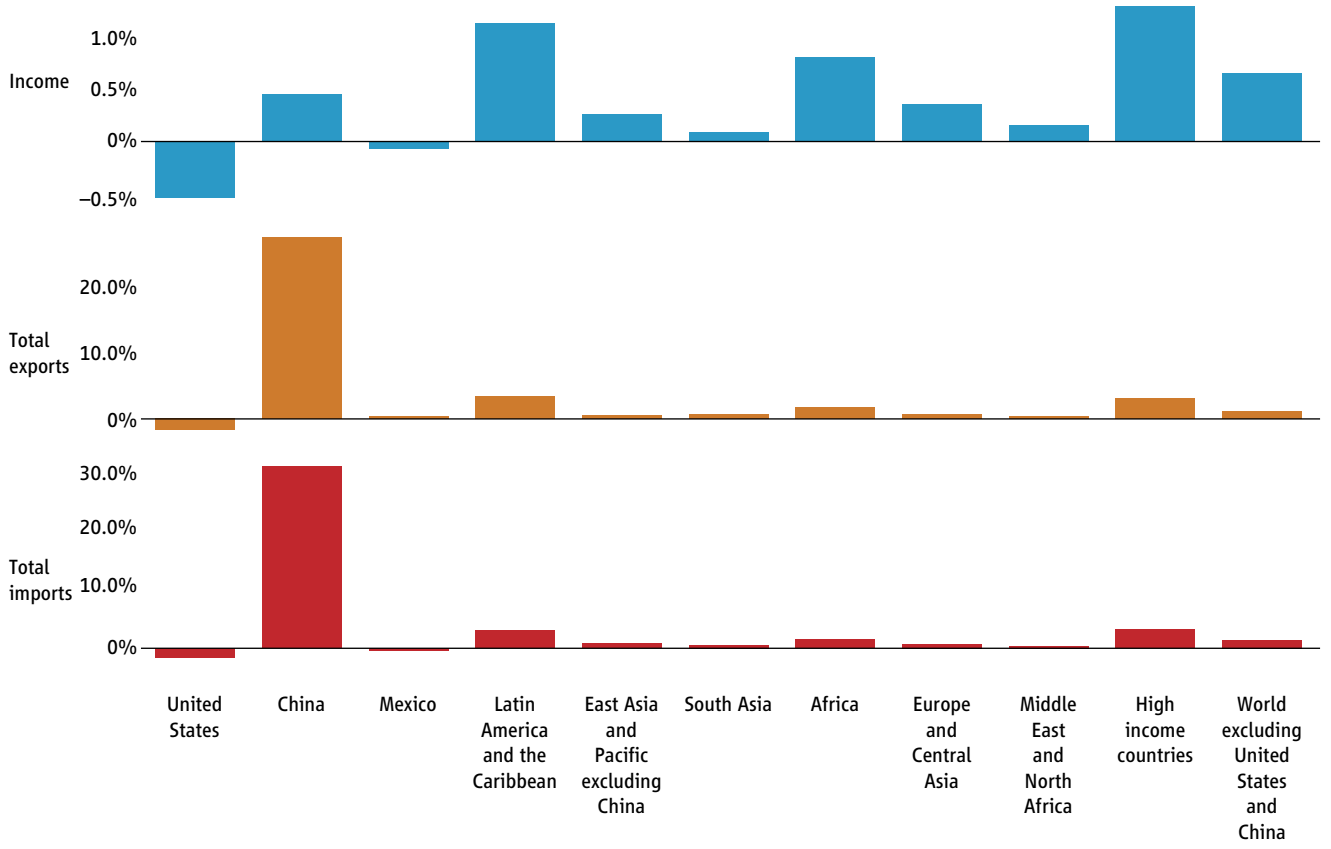



*Source:* Linkage model simulations.

*Achieving the import targets of the China-U.S. agreement through multilateral liberalization by China rather than managed trade would leave all countries, other than the United States and Mexico, better off (Figure II.2.6)*

Next the impact of the China-U.S. agreement is assessed when import targets are met through multilateral liberalization rather than managed trade. Specifically, we compare the managed trade deal with the multilateral liberalization by China (15 percent reduction in tariffs and nontariff barriers) that achieve the same gains in U.S. exports to China as targeted under the China-U.S. agreement.

**Figure II.2.6.** Impact of the "multilateral liberalization" scenario compared to the "managed trade" scenario (percent)




*Source:* Linkage model simulations.

Simulation results show that the United States is better off with China's MFN liberalization relative to a trade war but less so than with managed trade because it does not get preferential access to the Chinese market.[19] This is due to a negative term of trade effect for the United States (i.e., the price of its exports declines relative to the price of imports): because China's aggregate imports surge substantially more, the price U.S. exporters receive is lower when China opens multilaterally than when the United States receives preferential access. Due to the vertical linkages between the Mexican and U.S. economies, the fate of Mexico is closely tied to that of the United States and it experiences a small loss relative to the managed trade scenario. All other countries, including China, are better off with multilateral liberalization by

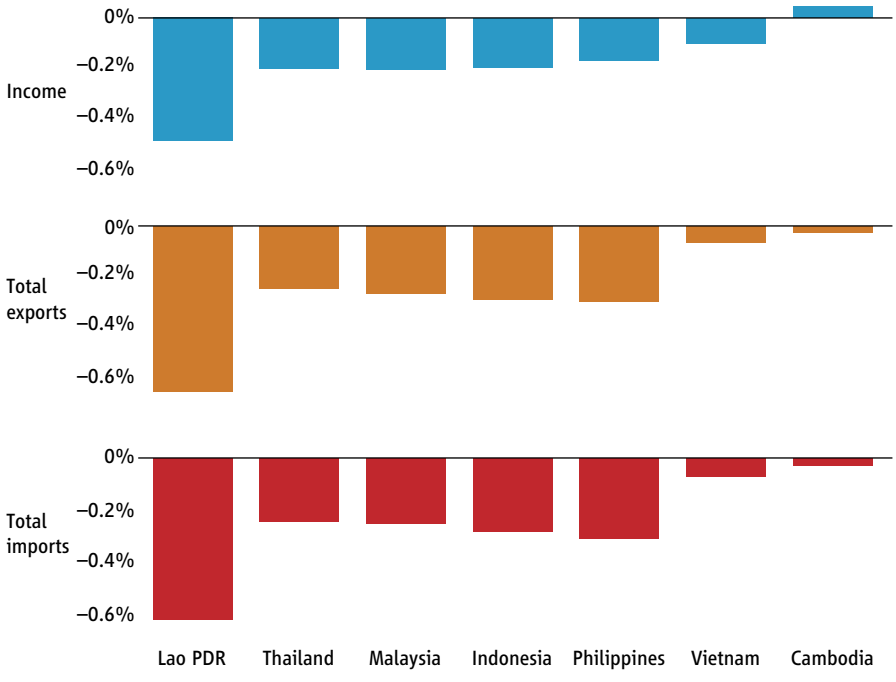
19 See Annex Table II.2.3 for the impact of the "multilateral liberalization" scenario compared to the "trade war" scenario, which can be directly compared to the impact of the "managed trade" scenario as compared to the "trade war" scenario.

China. Global income rises by the largest amount, more than 0.50 percent in this scenario. The largest income gains would be registered in Latin America and other high-income countries (1.1 and 1.2 percent, respectively). But African countries would also experience large increases in income (0.8 percent) driven by higher exports.

*Managed trade makes all developing East Asian countries except for Cambodia worse off (Figure II.2.7)*

Most developing countries in East Asia lose from the agreement relative to status quo policies because of trade diversion. Laos would experience the largest losses in terms of real income (–0.49 percent) and exports (–0.66 percent). Other countries with sizeable losses are Malaysia, Thailand, the Philippines, and Indonesia. Their real incomes would decline by roughly 0.2 percent, while their exports would drop by around 0.3 percent. Vietnam has a smaller loss in terms of real income (–0.10 percent) and exports (–0.07 percent). Cambodia is the only developing economy in East Asia that is positively affected by the China-U.S. agreement relative to the status quo policies. While its exports would contract by 0.03 percent, its real income would increase by 0.03 percent due to positive terms of trade effect.

**Figure II.2.7.** Impacts of the managed trade scenario as compared to the trade policy status quo scenario for East Asian developing countries (percent)



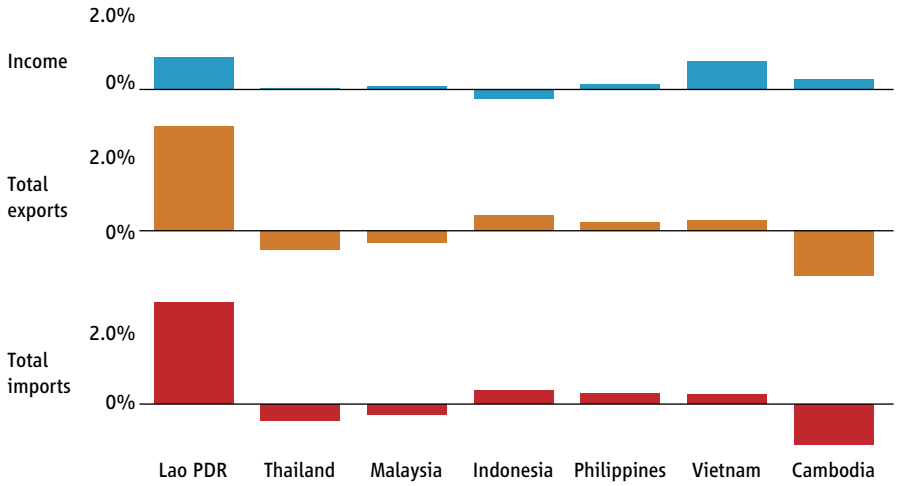

*Source:* Linkage model simulations.

*Achieving the import targets of the China-U.S. agreement through multilateral liberalization by China rather than managed trade would make all developing East Asian countries except Indonesia better off (Figure II.2.8)*

If China achieves the import targets through an MFN reduction of tariffs and nontariff barriers, there are two contrasting effects on East Asian developing countries. On the one hand, as discussed above, discrimination that favors U.S. producers is reduced. On the other hand, the preferential access that these countries have in the Chinese market thanks to the ASEAN-China trade agreements is in part eroded. Still, this exercise shows that three countries (Lao PDR, Vietnam,

and the Philippines) would have larger exports (between 2.90 percent for Lao PDR and 0.25 percent of the Philippines) and larger real income (between 0.9 percent for Lao PDR and 0.1 percent for the Philippines) under the multilateral liberalization relative to managed trade. Cambodia, Thailand, and Malaysia would see their export contract, but still, achieve higher real income under multilateral liberalization due to positive terms of trade effect. Indonesia is the only economy that would be negatively affected by a nondiscriminatory opening of the Chinese market relative to managed trade, with a slight decline in real income by –0.18 percent.

**Figure II.2.8.** Impact of the "multilateral liberalization" scenario compared to the "managed trade" scenario for East Asian developing countries (percent)




*Source:* Linkage model simulations.

## 5. Making the agreement work for the development

Having identified the valuable opportunity offered by the agreement, it is useful also to highlight four risks—and how they might be averted.

First, even as the United States and China engage in the managed coupling, they face internal pressures to decouple. Growing strategic rivalry is creating a strong impulse in both the United States and China to reduce mutual dependence and increase self-sufficiency. Yet, a deal that forces China to buy more from the United States encourages increased intertwining. This outcome may reflect the ascendancy within the United States of those who seek a new equilibrium of greater mutual openness over those who seek to reduce U.S. dependence; and of those within China who seek a more liberal economy over those who wish to maintain greater state control. But the unresolved tensions could make it hard to implement the deal through mutual liberalization—particularly if the United States persists with export restrictions and China maintains general trade barriers.

Second, even though the deal affirms in its preamble the benefits of market-based "harmonious development and expansion of world trade," it could turn into an exercise in state-driven, bilateral mercantilism. The preamble emphasizes market-based outcomes, international norms, and catalyzing broader international cooperation. But the deal specifies quantitative goals for the expansion of U.S. exports to China and therefore risks diminishing the role of the market in China. That is because meeting the quantitative goals could lead to managed trade and strengthen the role of state-owned enterprises—whose reform is desirable and has been deferred.

Third, a deal that seeks trade creation could result in trade diversion, not just in China but also in the United States. As noted above, if China does not liberalize compared to the rest of the world, China's bilateral commitments to the United States could result in reduced imports from other countries, including otherwise competitive developing countries. And the ability of the United States to realize its sales to China could come from reduced exports to other countries, at least until the capacity of U.S. firms and farms expands sufficiently—even as the United States operates at close to full employment. This double trade diversion could lead to trade distortions rather than beneficial trade liberalization.

Fourth, a deal that seeks to dispel uncertainty could make a trade policy permanently unpredictable. In principle, an agreement makes the world more predictable. But this agreement appears to deviate from multilateral rules against discrimination and guarantees against trade protection. By requiring bilateral purchases, the agreement marks a deeper departure from multilateral rules against discrimination than the preferential tariffs associated with typical bilateral and regional agreements. Moreover, instead of an independent multilateral dispute settlement, the United States has assumed the right to unilaterally judge and penalize China's nonconformity with obligations that are not always clear, while China must either accept or withdraw from the agreement. The result could be a durable uncertainty in the trading system. Finally, the deal disrupts not just existing rules but the established process of reaching trade agreements. Instead of exchanging the carrot of market opening at home for the carrot of market opening abroad, it resorted to the stick of protection to induce enhanced access abroad. Therefore, even existing openness—which had previously been assured by multilateral legal bindings—can no longer be taken for granted.

Many of these risks can be averted if China chooses to multilateralize this bilateral agreement. One route is to implement the provisions unilaterally as far as possible on an MFN basis. The fact that China negotiated the current deal may be ground for skepticism about the likelihood of China implementing broad-based liberalization. However, the agreement itself may encourage greater reform. To the extent there are losses from trade diversion, there will be increased pressure for China to liberalize trade for all partners—to reduce the costly trade diversion and increase imports from the most efficient producers. These pressures are not just a theoretical possibility: evidence from Latin American trade agreements show that PTAs typically induce multilateral liberalization, and these effects tend to be stronger when preferences are granted to important suppliers (Estevadeordal et al., 2008).

Multilateral liberalization can be accomplished by implementing reforms in areas like services, intellectual property, and technology transfer that extend the benefits of the agreement to all trading partners. In some cases, as in the recognition of foreign standards and conformity assessment procedures in agriculture, multilateralization could be a challenge, but China could still strive to establish objective and transparent conditions of eligibility for recognition. In financial services, barriers to entry could be eliminated on an MFN basis and regulatory recognition extended on the basis of prudential considerations that do not discriminate between trading partners with like regulatory conditions. Realizing the quantitative targets may pose the most significant difficulty. As we have seen, the extent of multilateral liberalization needed is likely to be much greater than the required preferential access for the United States alone. Moreover, for a large country like China, the liberalization may involve giving up the freedom to impose "optimum tariffs" that exploit its market power. Nevertheless, the costs of any such "concession" are likely to be outweighed by the benefits of nondiscriminatory liberalization, as the simulations in this paper suggest.

A more ambitious route is for China to institutionally multilateralize its reforms by offering to legally bind them in the World Trade Organization. Such a "down payment" by China could dispel some of the skepticism about the possibility of achieving meaningful liberalization in the WTO context and may galvanize multilateral negotiations. Such a course could also make China's obligations subject to an independent multilateral dispute resolution mechanism and may even help to revive this valuable function of the WTO. These developments would be in China's interests as it emerges as a major trading nation. In this role, it will need the WTO as a means of anchoring its policies to reassure trading partners and also as a forum for negotiations without having to resort to costly bilateral negotiations, which create painful political frictions.

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**Annex Table II.2.1.** Subarea covered in U.S. preferential trade agreements on intellectual property and technology transfer

| *Categories/ Agreement* | *(1) Accession/ ratification to existing international IP agreement(s)* | *(2) Incorporation of existing international IP agreements* | *(3) National treatment* | *(4) Exhaustion* | *(5) Transparency* | *(6) Trademarks* | *(7) Geographical indications (GIs)* | *(8) Domain names/(9) country names* | *(10) Patents* | *(11) Data protection/ protection of undisclosed information* | *(12) Industrial design* | *(13) Copyright and related rights* | *(14) Biodiversity/ traditional knowledge* | *(15) Enforcement* | *(16) Other (e.g., cooperation)* | *(17) Technology transfer* | *(18) Trade secrets* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| US-Korea, Rep. | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| US-Colombia | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| US-Peru | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| US-Panama | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| US-DR-CAFTA | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| US-Oman | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| US-Bahrain | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| US-Morocco | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| US-Chile | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| US-Australia | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| US-Singapore | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| US-Jordan | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| USMCA | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| US-China | 0 | 0 | 0 | 0 | 0 | 1* | 1* | 0 | 1 | 0 | 0 | 1* | 0 | 1 | 1 | 1 | 1 |

*Source:* The World Bank database on Deep Trade Agreements (Mattoo et al., 2020).
*Note:* 1 indicates coverage; 0 no coverage. 1* indicates areas in China-U.S. where there is some coverage but there is a significant departure in terms of content compared to other U.S. preferential trade agreements.

**Annex Table II.2.2.** A managed trade deal imposed in the pre-trade war setting would have reduced welfare for all countries, except the United States

***Managed trade imposed in 2018 as compared to the pre-trade war tariffs (percent)***

| | *Income* | *Total exports* | *Total imports* |
|---|---|---|---|
| USA | 0.08 | 0.24 | 0.19 |
| CHN | –0.04 | 0.20 | 0.21 |
| EAP excl. China | –0.03 | –0.04 | –0.04 |
| SAR | –0.01 | –0.01 | –0.01 |
| Mexico | 0.01 | –0.02 | –0.02 |
| LAC | –0.02 | –0.05 | –0.04 |
| AFR | –0.01 | –0.02 | –0.02 |
| ECA | –0.01 | –0.02 | –0.01 |
| MENA (Egypt, Arab Rep.) | –0.01 | –0.02 | –0.01 |
| HICs | –0.02 | –0.04 | –0.03 |
| ROW | –0.01 | –0.03 | –0.02 |
| Global | 0.00 | 0.03 | 0.03 |
| World excluding USA and CHN | –0.01 | –0.03 | –0.02 |

*Source:* Linkage model simulations.

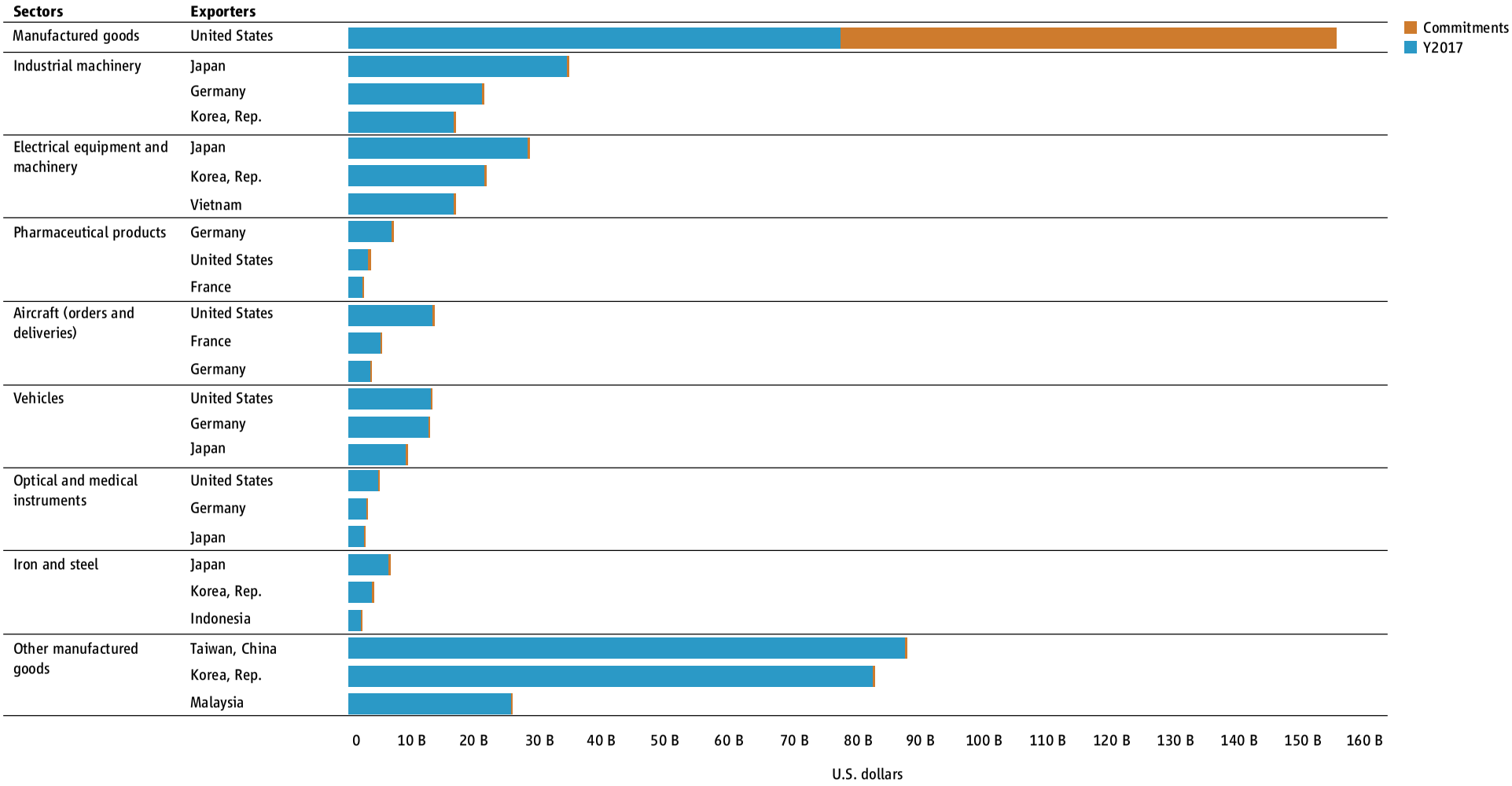
**Annex Table II.2.3.** Impacts of the "multilateral liberalization" scenario as compared to the "trade war" scenario (percent)

| | *Income* | | *Total exports* | | *Total imports* | |
|---|---|---|---|---|---|---|
| | *2020* | *2021* | *2020* | *2021* | *2020* | *2021* |
| USA | 0.67 | 0.72 | 2.98 | 3.03 | 2.40 | 2.49 |
| CHN | 0.68 | 0.52 | 32.05 | 32.87 | 34.55 | 35.52 |
| EAP excluding China | –0.27 | –0.19 | –0.72 | –0.55 | –0.39 | –0.18 |
| SAR | –0.12 | –0.05 | 0.06 | 0.14 | 0.19 | 0.28 |
| Mexico | –0.31 | –0.35 | –1.39 | –1.56 | –1.27 | –1.45 |
| LAC | 0.70 | 0.85 | 2.42 | 2.61 | 1.97 | 2.29 |
| AFR | 0.45 | 0.59 | 1.09 | 1.22 | 0.98 | 1.16 |
| ECA | 0.24 | 0.23 | 0.17 | 0.12 | 0.50 | 0.47 |
| MENA (Egypt, Arab Rep.) | 0.02 | 0.06 | –0.08 | –0.11 | 0.04 | 0.03 |
| HICs | 0.94 | 0.96 | 2.15 | 2.36 | 2.53 | 2.60 |
| ROW | 0.55 | 0.67 | 0.64 | 0.77 | 0.83 | 0.98 |
| Global | 0.31 | 0.50 | 4.12 | 4.37 | 4.22 | 4.48 |
| World excluding USA and CHN | **0.38** | **0.43** | **0.39** | **0.44** | **0.67** | **0.73** |

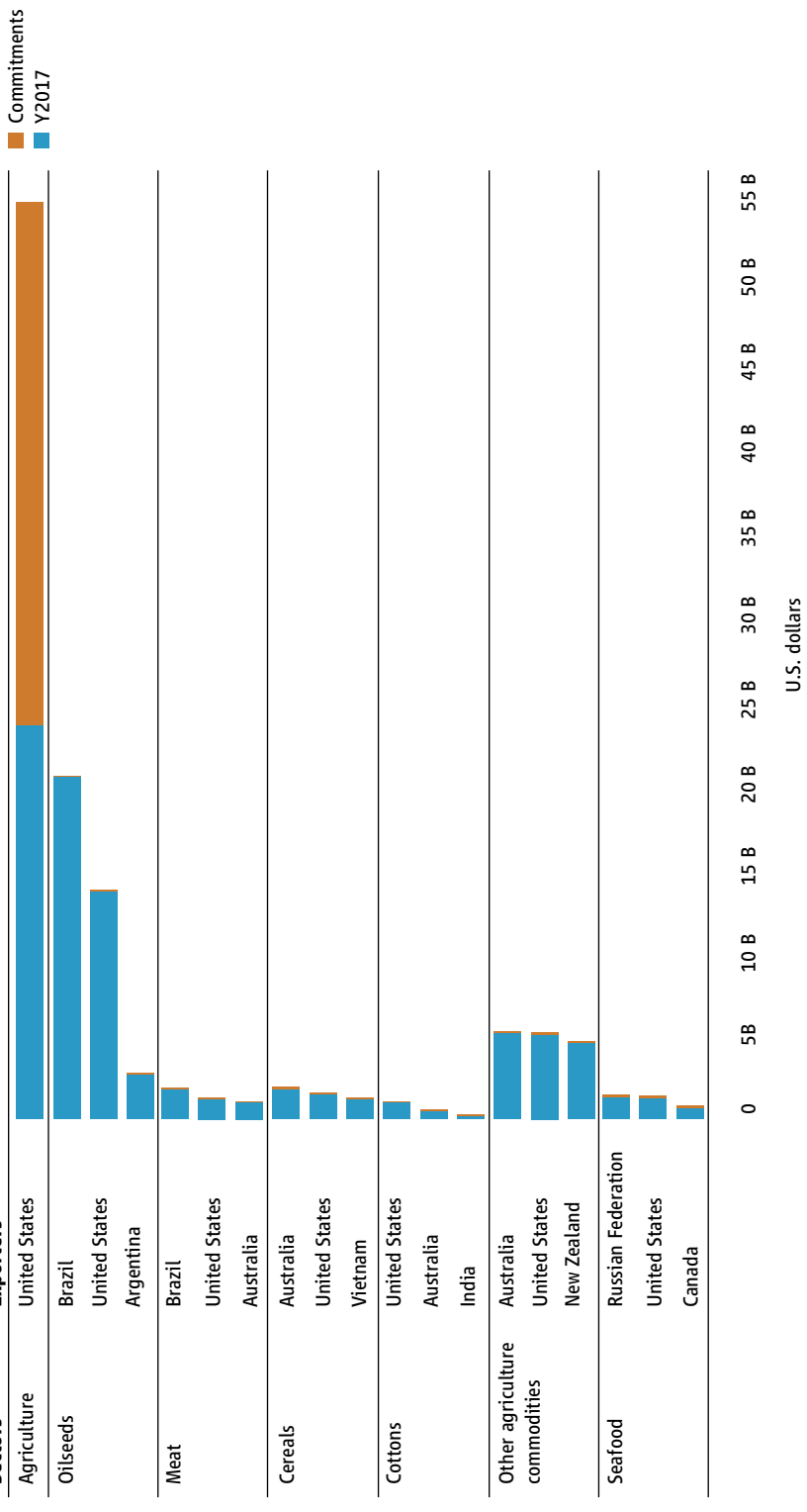
*Source:* Linkage model simulations.

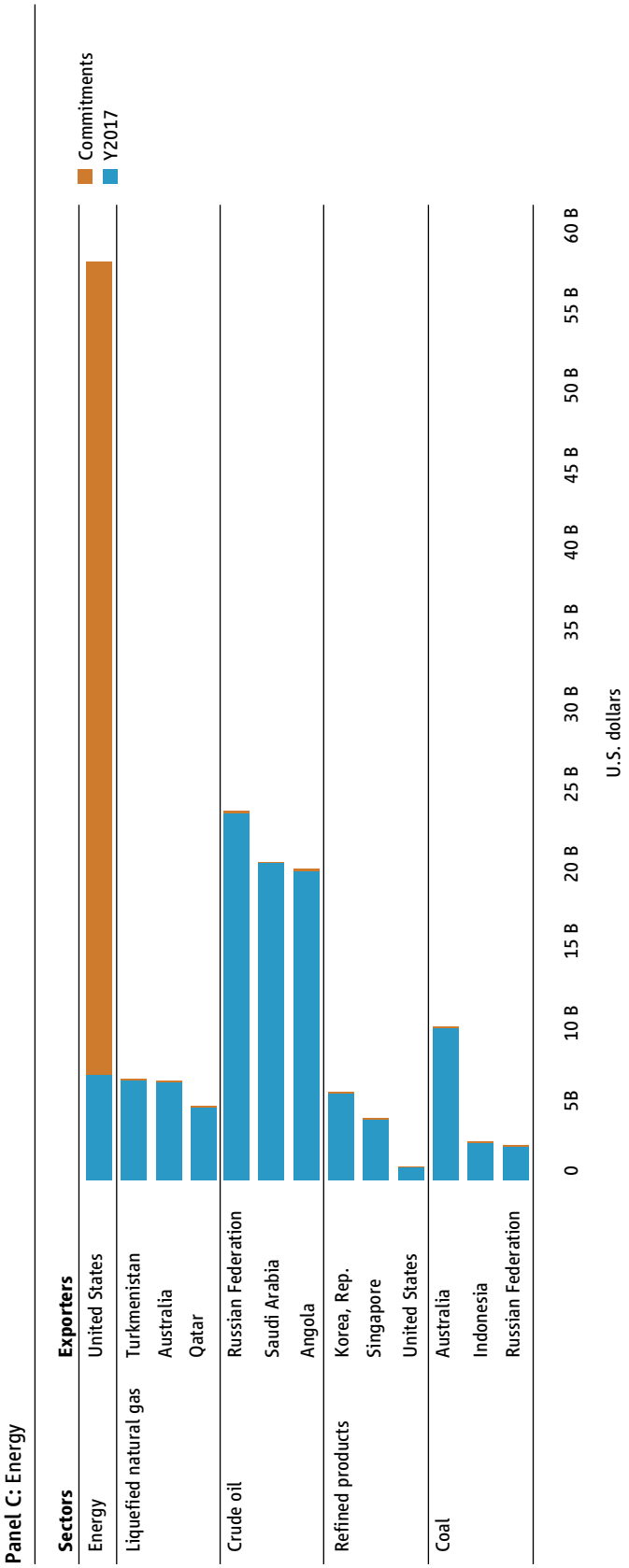
**Annex Figure II.2.9.** Chinese imports from top suppliers of goods and services subject to the China-U.S. trade agreement along with the commitments undertaken by China as part of the agreement

**Panel A:** Manufacturing

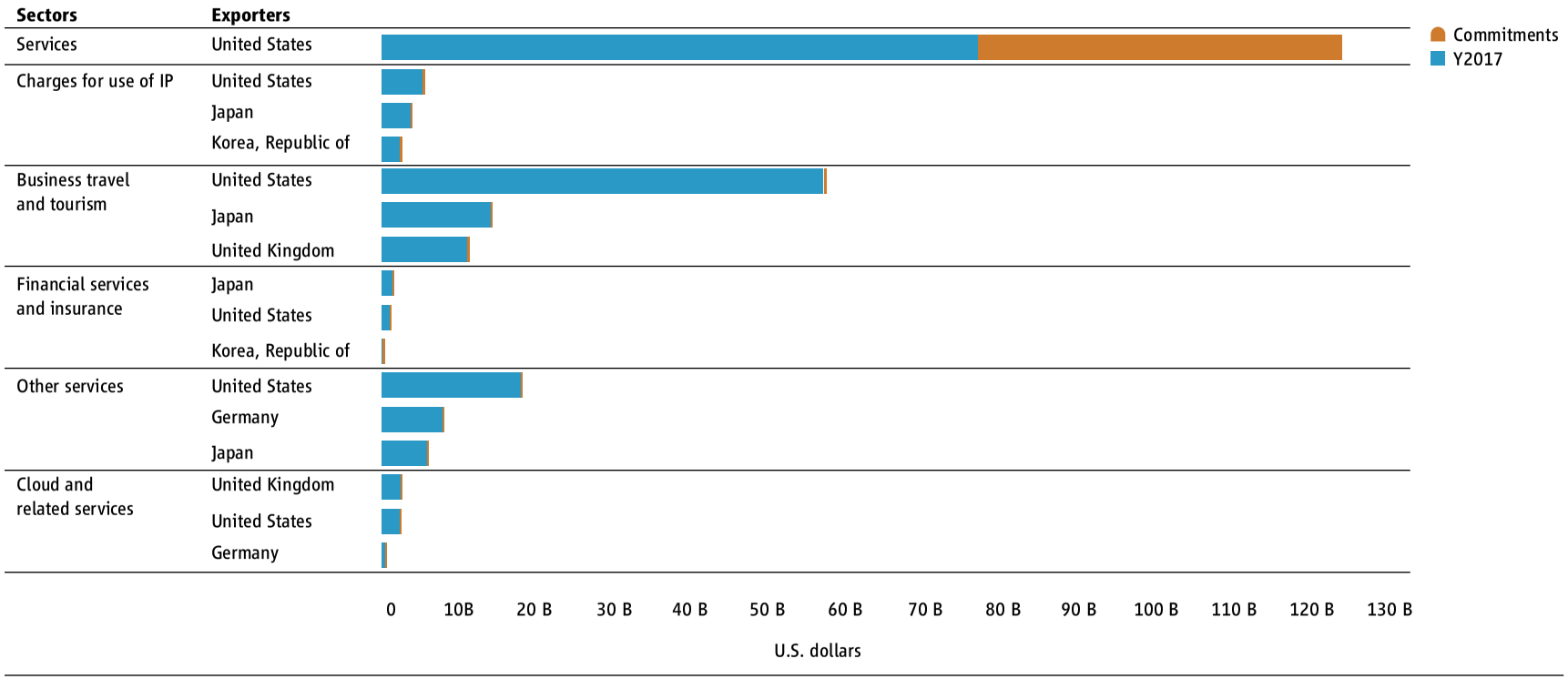


**Panel B:** Agriculture




Panel C: Energy
Sectors
Exporters
Energy
United States
Liquefied natural gas
Turkmenistan
Australia
Qatar
Crude oil
Russian Federation
Saudi Arabia
Angola
Refined products
Korea, Rep.
Singapore
United States
Coal
Australia
Indonesia
Russian Federation
Commitments
Y2017
0
5B
10 B
15 B
20 B
25 B
30 B
35 B
40 B
45 B
50 B
55 B
60 B
U.S. dollars

**Panel D:** Services




*Source:* Panels A, B, C, author's calculations using data from China Customs; Panel D, author's calculation using data from WTO.
*Note:* In Panel D, year 2016 is the latest year available for bilateral services trade data by sectors.

# Part III. Country Summaries and Key Indicators

**The global outlook is very uncertain. This outlook reflects information available at the time of its publication. As more information becomes available, these projections will be revised. They are presented now to assist policy makers to design alternative policy responses. The cut-off date for information in this MPO was: March 30, 2020.**

## CAMBODIA

| | 2019 |
|---|---|
| Population, million | 16.6 |
| GDP, current US$ billion | 26.9 |
| GDP per capita, current US$ | 1,623 |
| School enrollment, primary (% gross)[a] | 107.8 |
| Life expectancy at birth, years[a] | 69.3 |

*Sources:* WDI, Macro Poverty Outlook, and official data.
*Note:* (a) Most recent WDI value (2017).

### Summary

*Cambodia's economy has been hit hard by the global COVID-19 outbreak. The outbreak caused sharp decelerations in most of Cambodia's main engines of growth in the first quarter of 2020, including weakened tourism and construction activity. Growth is projected to slow sharply to 2.5 percent in 2020 under the baseline scenario. Downside risks include a local COVID-19 outbreak, a prolonged decline in tourist arrivals, and real estate market correction.*

### Recent Developments

The unprecedented global shock triggered by the COVID-19 pandemic has significantly impacted Cambodia's economy. While real growth was strong at 7.1 percent in 2019 (Figure 1), the outbreak has caused sharp decelerations in most of Cambodia's main engines of growth in early-2020. In 2019, growth of combined garment, footwear, and travel goods exports decelerated to 13.6 percent, down from 17.7 percent in 2018. This was driven by a contraction of combined garment, footwear, and travel goods exports to the EU market by 0.5 percent (Figure 2), which fell for the first time since the 2008/09 Global Financial Crisis (GFC). Boosted by duty free and quota free access to the U.S. market, travel goods export rapidly expanded, reaching US$1.29 billion (96.3 percent growth) in 2019.

Growth of international arrivals weakened, increasing by 6.6 percent in 2019, down from 10.7 percent in 2018. The number of foreign tourists visiting Angkor Wat temple complex, the country's main attraction site, contracted by 14.1 percent in 2019, again for the first time since the 2008/09 GFC, and a further 37.2 percent during the first two months of 2020. In 2019, contribution to growth of the hotels and restaurants sector eased significantly, while that of the agriculture sector contracted. In 2020, construction activity weakened as imports of steel dipped by 41.3 percent year-to-year in January 2020, after the value of approved construction permits doubled in 2019 when the construction (and real estate) sector contributed over a third of real growth.

While the demand for consumable goods such as foodstuff, beverages, and petroleum products remained robust, consumer appetite for durable goods has faded. Imports of passenger cars moderated to 13.9 percent growth in 2019, down from 72.4 percent in 2018. In January 2020, imports of motorcycles contracted by 6.3 percent year-to-year, while those of electronics such as mobile phones and televisions dipped by 9.9 percent. Inflation inched up, increasing to 3.1 percent by end-2019, compared to 1.6 percent by end-2018.

The value of approved FDI projects contracted by 9.6 percent in 2019. Roughly 40 percent of FDI inflows comes from China. Thanks to slower capital inflows, the exchange rate slightly depreciated, reaching riel 4,075 per U.S. dollar in December 2019, up from riel 4,018 per U.S. dollar at end-2018. Broad money growth eased considerably, reaching 18 percent growth in 2019, compared to 24 percent in 2018. Growth of foreign currency deposits shrank to 15 percent in 2019, down from 26.8 percent in 2018. Similarly, bank credit to the private sector (95.8 percent of GDP) eased, rising 21.3 percent in 2019, compared to 24.2 percent in 2018. Gross international reserves accumulation reached US$18.7 billion (about 7 months of

import coverage). The current account deficit is estimated to have remained stable at 8.8 percent of GDP in 2019.

Total government revenues (including grants) peaked last year, estimated at 25.4 percent of GDP, up from 23.8 percent in 2018, thanks to improvements in revenue administration and strong economic activity. Government outlays also increased, reaching an estimated 25.0 percent of GDP in 2019, compared with 23.4 percent in 2018, driven mainly by rising current expenditures. As a result, overall fiscal balance was in a surplus (estimated at 0.5 percent of GDP) for the second year in 2019.

## Outlook

Real growth is projected to slow sharply to 2.5 percent in 2020, but recover to 5.9 percent in 2021 under the baseline scenario. The tourism sector has been hit hardest by the outbreak. Similarly, the garment industry is facing a global demand shock as well as partial withdrawal of the EU's "Everything But Arms" (EBA) trade preferential treatment. Spillovers to the construction and real estate sector—one of Cambodia's growth drivers—amid financial market turmoil could potentially be detrimental to growth. Rebounds in economic activity in China and major markets in 2021 improves Cambodia's growth outlook next year.

Poverty reduction is expected to continue but at a slower pace. Given the agriculture sector provides livelihoods for most of the poor, efforts to diversify the agriculture sector and rural households' incomes as well as to promote agroprocessing are expected to help in the medium term.

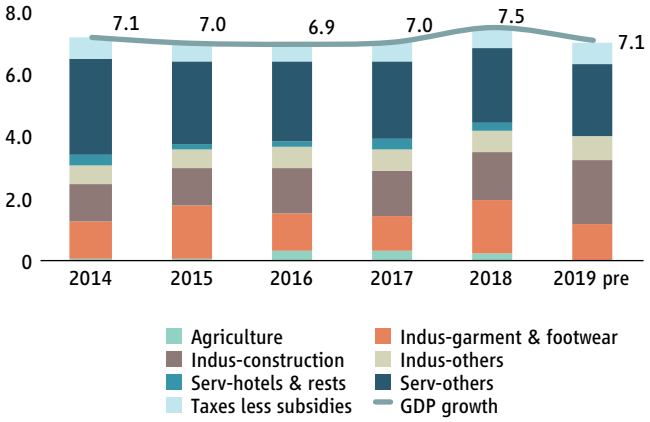
## Risks and Challenges

Downside risks to Cambodia's near-term growth outlook include continued decline in tourist arrivals due to lingering global outbreak, slow recovery in global economic activity that would further decelerate Cambodia's industrial sector due to extended demand shock to garment exports, and drastic slowdown in FDI due to prolonged financial market turmoil whereby construction activity does not pick up. In the downside scenario real growth is projected to diminish to 1.0 percent in 2020 and 3.9 percent in 2021. A significant local COVID-19 outbreak, real estate market correction following a prolonged construction and property boom, increased credit provided to the construction/ real estate/mortgage sector (that recently relies highly on Chinese investment), and high outstanding credit are additional vulnerabilities.

Several measures under a newly introduced fiscal stimulus in the 2020 budget have been announced to mitigate the negative impact. Depending on their effectiveness, measures supporting the hardest hit industries with tax relief and retraining and upskilling programs for laid-off workers may help. Additional capital injection for the Rural Development Bank to support agroprocessing firms and trade facilitation improvements with an expansion of "the green lane" and post audit clearance will enhance longer-term competitiveness. Other initiatives, including a new bank to support small- and medium-sized enterprises alongside cofinancing and risk sharing initiatives with commercial banks (and microfinance institutions) to improve access to finance, will likely need more preparatory work. Measures to address key aspects underpinning the ease of doing business will also need to be introduced. Improvements in fiscal and public investment management should continue to ensure effectiveness of the stimulus.

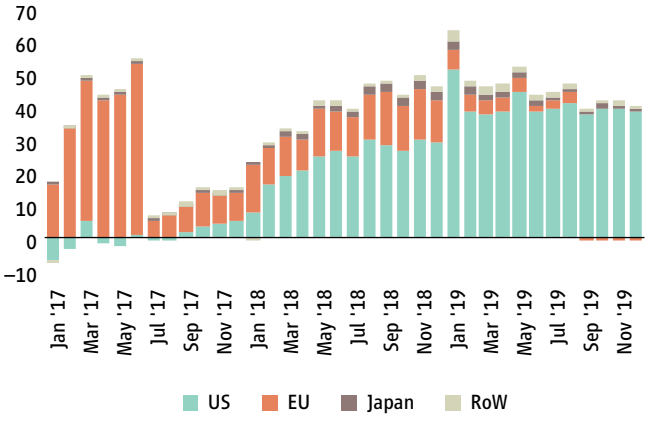
It is crucial to implement macroprudential measures such as bank limits in terms of exposure to construction and real estate sectors and tighten loan-to-value ratios, except for first home buyers, to cushion the potential impacts of real estate market correction. Recent monetary policy measures announced include reductions of reserve requirement rates, benchmark rates, and the liquidity coverage ratio.

**Figure 1.** Contributions to real GDP growth (percent)




*Sources:* Cambodian authorities and World Bank staff estimates.

**Figure 2.** Destination of Cambodia garment, footwear, and travel good exports (year-to-year percent change)




*Sources:* Cambodian authorities.
*Note:* RoW = The Rest of the World.

| | *2017* | *2018* | *2019e* | *2020f* | *2021f* | *2022f* |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 7.0 | 7.5 | 7.1 | 2.5 | 5.9 | 6.3 |
| Private consumption | 3.7 | 3.0 | 7.0 | 4.9 | 5.0 | 5.4 |
| Government consumption | 23.5 | 5.1 | –9.1 | 1.3 | 17.1 | 9.5 |
| Gross fixed capital investment | 6.1 | 6.1 | 10.7 | –2.2 | 7.4 | 7.2 |
| Exports, goods, and services | 5.3 | 5.3 | 7.8 | 2.6 | 7.0 | 7.5 |
| Imports, goods, and services | 4.1 | 4.1 | 6.0 | 3.0 | 6.9 | 7.1 |
| **Real GDP growth, at constant factor prices** | 6.8 | 7.4 | 6.8 | 2.4 | 6.0 | 6.3 |
| Agriculture | 1.7 | 1.1 | –0.5 | 0.3 | 0.4 | 0.5 |
| Industry | 9.7 | 11.6 | 11.3 | 7.5 | 9.2 | 9.3 |
| Services | 7.0 | 6.8 | 6.2 | –1.4 | 5.3 | 5.6 |
| **Inflation (consumer price index)** | 3.3 | 3.1 | 3.2 | 2.3 | 2.0 | 2.1 |
| **Current account balance (% of GDP)** | –9.7 | –8.9 | –8.8 | –10.9 | –11.9 | –12.8 |
| **Net foreign direct investment (% of GDP)** | 12.1 | 12.6 | 10.6 | 9.0 | 9.1 | 9.3 |
| **Fiscal balance (% of GDP)** | –0.8 | 0.4 | 0.5 | –3.0 | –0.4 | –0.6 |
| **Debt (% of GDP)** | 30.3 | 30.0 | 30.0 | 32.2 | 33.4 | 33.0 |
| **Primary balance (% of GDP)** | –0.4 | 0.8 | 0.9 | –2.5 | 0.1 | –0.1 |

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

## CENTRAL PACIFIC ISLANDS

| | 2018 |
|---|---|
| Population, million | |
| Kiribati | 0.12 |
| Nauru | 0.01 |
| Tuvalu | 0.01 |
| GDP, US$, billion | |
| Kiribati | 0.19 |
| Nauru | 0.11 |
| Tuvalu | 0.04 |
| GDP per capita, current US$ | |
| Kiribati | 1,594 |
| Nauru | 8,344 |
| Tuvalu | 3,550 |

*Sources:* WDI, World Bank staff estimates.

*Economic activity and government revenues in the Central Pacific countries—Kiribati, Nauru, and Tuvalu—are highly reliant on donor financing and rents from a few key sources (fisheries, Tuvalu's ".tv" Internet domain, and Australia's Regional Processing Centre (RPC) for asylum-seekers located in Nauru). Recently, public spending and donor-funded projects helped to fuel moderate growth in Kiribati and Tuvalu, but growth has slowed in Nauru due to a wind-down in RPC activity. The outlook is tilted to the downside in 2020, with the possibility that COVID-19 will disrupt imports of skilled labor and materials for construction activity. A continued global equities correction would also have short-term effects on the three countries' sovereign wealth fund balances.*

### Recent Developments

In **Kiribati,** economic growth is volatile and mainly determined by aid-related construction activity and government spending. Revised figures indicate GDP growth of just 0.9 percent in 2017 before accelerating to 2.3 percent in 2018, driven by the construction sector and government consumption (2019 data are not yet available). Inflation has been low in recent years and dipped into negative territory in 2019 (–1.8 percent) on the back of lower food and beverage prices, although there are likely to be some measurement issues (the consumption basket was last updated in 2006). Fishing license fees, investment income from its sovereign wealth fund—the Revenue Equalisation Reserve Fund (RERF)—and aid transfers contributed to a current account surplus of 39 percent of GDP in 2018, despite a large trade deficit (77 percent of GDP).

High fisheries revenues in recent years have fueled a major fiscal expansion. By far the largest new initiative is an international expansion of the state-owned airline fleet at a cost of circa $A120m (47 percent of GDP) over 2018–2020. Other recent measures include an increase to the copra (coconut) subsidy which supports livelihoods on the outer islands, an extension of fee-free primary education, a 30 percent pay rise for civil servants, and an outer islands infrastructure program. In the 2019 budget, the government introduced a new disability allowance and funding for pre-school teacher salaries, which may help to make early childhood education more accessible for the poor. Overall, Kiribati achieved a fiscal surplus of 4 percent of GDP in 2018 (after including budget support), but is likely to have registered a small deficit in 2019 (based on the revised budget estimates), owing to a one-off payment toward the airline fleet expansion and delays in budget support payments.

After doubling in size in the early part of the decade, the economy of **Nauru** has seen slower and more volatile growth in recent years, in line with fluctuations in activity associated with Australia's Regional Processing Centre (RPC) for asylum-seekers, phosphate mining, and fishing. After contracting in FY17 (year ended June), the economy rebounded in FY18, with growth of 5.7 percent attributable to strong fishing activity, preparations for the Pacific Islands Forum (hosted by Nauru in September 2018), and higher-than-expected activity related to the RPC. But growth is estimated to have slowed in FY19 to around 1 percent, due to a slowdown in phosphate mining and a reduction in refugee and asylum-seeker numbers.

Government revenue has increased by around 50 percentage points of GDP since FY2015 due to RPC-related revenues and fishing license fees, as well as the implementation of employment and services taxes and improvements in tax administration. Government spending has also increased rapidly, particularly on the wage bill and on RPC-related expenditures. Nevertheless, a surplus of 16.1 percent of GDP has been estimated for FY19, broadly in line with the average surplus of 20 percent of GDP realized over the last five years. These surpluses have been used to contribute to the Nauru Trust Fund (which now has assets equivalent to about two-thirds of GDP, but is not accessible until 2033), as well as build government deposits (including cash buffers) and reduce arrears.

**Tuvalu's** macroeconomic performance over the past few years has been favorable due to strong fishing license fees and increased capital investment in several large infrastructure and housing projects. The country looks set to record a sixth consecutive year of growth in 2019 with real GDP growth estimated at 4.1 percent, marginally below the 2018 level of 4.3 percent. Inflation climbed to 4.4 percent in 2017 due to higher food and transportation costs but is estimated to have fallen back to 4 percent in 2018–2019, with the increase in public wages, dictated by the need to compensate increased living costs and retain staff in the public administration, offset by moderation in food and fuel prices. Tuvalu has a very narrow domestic economic base, and external grants are a critical source of budget financing. The banking sector is fragile, and credit provides only modest support to growth.

In recent years Tuvalu maintained fiscal surpluses despite high expenditure thanks to revenue from fishing license fees and the ".tv" domain, and grants, which together account for three quarters of domestic revenues. In 2018 a windfall gain, from a near doubling of fishing license fees, resulted in a sizeable fiscal surplus (including grants) equivalent to 24 percent of GDP. Post-grant surpluses in recent years have been used to replenish the Consolidated Investment Fund (CIF) and, more recently, to capitalize the Tuvalu Trust Fund (TTF) and the newly established Tuvalu Survival Fund (TSF). The combined value of the TTF, TSF, and CIF was around 370 percent of GDP at end-2019. The current account continued to post a surplus, 5 percent of GDP, with the deficit in goods and services offset by income inflows, and reserve coverage remains adequate with an estimated 10 months of imports at end-2019.

**Outlook**

In **Kiribati** GDP growth of around 2 percent is expected over the medium term, fueled by construction projects, although the near-term outlook is tilted to the downside. The next stage of the airline project is expected to result in a large one-off budget deficit in 2020, although this can be afforded from Kiribati's cash reserve buffer. Economic disruption from COVID-19 could result in delays to construction activity in 2020 and may affect the valuation of sovereign wealth fund (RERF) assets in the short term. The impact on the fiscal position should be limited, however, provided that the Pacific tuna fishing industry is not strongly impacted by COVID-19 related travel restrictions.

Growth in **Nauru** is expected to moderate further to about 0.6 percent in FY2020, and only modest growth of between 1 and 2 percent per annum is expected over the medium term. Growth remains dependent on the still uncertain outlook for the RPC, the execution of infrastructure projects (which may suffer to the extent there are COVID-19 related constraints on the availability of labor or materials), and fishing license revenues. Port construction work is likely to continue to support overall economic activity over the next two to three years. The central case is for the fiscal surplus to decline significantly over the medium term in line with a projected decline in RPC-related revenues.

In **Tuvalu,** the short-term outlook is subject to downside risks due the potential adverse impact of the COVID-19 outbreak. The medium-term outlook is broadly positive with GDP growth projected to average 4 percent in 2020–2021, factoring in the implementation of infrastructure projects, and inflation should moderate to around 3 percent as oil price pressures ease. Over the medium term, however, limited administrative capacity, lack of competitiveness, and inefficient state-owned enterprises will act as constraints, and growth is projected to slow to an annual average of around 2 percent. The government projects a moderate fiscal surplus for 2020 but going forward fiscal deficits averaging 5 percent of GDP over the medium term and 7 percent in the long term could likely emerge as fishing revenues moderate due to a waning El Niño cycle and as development grant allocations decline. On the expenditure side, current spending is projected to remain elevated at around 100 percent of GDP and capital

spending to remain in the region of 10 percent of GDP but gradually decline due to limited fiscal space.

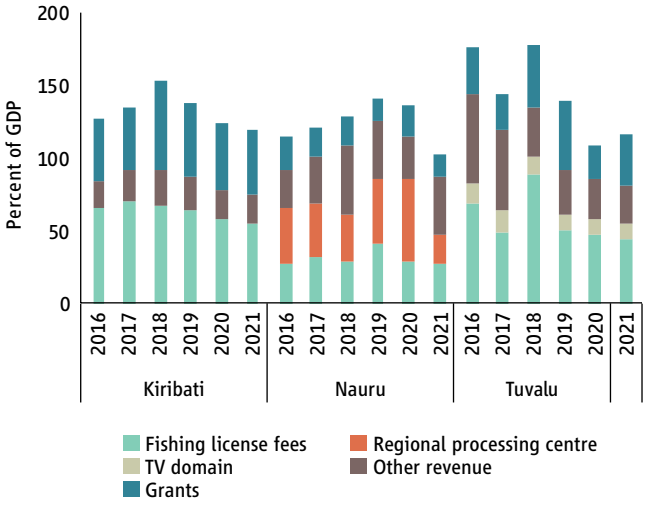
## Risks and Challenges

**Kiribati** is heavily reliant on volatile fishing license revenues and investment returns from the RERF to meet its substantial long-term development financing and climate adaptation needs. Going forward, it will be important for Kiribati to continue its efforts to strengthen the sustainable management of these critical resource endowments. Kiribati should also strengthen its fiscal framework to anchor spending around the medium-term fisheries revenue estimate, to ensure that higher-than-expected revenues are saved in order to smooth spending in low-revenue years.

**Nauru** faces significant challenges in sustaining growth and ensuring fiscal and debt sustainability. In the medium term, Nauru is highly vulnerable to the expected scaling down of the RPC. While fishing license fees have provided a welcome (albeit volatile) stream of revenue in recent years, the biggest challenge is to diversify the economy further given that neither phosphate mining nor the RPC are sustainable drivers of growth in the long run.

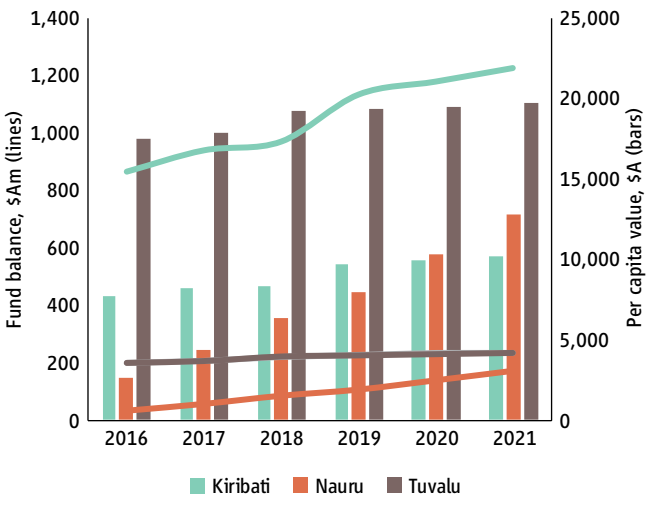
**Tuvalu** is also subject to significant downside risks and challenges stemming from a combination of factors, including the country's geographic remoteness, a narrow economic base dependent primarily on inherently volatile fishing revenues and international aid, near total dependency on imports of food and fuel, a fragile and under-regulated banking system, and elevated vulnerability to external shocks. Tuvalu is one of the most climate-change challenged countries in the world and the required climate-related adaptation measures impose long-term fiscal costs. It also confronts the economic consequences and escalating fiscal costs associated with meeting the health care needs of an aging population and a growing noncommunicable disease burden.

**Figure 1.** Sources of revenue—projections to 2021




*Sources:* Country authorities, and World Bank and IMF staff estimates and projections as of Dec 2019. Nauru data are June years; Kiribati and Tuvalu are calendar years.

**Figure 2.** Sovereign wealth fund balances—projections to 2021




*Sources:* Country authorities, and World Bank and IMF staff estimates and projections as of Dec 2019. Nauru data are June years; Kiribati and Tuvalu are calendar years. The Nauru Trust Fund was established in 2016.

| | *2016* | *2017* | *2018p* | *2019p* | *2020p* | *2021p* |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | | | | | | |
| Kiribati | 10.4 | 5.1 | 0.3 | 2.3 | –1.0 | 1.5 |
| Nauru | 2.8 | 10.4 | 4.0 | 1.0 | –2.0 | 1.1 |
| Tuvalu | 9.1 | 3.0 | 3.2 | 4.1 | 1.6 | 4.2 |

*Sources:* Country authorities and World Bank and IMF staff estimates. 2017 estimates are not yet available for Kiribati. Nauru data are based on the fiscal year ended June; Kiribati and Tuvalu are calendar years.
*Note:* p = projection.

# CHINA

| | 2019 |
|---|---|
| Population, million | 1,395.4 |
| GDP, current US$ billion | 14,115.8 |
| GDP per capita, current US$ | 10,116 |
| International poverty rate (US$1.90)[a] | 0.5 |
| Lower-middle-income poverty rate (US$3.20)[a] | 5.4 |
| Upper-middle-income poverty rate (US$5.50)[a] | 23.8 |
| School enrollment, primary (% gross)[b] | 99.4 |
| Life expectancy at birth, years[c] | 76.5 |

*Sources:* National statistical Office of China (CNBS), World Bank, WDI, and Macro Poverty Outlook.
*Note:* (a) Most recent Povcalnet value (2016). (b) Most recent WDI value 2018. (c) Most recent WDI value 2017.

## Summary

*The COVID-19 outbreak has led to an unprecedented economic shock in China and the global economy. Growth is projected to slow sharply in 2020 before rebounding in 2021. Uncertainty surrounding the outlook is exceptionally high. Risks include recurrent outbreaks and a sharper and longer lasting slowdown in global growth. The economic slowdown could also exacerbate existing balance sheet vulnerabilities in the household, corporate, and banking sectors. Amid slower growth in real household incomes the pace of poverty reduction will moderate.*

## Recent Economic Developments

GDP growth slowed to 6.1 percent in 2019 from 6.6 percent in 2018. Manufacturing investment and trade flows rebounded in the last quarter of 2019 following the conclusion of the phase one trade deal between China and the United States.

While momentum had been building toward January 2020, the outbreak of the COVID-19 virus has been taking a toll on the Chinese economy. Government restrictions, social distancing and fear have sharply reduced consumption of services. Transportation, hospitality, and traditional retail trade were most severely affected. Extended business suspension and labor shortages related to transport restrictions, lockdowns, and quarantine requirements caused significant supply disruptions and plunge in manufacturing output, especially in auto, electronics, and machinery sectors, across China. Real industrial value-added contracted by 13.5 percent year-to-year in the first two months of 2020, while real retail sales plummeted by 23.7 percent. Fixed asset investment (FAI) also fell sharply, declining 24.5 percent in the same period.

As of mid-March, activity has started to recover, even if at a slow pace. Coal consumption—a proxy of electricity generation—has risen since late February but remains 15 percent below the usual seasonal average. Car and property sales also picked up, albeit still remaining about 50 percent lower than last year.

The authorities have implemented measures to mitigate the economic impacts of the outbreak. The initial policy response aimed to bolster market confidence and provide adequate liquidity support to address near-team cashflow problems and mitigate more permanent economic damage in the form of bankruptcies, unemployment, and rising NPLs. The PBOC cut policy rates and announced a targeted reserve requirement ratio (RRR) cut, effective March 16, that would release RMB 550 billion (0.5 percent of GDP) in base money liquidity. The banking sector regulator also adopted regulatory forbearance to encourage banks to allow more flexible repayment and increase tolerance for nonperforming loans (NPLs) during the coronavirus outbreak. Targeted fiscal measures were rolled out to ease near-term cashflow problems in the enterprise sector including subsidies, tax breaks, and deferrals in social and health insurance payments by affected industries (estimated at about 1.2 percent of GDP). In addition, 1.3 trillion RMB (or 1.3 percent of GDP) special local

government bond issuance was authorized in 2020Q1, 0.6 percent GDP higher than 2019Q1.

## Outlook

Growth is forecast to decline sharply this year. In our base case scenario—which is predicated on a severe but ultimately short-lived shock—we expect growth to slow to 2.3 percent in 2020. After economic activity came to a sudden halt in the first quarter, growth is expected to rebound in the remainder of the year as supply side constraints ease and pent-up demand is released amid a roll back of prevention measures. However, job losses, shortfalls in corporate revenue, and uncertainty will slow the return to previous levels of consumption, investment, and trade. While additional fiscal support and monetary easing is expected to help lift domestic demand, the impending global recession is also expected to restrain the pace of recovery.

Risks to this baseline are significant and tilted to the downside. Domestically, recurrent outbreaks could delay resumption of economic activity. In addition, despite government policies to mitigate impacts, household, banking sector, and corporate balance sheets may suffer more permanent damage, especially given the high level of indebtedness. These domestic risks are compounded by heightened external uncertainty including the possibility of a more severe and protracted global recession, accompanied by persistent dislocations in global trade and finance. In a more adverse scenario where some of these risks materialize, China's growth would slow more sharply to 0.1 percent this year.

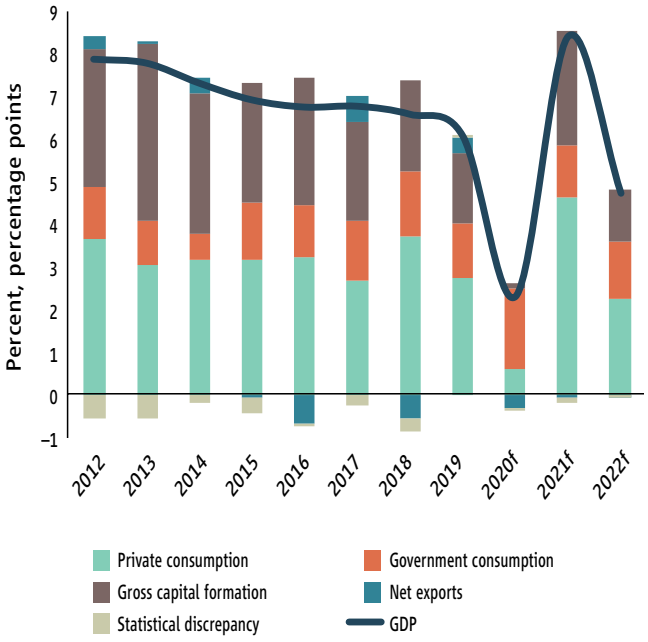
Reflecting labor dislocation, slower growth in household incomes, higher food prices, and health expenditures, the pace of poverty reduction is expected to slow. Workers in less secure, informal, and self-employment, particularly migrant workers, will be especially vulnerable. In addition, elderly population, with heightened health risk, higher health expenditures, and potentially lower family transfers which are not compensated by public transfers, may be particularly hurt by the outbreak. Still, the share of people living on less than US$5.50/day (the poverty line for upper-middle-income countries) is projected to continue to decline or stall, depending on the scenario. While in 2019 the poverty rate is estimated to have declined 2.0 percentage points (over 27 million people lifted out of poverty), the projection is that in 2020, the poverty rate will decline between 0.8 percentage points (11 million people) and 0.2 percentage points (2 million people) due to a slow down in economic growth.

## Risks and Challenges

Negative risks to the outlook are significant. Domestically, the economic impacts of the outbreak could exacerbate existing vulnerabilities and balance sheet weaknesses in the corporate and banking sectors which could weigh on the recovery, put additional strain on the banking system, and pose potential contingent fiscal liabilities. Externally, a sharper than expected deterioration in the external environment, including substantially weaker external demand, widespread disruptions to global supply chains outside China, and negative global market and financial confidence effects, could restrain the pace of China's recovery. The outbreak may also hamper the implementation of the China-U.S. phase one trade agreement, which could lead to renewed trade tensions, with broad-ranging economic consequences.

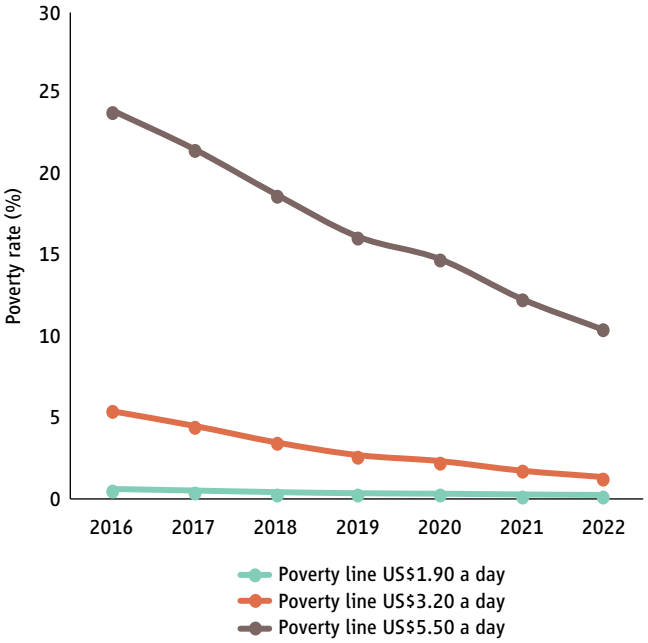
Continued and well calibrated fiscal and monetary policy measures are required to mitigate the economic impacts of the outbreak. Priority areas include policy measures to mitigate short-term distress, especially in small and medium enterprises and social impacts, and especially on poor and vulnerable households. Monetary policy will also need to remain accommodative to contain downside risks to growth. However, once economic activity stabilizes de-risking and de-leveraging efforts would need to resume to reduce financial risks. Beyond the immediate impact of the current outbreak, longer-term economic impacts may be associated with perceptions of heightened public health risks in China. This calls for resolute policy actions that enhance resilience against similar health shocks, including enhanced food safety, health surveillance, and response systems.

**Figure 1.** Annual percentage changes; contributions in percentage points




*Source:* National Bureau of Statistics; World Bank staff estimates.

**Figure 2.** China poverty estimates and projections




*Sources:* World Bank staff estimates using tabulated data from China NBS.

| | 2017 | 2018 | 2019e | 2020f | 2021f | 2022f |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 6.8 | 6.6 | 6.1 | 2.3 | 7.7 | 5.0 |
| Private consumption | 6.8 | 9.5 | 6.8 | 1.0 | 11.0 | 6.0 |
| Government consumption | 10.0 | 10.4 | 8.4 | 12.1 | 7.2 | 7.5 |
| Gross fixed capital investment | 4.4 | 4.8 | 4.5 | 0.2 | 5.4 | 3.3 |
| Exports, goods, and services | 9.1 | 4.0 | 2.5 | –8.5 | 4.0 | 1.0 |
| Imports, goods, and services | 7.1 | 7.9 | 1.0 | –9.3 | 4.5 | 1.2 |
| **Real GDP growth, at constant factor prices** | 6.8 | 6.6 | 6.1 | 2.3 | 7.7 | 5.0 |
| Agriculture | 3.9 | 3.5 | 3.3 | 3.1 | 3.4 | 3.3 |
| Industry | 5.9 | 5.8 | 5.5 | 2.8 | 7.3 | 4.2 |
| Services | 7.9 | 7.6 | 7.0 | 1.8 | 8.7 | 5.8 |
| **Inflation (consumer price index)** | 1.6 | 2.1 | 2.9 | 2.6 | 2.4 | 2.4 |
| **Current account balance (% of GDP)** | 1.6 | 0.4 | 1.1 | 1.1 | 0.9 | 0.8 |
| **Net foreign direct investment (% of GDP)** | 0.2 | 0.8 | 0.9 | 0.6 | 1.0 | 1.1 |
| **Fiscal balance (% of GDP)[a]** | –3.9 | –3.8 | –5.8 | –7.2 | –5.2 | –5.1 |
| **Debt (% of GDP)** | 46.5 | 36.2 | 39.2 | 45.1 | 46.2 | 48.3 |
| **Primary balance (% of GDP)** | –3.0 | –2.6 | –4.6 | –6.2 | –4.0 | –3.9 |
| **International poverty rate (US$1.90 in 2011 PPP)[b]** | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 |
| **Lower-middle-income poverty rate (US$3.20 in 2011 PPP)[b]** | 4.5 | 3.7 | 3.0 | 2.7 | 2.3 | 2.1 |
| **Upper-middle-income poverty rate (US$5.50 in 2011 PPP)[b]** | 21.5 | 19.5 | 17.4 | 16.6 | 14.9 | 13.9 |

*Source:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast.
(a) The adjusted fiscal balance adds up the public finance budget, the government fund budget, the state capital management fund budget and the social security fund budget.
(b) 2016 is actual based on group data provided by NBS, 2017 onwards are projections using neutral distribution assumption with pass through 0.72.

## FIJI

| | 2019 |
|---|---|
| Population, million | 0.9 |
| GDP, current US$ billion | 5.5 |
| GDP per capita, current US$ | 6,023 |
| Basic needs poverty rate[a] | 28.1 |
| International poverty rate (US$1.90)[a] | 1.4 |
| Lower middle-income poverty rate (US$3.20)[a] | 14.1 |
| Life expectancy at birth, years[a] | 67.3 |

*Sources:* WDI, Macro Poverty Outlook, and official data.
*Note:* (a) Fiji Bureau of Statistics. Based on income-based National Poverty. (a) Most recent WDI value (2017).

*Fiji's economy is estimated to have grown 1 percent in 2019, down sharply from the earlier projection of 3.4 percent, reflecting the downturn in the global economy and Fiji's main trading partners. On the domestic front, another year of robust performance in the tourism sector only partially offset subdued demand, a contraction in investment, and reduced fiscal stimulus. Fiji's medium-term outlook remains positive, but in the short term the economy is highly vulnerable to the fragile global environment and the potential impact of the current COVID-19 crisis.*

### Recent Developments

Fiji's economic growth decelerated sharply in 2019 to an estimated 1 percent, well below the prior projection of 3.4 percent and in marked contrast to the 3.5 percent expansion recorded in 2018. The downturn in 2019, when the economy grew at is slowest pace in a decade, reflected the synchronized slowdown in the global economy and Fiji's main trading partners. It was also driven by outcomes on the domestic front, including subdued consumer demand, a contraction in investment stemming from weak business and investor sentiment, and reduced fiscal stimulus following completion of reconstruction after Tropical Cyclone Winston. Real sector outcomes and industrial activity were also restrained, as reflected in lower gold, timber, and sugar outputs. COVID-19 has already started affecting Fiji's economy, particularly tourism, which is the country's primary industry, with a combined direct and indirect contribution to GDP estimated at 38 percent.

Inflation surged in 2018, but has decelerated since mid-2019 and turned negative in the fourth quarter of 2019. The annual inflation rate fell to minus 1.9 percent in January 2020, reflecting lower prices for communication; alcoholic beverages; tobacco; water and electricity; and gas and other fuels. Monetary policy remained accommodative. The Reserve Bank of Fiji (RBF) has just reduced its overnight policy rate (OPR) to 0.25 percent from 0.50 percent in response to the negative impact of COVID-19 on global travel and trade, as well as deteriorating consumer and business confidence. The OPR had been at the same level since 2011. Liquidity in the banking system, measured by banks' demand deposits, has been growing steadily in recent months and remains adequate to support financial intermediation alongside economic activity and stabilize interest rates. The Real Effective Exchange Rate (REER) declined over the last year on account of negative domestic inflation.

Fiscal policy in recent years has been expansionary in part because of large-scale reconstruction in the wake of the devastation wrought by Tropical Cyclone Winston in 2016. However, in 2019 the fiscal deficit contracted to an estimated 3.5 percent of GDP, from 4.4. percent in 2018, with the reduction in expenditure more than compensating for lower than expected revenues. Public debt rose 7 percent in 2019, driven by an increase in domestic debt but was unchanged in relation to GDP, at 48 percent. Balance of payments vulnerabilities receded in 2019 with the current account deficit estimated to have fallen to 4.7 percent of GDP, down from 8.5 percent in 2018, as a result of a sharp contraction in imports and rising surplus on the service account from higher tourism receipts and continued strength of remittances. The reduction in imports and lower crude oil prices, coupled with continued growth in tourism and remittances, also boosted foreign exchange reserves. They stood at US$982.4 million on

March 18, 2020, equivalent to 5.8 months of imports of goods and services.

Fiji has one of the lowest rates of extreme poverty in the Pacific. In 2013, just 1.4 percent of people in Fiji lived in extreme poverty, or under the US$1.90 per day (2011 PPP) poverty line. Inequality in Fiji is also among the lowest in the East Asia and Pacific region: the Gini Index, a measure of inequality, stood at 36.4 in 2013. Outcomes in Fiji are less favorable when measured against the US$5.50 Upper Middle-Income Class poverty line, which reflects living standards across all upper-middle-income countries. It puts the incidence of poverty in Fiji at 48.6 percent, higher than most other upper-middle-income countries.

## Outlook

Fiji's short-term outlook is uncertain and is dependent on the length of the COVID-19 crisis, the severity of the disruption to the global economy, and the impact on tourism, which is the mainstay of the Fijian economy. The economy is expected to contract in 2020 but return to trend from 2021 onwards, with growth strengthening to around 3 percent in 2021–2022 if the COVID-19 crisis is contained, allowing the global environment to improve and tourism to remain robust, and assuming public investment increases and the private sector gains momentum.

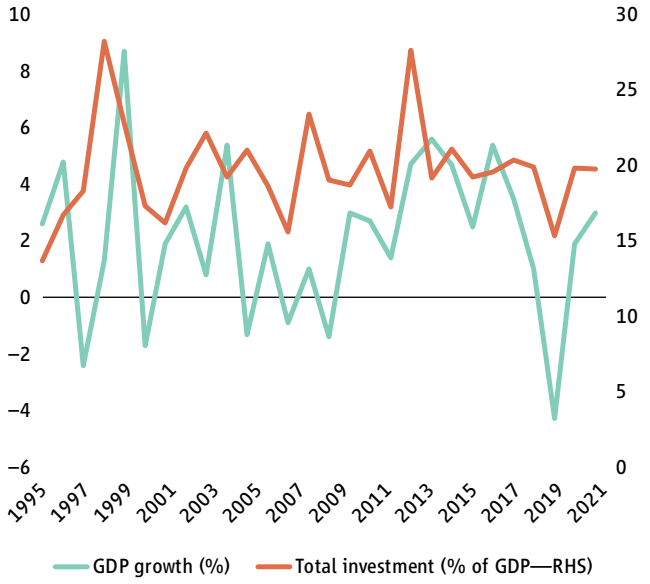
The modest outlook for import growth and an uptick in tourism and remittance inflows should keep international reserves at comfortable levels and the current account balance below 5 percent of GDP over the medium term. The FY2020 budget, the government's first since re-election for a second term in November 2018, had set out an ambitious commitment to fiscal consolidation driven by expenditure reduction measures, stabilization of capital spending at pre-Tropical Cyclone Winston levels and tighter control over recurrent spending. However, given the severe implications of COVID-19 on the economy, the government announced on March 26 an economic package of over FJ$1.0 billion, equivalent to around 8.7 percent of GDP, in its COVID-19 response budget. The package includes allocation of resources for containment and treatment of the virus; fiscal support to minimize economic disruptions; targeted spending and fiscal measures to boost disposable income and assistance for business. The deficit is expected to be financed through domestic borrowing as well as funds from the Asian Development Bank and the World Bank.

## Risks and Challenges

The potential impact of the current COVID-19 crisis poses heightened risks. The Fijian economy is particularly vulnerable to downside risks stemming from slower growth in main trading partners. These could impact tourism, remittances, and export receipts. Natural disasters are a constant threat, and delays in structural reforms aimed at mobilizing private investment would also contribute to slower growth and a higher debt-to-GDP ratio. On the upside, new air routes and code share arrangements with Asian and Indian carriers have the potential to boost tourism from these markets if the COVID-19 crisis is contained, and more stable oil prices would benefit inflation, imports, and foreign reserves.

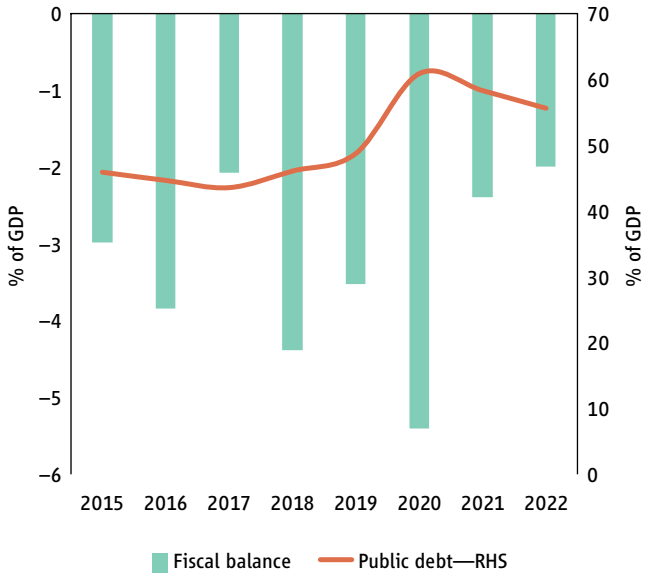
The poverty impacts of the COVID-19 crisis are also difficult to estimate due to this uncertainty. In 2013, 10 percent of households had at least one member working in the tourism industry, with a further 2 percent and 8 percent with a member working in restaurants and transportation, respectively, which may be indirectly impacted. While workers in these sectors are not disproportionally poor, more than 80 percent of these jobs are formal sector salaried employment, which may be difficult to replace in a general economic downtown. As such, a shock to the tourism industry, which would also cause ripple effects in related industries, and could significantly increase the poverty rate and deepen the poverty gap.

**Figure 1.** Real GDP growth and total investment




*Source:* Ministry of Economy, and IMF and World Bank staff estimates.

**Figure 2.** Fiscal balance and public debt (as percent of GDP)




*Sources:* Ministry of Economy, and IMF and World Bank staff estimates.

| | 2017 | 2018 | 2019e | 2020f | 2021f | 2022f |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 5.4 | 3.5 | 1.0 | –4.3 | 1.9 | 3.0 |
| Agriculture | 10.8 | 4.2 | 3.8 | 3.4 | 3.4 | 3.5 |
| Industry | 4.2 | 4.4 | 1.5 | 0.0 | 3.5 | 3.7 |
| Services | 3.8 | 1.2 | 1.3 | –5.1 | 0.1 | 2.0 |
| **Inflation (consumer price index)** | 3.3 | 4.8 | 2.0 | 2.3 | 2.5 | 3.0 |
| **Current account balance (% of GDP)** | –6.7 | –8.5 | –5.5 | –5.1 | –5.5 | –5.4 |
| **Net foreign direct investment (% of GDP)** | 7.1 | 8.7 | 8.6 | 7.9 | 8.2 | 8.1 |
| **Fiscal balance (% of GDP)[a]** | –2.1 | –4.4 | –3.5 | –5.4 | –2.4 | –2.0 |
| **International poverty rate (US$1.90 in 2011 PPP)[a,b,c]** | 0.8 | 0.7 | 0.7 | 0.9 | 0.8 | 0.8 |
| **Lower-middle-income poverty rate (US$3.20 in 2011 PPP)[a,b,c]** | 9.0 | 8.3 | 8.2 | 9.6 | 9.2 | 8.6 |
| **Upper-middle-income poverty rate (US$5.50 in 2011 PPP)[a,b,c]** | 39.5 | 37.9 | 37.8 | 40.8 | 39.9 | 38.6 |

*Sources:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast.
(a) Calculations based on EAPPOV harmonization, using 2013-HIES.
(b) Projection using neutral distribution (2013) with pass-through = 0.87 based on GDP per capita in constant LCU.

# INDONESIA

| | 2019 |
|---|---|
| Population, million | 269.1 |
| GDP, current US$ billion | 1,116.8 |
| GDP per capita, current US$ | 4,149 |
| International poverty rate (US$1.90)[a] | 5.7 |
| Lower-middle-income poverty rate (US$3.20)[a] | 27.3 |
| Upper-middle-income poverty rate (US$5.50)[a] | 58.9 |
| Gini index[a] | 37.9 |
| School enrolment, primary (% gross)[b] | 105.9 |
| Life expectancy at birth, years[b] | 71.3 |

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


## Abstract

*With unfavorable external conditions and significant terms-of-trade deterioration, Indonesia's economic expansion slowed in 2019. Domestic drivers of growth weakened, as consumption slowed from pre-election highs and decelerated investment growth due to weak commodity prices and domestic political uncertainty. Inflation and poverty rates reached record lows; the current account deficit narrowed modestly while the labor market sent mixed signals. Economic growth is projected to slow significantly due to the coronavirus pandemic. A delayed containment of the virus poses additional downside risks.*


## Recent Developments

Indonesia's economy grew by 5.0 percent in 2019, down from 5.2 percent in 2018 (Figure 1). Despite stable headline growth, domestic demand softened in Q4. Private consumption growth slowed as spending by political parties normalized. Similarly, government consumption growth decelerated to the weakest in 10 quarters, as revenue shortfalls led to fiscal restraint. Fixed investment growth also eased as commodity prices contracted further, global policy uncertainty lingered, and public infrastructure projects wrapped up. Weaker domestic demand was mirrored by another strong contraction in imports. With tepid external conditions, exports also declined, albeit only slightly, leading net exports to make a large contribution to growth.

The current account deficit (CAD) narrowed modestly to 2.7 percent of GDP from 2.9 percent in 2018. On a quarterly basis, the CAD widened to USD 8.1 billion in Q4 from USD 7.5 billion in Q3, partly due to higher year-end holiday fuel imports that reduced the goods trade surplus, which more than offset the narrower deficits in both services trade and income accounts. The negative terms-of-trade shock led to a smaller improvement in the CAD compared to the contribution from net exports to GDP growth. The capital and financial account surplus jumped to USD 12.4 billion in Q4, supported by strong portfolio and other investment inflows, amid reduced domestic political uncertainty and global monetary easing. Capital inflows also supported the rupiah, while bond yields fell. The overall Balance of Payments (BoP) returned to a surplus in Q4, leading reserves to increase to a near two-year high of USD 129.2 billion at the end of 2019, which are sufficient to finance 7.3 months of imports and external debt repayments. For the year, the BoP stood at a surplus of 0.4 percent of GDP, in contrast to a deficit of 0.7 percent of GDP in 2018.

Inflation fell to a record low of 2.8 percent in 2019, as lower energy and food costs outweighed higher gold prices. This, in addition to global monetary policy easing and a stable rupiah, allowed Bank Indonesia to cut the policy rate by a cumulative 100 bps from July to October. Lower commodity prices and contracting imports constrained total revenue growth that fell from a seven-year high in 2018 to 0.7 percent year-to-year in 2019. Consequently, the tax ratio fell to 9.8 percent of GDP. Meanwhile, contracting material, capital, and energy subsidy spending contributed to slower expenditure

growth of 4.4 percent, less than half of the increase in 2018. The budget deficit widened to 2.2 percent of GDP in 2019, above the budget target of 1.8 percent but below the legal ceiling of 3.0 percent.

Labor market indicators sent mixed signals. On the one hand, 2.5 million jobs were created over August 2018–19, taking the employment rate to 63.9 percent. The labor force participation rose to a four-year high of 67.4 percent. On the other hand, nominal wage growth was muted at 3.0 percent year-to-year, implying flat real wages. Consistent with sustained economic growth, strong job creation, low inflation, and the recent expansion in social assistance programs, Indonesia's poverty rate fell from 9.6 percent in September 2018 to another record low of 9.2 percent in September 2019, equivalent to 24.8 million individuals still living in poverty.

## Growth and Poverty Outlook

On account of the continuing spread of the coronavirus both domestically and abroad, Indonesia's real GDP growth is projected to weaken significantly to 2.1 percent in 2020, before rebounding to an average 5.4 percent in 2021–22 as aggregate demand recovers and stabilizes.

Private consumption growth this year is expected to slow sharply as Indonesia implements moderate restrictions to movement to curtail the spread of the virus. Similarly, investment growth is also projected to fall markedly on the negative terms-of-trade shock and as confidence plunges; lower borrowing costs and proposed economic reforms may support the recovery. In contrast, growth of government consumption is forecast to strengthen considerably as the government embarks on a sizable fiscal stimulus package. Amid sharply reduced global growth and trade, Indonesia's exports and imports are expected to contract for the second consecutive year. The CAD is expected to widen from 2.7 percent of GDP in 2019 to 2.8 percent of GDP as tourism exports abruptly halt and commodity prices sink.

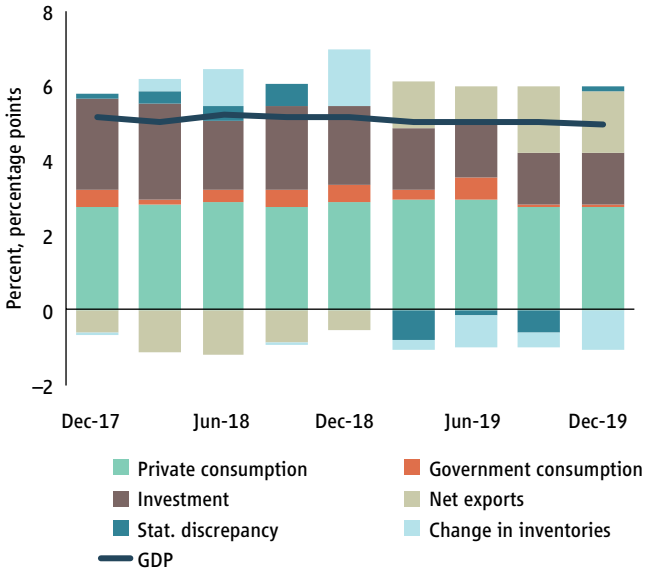
Based on the international poverty line, the extreme poverty rate (population living below US$1.90 per day) declined from 5.7 percent in 2017 to 4.6 percent in 2018, lifting 2.7 million people out of extreme poverty (Figure 2). The fall in moderate poverty was higher, declining 3.1 percentage points to 24.2 percent in 2018. Despite slower growth this year, extreme poverty is still expected to continue falling and is forecast to be cut by more than a third by 2022 at 2.7 percent. Similarly, moderate poverty is expected to fall to 17.6 percent by 2022, a 27.2 percent decline from 2018.

## Risks and Challenges

Downside risks to the growth outlook are severe. The need for drastic measures to restrict movement to contain the epidemic, both globally and domestically, could lead to a more protracted slowdown further weighing on global demand, commodity prices, international trade and tourism flows, global business sentiment and investment growth. In contrast, proposed structural reforms to open the economy to foreign direct investment present some upside risks at the recovery stage later in 2020 and in outer years.

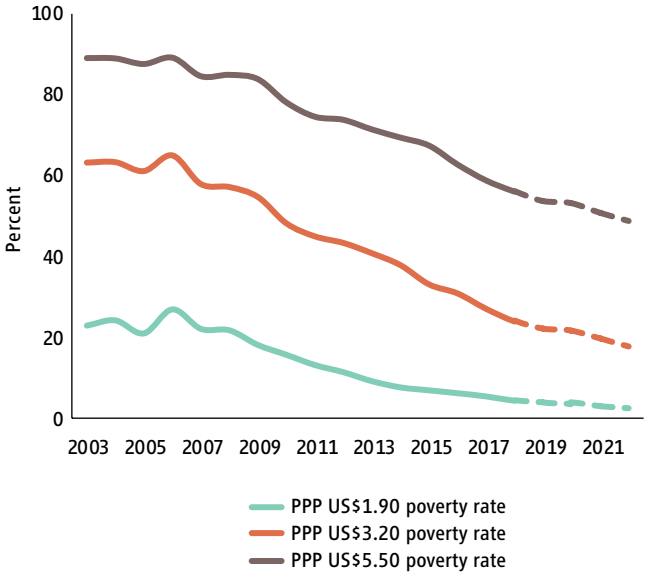
Poverty continues to decline, yet a substantial share of the population lacks economic security, and the coronavirus outbreak is likely to expose them to negative shocks. Indonesians with inadequate social protection who get sick or suffer income loss due to travel restrictions can fall into poverty. With sharply reduced tourism flows, even the aspiring middle class and middle-class families without adequate safety nets are at risk of slipping into poverty. Progressing up the economic ladder remains a challenge in general—there was only a moderate increase of 0.2 percentage point in the consumption share of the bottom 40 percent between September 2018–19.

**Figure 1.** GDP growth remained steady despite weaker domestic demand




*Sources:* BPS; World Bank staff calculations.

**Figure 2.** Indonesia's extreme poverty rate is projected to fall by more than a third by 2022

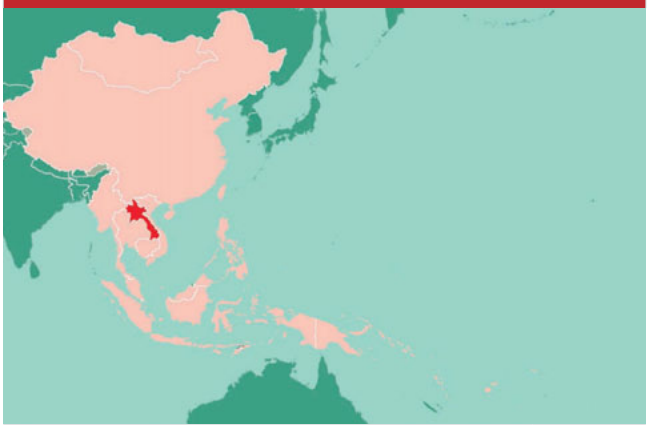



*Sources:* BPS; World Bank staff calculations.

| | *2017* | *2018* | *2019e* | *2020f* | *2021f* | *2022f* |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 5.1 | 5.2 | 5.0 | 2.1 | 5.6 | 5.2 |
| Private consumption | 5.0 | 5.1 | 5.2 | 1.5 | 5.2 | 5.2 |
| Government consumption | 2.1 | 4.8 | 3.2 | 5.0 | 3.0 | 3.5 |
| Gross fixed capital investment | 6.2 | 6.6 | 4.4 | 0.0 | 6.0 | 5.0 |
| Exports, goods, and services | 8.9 | 6.5 | –0.9 | –2.0 | 3.5 | 4.0 |
| Imports, goods, and services | 8.1 | 11.9 | –7.7 | –7.0 | 1.0 | 2.0 |
| **Real GDP growth, at constant factor prices** | 4.7 | 4.9 | 5.0 | 2.1 | 5.6 | 5.2 |
| Agriculture | 4.1 | 4.0 | 3.1 | 3.7 | 3.6 | 2.8 |
| Industry | 4.2 | 4.3 | 3.9 | 4.4 | 4.2 | 5.1 |
| Services | 5.4 | 5.8 | 6.6 | –0.5 | 7.5 | 6.0 |
| **Inflation (consumer price index)** | 3.8 | 3.3 | 2.8 | 2.9 | 3.0 | 2.7 |
| **Current account balance (% of GDP)** | –1.6 | –2.9 | –2.7 | –2.7 | –2.6 | –2.5 |
| **Net foreign direct investment (% of GDP)** | 1.8 | 1.2 | 1.8 | 1.7 | 1.8 | 2.0 |
| **Fiscal balance (% of GDP)** | –2.5 | –1.8 | –2.2 | –2.9 | –2.5 | –2.3 |
| **Debt (% of GDP)** | 29.4 | 29.9 | 28.0 | 31.4 | 31.5 | 31.7 |
| **Primary balance (% of GDP)** | –0.9 | –0.1 | –0.5 | –1.2 | –0.9 | –0.7 |
| **International poverty rate (US$1.90 in 2011 PPP)[a,b]** | 5.7 | 4.6 | 4.0 | 3.9 | 3.3 | 2.8 |
| **Lower-middle-income poverty rate (US$3.20 in 2011 PPP)[a,b]** | 27.3 | 24.2 | 22.2 | 21.8 | 19.8 | 18.0 |
| **Upper-middle-income poverty rate (US$5.50 in 2011 PPP)[a,b]** | 58.9 | 56.1 | 53.9 | 53.4 | 51.0 | 48.9 |

*Source:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast.
(a) Calculations based on EAPPOV harmonization, using 2011-SUSENAS, 2017-SUSENAS, and 2018-SUSENAS. Actual data: 2018. Nowcast: 2019. Forecasts are from 2020 to 2022.
(b) Projection using annualized elasticity (2011–2017) with pass-through = 1 based on GDP per capita in constant LCU.

## LAO PDR



| | 2019 |
|---|---|
| Population, million | 7.1 |
| GDP, current US$ billion | 18.1 |
| GDP per capita, current US$ | 2,568 |
| International poverty rate (US$1.90)[a] | 22.7 |
| Lower-middle-income poverty rate (US$3.20)[a] | 58.7 |
| Upper-middle-income poverty rate (US$5.50)[a] | 85.0 |
| Gini index[a] | 36.4 |
| School enrollment, primary (% gross)[b] | 106.0 |
| Life expectancy at birth, years[b] | 67.3 |

*Sources:* WDI, Macro Poverty Outlook, and official data.
*Note:* (a) Most recent value (2012), 2011 PPPs. (b) Most recent WDI value (2017).

### Summary

*GDP growth declined in 2019, owing to the natural disaster impacts and a decline in the resource sector. This has impacted poverty reduction. Despite reforms, revenue underperformance outweighs the expenditure compression, keeping the fiscal deficit and public debt/GDP ratios elevated. Therefore, promoting credible revenue-based fiscal consolidation and public debt management is necessary. In the near-term, COVID-19 outbreak will have a significant negative impact on both the demand and supply side. Limited fiscal and foreign currency buffers will challenge the ability of authorities to mitigate these impacts.*

### Recent Economic Developments

Economic growth has declined to an estimated 4.8 percent in 2019 owing primarily to the weak performance of the agriculture, mining, and hydropower sectors. The agriculture sector was adversely affected by the flooding in the south and a drought in the north of the country; a caterpillar infestation which decreased maize output; and the African Swine Fever outbreak which reduced the pig population. Industry growth also declined, weighed down by a decline in electricity generation due to low water level owing to the drought and mining output due to the declining ore quality and availability, This offsets the still robust growth in the construction sector. The services sector growth moderated slightly as the recovery in tourism was offset by the slowdown in the retail and wholesale trade sector due to a decline in real disposable income driven by higher inflation with the significant depreciation of the kip. Moderation in GDP growth coupled with continuously rising food prices and weak performance of the agriculture sector has disproportionately affected the poor. As a result, poverty is estimated to slightly decline to 18.6 percent in 2019 from an estimated 18.9 percent in 2018.

The fiscal deficit remained elevated at around 5.0 percent of GDP in 2019 due to the weak revenue performance. Despite revenue reforms, domestic revenue to GDP ratio is estimated to decline further due to: (i) delays in the approval of implementation instructions for tax laws; (ii) weak enforcement of and compliance with tax reforms and revenue administration measures; and (iii) a fall in non-tax revenues due to a decline in the forest fund in 2019 compared to 2018. Some expenditure compression was achieved by reducing new civil servant recruitment and moderating public investment together with expenditure arrears. Consequently, the public debt stock is estimated to reach almost 60.0 percent of GDP in 2019 from 57.2 percent in 2018, with an increasing share of non-concessional financing. This has led to central government external debt service obligations of just over US$1 billion/year in 2020.

The current account deficit narrowed in 2019 with exports growing slightly faster than imports. Export growth was driven by a rise in wood pulp and rubber to China and tourism, while import growth was supported by the construction sector which offset the decline in fuel imports due to lower oil prices. Foreign currency reserves increased to US$997 million in 2019 (owing primarily to the disbursement of the China Development Bank's loan for SMEs of US$100 million) from US$873 million

in 2018. However, foreign currency buffers remain thin, estimated to cover less than 1.4 months of imports and only 86 percent of projected total external public debt service obligations in 2020.

The pressure in the foreign exchange market increased since the second half of 2019. The kip continues to depreciate against the U.S. dollar and Thai baht. The demand-supply mismatch caused the spread between the official kip/USD and the parallel exchange rate in Vientiane capital to widen since mid-2019 to above 5 percent by mid-March 2020. The depreciation of the kip and rising food prices have driven up inflation, which climbed to 7.0 percent in January 2020 from 2.5 percent in mid-2019.

## Outlook

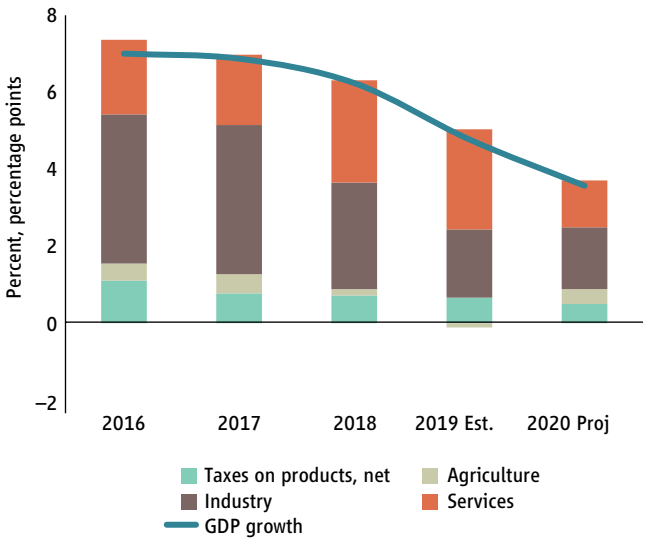
With the outbreak of COVID-19 worldwide, Lao PDR's growth is projected to decline to 3.6 percent in 2020 owing to supply and demand side disruptions. Immediate impacts are on the tourism, hospitality, and transport sectors and moderation in construction and manufacturing due to travel restrictions and supply chain disruptions. A sharp drop in tourism is expected to have short-term poverty impacts as households working in tourism and related sectors face a significant income loss that is expected to last for at least one quarter. In addition, the mining sector is expected to contract, with copper mines reducing their production as the mines mature. This contraction will more than offset the new gold operation that will begin operating toward the second half of 2020. This is expected to offset the gains from recovery in agriculture and higher power generation with four large power plants coming fully onstream this year. The current deficit is also expected to increase with the expected decline in the tourist arrivals, which will partly offset the anticipated rise in power generation and the rebound in the agriculture sector. By 2022, with the Lao-China Railway coming into operation, it is expected that the tourism and hospitality sector will experience robust growth.

Subject to the progress of credible revenue-based fiscal consolidation, the fiscal deficit is expected to increase in 2020 to 6 percent and remain at around 5 percent of GDP over the medium term. Debt/GDP is expected to rise over the medium term to around 67 percent of GDP. Public debt service (interest and principal) obligations in the next three years will average US$1 billion/year (or about 40 percent of revenue), which most likely will lead to additional borrowing to refinance these obligations. Over the medium term, foreign currency reserve coverage is expected to remain inadequate. Therefore, the containment of the fiscal deficit coupled with improved debt management is a priority for restoring macroeconomic stability and lowering the pressure on foreign currency reserves.

## Risks and Challenges

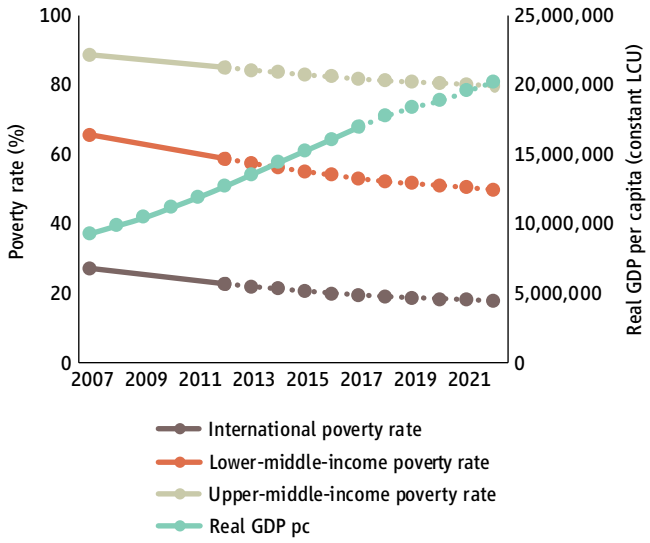
Risks are tilted to the downside. They could further weigh down on GDP growth, the fiscal and financial outlook, balance of payments, and poverty reduction efforts. These downside risks are: (i) a more prolonged, severe, and pervasive outbreak of COVID-19, exacerbated by more sluggish recovery in Lao PDR's key trading partners and community spread in Lao PDR that will negatively impact the agriculture, manufacturing, and other services sectors through the trade and investment channels; if so, poor and vulnerable households—particularly those with elderly members—will be disproportionately affected in the absence of effective social protection and adequate access to health care services; (ii) the challenges in meeting public external debt service (interest and principal) obligations as it becomes increasingly challenging to tap the international capital markets; and (iii) weather-related events such as a repeat of the droughts and floods of 2019 as the deteriorating fiscal space will put downward pressure on social and disaster-relief spending.

**Figure 1.** Contributions to GDP growth




*Source:* Lao Statistics Bureau, WB staff estimate.

**Figure 2.** Actual and projected poverty rates and real GDP per capita




*Sources:* Lao Statistics Bureau, WB staff estimate.

| | 2017 | 2018 | 2019e | 2020f | 2021f | 2022f |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 6.9 | 6.3 | 4.8 | 3.6 | 5.8 | 5.3 |
| **Real GDP growth, at constant factor prices** | 6.9 | 6.3 | 4.8 | 3.6 | 5.8 | 5.3 |
| Agriculture | 2.9 | 1.3 | −0.9 | 2.9 | 2.6 | 2.8 |
| Industry | 11.6 | 7.8 | 5.0 | 4.5 | 6.0 | 4.2 |
| Services | 4.5 | 6.8 | 6.7 | 2.9 | 6.8 | 7.1 |
| **Inflation (consumer price index)** | 0.8 | 2.0 | 3.3 | 4.8 | 5.0 | 4.9 |
| **Current account balance (% of GDP)** | −12.1 | −11.5 | −11.3 | −13.4 | −10.8 | −10.1 |
| **Fiscal balance (% of GDP)** | −5.5 | −4.7 | −4.9 | −6.0 | −5.2 | −4.8 |
| **Debt (% of GDP)** | 55.8 | 57.2 | 59.9 | 63.5 | 65.2 | 66.6 |
| **Primary balance (% of GDP)** | −4.1 | −3.0 | −2.9 | −3.8 | −3.1 | −2.9 |
| **International poverty rate (US$1.90 in 2011 PPP)[a,b]** | 19.4 | 18.9 | 18.6 | 18.4 | 18.0 | 17.6 |
| **Lower-middle-income poverty rate (US$3.20 in 2011 PPP)[a,b]** | 53.0 | 52.2 | 51.6 | 51.3 | 50.5 | 49.8 |
| **Upper-middle-income poverty rate (US$5.50 in 2011 PPP)[a,b]** | 81.7 | 81.2 | 80.9 | 80.6 | 80.2 | 79.7 |

*Source:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast.
(a) Calculations based on EAPPOV harmonization, using 2007-LECS and 2012-LECS. Actual data: 2012. Nowcast: 2013–2019. Forecasts are from 2020 to 2022.
(b) Projection using annualized elasticity (2007–2012) with pass-through = 1 based on GDP per capita in constant LCU.

## MALAYSIA

| | 2019 |
|---|---|
| Population, million | 32.5 |
| GDP, current US$ billion | 363.9 |
| GDP per capita, current US$ | 11,213 |
| International poverty rate (US$1.90)[a] | 0.0 |
| Lower-middle-income poverty rate (US$3.20)[a] | 0.2 |
| Upper-middle-income poverty rate (US$5.50)[a] | 2.7 |
| Gini index[a] | 41.0 |
| School enrolment, primary (% gross)[b] | 105.3 |
| Life expectancy at birth, years[b] | 75.8 |

*Source:* WDI, Macro Poverty Outlook, and official data.
*Note:* (a) Most recent value (2015), 2011 PPPs. (b) Most recent WDI value (2017).

*The ongoing COVID-19 outbreak has led to major negative impacts on the domestic economy, including broad-based disruption of economic activities. The GDP growth projection for 2020 has been revised sharply downwards, from 4.5 percent to –0.1 percent, reflecting the severity of the economic impact of the COVID-19 outbreak. It is important to note that this estimate contains a large degree of uncertainty, conditional on the overall outcome of the outbreak and the subsequent policy responses.*

### Recent Developments

The ongoing COVID-19 outbreak has led to major negative spillovers in the domestic economy. At the initial stage of the outbreak, the impact was mainly on the electrical and electronics (E&E) manufacturing sector, which is closely integrated into China-centric production networks, and in the tourism and retail industries due to lower tourist arrivals. More recently, as the outbreak became widespread with higher community transmission, the government announced a four-week movement control order (MCO), which includes general prohibition of mass gatherings, restrictions of travel, and closures of schools, universities, and government and private premises except those involved in essential services.

The government announced two economic stimulus packages totaling an RM 250 billion injection into the economy and has revised down its growth forecast and raised its deficit projection. Among the measures announced are a temporary cash transfer program of RM 10 billion (*Bantuan Prihatin Nasional*, or BPN) a salary subsidy package of RM 5.9 billion, as well as the reduction of the minimum workers' contribution to the Employees Provident Fund (EPF). The Central Bank of Malaysia (BNM) pre-emptively reduced its policy rate and lowered the statutory reserve requirement ratio to ensure adequate levels of liquidity in the banking system. In addition, special loan funds have also been established and several large banks have also announced moratoriums on loan repayments.

Domestic financial markets have been severely affected by heightened risk aversion, reflecting concerns about the impact of the outbreak. Between January and mid-March 2020, the FBM KLCI dropped by 24 percent and the ringgit depreciated by 7 percent against the U.S. dollar.

For the whole of 2019, GDP growth stood at 4.3 percent. Malaysia's economy expanded at a much slower pace in the second half of 2019, growing at 4.4 percent in Q3 and decelerating further to 3.6 percent in Q4. Private consumption remains the key driver of growth, anchored by positive income and employment growth. Growth in private investment remained slow on lower capital spending across economic sectors. Public investment remained in contraction, reflecting lower capital spending by both the federal government and public corporations. Meanwhile supply disruptions continued to affect the commodities and agriculture sectors.

Growth was also significantly affected by a deeper contraction of net exports of 1.3 percent and 3.3 percent in Q3 and Q4, respectively. Exports of E&E products were affected by the cyclical slowdown in the global technology cycle, while commodity exports were affected by a sharp contraction in liquefied natural gas exports. Growth of intermediate and capital imports shrank during the second half of 2019 on lower imports of intermediate

E&E equipment and slower investment in machineries and transport equipment.

Labor market conditions were stable in 2019, with unemployment at 3.2 percent and labor force participation at 69.1 percent as of Q4 2019. The COVID-19 outbreak is expected to have a significant negative impact on employment and incomes, especially among the more than 40 percent of the labor force that is not covered by employment-based social protection, as well as workers in retail, manufacturing, tourism, and other hard-hit sectors.

## Outlook

Against the backdrop of growing uncertainty over the duration and overall impact of the COVID-19 outbreak, the World Bank's GDP growth forecast for 2020 has been significantly lowered from 4.5 percent to –0.1 percent. This marked reduction incorporates the slower growth momentum from the second half of 2019, but more significantly, it reflects the impact of the outbreak under a scenario where the current large-scale disruption of economic activities would extend for most of the year, before a partial recovery toward the year end. It is important to note that this estimate has a large degree of uncertainty, conditional on the rapid developments of the outbreak domestically and globally, and the subsequent policy responses.

Net exports and investments are expected to experience a larger contraction in 2020, while private consumption is expected to grow at a much slower pace, from 7.6 percent in 2019 to 1.6 percent in 2020. Government expenditure is expected to increase on various measures, including the economic stimulus package and other key expenditures and initiatives to mitigate the economic and health impact of the outbreak, but the bulk of stimulus activities are expected to be off-budget in nature.

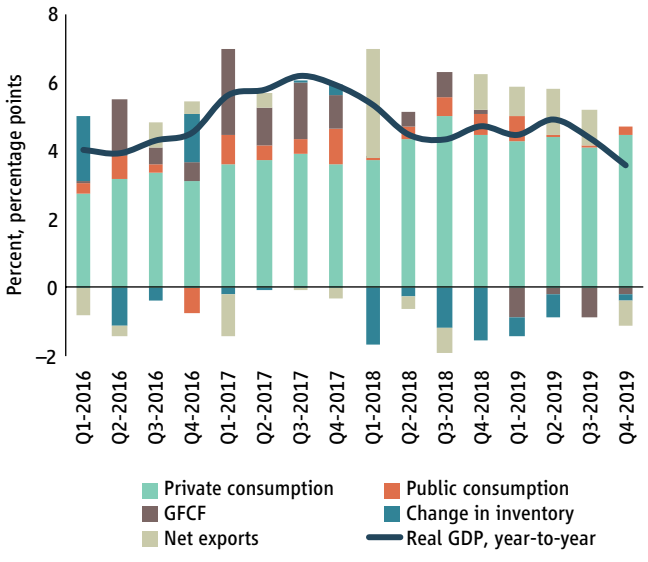
Because private consumption is projected to grow at only 1.6 percent (0.4 percent in per capita terms), the US$5.50/day 2011 PPP poverty rate is projected to remain unchanged at 1.3 percent in 2020. More significant are the expected employment and income losses among the bottom 40 percent and even the middle 40 percent. Effective economic relief for those affected will depend on both means-tested social assistance such as BPN and the ongoing Bantuan Sara Hidup program and employment-based social insurance such as EPF and EIS.

## Risks and Challenges

The large degree of uncertainty over the outcome of the outbreak presents a major downside risk to the economy. An uncontained or further deterioration of the outbreak would result in more severe or prolonged restrictions on overall economic activities, posing a further drag on growth into 2021. Moreover, uncertainty over the country's political stability following the recent change in the ruling coalition and the government's ability to manage the outbreak could pose further downside risks to growth.

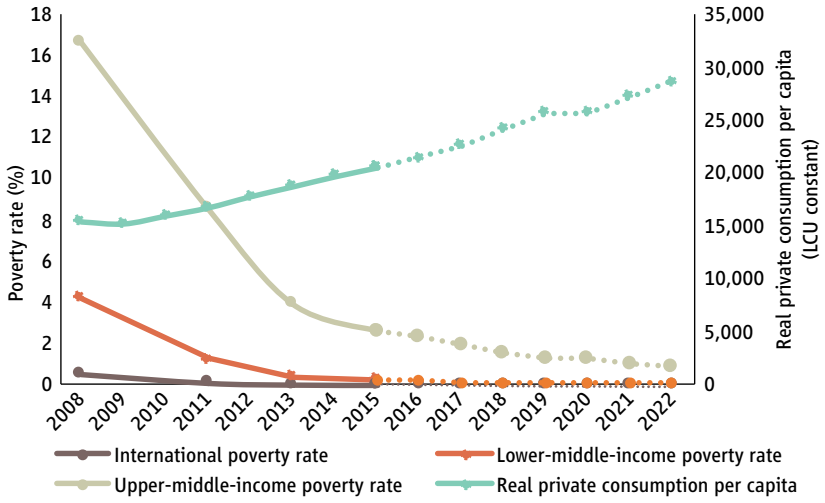
The other major challenge is the limited fiscal policy space to respond to the crisis. While the recently announced stimulus package could help to mitigate the immediate impact of the outbreak, a deeper economic policy response would be needed should the health crisis deepen and result in a longer duration of economic disruption. More targeted fiscal policy interventions would be needed to help mitigate the impact of the crisis on vulnerable households and businesses, as well as increase public health capacity. This is further complicated by the plunge in commodity prices, which would put additional strain on fiscal space and in turn may increase the burden on monetary policy as a key policy tool.

**Figure 1.** Real GDP growth, contributions to real growth




*Sources:* Department of Statistics Malaysia and World Bank staff calculations.

**Figure 2.** Actual and projected poverty rates and real private consumption per capita




*Sources:* Department of Statistics Malaysia and World Bank staff Calculations.

| | *2017* | *2018* | *2019e* | *2020f* | *2021f* | *2022f* |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 5.7 | 4.7 | 4.3 | –0.1 | 6.4 | 4.8 |
| Private consumption | 6.9 | 8.0 | 7.6 | 1.6 | 7.4 | 6.3 |
| Government consumption | 5.5 | 3.3 | 2.0 | 2.4 | 2.3 | 2.2 |
| Gross fixed capital investment | 6.1 | 1.4 | –2.1 | –4.0 | 3.8 | 2.6 |
| Exports, goods, and services | 8.7 | 2.2 | –1.1 | –3.9 | 5.1 | 2.6 |
| Imports, goods, and services | 10.2 | 1.3 | –2.3 | –3.6 | 4.2 | 2.6 |
| **Real GDP growth, at constant factor prices** | 5.6 | 5.0 | 4.4 | –0.2 | 6.5 | 4.8 |
| Agriculture | 5.8 | 0.1 | 1.8 | 1.9 | 2.5 | 2.7 |
| Industry | 4.7 | 3.2 | 2.4 | –2.9 | 4.2 | 3.2 |
| Services | 6.4 | 6.9 | 6.1 | 1.3 | 8.5 | 6.0 |
| **Inflation (consumer price index)** | 3.8 | 1.0 | 0.7 | 0.6 | 1.4 | 1.8 |
| **Current account balance (% of GDP)** | 2.8 | 2.1 | 3.3 | 1.9 | 2.6 | 2.4 |
| **Net foreign direct investment (% of GDP)** | 1.2 | 0.8 | 0.6 | 0.2 | 0.4 | 0.5 |
| **Fiscal balance (% of GDP)** | –2.9 | –3.8 | –3.4 | –6.4 | –3.8 | –3.3 |
| **Debt (% of GDP)** | 50.1 | 51.2 | 52.5 | 59.3 | 59.0 | 58.9 |
| **Primary balance (% of GDP)** | –0.9 | –1.7 | –1.3 | –4.1 | –1.5 | –1.1 |
| **International poverty rate (US$1.90 in 2011 PPP)[a,b]** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Lower-middle-income poverty rate (US$3.20 in 2011 PPP)[a,b]** | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| **Upper-middle-income poverty rate (US$5.50 in 2011 PPP)[a,b]** | 2.0 | 1.6 | 1.3 | 1.3 | 1.0 | 0.9 |

*Source:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast.
(a) Calculations based on EAPPOV harmonization, using 2011-HIS and 2015-HIS. Actual data: 2015. Nowcast: 2016–2019. Forecasts are from 2020 to 2022.
(b) Projection using point-to-point elasticity (2011–2015) with pass-through = 1 based on private consumption per capita in constant LCU.

# MONGOLIA

| | 2019 |
|---|---|
| Population, million | 3.2 |
| GDP, current US$ billion | 13.6 |
| GDP per capita, current US$ | 4,288 |
| National official poverty rate[a] | 28.4 |
| Gini index[a] | 32.7 |
| School enrollment, primary (% gross)[b] | 102.9 |
| Life expectancy at birth, years[b] | 69.5 |

*Sources:* WDI, Macro Poverty Outlook, and official data.
*Note:* (a) National Statistsics Office. Most recent value (2018). (b) Most recent WDI value (2017).

## Summary

*Mongolia's growth decelerated in 2019, led by declining commodity prices and lower quality of minerals, despite robust private investment. Meanwhile, the growth outlook for 2020 will further decelerate, mainly driven by the adverse economic impact of COVID-19. However, growth will pick up in 2021–22, supported by private consumption, and investment in mining and manufacturing sectors. Risks to the outlook include political uncertainty, commodity price shocks, lingering impact of COVID-19, and limited progress on bank recapitalization and anti-money laundering issues.*

## Recent Economic Developments

Real GDP growth decelerated in 2019 to 5.1 percent, mainly driven by a contraction of the mining sector following gradual decline in commodity prices and lower quality of key minerals. Non-mining sector growth also fell to 6.7 percent in 2019 from 8.2 percent in 2017–18, largely explained by slower growth in manufacturing and transportation sectors. However, strong performance in agriculture, construction, and trade sectors have supported the non-mining sector. Meanwhile, real investment remained a key growth engine in 2019 driven by robust foreign direct investment (FDI) and higher government investment. Furthermore, the recovery of private consumption, which gradually started in 2017–18 continued in 2019, largely on the back of relatively improved labor market conditions. Likewise, real household income has also continued to grow strongly in 2019 amid public sector wage increases and robust growth of rural livestock income. In addition, inflation decelerated to 5.2 percent in 2019, explained by moderate credit growth as macroprudential measures by the Bank of Mongolia (BoM) were introduced in early 2019. However, food inflation continues to rise and reached 8.3 percent in December 2019, mainly driven by increasing meat prices. This can disproportionately affect poor urban households who spend most of their income on food.

Fiscal performance remained strong in 2019, supported by robust revenue performance and steady implementation of fiscal consolidation reforms. The capital budget under execution also played a role. Fiscal balance turned around from a record high deficit of 15.3 percent of GDP in 2016 to a surplus of 2.6 percent in 2018 and 1.4 percent in 2019. Substantial improvements in the fiscal balance contributed to reduction of government debt in 2017–19.

After an escalation in 2018, external sector pressures have eased, largely dominated by a rapid deceleration of imports and bank credit growth, buoyed by robust capital inflows. The current account balance improved in 2019 by 4.3 percentage points of GDP from about 17 percent in 2018. Strong FDI inflows, a bond issuance (US$300 million) by private sector and official sector support resulted in a surplus of balance of payments (BoP) in 2019. Gross international reserves continued to rise, reaching US$4.3 billion (over 7 months of imports) in 2019. Despite limited reserves, BoM's foreign exchange interventions increased by nearly twofold in 2019 (about US$2.9 billion). Extensive foreign exchange interventions have led to a moderate depreciation of the tughrik against the U.S. dollar and Chinese renminbi in 2019.

Meanwhile, with a higher inflation compared to major trading partners (China and Russia), the real effective exchange rate appreciated by 3.7 percent in January–October 2019, which may have affected the export competitiveness of the non-mining sector.

## Outlook

Economic growth is projected to be 2.4 percent in 2020—substantially lower from our initial projections of 5.3 percent. Three key factors explain the latest downward revision: a steady decline in commodity prices (copper and coal), the potential impact of COVID-19 global pandemic (including ban on coal exports), and limited buffers to accommodate sizable stimulus. Mining and services sectors have already been hit by preventive measures on spreading risks of COVID-19. However, growth is expected to accelerate to over 5 percent in 2021–22, supported by stronger impetus in the mining sector (particularly recovery in quality of key minerals) despite a delay in the production schedule of Oyu Tolgoi's phase 2. Private investment backed by FDI and domestic credit (mainly corporate loans) will remain a key driver for growth in 2021–22, especially in mining, manufacturing, and transport services. Private consumption will be a key driver of medium-term growth. Inflation is likely to remain elevated in 2020, exacerbated by supply side risks associated with COVID-19. BoM recently reduced its policy rate to support economic growth. However, the base case assumes a gradual tightening of monetary policy to contain inflation.

Agriculture sector growth is projected to average at 4.6 percent in the medium term. Industry would grow by 4.3 percent in 2021–22, following recovery in the mining sector and potential implementation of mega mining projects. Strong linkages with mining activities would continue to support the services sector growth. Meanwhile, poverty rate would continue to decline at a modest pace.

The base case assumes that fiscal balance deteriorates in 2020, due to impact of COVID-19 on revenue, but improves in 2021–22, consistent with a lower debt path. Mineral exports growth is expected to recover in 2021–22, gradually reducing the current account deficit. Pressure in the foreign exchange market is likely to build in 2020 as an external debt of the private sector matures in May 2020. However, pressure will eventually ease with the recovery of export growth and further inflows of FDI in 2021–22. Gross international reserves would improve in 2021–22. In this context, BoM should encourage greater flexibility of the exchange rate through limited interventions to support economic diversification.

## Emerging Challenges

The risks to the growth outlook include a potential lingering impact of COVID-19 global pandemic, political uncertainty with the 2020 election, climate shocks (drought/flooding, harsh winter), and limited progress on banking sector reforms and on addressing anti-money laundering issues.

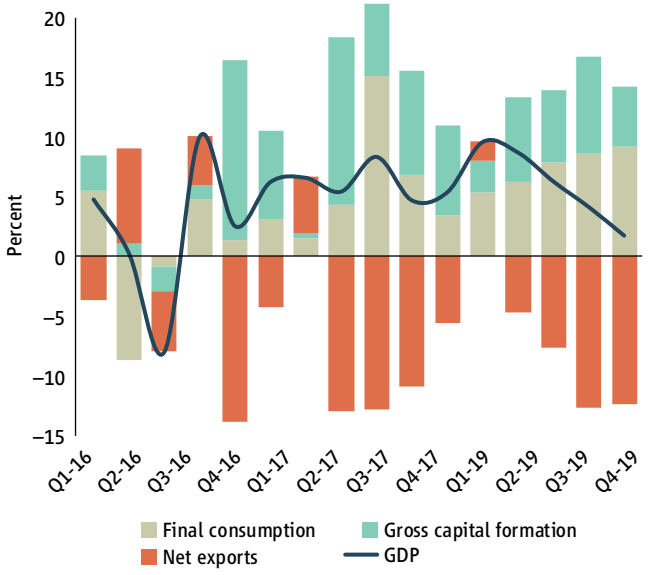
A downside scenario of the outlook could materialize if the impact of COVID-19 persists in the advanced economies, and thus severely cripples the global demand, commodity prices, and financial markets.

Growing political uncertainty could induce a sudden relaxation of the government's commitment to reforms, thereby affecting market sentiments and FDI flows. Although the authorities have maintained fiscal discipline and tight credit policies, the recent decisions to roll back the increase in the social security contribution rates and to write off pension-backed loans are seen as notable setbacks to economic reforms.

Weather-related shocks could affect non-mining exports (e.g., meat and cashmere) and thus adversely impact the income of poor and vulnerable herders. Also, the impact of inflationary pressures on poorer households needs to be monitored. Inability to recapitalize the banking sector adequately could create instability and delay the disbursement of planned official sector support.

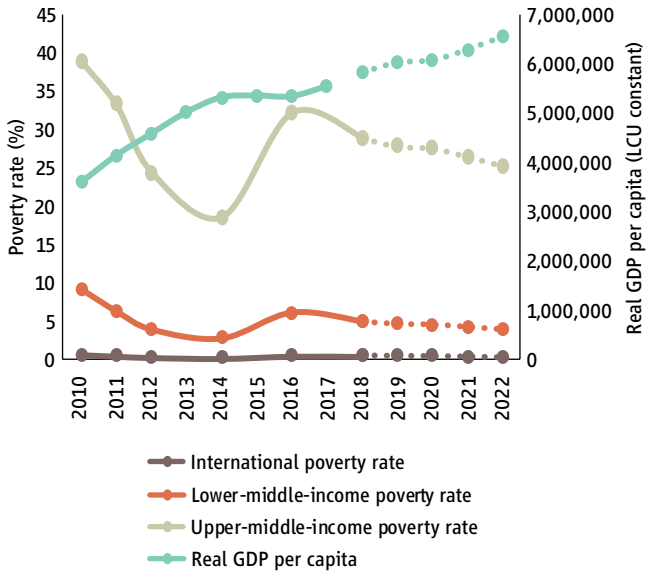
Given that Mongolia remains on the gray list of the Financial Action Task Force, limited progress on anti-money laundering issues could affect FDI inflows and the financial sector.

**Figure 1.** Annual percentage changes; contributions in percentage points




*Source:* National Statistics Office.

**Figure 2.** Actual and projected poverty rates and real GDP per capita




*Source:* National Statistics Office.

| | 2017 | 2018 | 2019e | 2020f | 2021f | 2022f |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 5.4 | 6.9 | 4.8 | 2.4 | 5.1 | 5.4 |
| Private consumption | 5.4 | 12.4 | 10.9 | 3.6 | 5.0 | 6.0 |
| Government consumption | –1.8 | –0.8 | 13.6 | 8.4 | 5.2 | 3.1 |
| Gross fixed capital formation | 35.6 | 21.3 | 24.5 | 10.5 | 14.0 | 18.0 |
| Exports, goods, and services | 14.8 | 24.0 | 9.9 | 1.5 | 7.0 | 8.3 |
| Imports, goods, and services | 24.8 | 30.9 | 19.1 | 5.6 | 9.5 | 12.0 |
| **Real GDP growth, at constant factor prices** | 5.3 | 7.2 | 5.1 | 2.4 | 5.1 | 5.4 |
| Agriculture | 1.8 | 4.5 | 8.4 | 4.5 | 4.6 | 4.7 |
| Industry (including mining) | 0.7 | 7.9 | 2.9 | 0.7 | 4.0 | 4.5 |
| Services | 10.7 | 7.5 | 5.9 | 3.1 | 6.2 | 6.4 |
| **Inflation (consumer price index, end period)** | 6.4 | 8.1 | 5.2 | 8.5 | 8.3 | 8.0 |
| **Current account balance (% of GDP)** | –10.1 | –16.9 | –12.7 | –12.1 | –11.0 | –10.8 |
| **Net foreign direct investment (% of GDP)** | 12.6 | 17.4 | 15.6 | 13.8 | 12.7 | 12.1 |
| **Fiscal balance (% of GDP)*** | –3.8 | 2.6 | 1.4 | –3.3 | –1.4 | –0.4 |
| **Debt (% of GDP)**** | 84.6 | 73.3 | 68.3 | 67.9 | 63.0 | 60.0 |
| **Primary balance (% of GDP)** | 0.3 | 5.8 | 3.6 | –1.0 | 0.8 | 1.3 |
| **International poverty rate (US$1.90 in 2011 PPP)[a,b]** | — | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| **Lower-middle-income poverty rate (US$3.20 in 2011 PPP)[a,b]** | — | 5.6 | 5.2 | 5.1 | 4.7 | 4.3 |
| **Upper-middle-income poverty rate (US$5.50 in 2011 PPP)[a,b]** | — | 28.9 | 27.8 | 27.5 | 26.3 | 25.1 |

*Source:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast.
* DBM spending is excluded from fiscal balance and monitored separately.
** General government debt data excludes SOE's debt and central bank's liability from PBOC swap line.
(a) Calculations based on EAPPOV harmonization, using 2016-HSES and 2018-HSES. Actual data: 2018. Nowcast: 2019. Forecasts are from 2020 to 2022.
(b) Projection using annualized elasticity (2016–2018) with pass-through = 1 based on GDP per capita in constant LCU.

# MYANMAR

| | 2019 |
|---|---|
| Population, million | 54.3 |
| GDP, current US$ billion | 67.9 |
| GDP per capita, current US$ | 1,250 |
| Lower-middle-income poverty rate (US$3.20)[a] | 19.3 |
| Upper-middle-income poverty rate (US$5.50)[a] | 60.8 |
| School enrollment, primary (% gross)[a] | 112.2 |
| Life expectancy at birth, years[a] | 66.6 |

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

*Despite a strong first quarter* (October to December), *economic growth is expected to decline sharply in FY2019/20 to 2.0 to 3.0 percent due to direct and indirect impacts of the COVID-19 pandemic. Supported by a pickup in public and private investment in power, infrastructure, and property markets, growth is projected to rise to 6.5 percent in the medium term. Risks are high from a domestic outbreak and from deeper and prolonged global impact, compounding domestic uncertainties relating to conflict and elections by November 2020.*

## Recent Economic Developments

Myanmar is facing headwinds to growth from the its exposure to the COVID-19 related slowdown in China and the world. Real GDP growth is projected to slow to between 2 and 3 percent in FY2019/20 (October 2019 to September 2020, which is equivalent to the 2020 of other countries), a significant downward revision. Following strong growth in Q1 FY2019/20, driven by manufacturing activity and exports, growth is estimated to slow in Q2 to Q4 due to the impact of the COVID-19 outbreak. Travel and border trade restrictions related to the pandemic mean that the impact will be felt through tourism-related services, agricultural exports to China, and supply chain disruptions to manufacturing, notably for garments, which account for 13 percent of exports, and second round impacts as external demand wanes. Chinese tourists made up 20 percent of arrivals in 2018/19 and agriculture exports represent 19 percent of total exports or 4 percent of GDP, roughly half of which is sold to China. Earnings from hotels, restaurants, and transport activities, which are partly supported by tourism, represent 16 percent of GDP and have been significantly impacted. At the same time, agriculture is the main sector of employment in Myanmar with as much as 78 percent of the rural labor force employed in this sector, while 27 percent of the urban labor force is working in tourism-related activities.

Headline inflation eased modestly to 9.5 percent (year-to-year) in December 2019 from a peak of 10.9 percent in July 2019 when electricity prices were raised. Food inflation rose to 7.8 percent in December 2019, largely attributed to supply side constraints, especially for cooking oil, meat, and vegetables, amplified by increased fuel and transportation costs. The Myanmar kyat appreciated against the U.S. dollar by 9 percent between October 2019 and March 2020 and more relative to trading partners, supported by balanced external trade, investment inflows, the U.S. interest rate decrease and domestic speculation in a shallow foreign exchange market. The appreciation adds pressure on exporters already affected by input supply disruptions related to COVID-19. Credit growth continues a gradual decline as banks comply with new prudential regulations, that have also led to more prudent provisioning for nonperforming loans.

Fiscal revenue collection continues to decline as a share of GDP to 16.8 percent in FY2018/19 and pushing the planned FY2019/20 budget deficit to 6.9 percent of GDP. However, systematic budget under-execution is likely to keep the deficit within the 5 percent of GDP rule. Aggregate planned expenditures are 28.7 trillion kyat (US$19.1 billion), or 0.7 percent of GDP more than in FY2018/19. This reflects a planned decline in defense spending, offset by a 28 percent increase in electricity spending and public debt servicing. Public spending,

notably in health, may drive up the fiscal deficit, and careful planning of financing is needed.

## Outlook

Growth is expected to slowly recover to 6 percent in FY2020/21 following the COVID-19 related shock in FY2019/20 and return to trend in the medium term on the back of investments in infrastructure, strong exports, and resilient private consumption. Facilitated by the new Project Bank, several transport infrastructure projects are underway, and a few large electricity generation projects are expected to begin commercial operation. Services sector activity is boosted by the granting of licenses to foreign insurers to operate in Myanmar and foreign banks to provide wholesale and retail lending services. The current account deficit is likely to widen to an average 3.8 percent in the medium term from 3.3 percent in FY2019/20 as exports suffer from lower global demand and lower energy prices, while large imports for mega infrastructure projects continue. Inflation is estimated to moderate to 7.5 percent in FY2019/20 from 8.5 percent FY2018/19 as global fuel prices decline and the one-off impact of the electricity price increase fades.

The impact of short-term economic fluctuations related to the COVID-19 pandemic is likely to disproportionately harm poor and vulnerable households. Sixty-eight percent of the poor work in agriculture and can suffer from declines in productions and prices associated with a reduction in exports to China. In addition, layoffs in the garment manufacturing sector, which accounts for 500,000 jobs, could also affect household incomes and domestic remittances, especially if China's supply chain disruptions are prolonged. Since individuals from poor households resort to temporary migration to work in unskilled, low-wage jobs to cope with income shortfalls, the slowdown in the manufacturing and related services could hit them hard. While forecasted to subside, persistently high inflationary pressures and potentially increased food prices hurt the poor the most, since poor households tend to be net buyers of food and to devote a higher share of their expenditures to food.

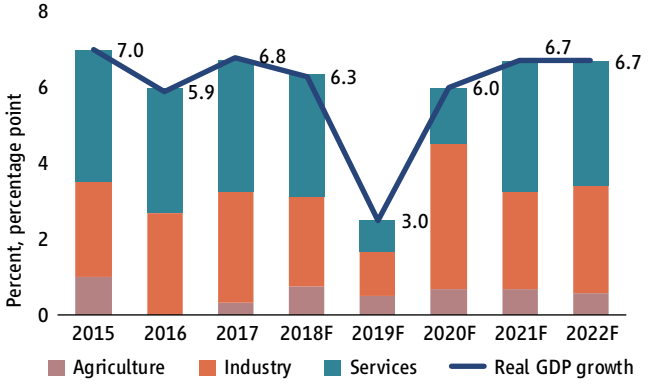
## Risks

In addition to the significant direct health impacts, COVID-19 poses significant risks to Myanmar's economic outlook. A domestic outbreak would require containment measures that limit social interaction and hence domestic consumption, which accounts for 50 percent of GDP. The COVID-19 outbreak has elevated global economic uncertainty and limited global demand, raising the likelihood of a global recession, which is likely to have a material impact on Myanmar through trade, FDI, tourism, and commodity prices. This is especially true of prospects of slowing growth in China, as China accounts for 33 percent of Myanmar's exports and imports respectively, 15 percent of FDI, and 20 percent of travel arrivals. Declining tourism income global energy prices would lower export and fiscal revenues from gas exports, which represent roughly 2 percent of GDP. In such a context, Myanmar could lose the gains in poverty reduction achieved in the last decade with an increase in households' vulnerability and potentially in unemployment.

Possible economic policy responses include addressing the immediate impact of the outbreak through targeted measures for impacted sectors and the vulnerable population, and using available fiscal policy space to accelerate spending on capital projects. Myanmar can also promote exports and associated imports of inputs by further removing licensing restrictions and making customs procedures more efficient.

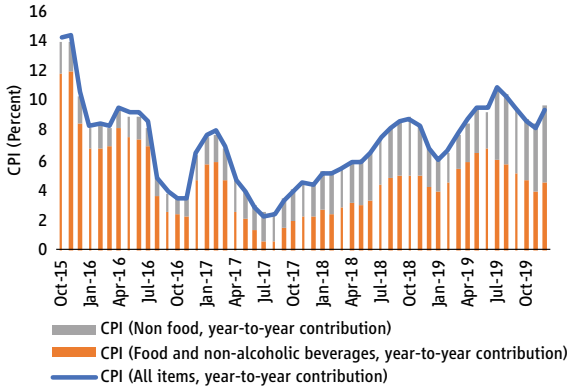
Economic reform momentum may slow down leading up to elections by November 2020. The banking sector remains vulnerable to shocks as banks take proactive measures to resolve years of overdue overdrafts and convert them into loans under new prudential regulations. Additionally, violence and forced displacement of refugees in Rakhine, and uncertainty from related legal proceedings in international courts, remain a challenge for investors' sentiment and for poverty reduction.

**Figure 1.**




*Sources:* Ministry of Planning and Finance, and World Bank staff estimate.

**Figure 2.** CPI inflation (year-to-year change)




*Sources:* Central Statistical Organization and Wakhema exchange rate centre.

| | *2016/17* | *2017/18* | *2018/19e* | *2019/20f* | *2020/21f* | *2021/22f* |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 6.8 | 6.3 | 3.0 | 6.0 | 6.7 | 6.7 |
| **Real GDP growth, at constant factor prices** | 6.8 | 6.3 | 3.0 | 6.0 | 6.7 | 6.7 |
| Agriculture | 1.3 | 3.1 | 2.8 | 3.5 | 3.2 | 3.2 |
| Industry | 9.7 | 6.4 | 3.0 | 7.5 | 7.0 | 7.0 |
| Services | 8.1 | 8.1 | 3.1 | 6.3 | 8.4 | 8.3 |
| **Inflation (consumer price index)** | 5.9 | 8.5 | 7.5 | 7.0 | 7.0 | 5.9 |
| **Current account balance (% of GDP)** | –4.2 | –2.0 | –3.3 | –3.5 | –3.9 | –4.1 |
| **Fiscal balance (% of GDP)** | –2.8 | –3.2 | –3.9 | –4.0 | –3.3 | –3.2 |
| **Primary balance (% of GDP)** | –1.9 | –1.9 | –2.0 | –2.2 | –1.5 | –1.3 |
| **Lower-middle-income poverty rate (US$3.20 in 2011 PPP)[a,b]** | 19.3 | 18.3 | 18.0 | 17.0 | 16.0 | 15.2 |
| **Upper-middle-income poverty rate (US$5.50 in 2011 PPP)[a,b]** | 60.8 | 59.6 | 59.1 | 57.9 | 56.4 | 55.0 |

*Source:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast. Data shows fiscal year values from October to September.
(a) Calculations based on EAPPOV harmonization, using 2017-MLCS. Actual data: 2017. Nowcast: 2018–2019. Forecasts are from 2020 to 2022.
(b) Projection using neutral distribution (2017) with pass-through = 0.3 based on GDP per capital in constant LCU.

## NORTH PACIFIC ISLANDS

| | 2019 |
|---|---|
| Population, million | |
| Federated States of Micronesia | 0.1 |
| Republic of the Marshall Islands | 0.06 |
| Palau | 0.02 |
| GDP, US$, billion | |
| Federated States of Micronesia | 0.34 |
| Republic of the Marshall Island | 0.21 |
| Palau | 0.31 |
| GDP per capita, current US$ | |
| Federated States of Micronesia | 3,058 |
| Republic of the Marshall Island | 3,621 |
| Palau | 17,317 |

*Sources:* WDI, World Bank staff estimates.

### Summary

*Growth in the Federated States of Micronesia, Republic of the Marshall Islands, and Palau is expected to have remained stable in FY2019, although the impacts of the COVID-19 pandemic are projected to drive all three economies into recession in FY2020. While high fishing revenues have bolstered fiscal balances in all three countries, substantial fiscal risks remain, including due to the scheduled expiry of compact-related grants and programs from the U.S. Government in 2023–2024.*

### Recent Economic Developments

The economy of the **Federated States of Micronesia (FSM)** is expected to have grown by 1.4 percent in FY2019 (October 2018 to September 2019) following growth of 1.2 percent in FY2018. This marks a fifth consecutive year of positive growth and the longest period of sustained economic expansion since 2003. Nevertheless, output is only slightly higher than it was in 2003, highlighting the economy's uneven performance over the past 15 years. Growth in FY2019 was likely driven by higher production in the fisheries sector and increased construction activity related to infrastructure projects. The sluggish growth performance over recent years has weighed on formal sector employment, which—according to the latest available data (2018)—was around 16,000 employees, slightly below its FY2011 level. This is likely to have exacerbated poverty in basic needs because consumption tends to be lower for those who are economically inactive or engaged in informal activities. The latest estimates indicate that 41.2 percent of the population were unable to afford the cost of basic needs in 2013/14. Inflation has been subdued in recent years and is expected to have remained below 2 percent in FY2019, due to lower domestic fuel prices and a stronger U.S. dollar (the official currency of the FSM) holding down prices for some imports. After traditionally registering large deficits, the current account is projected to have registered its fifth consecutive surplus in FY2019, reflecting higher fishing licence receipts and grant inflows related to the Compact of Free Association with the United States.

FSM's fiscal performance has improved significantly in recent years. Substantial increases in fishing license fees resulting from the introduction of the Vessel Day Scheme (a regional agreement that establishes the minimum price of a vessel day and limits the total number of vessel days sold), combined with one-off tax payments by captive insurance companies in FY2014, FY2017, and FY2018, resulted in average annual fiscal surpluses of 14 percent of GDP during FY2014–FY2018. While general tax revenue (excluding irregular captive insurance industry payments) has remained steady at around 12 percent of GDP, which is low relative to other countries in the Pacific, non-tax revenue (excluding grants) have more than doubled as a percent of GDP since 2011 to around 24 percent of GDP reflecting higher fishing license fees. Another sizeable fiscal surplus is projected for FY2019 following another large captive insurance tax payment. The government has prudently transferred fiscal surpluses to the FSM Trust Fund aimed at mitigating external shocks and potential future revenue shortfalls from the scheduled end of Compact grants from 2024. Nevertheless, further transfers of fiscal surpluses will be needed to build adequate fiscal

buffers, as the combined corpus of the nation's two trust funds (the Compact Trust Fund and the FSM Trust Fund) are projected to be less than sufficient to deliver an annual investment income that can fully replace the expiring grants. The central government retains cash reserves of around USD 64 million (five months of general government current spending). With no central bank or foreign exchange reserves, these serve as a means to absorb short-term liquidity shocks.

Economic growth in the **Republic of Marshall Islands (RMI)** is also expected to have remained stable in FY2019 at 2.4 percent, driven by continued strong fisheries activity and public infrastructure investment, following growth of 3.6 percent in FY2018. The current account has remained in surplus in recent years, with foreign grants and higher fishing license receipts more than offsetting a fall in exports and an increase in service imports. Inflation is projected to have remained low in FY2019, continuing the trend of recent years, as the stronger U.S. dollar (the official currency of the RMI) has held down the prices of some imports. The combination of solid economic growth (assuming it is equitable across the income distribution), public infrastructure investment, and low food price inflation are likely to have accelerated poverty reduction, though the extent of this is not known due to lack of data on household incomes and expenditures in the RMI (although a new household survey, planned for FY2021, will facilitate this type of analysis).

High fishing license fees underpinned small fiscal surplus over the five years FY2014 to FY2018, a trend which is expected to have continued in FY2019. However, larger fiscal surpluses will be required to build adequate buffers to sustain government spending following the scheduled end of Compact grants in 2023, as current projections indicate that the corpus of the RMI Trust Fund will not be sufficient to generate an annual income stream that can fully replace the expiring grants. In addition, government cash reserves are expected to have remained low at around one month of recurrent spending, although the steady flow of external grants has shielded the RMI from liquidity squeezes.

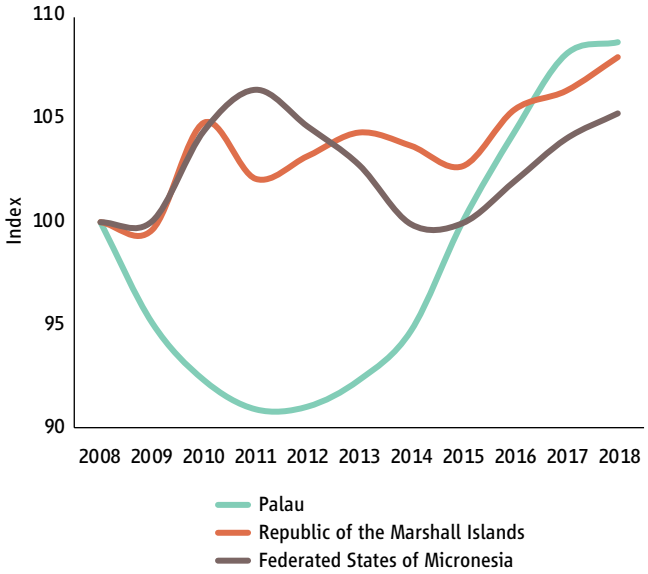
The **Palauan** economy is projected to have continued its expansion in FY2019 to 2.0 percent following growth of 1.7 percent in FY18, as tourism activity recovered with the entry of new hotels, and construction picked up. This follows a 3.5 percent contraction in FY2017 as the government implemented its structural reform of the tourism sector away from a high-volume model and toward a high-quality model of sustainable ecotourism development. Following explosive growth in tourist arrivals of over 52 percent between FY2013 and FY2015—driven by a 10-fold increase in Chinese tourists—authorities clamped down on package tourism and charter flights, as part of a new 'Pristine Paradise Palau' strategy to target the luxury tourism market and protect the environment. The result was a 31 percent fall in tourist arrivals from FY2015 to FY2018, although this was partially offset by a 15 percent increase in spending per tourist. Lower overall tourism receipts, combined with higher imports for transport and fuel, also weakened the external position, with the current account deficit reaching almost 17 percent of GDP in FY2018. The recent rebound in growth has helped the economy continue to create jobs (up 0.5 percent in FY2018), meaning formal employment has increased by 20 percent since FY2012. Consumer prices rose by 2 percent in FY2018 and are expected to have risen only marginally in FY2019, as the stronger U.S. dollar (the official currency of Palau) held down local prices for food and transport services. The combination of strong formal employment growth and low food price inflation is likely to have reduced the poverty risk for many Palauan households.

Palau's fiscal position has strengthened in recent years, with FY2018 registering a fiscal surplus (including grants) of 6.5 percent of GDP, the eighth consecutive annual surplus, underpinned by increased revenues from tourist departure taxes and higher Compact grants. These were partially offset by increased capital transfers to state governments, while higher tourist arrival fees were channeled to an independent, nonprofit organization that serves as the financial trustee to protect areas that have environmental or ecological significance. The government has retained a healthy cash balance, with reserves estimated to increase from around three months of government spending in FY2015 to about six months of spending by FY2021. However, the Compact Trust Fund remains below its pre-Global Financial Crisis level as a percent of GDP. Greater fiscal consolidation and revenue mobilization is necessary to ensure long-term fiscal sustainability.

## Outlook

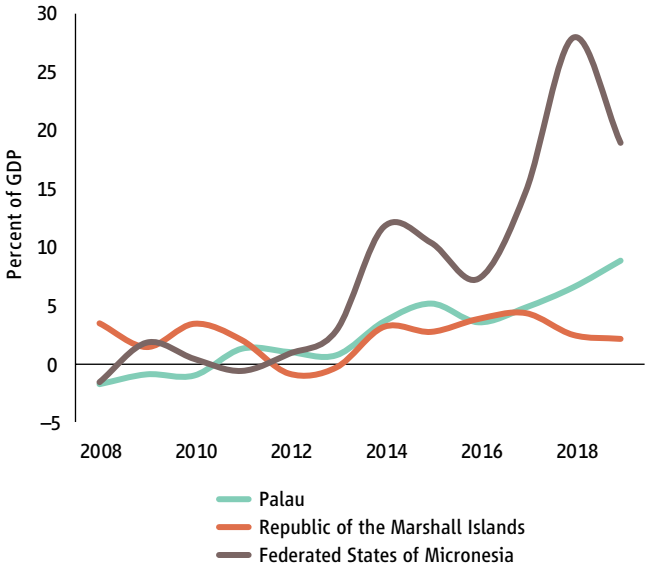
The economic impacts of the COVID-19 pandemic are projected to lead all three countries into recession in FY2020. The economies of the **FSM** and **RMI** are each projected to contract by 3 percent, as very restrictive arrival policies (designed to minimize the risk of the virus reaching their shores) lead to a sharp contraction in tourism receipts, restrictions on the entry of foreign workers and merchandise imports curtails construction activity, and the global economic slowdown reduces fish exports. The **Palauan** economy is expected to contract sharply in FY2020 due to the impacts on the tourism sector of a temporary ban on flights from Hong Kong, SAR, China, Macao, SAR, China, and mainland China. Lower economic activity is expected to lead to formal-sector job losses and lower demand for goods in the informal economy. The RMI receives annual remittance inflows of around US$30 million which is equivalent to almost 14 percent of GDP, while FSM receives remittance inflows equivalent to around 6 percent of GDP. These flows could reduce due to deteriorating labor market conditions in the United States. Combined with the tourism sector slowdown, these dynamics are likely to push more households into poverty. A sluggish recovery is projected in FY2021 for all three nations—conditional on a recovery in the global economy and the easing of restrictive domestic arrivals policies. Over the medium term, the outlook for the North Pacific countries is subject to substantial risks due to their reliance on grants, tourism, and commodity imports. A more severe or protracted global downturn, prolonged domestic travel restrictions, a domestic outbreak of the virus, or COVID-19-related supply-chain disruptions would have further negative impacts on economic activity. These countries will have to rely on fiscal and structural policies should the above-mentioned risks materialize, given the lack of monetary policy levers. Global financial market declines have also reduced the balances on the nations' various trust funds, which could put long-term fiscal sustainability at risk, considering the limited space for additional debt. Finally, the lack of recent household data in all three countries poses a risk to policy making and makes it challenging to monitor development progress and impacts of shocks on the poor.

**Figure 1.** Formal sector employment (index 2008 = 100)




*Sources:* National sources via EconMap.

**Figure 2.** Overall fiscal balance (share of GDP)




*Sources:* National sources via EconMap and latest available joint World Bank and IMF DSAs.

| | 2017 | 2018e | 2019f | 2020f | 2021f | 2022f |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | | | | | | |
| Republic of the Marshall Islands | 4.1 | 3.6 | 2.4 | –3.0 | 1.0 | 2.2 |
| Federated States of Micronesia | 2.4 | 1.2 | 1.4 | –3.0 | 0.5 | 0.7 |
| Palau | –3.5 | 1.7 | 2.0 | –6.0 | 0.0 | 3.0 |

*Sources:* EconMAP, IMF, and World Bank MTI Global Practice.
*Note:* e = estimate; f = forecast.

## PAPUA NEW GUINEA

| | 2019 |
|---|---|
| Population, million | 8.8 |
| GDP, current US$, billion | 25.0 |
| GDP per capita, current US$ | 2,845 |
| Poverty rate ($1.90/day 2011 PPP terms)[a] | 38.0 |
| National poverty rate[a] | 39.9 |
| Gini coefficient[a] | 41.9 |
| Life expectancy at birth, years[b] | 65.9 |

*Sources:* WDI, Macro Poverty Outlook, and official data.
*Note:* (a) Most recent value (2009/10). (b) Most recent WDI value (2017).

*The economy of Papua New Guinea (PNG) continues to face economic headwinds resulting from global and domestic economic uncertainties. PNG's growth outlook is being affected negatively by the novel coronavirus spread, the exacerbation of the LNG glut, and delays in delivering new resource projects in PNG. A limited fiscal space and a rigid exchange rate regime constitute constraints for the authorities to react to these shocks, requiring an urgent mobilization of external financial support from the development partners.*

### Recent Developments

While Papua New Guinea's economic growth rebounded in 2019, global and domestic economic uncertainties loom, affecting economic prospects. Real GDP growth is estimated to have recovered to 5.6 percent in 2019 (from –0.8 percent in 2018) driven by a rebound in the resource sector (mainly in its extractive segment, earlier affected by an earthquake) masking slower growth of the non-resource economy. The latter was due to sluggish domestic demand as confirmed by a shortfall in non-resource tax revenue and lower inflation, while formal employment improved during the first nine months of 2019.

The authorities have decided to stimulate weak domestic demand from the non-resource economy through expansionary macroeconomic policy, which could complicate macro-fiscal and debt sustainability. The government introduced a fiscal stimulus program in 2020, aimed at supporting domestic demand by investing in physical infrastructure for better connectivity by roads, ports, and telecommunications. The government will also continue addressing budget arrears accumulated by the previous administration.

These policies will lead to higher budget financing needs, to be covered from domestic and external sources. External borrowing should help to address a legacy of outstanding orders for foreign currency (a so-called FX backlog) while new FX orders have started building up.

However, in the absence of fiscal buffers—since the sovereign wealth fund remains nonoperational—the anticipated fiscal expansion and increased net borrowing may undermine fiscal and debt sustainability. Keeping the kina overvalued may maintain or increase the FX backlog, or lead to a drawdown of international reserves. To ensure macro-fiscal sustainability, it is important for the authorities to begin addressing the overvaluation of the kina more decisively, especially given the increased current account pressures, and resume fiscal consolidation over the medium term.

From global as well as regional perspectives, the prevalence of extreme poverty in PNG is high. About 38 percent of the population in 2010 (the latest household budget survey available) lived under the internationally recognized extreme poverty line of US$1.90 per day (2011 PPP terms). This incidence of poverty is by far one of the highest rates in the East Asia and Pacific (EAP) region. It is also higher than in many of PNG's lower-middle-income, resource-rich peer countries. Broadly consistent with the high proportion (87 percent) of the population living in rural areas, almost 90 percent of the country's poor are located in rural PNG and are more likely to be engaged in agricultural activities.

## Outlook

The short-term growth outlook is being affected negatively by an anticipated impact from the novel coronavirus, the recent escalation of a new 'oil price war' that exacerbated the LNG glut, and delays in finalizing agreements and launching implementation of large new resource projects. A renegotiation of terms for the Papua LNG project (the Elk-Antelope gas fields in Gulf province) in August 2019, a delay in getting an agreement on the PNG LNG expansion (the P'nyang gas field), and prolonged legal proceedings over the Wafi-Golpu gold project have led to downward adjustments in our economic growth projections.

Our baseline forecast now suggests that real GDP growth will slow to almost zero in 2020, while some rebound is expected in 2021, assuming recovery of the global economy from the coronavirus impact. While the resource sector is being affected negatively by weaker external demand and lower commodity prices, the domestic economy will be supported by fiscal stimulus adopted in the 2020 National Budget, with some adjustments expected in the coming Supplementary Budget.

The government is anticipating a substantial revenue shortfall in the resource sector (as export revenue will be lower) and will have to revise some of its investment plans due to the expected shortage of domestic funding available. To mitigate this shortfall, the government has already applied for the additional COVID-19 financing facilities established by the multilateral development partners. Despite these measures, the overall fiscal deficit is expected to widen further, putting additional pressure on public debt which is estimated to exceed the legislated ceiling of 45 percent of GDP.

Over the medium term, the looming construction boom represents a positive driver to the economy and the external accounts due to additional inflows of foreign direct investment into the resource sector. In addition to growth spillovers to the services sector, the implementation of new resource projects (Papua LNG and Wafi-Golpu) will have a positive impact on the external balance of payments. Additional foreign exchange inflows in the form of foreign direct investment and external borrowing will be used to import the goods and services required for these projects (thus narrowing the current account surplus). At the same time, a significant share of foreign exchange inflows will also be used to purchase domestic goods and services (thus keeping foreign exchange in the economy). The latter should help the central bank to replenish international reserves, as the current pressure on the exchange rate is expected to ease and reverse.

The economy may start seeing a change in the foreign exchange position from 2022 onward. The next two years will be critical for the authorities to continue adjusting the exchange rate toward its equilibrium while clearing the FX backlog.

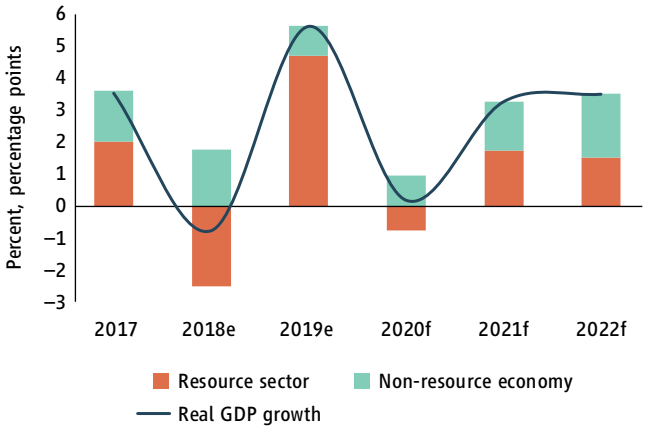
## Risks and Challenges

Old and emerging risks may undermine economic performance over the medium term. Our baseline assumptions already include previously identified risks. They cover ongoing delays in the implementation of new resource projects (affecting resource GDP growth projections), less favorable terms of trade (affecting performance of the non-resource economy and buildup of the FX backlog), and the inability to resume fiscal consolidation (leading to a potential downgrade to the public debt risk profile).

However, new risks—both external and domestic—have already begun to impact growth outlook. External risks include (i) a larger than expected impact from an outbreak of the coronavirus that will impact the Chinese and global growth to slow sharper than expected and has led to lower commodity prices, with negative spillovers for the EAP region, including Papua New Guinea, and (ii) a glut in the LNG market that is being exacerbated by the new 'oil price war', with plummeting oil and LNG prices. These developments will lead to negative implications for resource revenue flowing to the external and fiscal accounts of PNG. Although external risks are out of the government's control, the authorities should continue working on improving the economic and fiscal resilience of Papua New Guinea's economy. To support the population, especially the most vulnerable, the authorities should focus on maintaining a food and medicine supply to all parts of the country as it is being disrupted by a recent suspension of international and local flights, following the declaration of the Nationwide State of Emergency due to the coronavirus spread.

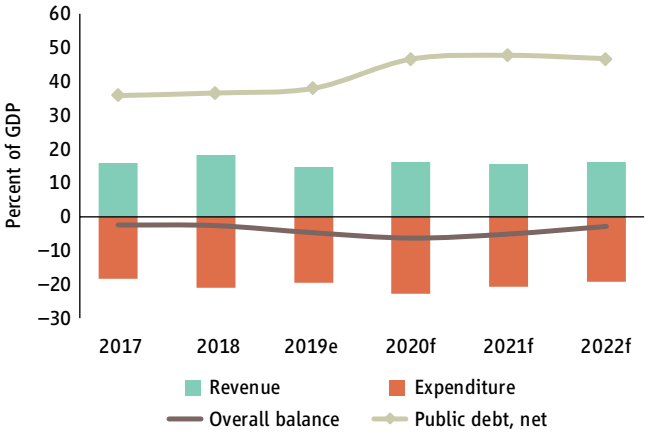
Domestic risks include the recent referendum in the Autonomous Region of Bougainville, where the overwhelming majority of the population (98.31 percent) voted for independence. To avoid the risks of social unrest in any region of Papua New Guinea and improve the inclusiveness of economic development, the authorities will need to focus on the human development agenda, including better public service delivery in health, education, and social protection. A big challenge for policy making is the absence of robust statistical data and systems to monitor changes in living standards and the impacts of shocks—both critical for planning and ensuring inclusive development.

**Figure 1.** Real GDP growth and contributions to real GDP growth




*Source:* World Bank staff estimates and forecast.

**Figure 2.** Key fiscal and debt indicators




*Source:* World Bank staff estimates and forecast.

| | 2017 | 2018 | 2019e | 2020f | 2021f | 2022f |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 3.5 | −0.8 | 5.6 | 0.2 | 3.3 | 3.5 |
| Resource sector[a] | 4.4 | −5.3 | 9.9 | −1.6 | 4.0 | 3.3 |
| Non-resource economy | 1.6 | 3.3 | 1.9 | 1.6 | 3.0 | 3.8 |
| **Inflation (consumer price index), period average** | 5.4 | 4.7 | 3.9 | 5.1 | 5.5 | 5.7 |
| **Current account balance (% of GDP)** | 25.1 | 25.4 | 26.6 | 14.7 | 10.7 | 2.7 |
| Resource sector[a] | 26.3 | 26.6 | 30.2 | 19.9 | 22.4 | 19.0 |
| Non-resource economy | −1.1 | −1.2 | −3.6 | −5.2 | −11.7 | −16.3 |
| **Overall fiscal balance (% of GDP)** | −2.5 | −2.7 | −4.7 | −6.3 | −5.1 | −2.9 |
| **Non-resource primary balance (% of non-extractive GDP)** | −1.6 | −2.7 | −5.1 | −6.3 | −5.2 | −2.5 |
| **Public debt, net (% of GDP)** | 35.9 | 36.7 | 38.0 | 46.6 | 47.7 | 46.8 |

*Source:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast.
(a) Calculations based on EAPPOV harmonization, using 2011-HIS and 2015-HIS. Actual data: 2015. Nowcast: 2016–2019. Forecasts are from 2020 to 2022.
(b) Projection using point-to-point elasticity (2011–2015) with pass-through = 1 based on private consumption per capita in constant LCU.

# PHILIPPINES

| | 2019 |
|---|---|
| Population, million | 108.1 |
| GDP, current US$, billion | 366.7 |
| GDP per capita, current US$ | 3,392 |
| International poverty rate (US$1.90/day)[a] | 6.1 |
| Lower-middle-income poverty rate (US$3.20)[a] | 26.0 |
| Upper-middle-income poverty rate (US$5.50)[a] | 55.1 |
| Gini index[a] | 44.4 |
| School enrollment, primary (% gross)[b] | 107.5 |
| Life expectancy at birth, years[b] | 71.0 |

*Source:* WDI, Macro Poverty Outlook, and official data.
*Note:* (a) Most recent value (2015), 2011 PPPs. (b) Most recent WDI value (2017).

## Summary

*Philippine economic growth slowed in 2019 to its weakest pace in eight years. The slowdown was driven by an investment contraction and export growth deceleration amid a recovery in private consumption. Growth outlook for 2020 is gloomy given the global impact of the COVID-19 pandemic and the strict community quarantine that has taken place in Luzon since March 17, 2020. These are expected to slow down the progress on poverty reduction, and have prompted the government to announce a stimulus package to boost the economy from the economic impact of the outbreak.*

## Recent Economic Developments

Economic growth moderated from 6.2 percent year-on-year in 2018 to 5.9 percent in 2019, driven by a contraction in investment, which was weighed down by uncertainties from the external environment and the proposed corporate tax reform. Export activities decelerated due to softer global demand amid weakness in global economic activities. Nonetheless, net exports contributed positively to growth given the much slower import growth compared to exports. Private consumption regained momentum and was the main growth driver, thanks to declining inflation, steady remittance flows, and improving labor market conditions.

Headline inflation returned within target in 2019, fueled by stabilizing prices of food and energy items, benefiting from recent reforms in rice policy. The subdued inflation environment encouraged the *Bangko Sentral ng Pilipinas* to be more accommodative by reducing the key policy rate by a total of 75 basis points and the reserve requirement ratio by 400 basis points in 2019 and cutting the policy rate further by 25 basis points (bps) in February 2020, and 50 bps in March 2020.

Despite significant delays, the government was able to execute its expansionary fiscal program in 2019 due to a catch-up spending plan in the second half. Public spending rose to 20.4 percent of GDP in 2019 from 19.6 percent a year ago, driven by robust growth in capital outlays. However, despite the increase in public revenues to 16.9 percent of GDP from 16.4 percent a year ago, tax collections in 2019 fell short of the programmed target, resulting in a fiscal deficit of 3.5 percent of GDP, exceeding the 3.2 percent target for 2019.

The current account deficit narrowed to 0.1 percent of GDP in 2019 from 2.4 percent of GDP in 2018. The narrower deficit was driven by a combination of a lower trade deficit and higher remittance flows. Capital and financial accounts registered a surplus of 1.8 percent of GDP, which was lower than 2.4 percent of GDP in 2018. This led to a 2.2 percent Balance of Payment (BOP) surplus in 2019, reversing the 0.7 percent deficit in 2018.

The national poverty incidence fell significantly to 16.6 percent in 2018, from 23.3 percent in 2015, due to robust growth in household incomes, particularly in the lower income groups. The real per capita income of the bottom quintile grew at a faster rate of 6.8 percent annually, compared to the 3.9 percent average. Wage

incomes continued to grow and accounted for about half of household income. During the same period, household wage incomes grew annually at 4.7 percent.

## Outlook

Real GDP growth is projected to significantly decelerate from 5.9 percent in 2019 to 3.0 percent in 2020 due to the impact of the COVID-19 outbreak and the associated community quarantine. The quarantine restricts all nonessential movement of people and closed down businesses and government agencies in Luzon—which accounts for 70 percent of national GDP—until April 14. Domestic consumption is expected to slow down sharply in the first half of 2020. In addition, implementation of a public infrastructure program is expected to be delayed and private sector investment to be postponed. Export of goods and services are also expected to be negatively impacted with the imposition of travel restrictions globally and the production disruption experienced in China in which the Philippine electronic sector has a strong linkage. Furthermore, travel bans and the COVID-19 outbreaks in Overseas Filipino Workers (OFW)-destination countries are likely to affect the inflow of remittances in 2020, further damping domestic consumption growth. Nevertheless, economic growth is expected to accelerate rapidly in 2021–22 as global conditions improve, and with more robust domestic activity bolstered by the public investment momentum and a boost from 2022 election-related spending.

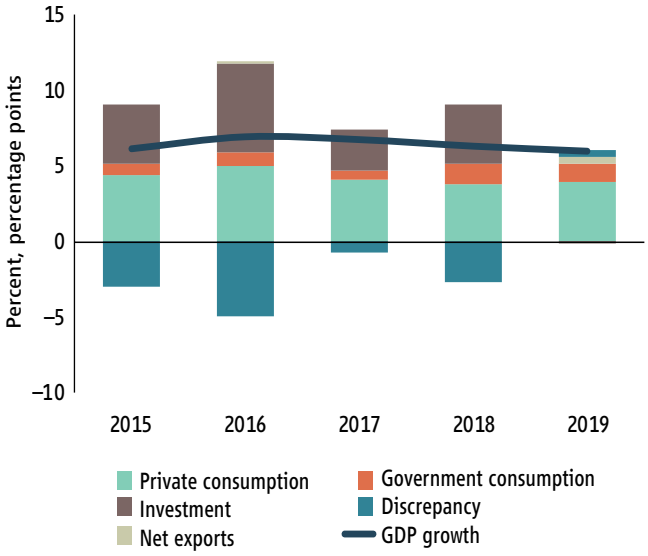
The ongoing increasing trend in real wages, which is expected to have a positive impact on household incomes, particularly those from the lower income groups, might be hampered by the impact of COVID-19. If the positive trends, including rising real wages, expanding nonagricultural wage employment, and stabilizing inflation, continue, the declining trend in poverty is likely to continue. Measured by the lower middle-income class poverty line (US3.20 dollars a day, 2011 PPP), the poverty headcount in the Philippines is projected to continue to decline from 21.9 in 2018 to 20.5 percent in 2020 and 18.3 percent in 2022.

## Risks and Challenges

Risks to the baseline forecast, which assumes that the Philippines will slowly return to normal business operations by Q3, include a rapid surge in confirmed cases resulting in a prolonged community quarantine, lengthier disruptions to government and business activities, loss of incomes, and a protracted weakening of the public health system. In this case, economic growth could contract in 2020 driven by a drastic slowdown in domestic consumption and investment, with echo effects into 2021. External risks could derive from a prolonged containment of the virus globally, leading to a global recession which will impact the Philippines through manufacturing, trade, tourism, and remittance channels. Such a scenario might take an even more significant toll on those who work in the informal sector, who are likely to suffer a more significant welfare loss.

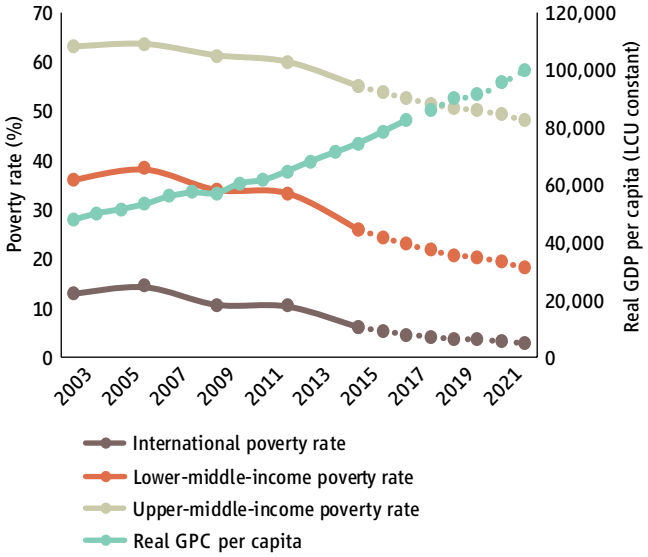
In addition to the immediate public health response to prevent, detect, and contain local transmission, short-term fiscal and monetary policy stimuli may be needed to lessen the adverse economic impact of COVID-19 and protect the vulnerable population. Specifically, the timely execution of public investments, targeted financial support to the poor and vulnerable sectors can restore confidence and soften the negative impact of the outbreak. In the medium term, the Philippines should further strengthen its health care system and preparedness for potential public health shocks, while continuing to accelerate structural reforms to improve the business environment, foster competition, and boost productivity growth. Sustained support must be ensured for bills that improve competitiveness, such as the passage of the Corporate Income Tax and Incentives Rationalization Act, and amendments to the Public Services Act.

**Figure 1.** Philippine economic growth slowed down in 2019




*Source:* Philippine Statistics Authority (PSA).

**Figure 2.** Poverty is likely to decline further with sustained growth in real household incomes




*Sources:* World Bank staff estimates.

| | 2017 | 2018 | 2019e | 2020f | 2021f | 2022f |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 6.7 | 6.2 | 5.9 | 3.0 | 6.2 | 6.4 |
| Private consumption | 5.9 | 5.6 | 5.8 | 2.4 | 6.0 | 6.1 |
| Government consumption | 6.2 | 13.0 | 10.5 | 9.9 | 10.0 | 10.2 |
| Gross fixed capital investment | 9.4 | 12.9 | 1.5 | 0.5 | 12.9 | 15.7 |
| Exports, goods, and services | 19.7 | 13.4 | 3.2 | 1.7 | 7.5 | 8.0 |
| Imports, goods, and services | 18.1 | 16.0 | 2.1 | 1.3 | 10.7 | 12.2 |
| **Real GDP growth, at constant factor prices** | 6.7 | 6.2 | 5.9 | 3.0 | 6.2 | 6.4 |
| Agriculture | 4.0 | 0.9 | 1.5 | 0.9 | 1.2 | 1.4 |
| Industry | 7.1 | 6.7 | 4.9 | 2.5 | 5.5 | 5.7 |
| Services | 6.8 | 6.8 | 7.1 | 3.6 | 7.2 | 7.3 |
| **Inflation (consumer price index)** | 2.9 | 5.2 | 2.5 | 2.0 | 3.0 | 3.0 |
| **Current account balance (% of GDP)** | −0.7 | −2.4 | −0.1 | −0.3 | −1.2 | −1.6 |
| **Net foreign direct investment (% of GDP)** | 3.2 | 3.0 | 2.1 | 0.5 | 1.8 | 1.8 |
| **Fiscal balance (% of GDP)** | −2.2 | −3.2 | −3.5 | −3.9 | −3.2 | −3.2 |
| **Debt (% of GDP)** | 36.6 | 36.0 | 35.7 | 36.9 | 36.4 | 36.2 |
| **Primary balance (% of GDP)** | −0.3 | −1.2 | −1.6 | −1.6 | −0.8 | −0.8 |
| **International poverty rate (US$1.90 in 2011 PPP)[a,b]** | 4.7 | 4.2 | 3.7 | 3.6 | 3.2 | 2.8 |
| **Lower-middle-income poverty rate (US$3.20 in 2011 PPP)[a,b]** | 23.1 | 21.9 | 20.8 | 20.5 | 19.4 | 18.3 |
| **Upper-middle-income poverty rate (US$5.50 in 2011 PPP)[a,b]** | 52.7 | 51.7 | 50.7 | 50.4 | 49.4 | 48.4 |

*Source:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast.
(a) Calculations based on EAPPOV harmonization, using 2006-FIES. Actual data: 2015. Nowcast: 2016–2019. Forecasts are from 2020 to 2022.
(b) Projection using annualized elasticity (2006–2015) with pass-through = 1 based on GDP per capita in constant LCU.

## SOLOMON ISLANDS

| | 2019 |
|---|---|
| Population, million | 0.6 |
| GDP, current US$, billion | 1.5 |
| GDP per capita, current US$ | 2,317 |
| National basic needs poverty rate[a] | 12.7 |
| School enrollment, primary (% gross)[b] | 112.6 |
| Life expectancy at birth, years[a] | 72.6 |

*Source:* WDI, Macro Poverty Outlook, and official data.
*Note:* (a) Solomon Islands National Statistics Office. Most recent value (2013). (b) Most recent WDI value (2017).

*Economic growth is projected to moderate to 2.5 percent in 2020, reflecting the continued deceleration in log exports. Lower food prices brought inflation down from 3.9 percent in 2018 to 2.2 percent in 2019. Fiscal consolidation efforts were undermined by weaker-than-expected revenues, resulting in a small deficit in 2019. The 2020 budget continues the fiscal consolidation path, although the global COVID-19 outbreak risks impacting on revenues, expenditures, and growth. Other risks include ongoing uncertainties in the logging and mining sectors.*

### Recent Developments

Economic growth is expected to moderate to around 2.5 percent in 2020, down from 2.7 percent in 2019, reflecting a moderation in forestry activity following the government's recent efforts to place the industry on a more sustainable footing, and weaker international demand in the first half of the year. Agriculture, ongoing large infrastructure investments, and services remain important contributors to growth. Inflation is estimated at 2.2 percent in 2019, down from 3.9 percent in 2018, driven mainly by lower food prices.

A newly formed government in April 2019 continued the previous government's fiscal consolidation path through passing a balanced budget in 2019. Fiscal deficits between 2015–17 severely eroded the government's cash reserves and its ability to absorb natural disaster and price shocks. The fiscal consolidation in 2018 was achieved through a substantial reduction in development expenditures, possibly affecting the already thin levels of service delivery in rural areas, and in 2018 a modest surplus of 0.7 percent of GDP was achieved. In 2019, planned spending fell short of budget estimates on both the recurrent and development budgets, owing in part to no development expenditures being permitted during the three-month caretaker period ahead of the national general elections held in April. Shortfalls in revenue collections, driven primarily by a reduction in log output and lower-than-expected levels of external financing, outweighed the underperformance in spending, resulting in a fiscal deficit of 1.4 percent of GDP. Total PPG external debt increased from 7.1 percent of GDP in end-2018 to an estimated 7.6 percent in 2019.

The 2020 budget targets once again a zero balance. Overall the government expects total revenues to increase by 0.4 percent against 2019 budget estimates, with increases in inland revenue and nontax revenue collections, and external financing outweighing a further reduction in customs collections. A proposed expansion of goods tax coverage to rice and sugary beverages could disproportionately affect poor households. Planned expenditures are expected to increase by the same magnitude, with the development budget claiming a marginally greater share of total spending. The current account deficit widened from 4.5 percent of GDP in 2018 to 8.6 percent in 2019, reflecting heightened levels of imports related to large infrastructure projects—most of which are partly or fully externally financed, and a reduction in log exports. International reserves fell from US$613 million in 2018 to US$602 million in 2019, although import cover remains ample, equivalent to eight months of forward spending.

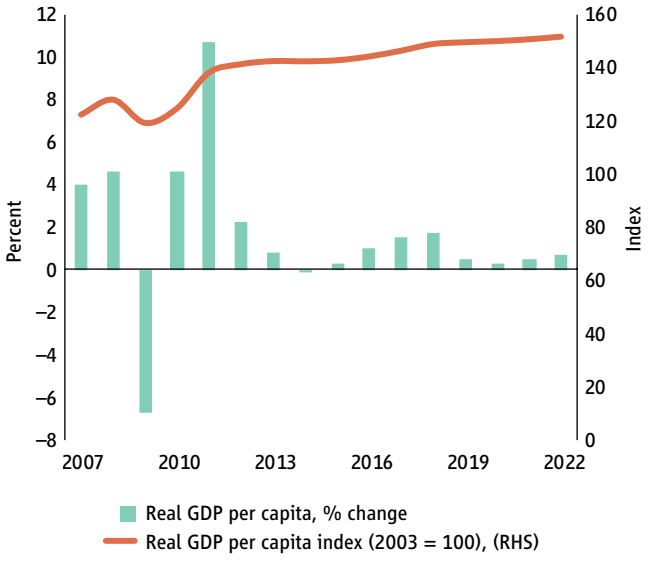
## Outlook

Despite continued fiscal consolidation efforts, growth is only projected to marginally decline, averaging around 2.8 percent per year over the medium term. The moderation in forestry activity is expected to be partially offset by a pickup in economic activities across the services and secondary sectors, driven by the rolling out of large (mostly donor-financed) national infrastructure projects in the roads, air transport, telecommunications, and energy sectors. Foreign direct investment is expected to average at around 3.8 percent of GDP and may detract from growth in the event of a decline from current levels. The baseline scenario also assumes resumed gold-mining activity and the exploitation of large nickel deposits. Over the longer term, tourism, which currently accounts for around 4 percent of GDP, has the potential to become an important driver of growth, however, significant constraints and coordination challenges would need to be overcome, including commercial access to land, the provision of utilities, environmental management, and the development of transport (air, sea, land) infrastructure conducive to tourism development. The continuation of sound fiscal management in 2020, complemented by key public financial management reforms and a tax review, could somewhat ease fiscal pressures. Enhanced commitment control and cash management will be essential to avoid the recurrence of arrears. Cash reserves will need to be rebuilt to ensure effective cashflow management and buffer against external shocks. Expenditure pressures associated with large unmet expenditure needs for infrastructure and public service delivery, increases to the public service payroll, and the hosting of the 2023 South Pacific Games continue to pose a risk to medium-term fiscal consolidation. The current account deficit—financed through large aid flows in the capital account—is expected to widen to further to around 13 percent of GDP by 2022, reflecting a continued increase in imports, and the underlying long-run decline in logging exports. The Honiara Consumer Price Index is expected to remain at around 3 percent over the medium term.

## Risks and Challenges

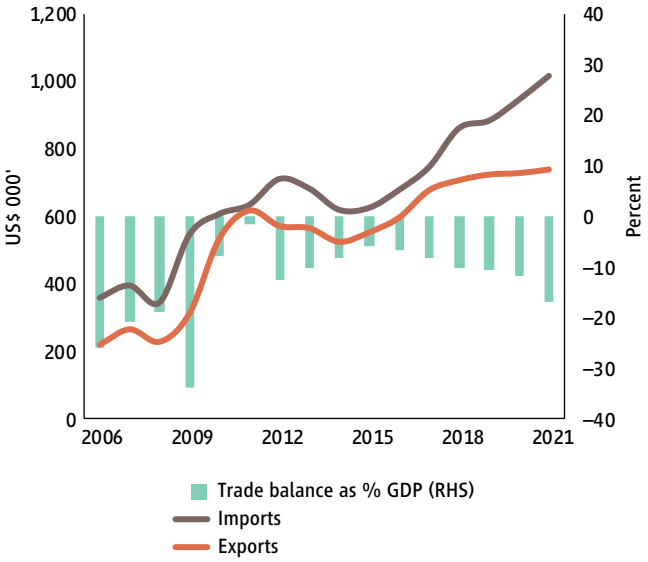
The Solomon Islands' economic geography and political economy continues to challenge the reach of the state and discourage significant levels of foreign direct investment. The economic policy stance of the government remains appropriate, particularly with regard to the continued momentum in the fiscal consolidation path set out in recent years' budgets, and efforts to enhance the overall quality of public spending. With logging sources expected to be depleted in the long run and uncertainty around the exploitation of the country's mining potential, the Solomon Islands faces the challenge of developing new sources of growth. In the near term, the current COVID-19 outbreak poses a substantial risk to log exports (China being the main export partner), government revenues and growth, and could possibly set back fiscal consolidation efforts. With uncertainty regarding the economic implications of COVID-19 across the world, it is unclear how significant or prolonged the risks could be. Over the medium term, the underlying decline of the logging industry will impact on growth and a vital source of government revenue and foreign exchange reserves. The new sustainable forestry policy may risk being undermined and result in foregone revenues, if insufficient resources are dedicated to its implementation. Mining could become a key driver of growth but developments in the sector hinge on the adoption of a legal and regulatory framework conducive to mining, and on clear procedures for the acquisition of land (for the exploration and exploitation). Such frameworks and procedures, which are currently being put in place, will also ultimately impact the extent to which forthcoming benefits from mining are shared across the population. The establishment of diplomatic ties with China in late 2019 and potential access to increased levels of external loan funding could heighten the risks associated with debt sustainability and affordability. In the context of a constrained fiscal environment, a sustained effort will be required to strengthen public financial management, and a heightened focus on the quality of public expenditures could maximize their effectiveness for the most vulnerable.

**Figure 1.** Real GDP per capita




*Sources:* Word Bank staff estimates, IMF.

**Figure 2.** Trade balance




*Sources:* Central Bank of Solomon Islands, World Bank staff estimates, IMF.

| | *2017* | *2018* | *2019e* | *2020f* | *2021f* | *2022f* |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 3.7 | 3.9 | 2.7 | −6.7 | −0.3 | 2.8 |
| **Inflation (consumer price index end of period)** | −2.2 | 2.1 | 3.2 | 3.2 | 3.5 | 3.6 |
| **Balance of payments** | | | | | | |
| Current account balance | −4.9 | −4.5 | −8.6 | −8.1 | 10.7 | 13.1 |
| Foreign direct investment | 3.9 | 3.1 | 3.4 | 3.6 | 3.9 | 3.9 |
| **Fiscal balance (% of GDP)** | −4.6 | 0.7 | −1.4 | −2.8 | −4.8 | −4.9 |
| **External debt (% of GDP)** | 7.6 | 7.1 | 7.6 | 10.1 | 13.2 | 15.9 |

*Sources:* Solomon Islands Government 2019 Budget Strategy; World Bank; International Monetary Fund.
*Note:* e = estimate, f = forecast.

## SOUTH PACIFIC ISLANDS

| | 2018 |
|---|---|
| Population, million | |
| Samoa | 0.20 |
| Tonga | 0.11 |
| Vanuatu | 0.29 |
| GDP, US$, billion | |
| Samoa | 0.82 |
| Tonga | 0.43 |
| Vanuatu | 0.93 |
| GDP per capita, current US$ | |
| Samoa | 4,184 |
| Tonga | 4,095 |
| Vanuatu | 3,170 |

*Sources:* WDI, World Bank staff estimates.

### Summary

*In Samoa, Tonga, and Vanuatu, economic activity has been influenced by a range of natural disasters and adverse shocks, with the global COVID-19 outbreak having severe effects on tourism arrivals. Samoa is also recovering from a measles outbreak in late 2019 that claimed more than 80 lives, while Tonga continues to rebuild from Tropical Cyclone (TC) Gita which hit in February 2018. Continued efforts are necessary in each country to avoid a local outbreak of COVID-19, including by immediately isolating suspect cases and ensuring health system preparedness.*

### Recent Development

After a contraction in FY2018 due to a series of one-off factors (including the closure of a major manufacturer), **Samoa's** economy rebounded in FY2019, with growth of 3.5 percent attributable to preparations for the Pacific Games in July 2019 and continued impetus from construction, tourism earnings, and remittances. However, an outbreak of measles in late 2019 which tragically claimed more than 80 lives and infected around 2 percent of Samoa's population also had an economic impact, particularly on the tourism and broader services sector. Combined with the broader slowdown in the global economy, the measles outbreak and more recent travel restrictions imposed as a result of the threat from COVID-19 have meant that GDP is expected to contract in FY2020 by around 3 percent, due mainly to a substantial reduction in tourism activity in the third and fourth quarters. Small surpluses in the current account in FY2018 and FY2019 due to strong growth in tourism and remittances are expected to turn to a deficit in FY2020, mainly due to the decline in tourism exports.

Due to significant increases in domestic revenue collection and weaker-than-expected execution of donor-funded capital spending, the government was estimated to have run a 2.7 percent surplus in FY2019, following a budget that was close to balance in FY2018. Spending is expected to pick up in FY2020 and revenue is expected to decline, resulting in a larger than expected deficit of between 2 and 3 percent of GDP.

**Tonga** continues to recover from Cyclone Gita which hit in February 2018, causing widespread damage and losses estimated to total US$164 million, or 38 percent of GDP. Growth slowed to 0.2 percent in FY2018 due to the impact of the cyclone on agricultural production, tourism, and the commercial sector, although is estimated to have picked up to 1 percent in FY2019 as reconstruction spending commenced. Inflation is expected to have eased in FY2019 (to 4.1 percent from around 7.0 percent in FY2017 and FY2018), although relatively fast inflation has persisted longer than expected due primarily to policy-driven tax increases and the impact of TC Gita on domestic food prices. The current account deficit is estimated to have widened to over 8 percent of GDP in FY2019 (from 6.3 percent of GDP in FY2018) due to an increase in reconstruction-related imports.

In recent years the authorities have maintained a generally prudent fiscal stance, underpinned by careful

expenditure management and ongoing efforts to improve revenue mobilization. Despite the substantial recovery and reconstruction needs associated with TC Gita, a small fiscal surplus was realized in FY2018 and another is estimated for FY2019, due to delays in the rollout of cyclone-related spending; substantial government efforts to create fiscal space by limiting other expenditures; and ongoing donor support.

In **Vanuatu,** the construction of public infrastructure—including roads, ports, and airports—as well as a pickup in agricultural activity is expected to have driven growth of around 3.0 percent in FY2019, up from 2.8 percent the previous year. However, growth in the tourism-related sectors moderated somewhat during 2019, in part because of weaker economic growth in Australia and New Zealand. Annual inflation is estimated to have moderated in 2019 from around 3.0 percent in 2018 (in part due to a one-off VAT increase in 2018 from 12.5 to 15.0 percent).

The implementation of several major reconstruction and rehabilitation projects following Tropical Cyclone Pam has resulted in fiscal pressures since 2015, and the pipeline of ongoing and planned projects remains strong. But in 2018 a fiscal surplus estimated at around 7.5 percent of GDP was achieved—despite a significant one-off increase in the wage bill—due to a sharp increase in revenue from citizenship schemes, the increase in the VAT rate, and underspending of the capital budget. In 2019, another large surplus is expected, with citizenship scheme revenue continuing to outperform expectations, expenditure control measures in place, and execution of donor-funded capital spending proving to be much slower than expected.

## Outlook

In **Samoa,** economic growth is projected to rebound to around 2.0 percent in FY2021 and 6.0 percent in FY2022, before stabilizing at between 2.0 and 2.5 percent per year over the medium term. But in the near term, much depends on the duration of travel restrictions imposed in response to COVID-19 (both in Samoa and in key source countries), and whether Samoa ultimately remains free of the virus. Over the medium term, the economy should be supported by construction of public infrastructure projects, and continued growth in the tourism and agriculture sectors, which should directly create formal job opportunities for Samoa's more vulnerable people (including its youth who tend to experience particularly high levels of unemployment).

In **Tonga,** over the medium term, reconstruction and repair activity for housing, public buildings, and schools combined, with the recovery in the agriculture sector, is expected to drive growth of around 3.0 percent. In the near term, however, the economic impact of the COVID-19 pandemic has led to a sharp downgrade in the FY2020 growth projection to 0.5 percent, due to an abrupt slowdown in the tourism, commerce, and construction sectors as a result of the global slowdown and preventative measures adopted by the authorities. To the extent that the economic and fiscal impacts of the COVID-19 pandemic are more pronounced or protracted than currently projected, these effects may lead to some pressure on government finances, unless additional donor financing is forthcoming.

In **Vanuatu,** GDP is expected to contract in 2020, due mainly to negative impacts on tourism from COVID-19, with lockdowns on the border expected to persist for several months. However, some support will be provided by ongoing public construction works and a further pickup in agriculture. Growth is expected to rebound in 2021 and 2022 before settling at between 2.5 and 3.0 percent over the medium term, as large infrastructure projects are completed. Nevertheless, the government's substantial public investment and cyclone reconstruction program will help to raise the productive capacity of the economy over the medium to long term.

## Risk and Challenges

For each of these small South Pacific nations, natural disasters and external shocks (including the global COVID-19 outbreak) pose a constant threat to livelihoods, economic growth, and fiscal sustainability.

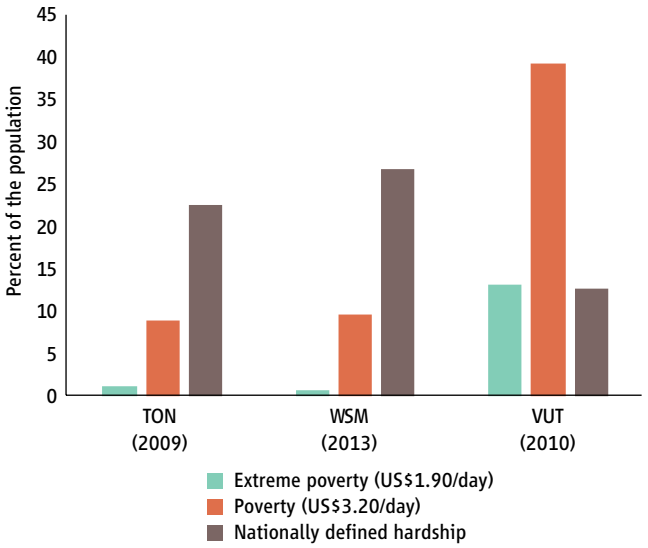
The impact of COVID-19 will be particularly significant for households linked to the tourism industry (estimated at 12 percent of households in Vanuatu, 16 percent in Samoa and 33 percent in Tonga). While these households

are not disproportionately poor, they will experience job and income losses, and ripple effects will likely hit other households as well, via a slowdown in activity in linked sectors such as agriculture. Tonga and Samoa also receive significant inflows of remittances that may decline due to economic slowdowns in the major migrant destination countries. Remittances are a significant share of average household incomes (7 percent in Samoa, 20 percent in Tonga), including for the poorer deciles, so any reduction in remittances could also lead to increased poverty and a deeper poverty gap.

The tourism-driven economies of **Samoa and Vanuatu** will be particularly hard hit by COVID-19. In these economies, the immediate priority is to enforce the travel restrictions necessary to quarantine the population from COVID-19, immediately isolate any suspected cases, and bolster the capacity and preparedness of the health system. Time-bound, targeted fiscal support will be necessary in the short term to support affected businesses, mitigate the impacts on employment and livelihoods, and avoid a destructive loss of private sector capacity, so that these countries are in a position to rebound strongly once the virus is contained.

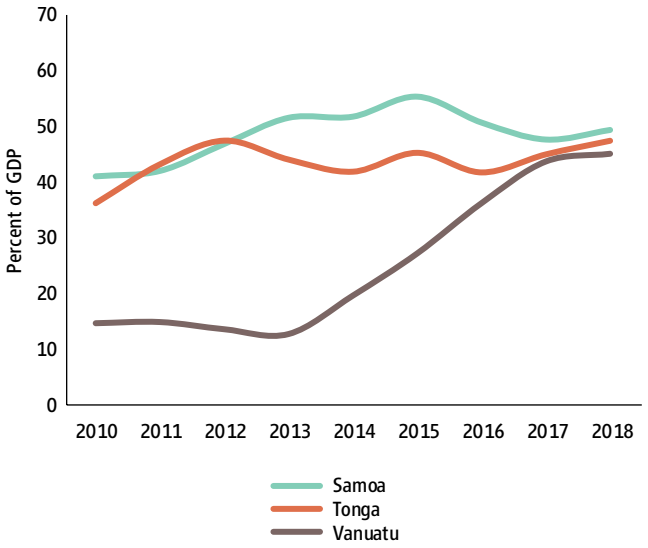
In general, the key challenge facing **Tonga** in the next few years is to maintain its prudent fiscal stance in the face of several competing pressures. The government should carefully prioritize cyclone reconstruction and development spending, mindful of budget and local capacity constraints, and continue to strengthen management of the government wage bill. In the short term, a more pronounced slowdown in the global economy would have adverse impacts on the tourism sector and pose a key downside risk to the growth outlook.

**Figure 1.** Incidence of poverty at international poverty lines and national hardship thresholds




*Sources:* World Bank (2016), Systematic Country Diagnostic for the eight small Pacific Island Countries.

**Figure 2.** Public and publicly guaranteed external debt




*Sources:* Latest available joint World bank and IMF Debt Sustainability Analyses.

| | 2017 | 2018 | 2019 | 2020f | 2021f | 2022f |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | | | | | | |
| Samoa | 1.0 | –2.2 | 3.5 | –5.0 | 0.0 | 6.0 |
| Tonga | 5.4 | 0.2 | 1.0 | 0.5 | 3.2 | 2.8 |
| Vanuatu | 4.4 | 2.8 | 3.0 | –8.0 | 6.0 | 4.5 |

*Sources:* World Bank and IMF.
*Note:* Financial years for Samoa and Tonga are Jul–Jun, for Vanuatu is Jan–Dec. e = estimate, f = forecast.

# THAILAND

| | 2019 |
|---|---|
| Population, million | 69.3 |
| GDP, current US$ billion | 564.1 |
| GDP per capita, current US$ | 8,139 |
| Upper-middle-income poverty rate (US$5.50)[a] | 8.6 |
| Gini index[a] | 36.4 |
| School enrollment, primary (% gross)[b] | 99.6 |
| Life expectancy at birth, years[b] | 76.7 |

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

*Already impacted by the U.S.-China trade tension and domestic political uncertainty, the Thai economy was further dragged down by a severe drought, resulting in an annual growth below 3 percent in 2019. Economic growth is expected to contract in 2020 due to the impact of the COVID-19 outbreak, through a decline in external demand affecting trade and tourism, supply chain disruptions, and weakening domestic consumption. Downside risks to the outlook include a significant domestic COVID-19 outbreak and a prolonged decline in global demand in large economies such as the United States and the European Union.*

## Recent Developments

A series of domestic and external shocks has led to a decline in growth from 4.2 percent in 2018 to 2.4 percent in 2019. The sluggish growth registered in 2019 was due to the compounded effects of the U.S.-China trade tension, domestic political uncertainty, and the ongoing drought. These shocks have impacted both external and internal drivers of growth. The trade tension weighed heavily on the manufacturing sector, the political uncertainty delayed the FY2020 budget and led to a slowdown in public consumption, and the drought has weakened the agricultural sector.

In early 2020, the COVID-19 outbreak has already had a significant impact on the economy. Tourism accounts for close to 16 percent of GDP, and tourist arrivals have declined sharply—by 45 percent year-on-year in February 2020 and 67 percent year-on-year in March 2020, reflecting increasing global travel restrictions. The outbreak is also impacting domestic drivers of growth, with consumer and investor confidence declining sharply to five-year lows by February 2020. As with other emerging markets, the stock market in Thailand is experiencing volatility and sharp sell-offs, declining 30.8 percent year to date.

The government has declared a state of emergency and responded to the outbreak using available fiscal and monetary policy tools. Further restrictions on movement across provinces are being considered. Thailand does have enough fiscal space to pursue an aggressive fiscal response to the economic downturn[20] and has approved a 400-billion-baht package in early March followed by 117-billion-baht package in late March to reduce the impact of the COVID-19 outbreak. The first package includes soft loans (150 billion baht), funded by the Government Savings Bank, to enable commercial and government banks to grant soft loans at 2 percent for businesses, debt payment extension for liquidity stressed businesses, and reduction of the withholding tax from 3 percent to 1 percent from April to September this year. Measures to support households include reduction or postponement of utility bills, as well as reduction of employer and employee contributions to the Social Security fund. In the second round, cash transfers (45 billion baht) were earmarked for informal workers.

The Bank of Thailand quickly responded by lowering the official policy rate twice this year to 0.75 percent in March 2020. Risks arising from low interest rates are balanced by macroprudential policies, which have so far been effective at safeguarding the financial sector. However, these policies

20 Thailand Economic Monitor, January 2020.

come at a cost, as recent research has shown that they are associated with considerable output losses in emerging economies.[21] After appreciating by about 7 percent over the course of 2019 and eroding export competitiveness, the Thai baht has weakened in recent weeks and could help revitalize exports, especially agricultural exports.

The unemployment rate increased from 1.67 percent in Q1 2019 to 2.82 percent in Q4 2019, and wage growth continues to stagnate. Average nominal wages declined consistently from Q2 2019 to Q4 2019. The yield of Thailand's major crops—rice, rubber, and sugar—declined significantly in 2019 due to the ongoing drought, thus impacting the income of farm workers. These trends in 2019 follow a period of increase in official poverty rates from 2017 to 2018 in all regions. Continued challenges to the agricultural sector, the main economic activity of the majority of the poor, suggests that poverty reduction was unlikely in 2019.

## Outlook

The outlook for the medium term has significantly worsened since October 2019, with growth projections for 2020 revised down from 2.9 percent to a range of –3.0 percent to –5.0 percent, reflecting an economic contraction. The key driver of the downward revision has been the impact of the COVID-19 outbreak, which, in the baseline, is expected to (i) significantly lower tourist arrivals and, as a result, also impact overall consumption growth due to weaker activity in the retail sector; (ii) impact domestic consumption reflecting potential public health measures regarding social distancing and depressed consumer sentiment; and (iii) impact on key supply chains such as electronics and automotive that are critical to Thailand's exports. The baseline assumes a muted spread of the outbreak in Thailand, a significant worsening of global growth prospects in 2020, and structural challenges in disbursing public spending.

Negative externalities from COVID-19 will compound an already challenging context of droughts, stagnant wage growth, rising unemployment, and rising poverty. Poverty projections indicate that the poverty rate in 2022 will remain higher than in 2015. In addition, the expected reduction in foreign tourists in 2020 and closures of malls and restaurants will likely have a significant impact on poverty for those living in popular destinations. As an example, in 2018, Phuket was the only province where poverty increased to a point higher than in 2000, linked to the reduction in tourism following a boat accident. Government policies to help households reliant on services income to weather the economic downturn, such as relaxing debt payments and targeted social programs, may help mitigate these negative impacts.

## Challenges

The medium-term outlook is subject to high domestic and external downside risks. The main risk is that the impact of the COVID-19 outbreak may be more severe locally and globally. A more severe local outbreak could dent consumer and investor sentiment further and necessitate a stronger public health response, which could limit private consumption. A further global spread could severely impact supply chains and overall exports due to regional and global economic slowdown.

21 Richter et al., 2019. "The Costs of Macroprudential Policy" *Journal of International Economics* 118, 263–282.

**Figure 1.**

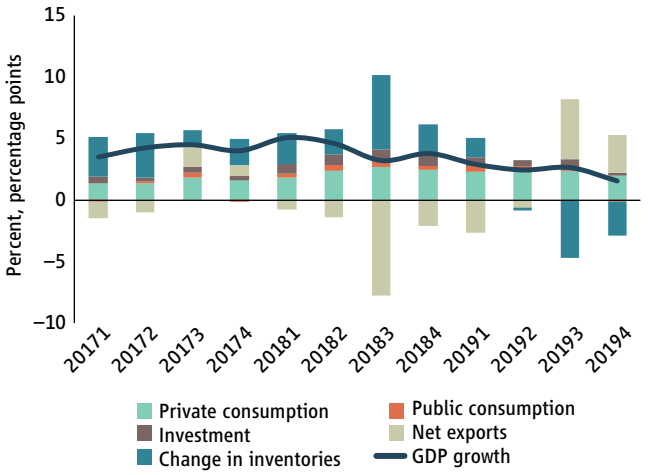
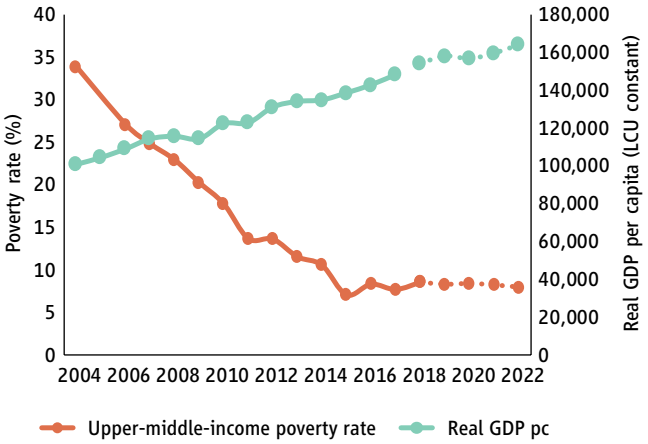



**Figure 2.** Public and publicly guaranteed external debt




| | *2017* | *2018* | *2019e* | *2020f* | *2021f* | *2022f* |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 4.0 | 4.1 | 2.4 | –3.0 | 4.0 | 3.5 |
| Private consumption | 3.0 | 4.6 | 4.4 | –1.8 | 4.3 | 4.1 |
| Government consumption | 0.1 | 1.8 | 1.9 | 1.7 | 0.9 | 1.9 |
| Gross fixed capital investment | 1.8 | 3.8 | 8.1 | –0.6 | 2.3 | 2.6 |
| Exports, goods, and services | 5.4 | 4.2 | –4.5 | –5.5 | 2.0 | 2.5 |
| Imports, goods, and services | 6.2 | 8.6 | –2.5 | –3.0 | 2.4 | 2.2 |
| **Real GDP growth, at constant factor prices** | 4.2 | 4.2 | 2.4 | –2.9 | 4.0 | 3.5 |
| Agriculture | 3.7 | 5.0 | 2.0 | 1.0 | 1.5 | 2.0 |
| Industry | 1.8 | 2.7 | 2.6 | 1.5 | 2.5 | 3.0 |
| Services | 5.8 | 5.1 | 2.3 | –6.0 | 5.3 | 4.0 |
| **Inflation (consumer price index)** | 0.7 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 |
| **Current account balance (% of GDP)** | 9.7 | 6.4 | 2.7 | 2.3 | 1.8 | 1.8 |
| **Net foreign direct investment (% of GDP)** | –2.3 | –0.2 | 0.1 | 0.2 | 0.5 | 0.5 |
| **Fiscal balance (% of GDP)** | –0.9 | 0.3 | –0.9 | –1.6 | –1.4 | –1.0 |
| **Debt (% of GDP)** | 41.2 | 41.5 | 42.4 | 43.9 | 44.4 | 44.4 |
| **Primary balance (% of GDP)** | 0.1 | 1.3 | 0.1 | –0.4 | –0.1 | 0.4 |
| **Upper-middle-income poverty rate (US$5.50 in 2011 PPP)[a,b]** | 7.8 | 8.6 | 8.4 | 8.7 | 8.4 | 8.1 |

*Source:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast.
(a) Calculations based on EAPPOV harmonization, using 2014-SES and 2018-SES. Actual data: 2018. Nowcast: 2019. Forecasts are from 2020 to 2022.
(b) Projection using average elasticity (2014–2018) with pass-through = 0.7 based on GDP per capita in constant LCU.

## TIMOR-LESTE

| | 2019 |
|---|---|
| Population, million | 1.4 |
| GDP, current US$ billion | 1.7 |
| GDP per capita, current US$ | 1,238 |
| School enrollment, primary (% gross)[b] | 119.8 |
| Life expectancy at birth, years[b] | 69.0 |

*Sources:* WDI, Macro Poverty Outlook, and official data.
*Note:* (a) Most recent WDI value (2017).

*Despite a return to economic growth in 2019, failure to approve a state budget and the global COVID-19 outbreak have considerably weighed down prospects for 2020. The ongoing political uncertainty may compound these effects. Improved preparedness and response to global health emergencies and climatic shocks will be key to sustain achievements in human development. Meanwhile, a stable political environment and a strong policy commitment to support the private sector are crucial to avert a significant economic contraction.*

### Recent Developments

Gross domestic product (GDP) is thought to have recovered by over 3 percent in 2019, in a rebound from the 2017–2018 recession. Improved economic activity was supported by both public and private consumption, although investment likely faltered. Despite a relatively low budget execution rate (at 83 percent), total public spending still increased by 5 percent when compared to 2018. Expenditures on goods and services and public transfers were its key drivers, while capital spending declined by 7 percent. Private consumption was boosted by strong credit demand from households and low inflation. Notwithstanding this economic upturn, GDP per capita remains considerably below the level observed in 2016.

The late approval of the 2019 state budget contributed to a slow start, but public spending picked up throughout the year. Government revenues remained low, even when considering the Estimated Sustainable Income (ESI)—which is the amount that can be withdrawn from the Petroleum Fund without depleting its asset value. Tax revenues declined for a third consecutive year, underscoring the need to develop an effective tax policy and strengthen tax administration. The fiscal deficit worsened to 31 percent of GDP, reversing the positive trend recorded in recent years—largely enabled by a constrained spending environment in 2017 and 2018. The deficit was mostly financed by excess withdrawals from the Petroleum Fund, which are the amounts above the ESI that are transferred to the state budget. The Petroleum Fund balance reached a record high of $17.7 billion in December, albeit due to a $1.7 billion asset revaluation accounted by the strong performance of international equity markets in 2019. Petroleum revenues (excluding investment returns) have been consistently outpaced by total withdrawals in the past five years.

Consumer price inflation slowed to 0.9 percent in 2019, even though prices for education, and alcohol and tobacco increased by 9.0 percent and 3.5 percent, respectively. This deceleration contributed to a depreciation of the real exchange rate, which was reinforced by the weakening of the U.S. dollar—the country's currency—against the currencies of its main trading partners. Commercial bank credit grew by 5 percent in 2019, owing to strong demand from households that compensated declines in the productive sectors. Meanwhile, average lending rates increased by nearly 2 percentage points to reach 16.3 percent in December—the highest level since 2007. Credit to the private sector remains low at 14 percent of GDP, despite a robust level of deposits (nearly five times higher as a share of GDP).

The current account turned a surplus for the first time since 2015, partly owing to a significant increase in primary income—which predominantly comprises petroleum-related revenues such as taxes and royalties. The trade

deficit is thought to have remained broadly stable. With the ratification of the Maritime Boundary Treaty in August 2019, oil and gas fields previously shared between Australia and Timor-Leste in the Joint Petroleum Development Area (JPDA) transitioned to Timor-Leste's exclusive jurisdiction. With this change, offshore petroleum production is now considered to be part of Timor-Leste's national accounts, and therefore trade statistics. However, given the limited data available and the need to compare economic performance across time, estimates for 2019 and forecasts for 2020–2022 do not (yet) reflect this change.

## Outlook

The government failed to get its 2020 state budget proposal approved by Parliament, triggering significant political uncertainty. Members of the National Congress for the Reconstruction of Timor-Leste (CNRT), the senior partner in the government coalition, abstained in the parliamentary vote. The President subsequently asked all political parties to attempt to form a new coalition in order to avoid early elections. While there is still no clear political solution to the impasse, the next government will have to prepare two state budgets until the end of the year, a situation reminiscent of 2018. Public spending will be relatively constrained until a 2020 state budget is approved by Parliament.

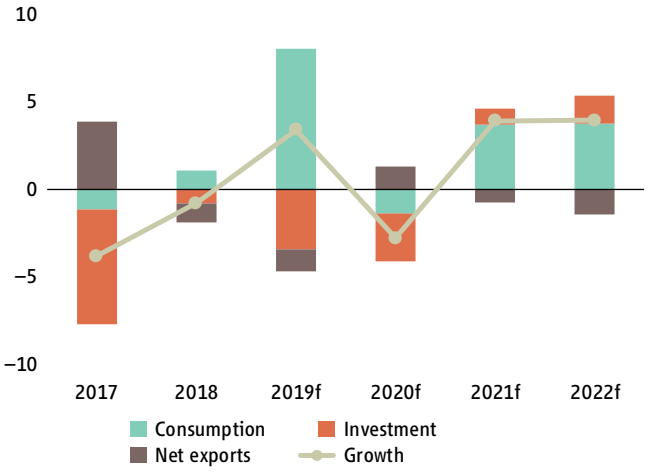
The global outbreak of the novel coronavirus (COVID-19) will also affect domestic economic activity, especially through stringent travel restrictions and public health measures to contain its spread. Given the renewed political uncertainty and likely COVID-19 impacts, the GDP growth forecast for 2020 has been lowered from the previous 4.6 percent (October 2019) to –2.8 percent. However, it should be noted that this projection is still subject to much uncertainty.

## Risks and Challenges

The economic impact of the global COVID-19 outbreak will be felt through constraints to the movement of persons (namely workers, tourists, and business people), disruptions in international trade, and deteriorating global equity markets. Recent travel restrictions will affect the implementation of public investment projects (many of which are reliant on Chinese workers) and the nascent tourism sector. Trade disruptions could affect imports, which are key to satisfy domestic demand—given limited productive capacities. The collapse of international stock markets (and, to a lesser extent, the sharp fall in oil prices) will negatively impact the value of the Petroleum Fund, although its link to the real economy mainly operates through withdrawals to fund the state budget. Public health measures to contain the spread of COVID-19 within the population—especially 'social distancing'—will also weigh down on economic activity, although their time frame is unclear. Moreover, recent heavy rains caused floods that affected thousands of people, particularly in Dili, where much of the economic activity takes place. Overall, a lack of preparedness for global health emergencies and climatic shocks could undermine human development achievements. In an interconnected world, failure to prepare for (and tackle) the spread of communicable diseases could lead to significant human and economic costs. Extreme whether events, such as droughts and heavy rains, can have a significant impact on agricultural yields (and thus living standards) as well as on connective infrastructure (especially roads).

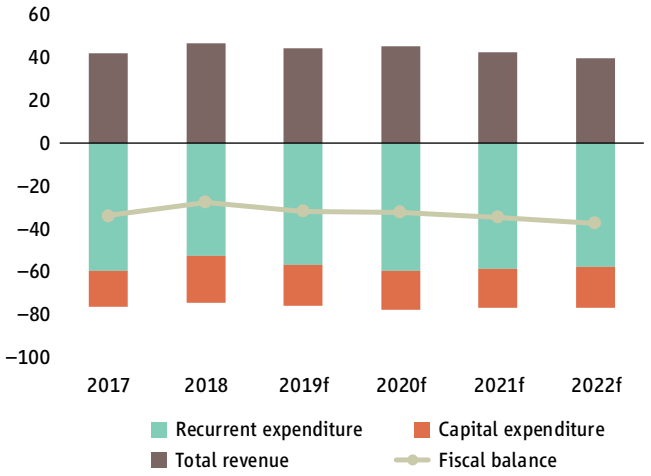
The intermittent political uncertainty observed since 2017 has contributed to a volatile pattern in public spending. It is likely that the quality of public spending has suffered during this period because of inadequate planning, delayed budget decisions, and spending restrictions. While a political solution might be eventually found to avoid a third parliamentary election since 2017, political tensions remain elevated. Moreover, fiscal sustainability remains a critical medium-term concern. Protecting the Petroleum Fund from large withdrawals ought to be a key priority, especially when considering the financing options for the development of the Greater Sunrise oil and gas fields. Efforts to mobilize additional domestic resources—through a comprehensive fiscal reform—would also contribute to ease the pressure on the Petroleum Fund.

**Figure 1.** Real GDP growth, contribution to real growth




*Sources:* Ministry of Finance & World Bank staff estimates.

**Figure 2.** Fiscal aggregates (percentage of GDP)




*Sources:* Ministry of Finance & World Bank staff estimates.
*Note:* Total revenue includes the ESI but not excess withdrawals.

| | *2017* | *2018* | *2019e* | *2020f* | *2021f* | *2022f* |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | –3.8 | –0.8 | 3.4 | –2.8 | 3.9 | 4.0 |
| Private consumption | 3.6 | 2.6 | 3.2 | –1.7 | 3.1 | 3.9 |
| Government consumption | –5.8 | –1.0 | 10.9 | –0.4 | 2.8 | 2.1 |
| Gross fixed capital investment | –16.7 | –1.8 | –10.1 | –9.3 | 3.4 | 5.9 |
| Exports, goods, and services | –39.1 | 8.4 | 1.5 | 0.2 | 4.5 | 6.4 |
| Imports, goods, and services | –8.7 | 2.3 | 2.2 | –2.3 | 1.4 | 2.8 |
| **Real GDP growth, at constant factor prices** | –3.6 | –0.2 | 3.0 | –2.8 | 3.9 | 4.0 |
| Agriculture | –3.3 | 4.4 | 2.4 | 2.1 | 2.6 | 2.9 |
| Industry | –26.5 | 5.3 | 3.2 | –1.8 | 1.1 | 2.4 |
| Services | 3.1 | –2.4 | 3.2 | –4.3 | 5.0 | 4.6 |
| **Inflation (consumer price index)** | 0.6 | 2.2 | 0.9 | 1.4 | 1.8 | 2.2 |
| **Fiscal balance (% of GDP)** | –33.4 | –27.5 | –30.8 | –30.8 | –32.4 | –34.1 |
| **Current account balance (% of GDP)** | –17.6 | –12.2 | 3.5 | 1.9 | –10.3 | –28.2 |

*Source:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast.
(a) The ESI is part of total revenue, while excess withdrawals from the PF is a financing term.

# VIETNAM

| | 2019 |
|---|---|
| Population, million | 97.4 |
| GDP, current US$ billion | 265.8 |
| GDP per capita, current US$ | 2,729 |
| International poverty rate (US$1.90)[a] | 1.9 |
| Lower-middle-income poverty rate (US$3.20)[a] | 7.0 |
| Upper-middle-income poverty rate (US$5.50)[a] | 23.6 |
| Gini index[a] | 35.7 |
| School enrollment, primary (% gross)[b] | 109.2 |
| Life expectancy at birth, years[b] | 75.2 |

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

## Summary

*While Vietnam remains significantly exposed to the COVID-19 outbreak and the ongoing turbulence in the global financial markets, its economy remains resilient to external shocks in the first few months of 2020. The medium-term outlook is broadly favorable, but significant downside risks are tied to adverse stronger and longer impacts of the coronavirus outbreak, weak external demand, and incomplete structural reforms. On the upside, Vietnam is strongly positioned to benefit from numerous free trade agreements that are coming into force over the forecast period.*

## Recent Economic Developments

While Vietnam remains significantly exposed to the COVID-19 outbreak and the ongoing turbulence in the global financial markets, its economy remains resilient to external shocks. Given its deep integration with the global economy, Vietnam was hit hard by the COVID-19 outbreak, with manufacturing, tourism, and transport activities falling abruptly during the first two months of 2020. It has been feeling the pain of the ongoing global financial turmoil, with declining equity prices, rising in sovereign spreads and decreasing capital flows. Yet, Vietnam's economy remains resilient: in the first two months, exports have expanded by 8.0 percent, FDI inflows amounted to $2.5 billion and retail sales were up by 5.4 percent. With adequate policy buffer in hand, Vietnam appears to be well-positioned to overcome the ongoing health and economic crisis.

In 2019, Vietnam's economy continued to show fundamental strength and resilience, supported by robust domestic demand and export-oriented manufacturing. Preliminary data indicate that real GDP grew by about 7 percent in 2019, close to the rate reported in 2018, and one of the fastest in the region.

Industry (especially manufacturing) and service sector growth led to robust labor demand, creating 1.8 million wage jobs during 2016–18, drawing labor away from agriculture and driving non-agriculture wage income growth. This was primarily responsible for the reduction in poverty from 9.7 percent in 2016 to 6.7 percent in 2018 based on the GSO-WB national poverty line. Continued progress in poverty reduction among ethnic minorities has been largely driven by rising wage incomes too.

After moderating in the first three quarters of 2019, the headline Consumer Price Index (CPI) surged as the result of higher food prices in the last quarter. During the first few months of 2020, inflationary pressures remained due to higher food prices related to the end of the year season and potential shortages associated to trade restrictive measures in response to the COVID 19 virus outbreak.

Vietnam's monetary policy continued to balance the dual objectives of maintaining stability while supporting economic growth. After months of prudent monetary policy, the SBV has started to ease its policy stance in September 2019 and even further in recent weeks when the State Bank of Vietnam (SBV) cut the key policy rate by 100

basis points and allowed commercial banks to restructure loan maturities to affected businesses in response to the epidemic crisis.

Vietnam's external balances continued to improve in 2019, despite uncertain global trade developments, as the country reported a current account surplus for the second year in a row. Vietnam's export activity expanded by about 8 percent in early 2020, suggesting their resilience to deepening unfavorable external economic conditions.

The capital account surplus also remained sizeable, owing to sustained high FDI inflows, leading to the further accumulation of foreign exchange reserves, which increased from the equivalent of 2.8 months of import cover at end-2018 to about 3.5 months at end-2019. Concurrently, both the nominal and real exchange rates were relatively stable through 2019 and into early-2020.

In line with the fiscal consolidation policy followed since 2016, the overall fiscal deficit declined from 4.4 percent of GDP in 2018 to 4.0 percent in 2019. As a consequence, Vietnam's public debt continued to decline as a share of GDP, down from 59.6 percent in 2016 to about 54.0 percent at end 2019.

## Outlook

While prospects remain favorable for the Vietnamese economy in the medium term, GDP growth will be affected negatively by the recent coronavirus outbreak, now a global pandemic. Preliminary estimates suggest that the rate of expansion of the economy could decline to about 4.9 percent in 2020 (which is about 1.6 percentage points lower than our previous forecast). Because of the relatively limited number of infected cases (as of end March 2020), the most important negative impacts associated to the outbreak are on tourism and on manufacturing due to supply chain disruptions. Inflationary pressures are projected to increase temporarily, reflecting uncertain prices of food and fuel, and possible trade disruptions. With many households now wage dependent even in rural areas, a slowdown in tourism, hotels, and catering as well as manufacturing sectors could temporarily increase poverty during the first half of 2020.

The external position is projected to deteriorate in 2021, mainly as the result of the fall in exports of services (tourism) and lower FDI inflows. The fiscal deficit will temporary increase in 2020 due to lower revenue and the fiscal stimulus that will partially compensate for the negative effect of the global pandemic on the Vietnamese economy.

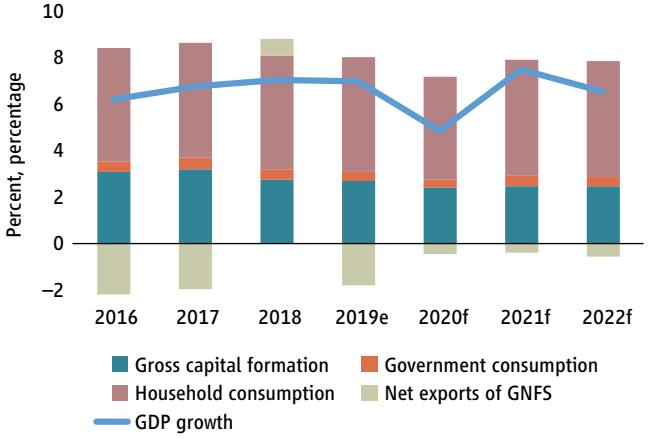
The fiscal consolidation process is projected to continue from 2021 onwards, which will help to further reduce public debt as a share of GDP. Over the medium term, growth is projected to rebound back to 7.5 percent in 2021 and converge at around 6.5 percent in 2022, reflecting an improved external demand and a firming of the services sector, as well as a gradual recovery in agricultural production. The economy will also rebound from the global coronavirus pandemic. Poverty is projected to continue to decline further, as labor market conditions are expected to remain favorable.

## Challenges and Risks

In the short term, the coronavirus outbreak could create stronger adverse impacts on Vietnam's economy, especially manufacturing and tourism sectors that are highly dependent on the global economy. The short-term impact on Vietnam's economic activities could be significant but short lived if the outbreak is rapidly contained as experienced in other epidemic episodes. Other short-term risks include the continuous slowdown in global economic activity and trade flows as Vietnam's economy is one of the most open in the world.

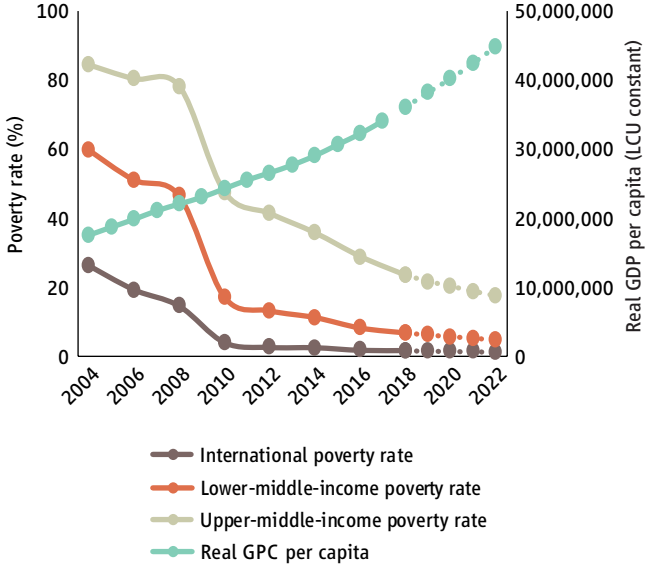
Looking forward, Vietnam could manage the above external risks by diversifying its trade flows and improving its competitiveness. Vietnam's adhesion to new trade agreements, e.g., the EVFTA, will support this effort. Heightened global volatility underscores the need to maintain sound macroeconomic policies, including implementation of planned structural reforms, such as for state-owned enterprises. But advancing this agenda while maintaining an equitable society within and across regions in a country with rapidly declining but spatially and ethnically concentrated poverty is a key challenge.

**Figure 1.** Real GDP growth, contribution to real growth




*Sources:* Official data and World Bank staff estimates.

**Figure 2.** Poverty rate and GDP per capita




*Sources:* Official data and World Bank staff estimates.

| | *2017* | *2018* | *2019e* | *2020f* | *2021f* | *2022f* |
|---|---|---|---|---|---|---|
| **Real GDP growth, at constant market prices** | 6.8 | 7.1 | 7.0 | 4.9 | 7.5 | 6.5 |
| Private consumption | 7.4 | 7.3 | 7.4 | 6.7 | 7.3 | 7.3 |
| Government consumption | 7.3 | 6.3 | 4.2 | 6.0 | 5.3 | 6.4 |
| Gross fixed capital investment | 10.2 | 8.2 | 7.9 | 7.0 | 7.1 | 7.1 |
| Exports, goods, and services | 16.7 | 14.3 | 7.6 | 2.6 | 8.8 | 9.1 |
| Imports, goods, and services | 17.5 | 12.8 | 8.3 | 2.8 | 8.5 | 9.4 |
| **Real GDP growth, at constant factor prices** | 6.9 | 7.2 | 7.0 | 4.9 | 7.5 | 6.5 |
| Agriculture | 2.9 | 3.8 | 2.0 | 1.9 | 2.0 | 2.0 |
| Industry | 8.0 | 8.9 | 8.9 | 7.6 | 8.6 | 8.4 |
| Services | 7.4 | 7.0 | 7.2 | 3.3 | 8.2 | 6.2 |
| **Inflation (consumer price index)** | 3.5 | 3.5 | 2.8 | 3.5 | 3.7 | 3.6 |
| **Current account balance (% of GDP)** | –0.7 | 2.3 | 2.4 | –1.5 | 1.0 | 1.2 |
| **Fiscal balance (% of GDP)** | –4.7 | –4.4 | –4.0 | –4.4 | –3.8 | –3.6 |
| **Debt (% of GDP)** | 58.3 | 55.7 | 54.1 | 53.3 | 52.0 | 51.3 |
| **Primary balance (% of GDP)** | –2.7 | –2.4 | –1.9 | –2.4 | –1.8 | –1.6 |
| **International poverty rate (US$1.90 in 2011 PPP)[a,b,c]** | — | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 |
| **Lower-middle-income poverty rate (US$3.20 in 2011 PPP)[a,b,c]** | — | 7.0 | 6.4 | 6.0 | 5.4 | 5.0 |
| **Upper-middle-income poverty rate (US$5.50 in 2011 PPP)[a,b,c]** | — | 23.6 | 21.8 | 20.8 | 19.1 | 17.8 |

*Source:* World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices.
*Note:* e = estimate, f = forecast.
(a) Calculations based on EAPPOV harmonization, using 2014-VHLSS and 2018-VHLSS. Actual data: 2018. Nowcast: 2019. Forecasts are from 2020 to 2022.
(b) Projection using annualized elasticity (2014–2018) with pass-through = 0.7 based on GDP per capita in constant LCU.

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