

Impacts of Covid-19 on inclusive economic growth in middle-income countries

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11 May 2020

Question

What evidence is available on impacts from previous epidemics, financial crises and emerging evidence from Covid-19 on inclusive growth in middle-income countries?

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1. Summary

Covid-19 is likely to cause much greater economic damage than any recent disease outbreak or economic crisis (Shretta, 2020). As of April 2020, the IMF is forecasting that the global economy is likely to contract by -3% in 2020 (IMF, 2020c, p. 1) and that ‘the cumulative loss to global GDP over 2020 and 2021 from the pandemic crisis could be around 9 trillion dollars’, making it the worst economic downturn since the Great Depression (Gopinath, 2020). Economic recovery could be swift (the IMF currently forecasts that the world’s economies will grow by 5.8% in 2021) (IMF, 2020c, p. 1) but this will require decisive and effective action to control the disease and restore economic activity including global value chains.

Covid-19’s economic impacts are broader and more severe than most past crises. The disease has been highly infectious in comparison with past major disease outbreaks, spreading rapidly to reach almost every country in the world and infecting more than four million people (Madhav et al., 2018, p. 317). In addition, while previous pandemics have typically emerged in poorer countries and have had their greatest impact there, Covid-19 emerged in an important economic hub and has affected countries central to the global economy: at the beginning of March, the list of the ten countries most affected by Covid-19 was ‘almost identical to the list of the ten largest economies in the world (Iran and India are the exceptions)’ (Baldwin & di Mauro, 2020, p. 2). The impacts of the disease itself (illness and absenteeism), the policy measures being taken to control its spread (closing businesses and schools, and restricting travel and gatherings), and the behaviour changes that individuals are making to avoid exposure (avoiding public places and reducing consumption, especially in social settings) combine to simultaneously affect supply and demand at multiple points in the economy. Most of the economic impacts of Covid-19, as has been the case with past epidemics and pandemics, are a side effect of the measures taken to control the spread of the disease, rather than a direct effect of the disease itself.

Covid-19 has greatly disrupted global value chains, which now account for more than two-thirds of world trade (Dollar, 2019, p. 1), and disruptions are likely to continue to propagate back and forth through these networks as countries restrict economic activity to control the disease (Baldwin & Freeman, 2020; Jonas, 2013, p. 10). The experience of value chain disruption during the pandemic is likely to feed into future debates about deglobalisation. The manufacturing sector will suffer disruption through shutdowns, labour shortages, supply chains and transportation disruptions, and declining demand as customers cancel or delay purchases and investments (Baldwin & di Mauro, 2020, p. 4). Small and medium-sized firms that participate strongly in global value chains, and manufacturers of durable goods, are particularly vulnerable (Baldwin & di Mauro, 2020, p. 4; Baldwin & Tomiura, 2020, p. 61; Shretta, 2020). World merchandise trade is expected to decline by between 13% and 32% in 2020 (World Trade Organization, 2020, p. 1). Large drops in demand for and prices of oil and industrial metals (World Bank, 2020a, pp. 3, 8) will cause serious economic harm to countries that export these commodities (IMF, 2020c, pp. 5–6).

Agricultural production and prices have not yet been strongly affected by Covid-19, with the exception of crops grown for biofuels and industrial purposes (World Bank, 2020a, pp. 7–8), and food security is not currently threatened at the global level. Agricultural commodity prices are stable, production levels and stocks of staple foods are near record highs, the prospects for the next crop are good, and demand for biofuel crops is likely to contract (Pangestu, 2020; Schmidhuber, Pound, & Qiao, 2020, p. 7; World Bank, 2020a, p. 10). However, agriculture and food security are at risk of disruption if travel restrictions lead to labour shortages, reduced

access to agricultural inputs, or barriers to transporting produce, if countries restrict trade in food, or if economic disruption reduces people's incomes and purchasing power.

Countries, regions, and cities where service industries account for a large share of GDP are likely to be badly affected (Gong, Zhang, Yuan, & Chen, 2020, p. 8). Covid-19 is likely to lead to lower consumer and business confidence and decreased personal spending across a broad range of categories (Shretta, 2020). Recovery in the service sector is likely to be slow, and some economic output will be permanently lost. The travel and tourism sector has been one of the hardest hit (Shretta, 2020), as travel restrictions are more widespread and stringent than in any previous pandemic response and the combination of economic recession and individual reluctance to travel is expected to depress international travel significantly longer than in previous pandemics.

Despite substantial progress on reducing global poverty in the past thirty years, there is a significant chance that Covid-19 could lead to 2020 being the first year with an increase in poverty levels since 1990 (Sumner, Hoy, & Ortiz-Juarez, 2020). The anticipated economic downturn will affect people in or near poverty badly, and is likely to result in millions of people falling below the \$1.90/day international extreme poverty line (Laborde, Martin, & Vos, 2020). Informal employment is widespread in most low- and middle-income countries and is a critical source of livelihood for a large proportion of the population. Informal workers, notably home-based workers, domestic workers, street vendors and market trader, and waste pickers are particularly vulnerable during the Covid-19 crisis due to the insecurity of their work, lack of labour rights, and inability to rely on social safety nets. Remittances from overseas workers have in the past been very important in helping to compensate for crises, but in the current situation, workers abroad are also vulnerable, and globally, remittances are projected to drop by about 20% in 2020 due to falling wages and unemployment of migrant workers (World Bank, 2020b).

Women and girls are particularly vulnerable to economic hardship, as they are generally in more precarious employment than men to begin with, they bear a greater burden of unpaid care work which limits their economic participation, and they suffer increased incidences of gender-based violence during crises.

2. Global impact on GDP

Covid-19 is likely to cause much greater economic damage than any recent disease outbreak or financial crisis (Shretta, 2020). As of April 2020, the IMF is forecasting that the global economy is likely to contract by -3% in 2020, assuming that 'the pandemic fades in the second half of 2020 and containment efforts can be gradually unwound' (IMF, 2020c, p. 1). and that 'the cumulative loss to global GDP over 2020 and 2021 from the pandemic crisis could be around 9 trillion dollars' (Gopinath, 2020). Emerging market and developing economies are expected to be less hard hit than wealthy countries, with gross domestic product (GDP) shrinking by -1.0% and -6.1% respectively (IMF, 2020c, p. ix, 2020d). The IMF's forecasts for selected countries are shown in Table 1.

Table 1: Annual percentage change in GDP in selected countries¹

Country	Annual percentage change in real (inflation-adjusted) GDP		
	2019	2020 projected	2021 projected
Bangladesh	7.9	2.0	9.5
Brazil	1.1	-5.3	2.9
China	6.1	1.2	9.2
Colombia	3.3	-2.4	3.7
Egypt	5.6	2.0	2.8
Ghana	6.1	1.5	5.9
India	4.2	1.9	7.4
Indonesia	5.0	0.5	8.2
Kenya	5.6	1.0	6.1
Malawi	4.5	1.0	2.5
Malaysia	4.3	-1.7	9.0
Mexico	-0.1	-6.6	3.0
Mozambique	2.2	2.2	4.7
Myanmar	6.5	1.8	7.5
Nigeria	2.2	-3.4	2.4
Pakistan	3.3	-1.5	2.0
Peru	2.2	-4.5	5.2
Philippines	5.9	0.6	7.6
South Africa	0.2	-5.8	4.0
Sri Lanka	2.3	-0.5	4.2
Thailand	2.4	-6.7	6.1
Turkey	0.9	-5.0	5.0
Vietnam	7.0	2.7	7.0
Zambia	1.5	-3.5	2.3
World	2.9	-3.0	5.8
Emerging market and developing economies	3.7	-1.0	6.6

Source: IMF, 2020d. Darker green shades indicate more positive growth, darker red shades indicate greater shrinkage.

Other forecasts of the global effects of the pandemic are in a similar range, but forecasts are changing constantly as the situation evolves. On 2 March, the OECD forecast that global economic growth would drop by half a percentage point, from 2.9% in 2019 to 2.4% in 2020 (OECD, 2020a, p. 2). By 14 April, as shutdowns and lockdowns were implemented around the world to contain the disease, the OECD published a new forecast saying that the decline in

¹ The countries included are the focus countries of the UK Prosperity Fund for 2017-2023.

output was 'equivalent to a decline in annual GDP growth of up to 2 percentage points for each month that strict containment measures continue' and that 'if the shutdown continued for three months, with no offsetting factors, annual GDP growth could be between 4-6 percentage points lower than it otherwise might have been' (OECD, 2020b, p. 1).

The Centre for Economics and Business Research similarly projected (as of 22 March) that world GDP will fall by at least 4.0%, noting that this would be more than twice the drop that occurred in 2009 as a result of the global financial crisis (Centre for Economics and Business Research, 2020).

There is a high degree of uncertainty in these forecasts. 'The economic fallout depends on factors that interact in ways that are hard to predict, including the pathway of the pandemic, the intensity and efficacy of containment efforts, the extent of supply disruptions, the repercussions of the dramatic tightening in global financial market conditions, shifts in spending patterns, behavioural changes (such as people avoiding shopping malls and public transportation), confidence effects, and volatile commodity prices' (IMF, 2020c, p. 1).

Some estimates of economic losses attributable to other recent epidemics or pandemics are shown in Table 2 and Figure 1, although it should be noted that estimates of the economic impacts of past epidemics and pandemics vary and are not necessarily directly comparable, as there is no widely accepted, consistent methodology for estimating the economic impacts of pandemics (Gong et al., 2020, p. 2; Madhav et al., 2018, p. 316). SARS is the most damaging disease outbreak, in terms of percentage of GDP lost, for which estimates of global economic impact exist. It is estimated to have cost the global economy US\$40 billion to \$54 billion, or about 0.1% of global GDP at the time (Global Preparedness Monitoring Board, 2019, p. 13; Lee & McKibbin, 2004a, p. 107). The economic losses attributed to other recent disease outbreaks have all been less than 0.1% of global GDP at the time of the event.

Figure 1: Estimated economic losses attributed to selected epidemics/pandemics



Source: Global Preparedness Monitoring Board, 2019, p. 13. Used under license (CC BY-NC-SA 3.0 IGO).

Table 2: Notable epidemics and pandemics in the post-war era

<i>Starting year</i>	<i>Event</i>	<i>Geographic extent</i>	<i>Estimated direct morbidity or mortality</i>	<i>Estimated global economic losses</i>
1981	HIV/AIDS pandemic	Global	More than 70 million infections, 36.7 million deaths	
2003	SARS epidemic	4 continents, 37 countries	8,098 possible cases, 744 deaths	US\$40 billion ^a to \$54 billion ^b
2009	H1N1 'swine flu' pandemic	Global	151,700 - 575,500 deaths	US\$45 to 55 billion ^a
2012	MERS epidemic	22 countries	1,879 symptomatic cases, 659 deaths	US\$10 billion ^a
2013	West Africa Ebola virus disease epidemic	10 countries	28,646 cases, 11,323 deaths	US\$53 billion ^a
2015	Zika virus pandemic	76 countries	2,656 reported cases of microcephaly or central nervous system malformation	US\$7 to \$18 billion ^c
2019	Covid-19	Global (185 countries and territories)	4.1 million confirmed cases, 283,000 deaths as of 11 May 2020	US\$9 trillion ^d

Source: Most data from Madhav et al., 2018, p. 317. Data for Covid-19 from Johns Hopkins University, 2020 as of 11 May 2020. Indicative global economic losses from: (a) Global Preparedness Monitoring Board, 2019, p. 13, (b) Jonas, 2013, p. 2, (c) UNDP, 2017, p. 8, (d) Gopinath, 2020.

Several studies have attempted to model the range of economic impacts of a major global pandemic. One World Bank study suggests that an influenza pandemic on the scale of the 1918 Spanish flu could cause economic losses equivalent to 3.1% of global GDP (Burns, Mensbrugge, & Timmer, 2008, p. 3). A study published in the *Bulletin of the World Health Organization* projected economic losses from a moderate to severe influenza pandemic of 1.6% of gross national income (GNI) for lower-middle-income countries and 1.0% for upper-middle-income countries (Fan, Jamison, & Summers, 2018, p. 131). Another study from the Australian National University modelled a range of outcomes including a 'mild' scenario similar to the 1968-69 Hong Kong flu that might reduce world economic output by 0.7%, a 'moderate' scenario similar to the 1957 Asian flu that might reduce output by 2.0%, a 'severe' scenario similar to the 1918 Spanish flu that might reduce output by 4.8%, and a catastrophic 'ultra' scenario which simulates a pandemic worse than any seen in the past century that would lead to losses of 12.6% (Burns et al., 2008, p. 2; McKibbin & Sidorenko, 2006, p. 26). Current IMF and OECD forecasts for Covid-19's impact in 2020 are in line with these scenarios, although well below McKibbin and Sidorenko's 'ultra' scenario.

Economic recovery from Covid-19 will depend on how quickly the disease can be brought under control, how quickly consumer and investor confidence can be restored, whether companies are able to find substitutes for parts of their supply chains that are disrupted, and the effectiveness of actions taken to support workers and companies to prevent widespread bankruptcies, extended

job losses, and system-wide financial strains (Baldwin & di Mauro, 2020, p. 17; IMF, 2020c, p. 6; OECD, 2020b, p. 2). The IMF currently forecasts that the world's economies will bounce back quickly from the expected 3.0% contraction in 2020, and grow by 5.8% in 2021 (4.5% in the wealthier countries and 6.6% in emerging markets and developing economies) (IMF, 2020c, pp. 1, 6).

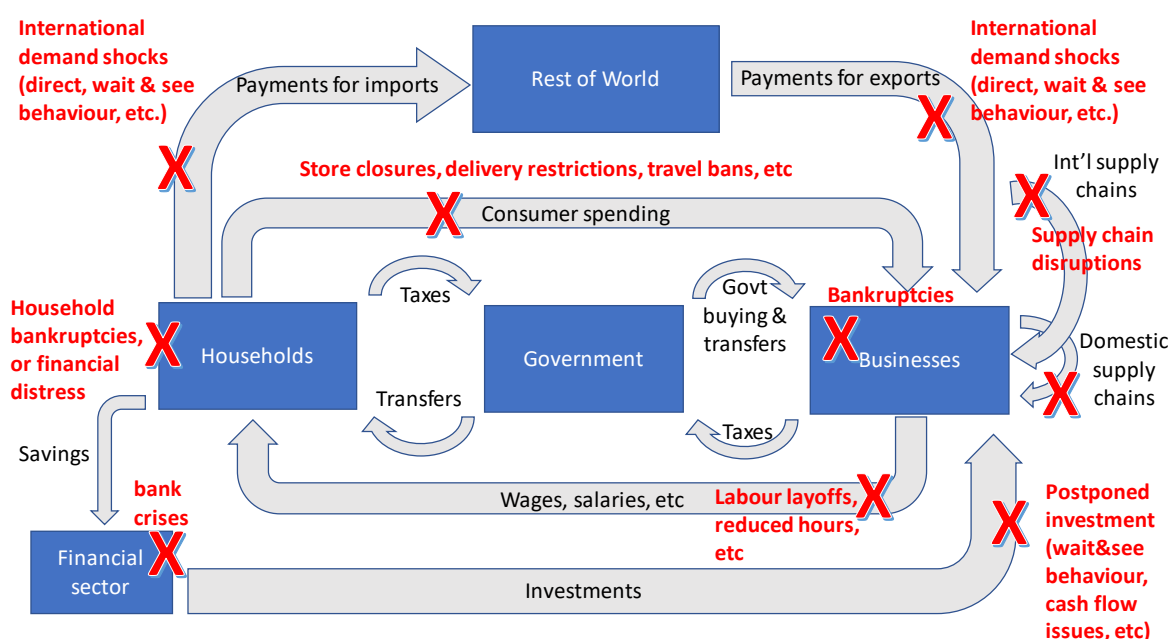
Previous comparable crises have tended to produce quite short, sharp economic shocks (Baldwin & di Mauro, 2020, p. 17). The economic impacts of SARS in 2003, for example, lasted about six months in all (IATA, 2020b, 2020c; Lee & McKibbin, 2004b, p. 119). In most of the countries it affected, losses only affected one to three months of economic activity and were followed by gains so that 'over a year the effect was marginal at best' (Keogh-Brown & Smith, 2008, p. 114). Global GDP growth also recovered rapidly: from global shrinkage of -0.1% in 2009 to growth of 5.4% in 2010 (IMF, 2020c, p. 6).

Baldwin (2020b), however, suggests that the Covid-19 shock may last much longer. He argues that when restrictions are relaxed, we should expect to see recurring waves of infection that will depend on when restrictions aimed at controlling the spread of the disease are lifted in different places, and that the interdependencies of global value chains, which are more significant today than in past crises, will hamper economies from restarting smoothly (see *global value chains* section below). Baldwin and di Mauro (2020, p. 17) suggest that inappropriate macroeconomic policy responses could lead to a situation like the 'stagflation' of the 1970s (Baldwin & di Mauro, 2020, p. 17).

3. Pathways of economic impact

Covid-19's effect on the global economy is broader and more severe than most epidemics, pandemics, and economic crises of recent decades. Most recessions are triggered by a lack of spending, which governments can address through stimulus, but Covid-19 is interrupting economic activity at multiple points, creating a complex combination of supply and demand shocks at the same time (Baldwin, 2020b, 2020a, p. 5) (see Figure 2) .

Figure 2: Economic cycles interrupted by Covid-19



Source: Baldwin, 2020a, p. 5. Used with permission.

Covid-19's economic impacts are projected to be much larger than any other recent disease outbreak because of how quickly it has spread and where it has emerged. Covid-19 has been highly infectious, reaching almost every country in the world in four months, and has already caused four million confirmed infections, which is more than any post-war epidemic or pandemic except HIV/AIDS and 2009 H1N1 influenza (Table 2). In addition, while previous pandemics have typically emerged in poorer countries and have had their greatest impact there, Covid-19 emerged in an important economic hub and has affected countries central to the global economy: at the beginning of March, the list of the ten countries most affected by Covid-19 was 'almost identical to the list of the ten largest economies in the world (Iran and India are the exceptions)' (Baldwin & di Mauro, 2020, p. 2).

It is well established that the economic impacts of epidemics and pandemics are due more to the measures taken to control the spread of the disease, and to behaviour change caused by fear of the disease, than to the direct costs and health impacts of the disease. Policy measures such as closing borders, schools, businesses, and transport services; restrictions on mass gatherings; physical distancing requirements and other disease-control measures; combined with choices of individuals and businesses such as avoiding travel, avoiding social activities and public spaces including shops, restaurants, and other services, and delaying purchases deliver multiple simultaneous shocks to the economy (Evans & Over, 2020; Gong et al., 2020; Jonas, 2013; Madhav et al., 2018; Mauro, 2020; Shretta, 2020; World Bank, 2014; Wren-Lewis, 2020). A World Bank study modelling the economic impacts of a serious influenza pandemic suggests that in low- and middle-income countries, 58% of the total economic impact would come from efforts to avoid infection (Burns et al., 2008, p. 4).

4. Impacts by sector

Global value chain disruption

More than two thirds of world trade now occurs through global value chains, in which production crosses one or more borders before final assembly (Dollar, 2019, p. 1). Disruptions to production, travel, or capital movements can cause a cascade of impacts through regional and global trade networks (Jonas, 2013, p. 10). The impacts of Covid-19 are likely to propagate back and forth along value chains as countries restrict economic activity to control the disease (Baldwin & Freeman, 2020). The experience of value chain disruption during the pandemic is likely to feed into future debates about deglobalisation.

China is a central hub for world trade and industrial components made in China are important to manufacturing processes around the world (Baldwin & Tomiura, 2020, pp. 60–61; Li, Meng, & Wang, 2019). When manufacturing in China was first disrupted by Covid-19, ‘supply chain contagion’ spread initially to the countries most closely linked to China in regional trade networks, notably South Korea and Japan, but soon affected most of the world (Baldwin & di Mauro, 2020, pp. 15–16; Baldwin & Tomiura, 2020, pp. 60–61). In turn, China, South Korea, and Japan together account for more than 25% of US imports, including more than 50% of US imports of computer and electronics products, so the loss of capacity in these three countries quickly affected production in the US (Baldwin & di Mauro, 2020, p. 20). China’s manufacturing outputs are particularly significant to Mexico, South Korea, and Taiwan, where they constitute 14%, 16%, and 17% respectively of the value of inputs; similarly, 4.8% of the UK’s total manufacturing production relies upon Chinese inputs (Baldwin & Freeman, 2020). The complexity and shape of value chains varies from one sector to another (see Figure 3).

Disruptions in global trade can proceed in both directions up and down value chains. As countries restrict economic activity in an effort to contain Covid-19, countries that supply components find themselves without customers, leading to industrial ‘contagion’ and ‘reinfection’ propagating back along the value chain (Baldwin & Freeman, 2020). Trade is likely to fall more steeply in sectors with complex value chains, notably electronics and automotive products (World Trade Organization, 2020, p. 4). Countries that are less tightly integrated in international supply chains may be less affected; India, for example, is the world’s seventh largest economy but is not very involved in supply chains, ‘so may be shielded somewhat from this form of economic contagion’ (Baldwin & di Mauro, 2020, p. 16).

The most complex supply chains are regional; for example, China is the main hub for Asian manufacturing, the USA the hub for North America, and Germany the hub for Europe. During a crisis, regional coordination efforts among close trading partners could perhaps help keep supply chains operating and sustain manufacturing capacity (Baldwin & Freeman, 2020).

The textile and garment sector is particularly highly integrated in global value chains, with a particular concentration in East Asia. China is ‘the workshop of the world when it comes to textile sector inputs’ and is the central hub for global trade, which makes the sector particularly vulnerable to disruptions in East Asia (Baldwin & di Mauro, 2020, p. 20; Baldwin & Tomiura, 2020, p. 62). Italy plays a similar role as a trading hub in Europe; there are no similar hubs for the textile sector in Africa and South America (Baldwin & Tomiura, 2020, p. 62).

Figure 3: Supply hubs for global trade networks



Source: Li, Meng, & Wang, 2019. Traditional trade consists of products that cross borders once for final consumption; simple global value chains involve components that cross borders once before final assembly and consumption; complex global value chains involve components crossing borders during production, and where final products are then also exported. Countries and territories are identified using International Organization for Standardization (ISO) codes; the principal hubs are CHN = China, DEU = Germany, and USA = United States of America. Copyright World Trade Organization, reproduction for non-commercial purposes permitted.

The experience of disruption in global value chains may stimulate discussions about deglobalisation. Companies may increasingly consider ‘decoupling’ (loosening value chain links) and ‘reshoring’ (reducing reliance on overseas production) with the aim of making supply chains more resilient (UNCTAD, 2020, p. 4), supported by ideas about strengthening national security by shortening supply chains for critical items (World Bank, 2020a, p. 14). Such arguments are likely to find support in times of rising nationalism and populism, where fears and suspicions of ‘others’ might become a force for disintegration and deglobalisation (Baldwin & di Mauro, 2020, p. 22). However, global value chains arose out of efforts to improve efficiency and productivity, and major changes to current systems would be a major undertaking and would likely increase costs of production (Baldwin & Tomiura, 2020, p. 68). Global value chains also reduce risk through spreading production among multiple sites rather than centralising it, so there are also arguments for extending value chains to include redundant sourcing from multiple countries to reduce current levels of dependence on hubs like China (Baldwin & Tomiura, 2020, p. 68).

Manufacturing and trade in goods

The manufacturing sector will suffer disruption through shutdowns, labour shortages, supply chains and transportation disruptions, and declining demand as customers cancel or delay purchases and investments (Baldwin & di Mauro, 2020, p. 4). Small and medium-sized firms that participate strongly in global value chains are particularly vulnerable (Shretta, 2020). Manufacturers of durable goods are likely to be affected by a sharp, short-term drop in demand but may also see rapid recovery (Baldwin & di Mauro, 2020, p. 4; Baldwin & Tomiura, 2020, p. 61). World merchandise trade is expected to decline by between 13% and 32% in 2020 (World Trade Organization, 2020, p. 1).

The manufacturing sector will suffer a supply side shock as businesses are required to shut down and as a result of labour shortages; disruptions to supply chains and transportation services that interrupt inputs and render markets less accessible; and a reduction in aggregate demand as customers cancel or delay purchases and investments (Baldwin & di Mauro, 2020, p. 4). International media and personal communications can transmit and amplify uncertainty and create a crisis of confidence among businesses and individual consumers. During the global financial crisis of 2008-09, this contributed to turning the initial financial shock into a massive, synchronised global demand shock in which ‘trade volumes collapsed at the same time in all nations and for almost all products at a pace never seen before’ (Baldwin & di Mauro, 2020, pp. 16–17).

In past epidemics and economic crises, the most vulnerable industries were those linked most closely to the affected locations. For example, following floods in Thailand in 2011, impacts down to the level of individual factories were known almost immediately based on the altitude of the factory. Similarly, after earthquakes in Japan in 2011, damage was directly related to distance from the epicentre of the earthquakes (Baldwin & di Mauro, 2020, p. 14). During the SARS epidemic of 2003, infections were sufficiently localised that factories in Hong Kong could house workers in hotels to isolate them from nearby communities and continue operating, which actually led to an increase in the value of Hong Kong’s exports during the outbreak (Gong et al., 2020, p. 6). Covid-19, however, has spread rapidly throughout the world and is affecting many countries simultaneously through the effects of the disease and by disrupting global supply chains.

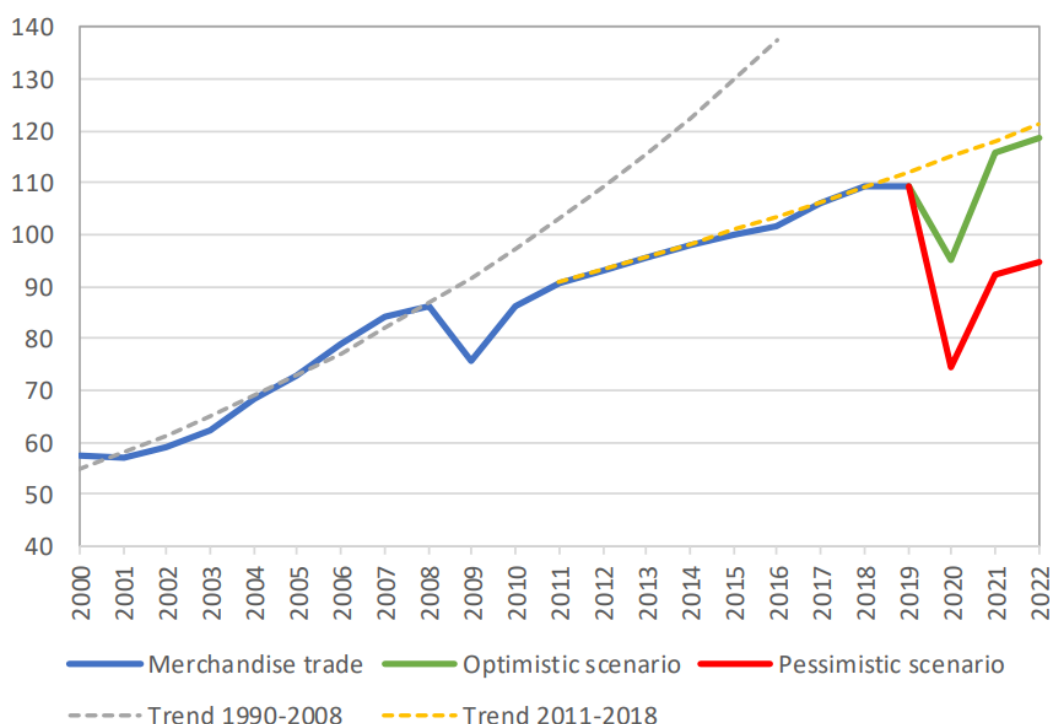
The slowdown in economic activity and the restrictions put in place to control the spread of the disease will impact companies around the world involved in manufacturing or in producing raw materials used in manufacturing. ‘Small and medium-sized firms, especially firms that rely on

intermediate goods from affected regions and which are unable to easily switch sourcing these goods, may have greater difficulty surviving the disruption', as will businesses that have highly concentrated trade exposures to the EU and the US (Shretta, 2020). Durable goods tend to be more vulnerable to demand shocks than non-durable goods, as seen following the global financial crisis of 2008, because purchases are more easily deferrable (Baldwin & di Mauro, 2020, p. 4; Baldwin & Tomiura, 2020, p. 61).

World merchandise trade is expected to decline by between 13% and 32% in 2020 due to the Covid-19 pandemic (see Figure 4). There is widespread uncertainty about this forecast, but 'the decline will likely exceed the trade slump brought on by the global financial crisis of 2008-09' (World Trade Organization, 2020, p. 1).

Figure 4: World merchandise trade volume

Index, 2015=100



Source: World Trade Organization, 2020, p. 2. Copyright World Trade Organization, reproduction for non-commercial purposes permitted.

Other crises have similarly affected international trade even when the epidemics have been localised. For example, the 2014 Ebola outbreak was confined to a small part of West Africa, but caused merchandise exports from the USA to the affected countries to drop by US\$1.08 billion, and led to 12,200 jobs lost in the USA (Delivorias & Scholz, 2020, pp. 3–4). The most severe drop in global trade in recent times was the 'great trade collapse' that followed the global financial crisis of 2008-09, much of which involved 'postpone-able' purchases of durable goods (Baldwin & Tomiura, 2020, p. 67).

The longer-term outlook is highly uncertain at this point. The WTO suggests that a short, sharp drop in trade could be followed by recovery in 2021 to nearly the trend of the past decade, but a deeper decline followed by a slower and less complete recovery could also be possible (World Trade Organization, 2020, p. 3). A strong rebound is more likely if disease control measures work quickly to keep the pandemic short and businesses and consumers view it as a temporary,

one-time shock (Gong et al., 2020, pp. 6–7; World Trade Organization, 2020, p. 3). Returning industries to full production and reactivating supply chains after a severe and lengthy shutdown will be challenging (Shretta, 2020) and ‘if the outbreak is prolonged and/or recurring uncertainty becomes pervasive, households and business are likely to spend more cautiously’ (World Trade Organization, 2020, p. 3).

A significant proportion of manufacturing output may be delayed, rather than completely lost, allowing production to ‘rebound to restock inventories once quarantines end and factories reopen’ (Mann, 2020, p. 82). For example, China accounts for up to 40% of the German car industry’s revenues, and although sales have collapsed during the crisis, one might expect sales to recover when the situation normalises (Mauro, 2020, p. 33). However, not all trade will recover quickly, and after the financial crisis of 2008-09, although trade recovered to pre-crisis levels quickly, further growth in trade has remained below its previous trend (World Trade Organization, 2020, p. 3).

Extractive industries

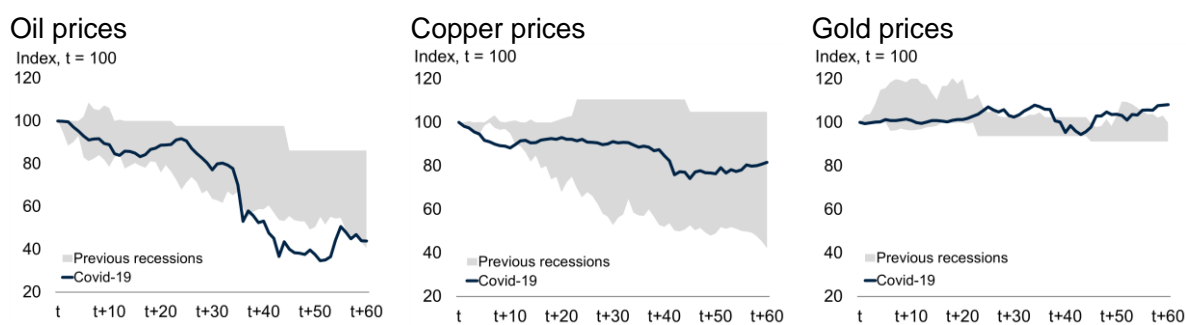
The economic disruptions associated with Covid-19 have led to large drops in demand for and prices of energy, especially oil, and industrial metals (World Bank, 2020a, pp. 3, 8). Falling commodity prices will cause economic disruption and undermine investment and growth in countries that produce and export oil and metals, but could potentially be positive for some importers, business users, and consumers (Mann, 2020, pp. 82–83).

Oil markets have been severely affected, due to the decline in general economic activity and especially in transportation, which accounts for two-thirds of global oil demand. Oil prices fell by two-thirds from January to April, the steepest one-month decline on record, exacerbated by the collapse of an agreement between OPEC and its partners which led to a glut of production (World Bank, 2020a, pp. 7–9). Oil exporting countries will suffer declining revenues and are expected to see their economies shrink by 4.4% in 2020 (IMF, 2020c, pp. 5–6). Nigeria, which relies on oil for 90% of the value of its exports, is forecast (as of 22 April) to suffer a 3.4% shrinkage in GDP in 2020 largely due to the collapse of oil prices (IMF, 2020b, 2020a).

The prices of most industrial metals have fallen, but not as dramatically as oil prices. The largest declines have been in copper and zinc, with declines of around 15% since January (World Bank, 2020a, p. 10). The decline in demand and prices will affect low- and middle-income countries that export oil and metals until global value chains are re-established and demand resumes. Currently, some 15% of global copper mines and 20% of zinc mines are either offline or operating at reduced capacity, and new projects are on hold in copper-producing countries (World Bank, 2020a, pp. 9–10).

Compared with previous global recessions and pandemics, current swings in metal prices and agricultural prices are no greater than in previous experience, except for oil prices which have set dramatic new lows (World Bank, 2020a, p. 12). During recessions, it is typical for oil and copper prices to fall, while agricultural prices have been less affected; the sharpest declines in previous recessions occurred in 2009, when oil and copper fell by about 60% in three months and agricultural prices fell by 40% (partly due to returning from historic highs in 2008) (World Bank, 2020a, p. 12).

Figure 5: Prices of oil, copper, and gold in previous crises



Source: Adapted from World Bank, 2020a, p. 12. Grey shaded areas show the range of commodity price movements in global recessions in 1974, 1981, 1990, and 2008. Used under license (CC BY 3.0 IGO).

In the long term, new patterns of working at home, substitution of video conferencing for travel, continuing travel restrictions, and reluctance of individuals to travel could contribute to a permanent reduction in demand for travel and fuel (World Bank, 2020a, pp. 7, 14). Pressures to unwind global value chains, re-shore production, and substitute domestic commodities for imported ones could further reduce demand (World Bank, 2020a, p. 7). If such developments result in a permanent reduction in demand for oil, they would reduce export and fiscal revenues for oil exporters, and lead to improved current account balances for oil importers (World Bank, 2020a, p. 14). The drop in oil prices could provide an opportunity to eliminate domestic energy subsidies (World Bank, 2020a, p. 7); in April, Nigeria removed its petrol subsidy (Munshi & Pilling, 2020), which had been popular with the public but disproportionately benefited wealthier people and large businesses who consumed more fuel (Oxford Business Group, 2019).

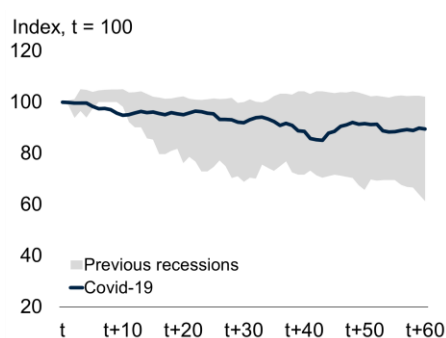
Agriculture

In many middle-income countries, agriculture contributes a large proportion of value to GDP and is critical to employment and livelihoods. Agricultural production and prices have not yet been strongly affected by Covid-19, with the exception of crops grown for biofuels and industrial purposes (World Bank, 2020a, pp. 7–8). However, the agriculture sector is at risk of serious disruption if travel restrictions are maintained and lead to labour shortages, reduced access to agricultural inputs, or barriers to transporting produce.

Global agricultural markets have not yet been strongly affected by the Covid-19 crisis. Prices of the main food commodities declined about 9% between January and April, but are within the ranges seen during previous crises (World Bank, 2020a, pp. 10–12).

Demand for non-food agricultural products is expected to decline with declining industrial activity worldwide. Natural rubber, for example, is used mostly for manufacturing tires, and prices have already dropped by 25% (World Bank, 2020a, p. 10). Demand for crops used in biofuels, such as corn and soybeans, has also declined in parallel with oil and gasoline (World Bank, 2020a, p. 10). Kenya's exports of fresh flowers to European markets have dropped by 75% to 80% amidst travel disruptions between East Africa and Europe, and their production is also being affected by disruption to inputs (World Bank, 2020a, p. 11).

Figure 6: Average price index for wheat, corn, and soybeans in previous crises



Source: World Bank, 2020a, p. 12. Grey shaded area shows the range of commodity price movements in global recessions in 1974, 1981, 1990, and 2008. Agricultural commodities included are wheat, corn, and soybeans. Used under license (CC BY 3.0 IGO).

The agriculture sector is heavily dependent on migrant labour, and availability of workers is increasingly becoming a problem, especially in labour-intensive sub-sectors such as fruits, vegetables, meat, and dairy production (World Bank, 2020a, p. 11). Labour shortages could pose a serious risk to food production if travel is restricted in the long term, if workers are unwilling to travel (both within their own countries and across borders), or if safe working conditions including protective equipment are not available (Pangestu, 2020; World Bank, 2020a, pp. 8–9). Labour shortages at the beginning of the Ebola outbreak in 2014, for example, led to a 20% drop in rice production and a 50% drop in coffee production in Ghana, which caused a national food crisis and greatly affected farmers' incomes (Gong et al., 2020, p. 5).

Farmers also need to obtain agricultural inputs such as seeds, fertilisers, and pesticides, and to transport produce to market. Travel restrictions that affect these movements could adversely affect food production (Pangestu, 2020; World Bank, 2020a, pp. 8–9). For example, transportation costs of pesticides to East Africa have increased by a factor of three and shipping is delayed because of the reduced number of flights operating to the region, which is hampering the ability to contain a locust outbreak (Schmidhuber et al., 2020, p. 12). In the Ebola outbreak in 2013, vegetable traders selling perishable goods lost much of their produce because of travel restrictions and the closure of local markets (African Development Bank, 2016, p. 26).

Some factors that significantly harmed the agriculture sector in previous pandemics do not appear to be likely to play a significant role in relation to Covid-19. In past pandemics where livestock were involved in transmitting the disease, control measures included destroying large numbers of livestock, which caused extensive and sometimes long-lasting economic damage. For example, during the 1998 Nipah virus outbreak in Malaysia, 1.1 million pigs were culled and many pig farmers were forced out of business into other jobs, but were never able to regain their former economic status (Smith, Machalaba, Seifman, Feferholtz, & Karesh, 2019, p. 3). Public misinformation also played a role in some previous pandemics. For example, during the 2009 H1N1 pandemic, popularly referred to as 'swine flu', many consumers chose to avoid pork products; consumers in China reduced consumption significantly and imports fell by 56% due to trade restrictions (Gong et al., 2020, pp. 5–6). Outbreaks of avian influenza in 2005-06 similarly reduced global demand for poultry products and the prices that producers could achieve (FAO, 2020, p. 6).

Retail and other services

Countries, regions, and cities where service industries account for a large share of GDP are likely to be badly affected by Covid-19 (Gong et al., 2020, p. 8). The disease is likely to lead to lower consumer and business confidence and decreased personal spending across a broad range of categories (Shretta, 2020). Recovery in this sector is likely to be slow, and some economic output will be permanently lost.

Service industries are expected to suffer from transport and travel restrictions and the closure of retail, hospitality, entertainment, cultural, and other businesses (World Trade Organization, 2020, p. 4). Non-essential goods, luxury goods and restaurants are likely to be hit hard (Shretta, 2020). Food, consumer goods, financial services, and medical services are likely to suffer less as they tend to be essential, and purchasing these goods does not involve a high risk of infection (Baldwin & Tomiura, 2020, p. 66; Shretta, 2020).

During the SARS outbreak in 2003, retail sales growth in China declined by almost 3 percentage points during the second quarter of 2003 (Shretta, 2020). During the 2015 MERS outbreak in South Korea, the accommodation and food sectors experienced a 10% drop in production from the previous year; the entertainment and recreation sector dropped 8.6%; publishing, communication and information sectors dropped 6.3%; transportation and storage dropped 2.4%; wholesale and retail dropped 1.6%; and electricity and air conditioning dropped by 0.9% (Smith et al., 2019, p. 3).

In the longer term, services are likely to experience an 'L' shaped (gradual) recovery and the shock to 'non-storable' tourism, transportation, and domestic services will not be recovered (Mann, 2020, p. 82). Information technology services could be an exception, as these are in high demand, and services that can be provided remotely could see opportunities opening up (Baldwin & Tomiura, 2020, p. 66; World Trade Organization, 2020, p. 4), but these are largely provided by companies based in the wealthier countries of the world.

Travel and tourism

The travel and tourism sector has been one of the hardest hit by the Covid-19 pandemic (Shretta, 2020). Travel restrictions are more widespread and stringent than in any previous pandemic response, and the combination of economic recession and individual reluctance to travel is expected to depress international travel significantly longer than in previous pandemics. The countries likely to be affected most are those that rely heavily on international tourism.

The travel and tourism sector is responsible for more than 10% of global GDP, 7% of all international trade, and 30% of the world's exports in services (World Bank, 2017, p. 8). In lower- and middle-income countries, tourism directly contributes 4.5% to 6.3% of GDP (Jansen, 2013, pp. 17–18) (see Table 3). The tourism sector is highly labour-intensive, with women making up 60% to 70% of the workforce and half of the workforce being under 25 years old (ILO, 2011, cited in Jansen, 2013, p. 17).

Table 3: Tourism sector contributions to GDP and employment, 2006-2011

	<i>Tourism sector contribution to GDP</i>		<i>Tourism sector contribution to employment</i>	
	<i>Direct</i>	<i>Direct + Indirect</i>	<i>Direct</i>	<i>Direct + Indirect</i>
Lower-middle-income countries	4.5%	11.5%	4.1%	10.4%
Upper-middle-income countries	6.3%	18.0%	6.3%	17.3%

Source: World Travel and Tourism Council estimates cited in Jansen, 2013, pp. 17–18. Direct contributions to GDP and employment relate to tourist services such as accommodation, transportation, and entertainment. Indirect contributions include other sectors of the economy such as sales of local handicrafts and hotels purchasing supplies and equipment locally.

Previous epidemics have had relatively short, sharp impacts on the tourism sector. In Mexico, where tourism is the country’s largest service sector and third largest source of foreign exchange earnings, the H1N1 influenza pandemic led to a loss of US\$2.8 billion over five months (Rassy & Smith, 2013). Similarly, the impact of SARS in 2003 on tourism earnings is estimated at US\$3.5 billion in China and US\$1.7 billion in Malaysia (Keogh-Brown & Smith, 2008, p. 115) and GDP growth across east and southeast Asia was reduced by between 0.2% and 1.8% (Gong et al., 2020, p. 9). SARS was the most serious disease outbreak to date in its effect on international air travel, but the impacts were short-lived, with international air passenger traffic returning to pre-crisis levels within six months (IATA, 2020b, 2020c).

As of the end of April 2020, every country and territory in the world had imposed travel restrictions related to Covid-19, including totally closing borders to tourists, suspending international flights, banning entry to people arriving from or transiting through particular countries, or requiring quarantine or self-isolation measures – measures that have never been so extreme or widespread (UNWTO, 2020a). International tourist arrivals are forecast to decline in 2020 by up to 30%, with a loss of international tourism receipts of up to US\$450 billion (UNWTO, 2020b), which is approximately ten times the global financial impact of the SARS epidemic (Shretta, 2020).

Covid-19 is expected to depress international travel for significantly longer than previous pandemics due to the combination of a serious global recession and lack of passenger confidence. In an airline industry survey conducted in April, nearly 40% of respondents indicated that they would wait six months or more after official travel restrictions are lifted before they would consider travelling by air again (IATA, 2020a). Recent trends towards remote working and video conferencing could potentially reduce demand for overseas travel in the long term (World Bank, 2020a, p. 14).

Labour shortages

Businesses that are able to continue operating through the pandemic are expected to experience shortages of labour due to workers becoming ill or needing to care for family members who are ill, because of the measures that individuals take to avoid exposure to disease, and because of official measures taken to control the disease, like school closures. Illness and absenteeism are expected to account for 25% of the total economic impact of a pandemic in low- and middle-income countries (Burns et al., 2008, p. 4).

Illness leads directly to absenteeism and reduced productivity, but labour force participation also drops where one or more members of a household become infected and workers have to stay home to care for their relatives, or are required to remain in quarantine to prevent further spread

of the disease (Baldwin & di Mauro, 2020, p. 13). Experience from the Ebola outbreak in 2013 indicates that the effect on the labour pool, and on economic activity, is closely related to the number of cases of disease present in the population, and so can be influenced by effectively controlling the disease outbreak directly (World Bank, 2014, p. 6).

People may also seek to avoid working, if they have that option, to limit their exposure to others (Madhav et al., 2018, p. 324), and school closures reduce labour participation as workers have to stay at home to look after children (Baldwin & di Mauro, 2020, p. 13). Experience from the Ebola outbreak in 2013 indicates that the effect of such 'behavioural' factors on the labour pool is less sensitive to the number of cases of disease in the population, but is potentially sensitive to information campaigns and safety measures aimed at protecting and reassuring workers (World Bank, 2014, p. 6).

A World Bank study estimating the economic impacts of a serious influenza pandemic suggests that in low- and middle-income countries, 25% of the total economic impact would come from lost production due to illness and absenteeism (Burns et al., 2008, p. 4). Labour-intensive industries 'such as public order, transport, education, health care, [and] retail commerce' and networked industries 'such as banking, utilities, and communications' are expected to be the worst affected (Jonas, 2013, p. 11). In some industries and job functions, digital technology can be used to help sustain labour force participation through remote working (Baldwin & di Mauro, 2020, p. 13).

During the 2013 Ebola outbreak in Sierra Leone, for example, 'the supply of labour declined due to deaths as a result of EVD [Ebola Virus Disease], the departure of expatriates, the burden of care on households, the migration of workers to escape the disease, and the unwillingness to engage in collective activities (as farmers refused to participate in the harvest and office workers stayed home from many private firms and public sector institutions)' (Amara, Tommy, & Kamara, 2017, p. 21). In Chile, the 2009 H1N1 pandemic is estimated to have led to a loss of at least US\$16 million in labour productivity due to days of work missed due to illness, not including the indirect reasons for absenteeism noted above (Duarte, Kadiyala, Masters, & Powell, 2016, p. 14).

Financial markets

There does not yet appear to be evidence of destabilisation of financial markets occurring as a result of Covid-19, but there is some risk that the impacts of the pandemic could spill over from the 'real economy' to financial markets if disruption to business activities creates excessive financial problems for firms, or if large losses occur in equity and bond markets, eroding investor confidence (Shretta, 2020). Central banks and governments have already intervened heavily in financial markets to provide stability, and continue to do so.

Exchange rate fluctuations have been a driver of contagion in past financial crises. In the Asian financial crisis of the late 1990s, for example, companies and countries that had borrowed in one currency while earning income in another were vulnerable to exchange rate movements, and the devaluation of the Thai baht made debt owed in foreign currency unsustainable. So far in the current Covid-19 crisis, 'there is no hint of this mechanism in play' and the lessons of past financial crises mean that the risk of such events has been reduced (Baldwin & di Mauro, 2020, p. 23).

Foreign direct investment is likely to fall by 5% to 15% in 2020, with impacts concentrated in countries that have been forced to take the most drastic measures to contain the spread of

Covid-19 (UNCTAD, 2020, pp. 1–2)². Other observers concur that foreign direct investment is likely to be delayed at least in the short term as part of the global decline in aggregate demand (Baldwin & di Mauro, 2020, p. 4) and as a result of increased uncertainty, as was seen for example during the Ebola crisis of 2013 (UNDP, 2014, p. 15). Some observers note, however, that the core arguments for investments may remain valid and that investment flows could only be delayed, rather than lost entirely, assuming that the pandemic is brought under control (Evans & Over, 2020).

Stability of financial institutions is not yet expected to be a serious problem in the Covid-19 crisis, unlike in past economic crises (Baldwin & di Mauro, 2020, p. 18). Compared with the time of the global financial crisis, banks' capital reserves are higher, regulatory frameworks better able to deal with crises, and stress tests more stringent (Beck, 2020). To keep financial system risks low and reduce the possibility of panics and bank runs, it has been suggested that policy-makers should be transparent and honest to support confidence in the banking system (Beck, 2020; Cecchetti & Schoenholtz, 2020).

The **microfinance sector** may be hit hard by the Covid-19 economic crash as borrowers lose their incomes and become unable to service loans. Surveys conducted in Pakistan in April, for example, found that week-on-week sales and household incomes of borrowers had fallen by about 90%, with 70% of borrowers reporting that they could not repay their loans and loan officers reporting that they expected a repayment rate of just 34% in April (Malik et al., 2020). The Asian financial crisis and the Global Financial Crisis of 2008 'disrupted global capital markets... [but] had relatively little impact on the day-to-day economic lives of the microfinance clientele' and so had limited impact on microfinance institutions (Malik et al., 2020, pp. 32–33). During the Covid-19 crisis, however, microfinance institutions are suffering both from a lack of repayments and from difficulty accessing capital and liquidity from larger funders, which is creating a major crisis for the microfinance industry (Bull & Ogden, 2020; Malik et al., 2020, pp. 32–33).

5. Impacts on populations

Food security

Food security is not currently threatened at the global level by Covid-19. Agricultural commodity prices are stable and are expected to remain stable in 2020. Production levels and stocks of most staple foods are near record highs, the prospects for the next crop are good, and demand for biofuel crops is likely to contract (Pangestu, 2020; Schmidhuber et al., 2020, p. 7; World Bank, 2020a, p. 10). Risks to food security could arise if countries restrict trade in food, if travel restrictions affect migrant workers and the transportation of agricultural inputs and products, or if economic disruption reduces people's incomes and purchasing power.

The greatest risk to food security at the global level is the risk of countries restricting the trade of food, or that general travel restrictions might hinder trade. In response to the Covid-19 pandemic, 26 countries had implemented restrictions on exporting food as of 17 April 2020 (Evenett, 2020, p. 7). For example, Vietnam, the world's third largest rice exporter, imposed a temporary ban on

² This forecast was made in March based on projections of GDP shrinkage of -0.5% to -1.5%. Projections for GDP have been revised downwards since then, which could suggest worse prospects for FDI as well.

exports, although this has since been lifted (Pangestu, 2020). Trade restrictions can lead to rapid increases in food prices that hit poor countries hard: for example, during the 2007-08 food crisis, as many as one-third of the world's countries adopted trade restrictions which increased prices on basic commodities like wheat and rice, and contributed to the number of undernourished people in the world increasing by 114 million (FAO, 2020, p. 5; World Bank, 2020a, p. 9). At present, there does not appear to be a significant risk of either food shortages or a move towards extensive restrictions on trade, but these factors can change rapidly (Evenett, 2020). Excess buying by some importers (including Philippines for rice and Egypt for wheat) is also a cause for concern as this could also drive up prices (World Bank, 2020a, p. 10).

Disease outbreaks in the past have not had a measurable effect on commodity demand or supply at the global level, but have adversely affected food security and nutrition in local areas, particularly for vulnerable populations including children, women, the elderly, and the poor (World Bank, 2020a, p. 13). During the Ebola outbreak in West Africa in 2014, for example, containment measures disrupted agricultural supply chains and many farmers were unable to grow or sell crops due to lack of inputs, lack of labour, or closed markets, which led to restricted food supplies and increased prices (FAO, 2020, p. 5).

A global recession could produce declining incomes and increasing unemployment which would reduce people's purchasing power and lead to instances of food insecurity that would depend on the length and depth of the recession and the availability of savings, credit, and other safety nets. It is likely that the income shock could result in a decline in nutritional quality in some populations as poorer consumers "shift from more expensive and more nutritious foods, such as fruits, vegetables, meats and dairy products, to cheaper staples such as grains, sugar or roots and tubers" (Schmidhuber et al., 2020, pp. 7, 26)

Poverty levels

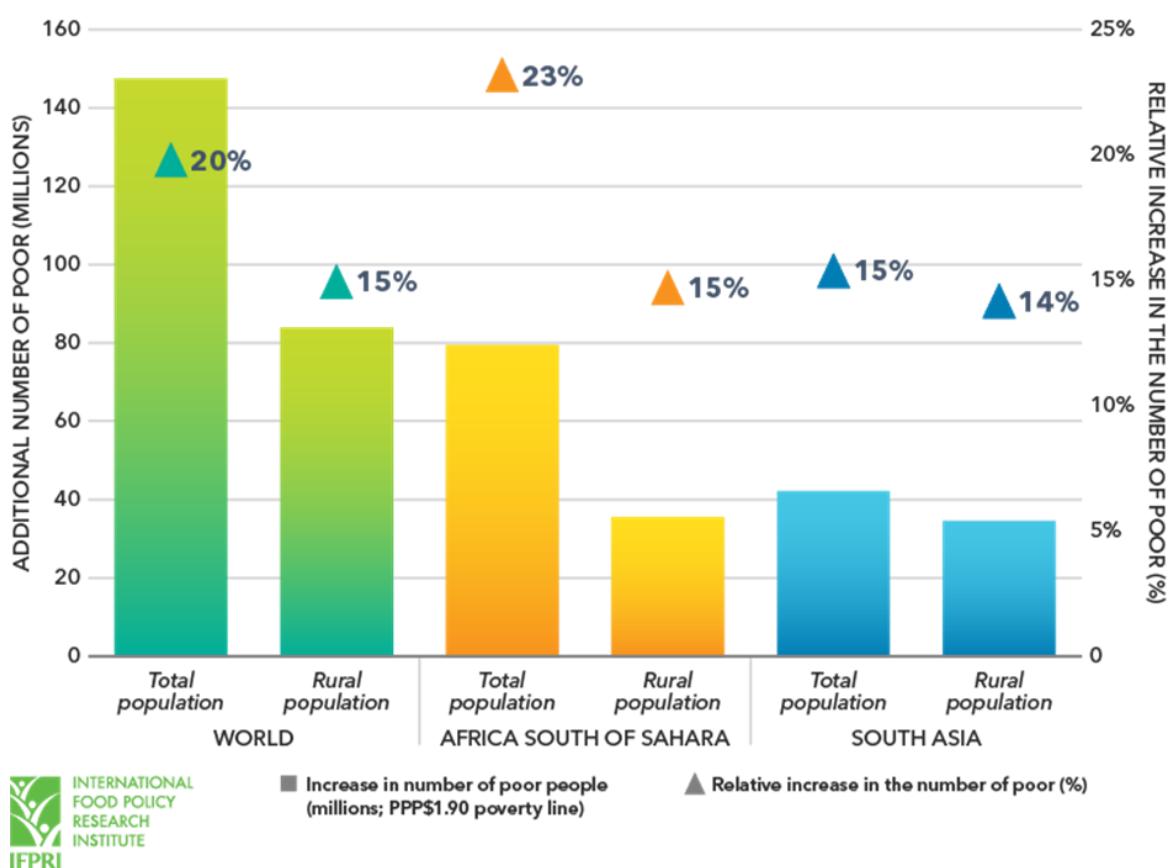
The world has made substantial progress on steadily reducing global poverty in the past thirty years, but recent forecasts of the impact of Covid-19 suggest that without significant action, 2020 could see the first annual increase in poverty levels since 1990 (Sumner et al., 2020).

The poorest segment of the population in a country is highly vulnerable in a crisis: they often suffer from poor health to begin with and their incomes and livelihoods are precarious; they are among the first to experience shortages of food and health care, and among the last to be reached by relief (Jonas, 2013, p. 13). People living in poverty have limited reserves to cope with shocks such as disease outbreaks (de la Fuente, Jacoby, & Lawin, 2019, p. 2). During the Ebola crisis in Liberia, for example, per capita food consumption and per capita total consumption fell more in areas with higher prevalence of the disease, 'indicating that households did not have the means to completely self-insure against this (income) shock', and rural poverty increased from 70% to 82% following the crisis (de la Fuente et al., 2019, p. 19).

The impacts of Covid-19 on employment are likely to be severe, with anywhere between 5 million and 25 million jobs lost along with labour income of US\$860 billion to USD\$3.4 trillion. Small and medium enterprises, the self-employed, daily wage earners, and workers in the informal sector will be hit particularly hard (UNSDG, 2020, p. 8). Small-scale surveys in the past two months report incomes of poor rural households in Pakistan falling by 90%, incomes of households in urban slums in Bangladesh falling by 80%, and incomes of another group of working poor across central Bangladesh falling by two-thirds (Malik et al., 2020, p. 3).

An IFPRI study completed in mid-April estimates that globally, if no preventative action is taken, more than 140 million people could fall into extreme poverty (measured against the \$1.90 poverty line) in 2020, which would be an increase of 20% from present levels (Laborde et al., 2020) (see Figure 7).

Figure 7: Potential impact of Covid-19 on extreme poverty (against the \$1.90/day poverty line)



Source: Laborde, Martin, & Vos, 2020. Reproduction for non-commercial purposes permitted.

Similarly, a United Nations University study considering various scenarios for the income shock that could be produced by Covid-19 forecasts that a relatively small contraction of 5% in per capita income or consumption would be expected to increase the number of people living in poverty at the \$1.90/day, \$3.20/day, or \$5.50/day international poverty lines by 85 million, 135 million, or 124 million people respectively compared with 2018. Larger contractions in income would produce correspondingly higher poverty headcounts, up to 580 million at the \$3.20/day poverty line for a 20% drop in per capita income (Sumner et al., 2020).

Informal workers

Informal employment³ is widespread in most low- and middle-income countries and is a critical source of livelihood for a large proportion of the population. Informal workers are

³ Informal employment is defined by the ILO as consisting of all wage employment and self-employment that is not registered, regulated or protected by existing legal or regulatory frameworks, as well as non-remunerative work undertaken in an income-producing enterprise. Informal workers do not have secure employment contracts, workers' benefits, social protection or workers' representation. (ILO, 2017)

particularly vulnerable during the Covid-19 crisis due to the insecurity of their work, lack of labour rights, and inability to rely on social safety nets.

Globally, two billion people, making up 61% of the world's employed people aged 15 and over, work in the informal economy. 86% of all employment in Africa, 68% of all employment in Asia and the Pacific, and 40% of all employment in the Americas is informal (ILO, 2018, p. 13). In India, well over half of GDP is produced in the informal sector, and three-quarters of rural households receive their main income from self-employment or casual labour (Ray, Subramanian, & Vandewalle, 2020, p. 2). In low- and lower-middle-income countries, slightly more women than men are in informal employment, but women are more often found working in more vulnerable situations as domestic workers, home-based workers, or contributing family workers (supporting a family business operated by another member of the household) (ILO, 2018, pp. 20–21).

Informal workers are often unable to maintain physical distancing in the crowded environments where they live and work, and have limited information about the virus and inadequate access to water and sanitation facilities or to protective equipment. They are often poor and lack the resources to stockpile food to cope with lockdown requirements, and are unable to access official support systems. They are vulnerable to mental health challenges due to health and economic uncertainties, and isolation as support systems break down due to lockdown. Some informal workers are migrants (either international, or rural-urban) and face losing incomes and housing as well as having become targets of violence. Official government disapproval of informal workers, especially street traders, is often manifested in police harassment including confiscation of goods, fines or physical violence and abuse. (WIEGO, 2020, p. 2)

In late March and early April, the network organisation Women in Informal Employment: Globalizing & Organizing (WIEGO) carried out assessments of how Covid-19 was affecting informal workers in Africa, Asia, and Latin America through interviews with 21 national or local member-based organizations, five regional and global networks of informal workers' organisations, and a research institute and an NGO that work closely with informal workers. The findings of this assessment are briefly summarised below.

Home-based workers produce goods or services in or near their homes for local, domestic or global markets in many industries. Across Southeast Asia, home-based workers saw the price of their raw materials rise as soon as China entered lockdown, leading to a drop in profits (Moussié, 2020; WIEGO, 2020, p. 4). As economic disruption spread, European and USA purchasers cancelled contracts with garment factories in Vietnam, Bangladesh, India and Pakistan, leading to fewer or no orders for home-based workers. There has similarly been a decline in demand for all handicrafts and handmade products across Southeast Asia and Eastern Europe, particularly products related to the tourist industry. In South Africa, cooperatives that had been receiving monthly orders from social enterprises have been told that no work will be available during the lockdown period. Home-based workers who have still been able to work have found it difficult to collect orders and payments or buy materials due to lockdowns. Many home-based workers expect to have no work for at least the next six months (WIEGO, 2020, p. 4).

Domestic workers are anxious not only about losing their own jobs, but also that their employers might lose theirs (WIEGO, 2020, p. 2). Domestic workers who live outside their employers' homes or work part-time have been laid off without compensation across the Americas, Europe, Asia, and in South Africa. Other domestic workers are unable to work because they have to care for their own children, where schools and child-care facilities are closed. Live-in domestic workers in the Middle East and Southeast Asia report an increase in

paid care work, but this has come with a large increase in workload with all members of the employer's family at home and workers are unable to take time off or leave the house because of lockdown restrictions. Migrant domestic workers have been trapped by border closures, either unable to travel from their home countries to the countries they work in, or vice-versa. Workers in Southeast Asia, the Middle East, and Mexico report a lack of protective equipment and no measures being taken in employers' homes to limit the spread of coronavirus (Moussié, 2020; WIEGO, 2020, p. 3).

Street vendors and market traders in many countries, especially non-food traders, have suffered as a result of governments closing markets to control the spread of Covid-19. In the process, forced evictions and police brutality against informal traders has been reported in Ghana, Liberia, India, Senegal, South Africa, and Zimbabwe, and some local governments in India have broken up street vending infrastructure so that street vendors will have nowhere to return to. Food vendors have been recognised as an essential service in some countries and have been permitted to operate. Market traders of all types report a lack of protective equipment available to them and greatly decreased sales due to customers avoiding public spaces. Shoe shiners in Mexico and newspaper vendors in Peru continue to work but report not earning enough in a day to cover the cost of public transport to get to work. Traders in some countries have had difficulty obtaining produce and other items to sell: police confiscated and destroyed farmers' produce when farmers tried to take it to market in Zimbabwe, stockpiling and price-gouging has increased the price of inputs for food vendors in Thailand and India, and cross-border traders (and in India, traders who normally cross state borders within the country) cannot operate at all. (Moussié, 2020; WIEGO, 2020, pp. 1–2, 5–6, 8).

Waste pickers, who earn a living collecting, sorting, and recycling trash, report (in South Africa, Colombia, Brazil, Ghana, Peru, and India) that the value chains that they feed recyclable materials into are collapsing: in some cases the warehouses and middlemen that they sell to have closed, and in many countries the prices offered for materials have dropped dramatically, in part due to lack of demand in international markets. Landfill sites in some countries are closed so waste pickers have no access. Safety is a concern due to a lack of protective equipment, difficulties maintaining distancing in warehouses and sorting facilities, and fears of coronavirus being spread via waste materials (Moussié, 2020; WIEGO, 2020, pp. 6–7).

Remittances

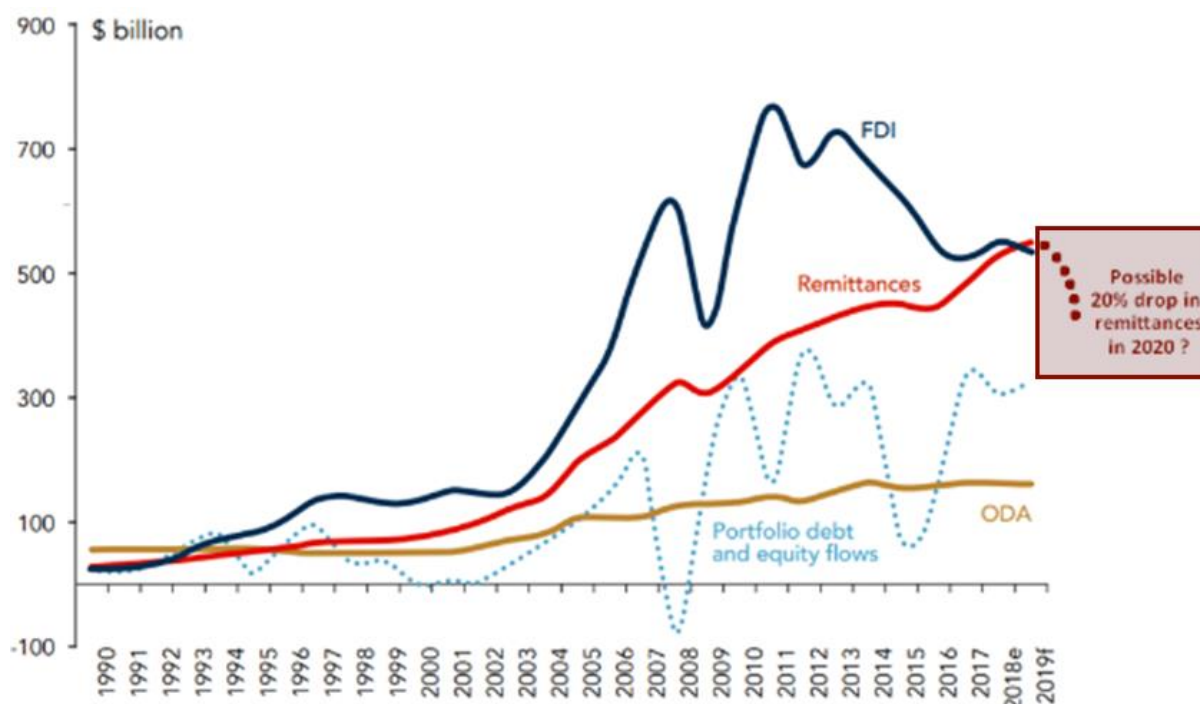
Remittances from overseas workers are very important to many low-income and middle-income countries. In past crises, remittances have helped compensate for crises at home, but in the current situation, workers abroad are also vulnerable to losing their incomes. Globally, remittances are projected to drop by about 20% in 2020 due to falling wages and unemployment of migrant workers (World Bank, 2020b).

Globally, remittances to low- and middle-income countries are worth three times as much as official development assistance, and worth as much as foreign direct investment while being much more stable (World Bank, 2019, pp. 14–15). In Myanmar, for example, 70% of rural households receive remittances from abroad, contributing to the incomes of 70% of the population (McCarthy, 2020, p. 2).

In past crises, remittances have tended to be stable and counter-cyclical: workers abroad have been insulated from crises in their home countries and have been able to send money home to support family. The Covid-19 pandemic is unusual because of its global impact, as workers overseas are vulnerable to losing their incomes at the same time that the crisis is affecting their

home countries (World Bank, 2020b). Globally, remittances are projected to drop by about 20% in 2020 (World Bank, 2020b). The sharpest decline is expected in Europe and Central Asia (27.5%), followed by Sub-Saharan Africa (23.1%), South Asia (22.1%), the Middle East and North Africa (19.6%), Latin America and the Caribbean (19.3%), and East Asia and the Pacific (13%) (World Bank, 2020b).

Remittance flows to low- and middle-income countries, official development assistance, and private capital flows, 1990–2019



Source: adapted from World Bank, 2019, p. 15, and World Bank, 2020c. The figure for 2018 is an estimate ('e'); the figure for 2019 is a forecast ('f'). The projection of a 20% drop in remittances is based on World Bank, 2020c. Copyright International Bank for Reconstruction and Development / The World Bank, reproduction for noncommercial purposes permitted.

Women and girls

Women and girls are particularly vulnerable to economic hardship during the Covid-19 pandemic. Around the world, women have less capacity to absorb economic shocks than men do: women 'earn less, save less, hold less secure jobs, [and] are more likely to be employed in the informal sector' where they have less protection (UN, 2020, p. 4). Women bear a greater burden of unpaid care work which limits their economic participation, and suffer increased incidences of gender-based violence during crises.

Women's jobs tend to be less secure than men's. Women are over-represented in service sector industries such as retail, hospitality and tourism, where layoffs have already been acute (UN, 2020, p. 4), and in precarious informal employment, particularly as domestic workers, home-based workers, or informally supporting a family business (ILO, 2018, pp. 20–21).

At home, women and girls typically take on disproportionate burdens of unpaid care work which prevent them from taking on income-generating work. They perform 76% of the total hours of unpaid care work, more than three times as much as men, and during public health crises, care burdens increase to include caring for the sick, for vulnerable elderly family members, and for children (Coalition for Women's Economic Empowerment, 2020, p. 1). The impacts of disease-

control measures such as closures of schools and childcare facilities fall primarily on women, who often have to abandon opportunities for paid work to care for children (Moussié, 2020).

During the Ebola crisis of 2013, quarantines and other prevention measures significantly reduced women's economic and livelihood activities, increased poverty rates, and exacerbated food insecurity, and while men's economic activity returned to pre-crisis levels shortly after preventative measures subsided, the impacts on women's economic security and livelihoods lasted much longer (UN, 2020, p. 4). In Sierra Leone, in villages that were highly disrupted by Ebola, the crisis led to higher rates of out-of-wedlock pregnancies and a persistent 16 percentage point drop in school enrolment post-crisis (Bandiera, Buehren, Goldstein, Rasul, & Smurra, 2019). In Liberia, women experienced worse job losses and remained out of work longer than men, since women worked disproportionately in the hardest-hit sectors (Copley, Decker, & Delavelle, 2020).

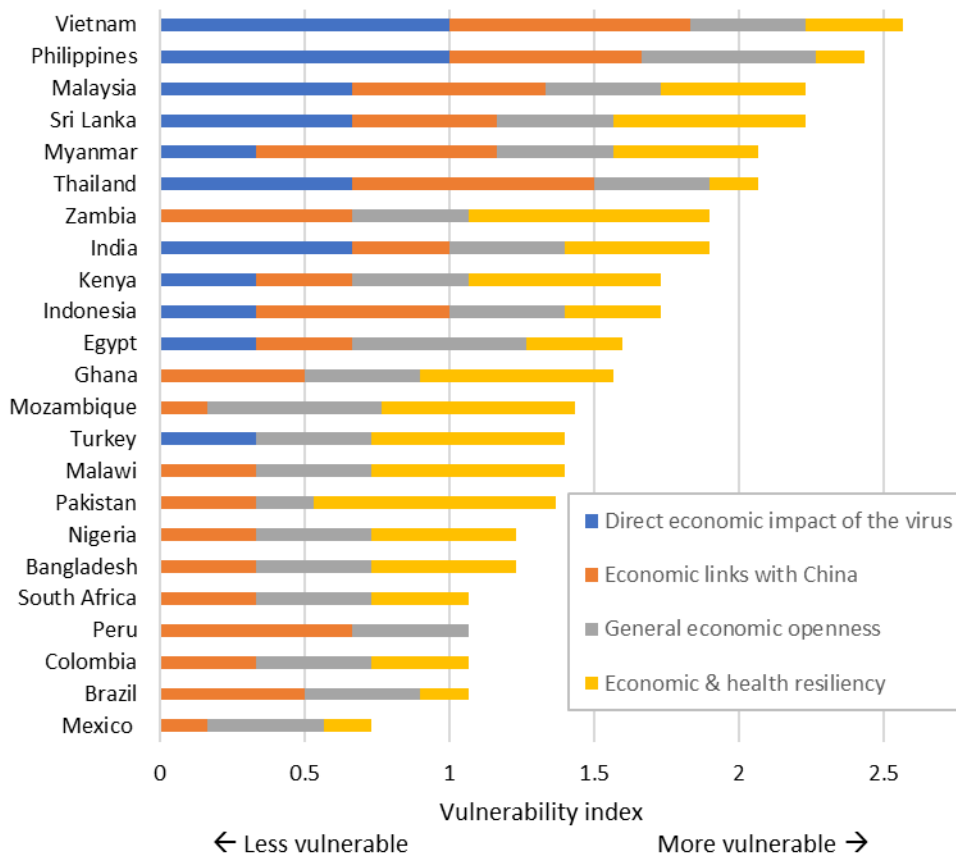
Gender-based violence tends to increase in emergencies, impeding women and girls from participating in economic activities. Stress and disruption caused by crises often exacerbate underlying norms that lead to gender-based violence. (Coalition for Women's Economic Empowerment, 2020, p. 2) Lockdown measures increase the threat of domestic violence among women informal workers (WIEGO, 2020, p. 2). Some evidence is emerging from China and France that cases of domestic violence have increased during the Covid-19 crisis as a result of stay-at-home measures, and as in other crises, practices such as child marriage and survival sex rise as negative coping mechanisms. Gender-based violence can prevent women and girls from engaging in economic activities, decrease their productivity, and cause them to lose their earnings to abusers. (Coalition for Women's Economic Empowerment, 2020, p. 2)

Experience of previous crises and emerging current data suggest that 'the Covid-19 global recession will result in a prolonged dip in women's incomes and labour force participation, with compounded impacts for women already living in poverty' (UN, 2020, p. 4).

6. Vulnerability by country

Various factors may influence a country's vulnerability (or resilience) to economic shocks delivered by Covid-19. Raga and te Velde developed estimates of countries' vulnerability to Covid-19 based on their degree of exposure to the virus, their economic exposure to China (as the original source of the pandemic), their economic openness to the rest of the world, and their economic strength and resilience (Raga & te Velde, 2020, p. 7). The chart below presents their assessment of vulnerability for the countries of interest in this report, which shows that Vietnam is the most vulnerable and Mexico the least. This analysis was developed in February when the disease was first emerging and most cases were located in China, hence the emphasis that it places on links to China; an update to this analysis could consider the greater spread of Covid-19 outside of China today.

Figure 8: Vulnerability of countries to economic shocks caused by Covid-19



Source: Author's own, data taken from Raga & te Velde, 2020 (replotted from data in Appendix 1). The countries shown here are the focus countries of the UK Prosperity Fund for 2017-2023; Raga & te Velde analyse data for 97 countries.

References

- African Development Bank. (2016). *Women's Resilience: Integrating Gender in the Response to Ebola*. Retrieved from https://reliefweb.int/sites/reliefweb.int/files/resources/AfDB_Women_s_Resilience_-_Integrating_Gender_in_the_Response_to_Ebola.pdf
- Amara, M. M., Tommy, F., & Kamara, A. H. (2017). *Sierra Leone 2015 Population and Housing Census Thematic Report on Socio-Economic Impact of the Ebola Virus Disease*. Retrieved from https://sierraleone.unfpa.org/sites/default/files/pub-pdf/EVD_report.pdf
- Baldwin, R. (2020a). Thinking Ahead on Covid19 and GVCs. *The COVID Concussion and Supply-Chain Contagion Waves*. Retrieved from <http://pubdocs.worldbank.org/en/693171587587537864/WB-Trade-GVCs-COVID-22Ap20-Baldwin.pdf>
- Baldwin, R. (2020b). Trade and Global Value Chains in the Age of COVID-19. *The COVID Concussion and Supply-Chain Contagion Waves*. Retrieved from <https://www.worldbank.org/en/news/video/2020/04/22/trade-and-global-value-chains-in-the-age-of-covid-19>
- Baldwin, R., & di Mauro, B. W. (2020). Introduction. In R. Baldwin & B. W. di Mauro (Eds.), *Economics in the Time of COVID-19*. Retrieved from <https://voxeu.org/content/economics-time-covid-19>
- Baldwin, R., & Freeman, R. (2020). *Supply chain contagion waves: Thinking ahead on manufacturing "contagion and reinfection" from the COVID concussion*. Retrieved from <https://voxeu.org/article/covid-concussion-and-supply-chain-contagion-waves>
- Baldwin, R., & Tomiura, E. (2020). Thinking ahead about the trade impact of COVID-19. In R. Baldwin & B. W. di Mauro (Eds.), *Economics in the Time of COVID-19*. Retrieved from <https://voxeu.org/content/economics-time-covid-19>
- Bandiera, O., Buehren, N., Goldstein, M., Rasul, I., & Smurra, A. (2019). *The Economic Lives of Young Women in the Time of Ebola: Lessons from an Empowerment Program* (No. 8760). Retrieved from <http://documents.worldbank.org/curated/en/452451551361923106/pdf/WPS8760.pdf>
- Beck, T. (2020). Finance in the times of coronavirus. In *Economics in the Time of COVID-19*. Retrieved from <https://voxeu.org/content/economics-time-covid-19>
- Bull, G., & Ogden, T. (2020). COVID-19: How Does Microfinance Weather the Coming Storm? Retrieved from CGAP (Consultative Group to Assist the Poor) blog website: <https://www.cgap.org/blog/covid-19-how-does-microfinance-weather-coming-storm>
- Burns, A., Mensbrugge, D. van der, & Timmer, H. (2008). *Evaluating the Economic Consequences of Avian Influenza*. Retrieved from http://siteresources.worldbank.org/EXTAVIANFLU/Resources/EvaluatingAHIeconomics_2008.pdf
- Cecchetti, S. G., & Schoenholtz, K. L. (2020). Contagion: Bank runs and COVID-19. In R. Baldwin & B. W. di Mauro (Eds.), *Economics in the Time of COVID-19*. Retrieved from <https://voxeu.org/content/economics-time-covid-19>
- Centre for Economics and Business Research. (2020). A world recession is now almost a certainty, with global GDP set to decline twice as much as during the financial crisis. The challenge now is to prevent the recession from turning into a 1930s style rout. Retrieved from <https://cebr.com/reports/a-world-recession-is-now-almost-a-certainty-with-global-gdp-set-to-decline-twice-as-much-as-during-the-financial-crisis-the-challenge-now-is-to-prevent-the-recession-from-turning-into-a-1930s-style>
- Coalition for Women's Economic Empowerment. (2020). *COVID-19 and Women's Economic*

Empowerment. Retrieved from <https://www.icrw.org/publications/covid-19-and-womens-economic-empowerment-cweee/>

Copley, A., Decker, A., & Delavelle, F. (2020). Supporting African women through the economic consequences of COVID-19. Retrieved from World Bank Blogs website: <https://blogs.worldbank.org/african/supporting-african-women-through-economic-consequences-covid-19>

de la Fuente, A., Jacoby, H. G., & Lawin, K. G. (2019). *Impact of the West African Ebola Epidemic on Agricultural Production and Rural Welfare: Evidence from Liberia*. Retrieved from <http://documents.worldbank.org/curated/en/423511560254844269/pdf/Impact-of-the-West-African-Ebola-Epidemic-on-Agricultural-Production-and-Rural-Welfare-Evidence-from-Liberia.pdf>

Delivorias, A., & Scholz, N. (2020). *Economic impact of epidemics and pandemics*. Retrieved from [https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/646195/EPRS_BRI\(2020\)646195_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/646195/EPRS_BRI(2020)646195_EN.pdf)

Dollar, D. (2019). Executive Summary. In D. Dollar, E. Ganne, V. Stolzenburg, & Z. Wang (Eds.), *Global Value Chain Development Report 2019: Technological Innovation, Supply Chain Trade, and Workers in a Globalized World*. Retrieved from https://www.wto.org/english/res_e/booksp_e/gvc_dev_report_2019_e.pdf

Duarte, F., Kadiyala, S., Masters, S. H., & Powell, D. (2016). *The Effect of the 2009 Influenza Pandemic on Labor Market Outcomes*. Retrieved from <https://dx.doi.org/10.2139/ssrn.2759464>

Evans, D., & Over, M. (2020). The Economic Impact of COVID-19 in Low- and Middle-Income Countries. Retrieved from Center for Global Development website: <https://www.cgdev.org/blog/economic-impact-covid-19-low-and-middle-income-countries>

Evenett, S. (2020). Trade Policy Dynamics unleashed by Covid-19: Implications for Development. *Trade and Global Value Chains in the Age of COVID-19*. Retrieved from <http://pubdocs.worldbank.org/en/756611587587532919/Evenett-WB-April-2020.pdf>

Fan, V. Y., Jamison, D. T., & Summers, L. H. (2018). Pandemic risk: how large are the expected losses? *Bulletin of the World Health Organization*, 96, 129–134.

FAO. (2020). *Addressing the impacts of COVID-19 in food crises*. Retrieved from <http://www.fao.org/3/ca8497en/CA8497EN.pdf>

Global Preparedness Monitoring Board. (2019). *A world at risk: annual report on global preparedness for health emergencies*. Retrieved from https://apps.who.int/gpmb/assets/annual_report/GPMB_annualreport_2019.pdf

Gong, B., Zhang, S., Yuan, L., & Chen, K. Z. (2020). A balance act: minimizing economic loss while controlling novel coronavirus pneumonia. *Journal of Chinese Governance*. Retrieved from <https://doi.org/10.1080/23812346.2020.1741940>

Gopinath, G. (2020). The Great Lockdown: Worst Economic Downturn Since the Great Depression. Retrieved from IMF blog website: <https://blogs.imf.org/2020/04/14/the-great-lockdown-worst-economic-downturn-since-the-great-depression/>

IATA. (2020a). *Air passenger demand & capacity evaporate amid COVID-19*. Retrieved from <https://www.iata.org/en/iata-repository/publications/economic-reports/air-passenger-monthly-analysis---mar-2020/>

IATA. (2020b). Covid-19 Updated Impact Assessment, 24 March 2020. Retrieved from IATA Economics website: <https://www.iata.org/en/iata-repository/publications/economic-reports/third-impact-assessment/>

IATA. (2020c). *What can we learn from past pandemic episodes?* Retrieved from <https://www.iata.org/en/iata-repository/publications/economic-reports/what-can-we-learn-from-past-pandemic-episodes>

- ILO. (2017). Informal economy workers. Retrieved from Minimum Wage Policy Guide website: https://www.ilo.org/global/topics/wages/minimum-wages/beneficiaries/WCMS_436492/lang-en/index.htm
- ILO. (2018). *Women and men in the informal economy: a statistical picture*. Retrieved from https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_626831.pdf
- IMF. (2020a). *Nigeria: Request for Purchase Under the Rapid Financing Instrument*. Retrieved from <https://www.imf.org/en/Publications/CR/Issues/2020/04/29/Nigeria-Request-for-Purchase-under-the-Rapid-Financing-Instrument-Press-Release-Staff-Report-49384>
- IMF. (2020b). *Nigeria's IMF Financial Assistance to Support Health Care Sector, Protect Jobs and Businesses*. Retrieved from <https://www.imf.org/en/News/Articles/2020/04/29/na042920-nigerias-imf-financial-assistance-to-support-health-care-sector-protect>
- IMF. (2020c). *World Economic Outlook: Chapter 1: The Great Lockdown*. Retrieved from <https://www.imf.org/en/Publications/WEO/Issues/2020/04/14/weo-april-2020>
- IMF. (2020d). *World Economic Outlook: Statistical Appendix: Tables Part A*. Retrieved from <https://www.imf.org/en/Publications/WEO/Issues/2020/04/14/weo-april-2020>
- Jansen, M. (2013). *Aid for Trade and Value Chains in Tourism*. Retrieved from https://www.oecd.org/dac/aft/AidforTrade_SectorStudy_Tourism.pdf
- Jonas, O. B. (2013). *Pandemic risk*. Retrieved from https://openknowledge.worldbank.org/bitstream/handle/10986/16343/WDR14_bp_Pandemic_Risk_Jonas.pdf?sequence=1&isAllowed=y
- Keogh-Brown, M. R., & Smith, R. D. (2008). The economic impact of SARS: How does the reality match the predictions? *Health Policy*, 88, 110–120. <https://doi.org/10.1016/j.healthpol.2008.03.003>
- Laborde, D., Martin, W., & Vos, R. (2020). *Poverty and food insecurity could grow dramatically as COVID-19 spreads*. Retrieved from <https://www.ifpri.org/blog/poverty-and-food-insecurity-could-grow-dramatically-covid-19-spreads>
- Lee, J.-W., & McKibbin, W. J. (2004a). Estimating the Global Economic Costs of SARS. In S. Knobler, A. Mahmoud, S. Lemon, A. Mack, L. Sivitz, & K. Oberholtzer (Eds.), *Learning from SARS: Preparing for the Next Disease Outbreak -- Workshop Summary*. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK92462/pdf/Bookshelf_NBK92462.pdf
- Lee, J.-W., & McKibbin, W. J. (2004b). Globalization and disease: The case of SARS. *Asian Economic Papers*, 3(1). <https://doi.org/10.1162/1535351041747932>
- Li, X., Meng, B., & Wang, Z. (2019). Recent patterns of global production and GVC participation. In D. Dollar, E. Ganne, V. Stolzenburg, & Z. Wang (Eds.), *Global Value Chain Development Report 2019: Technological Innovation, Supply Chain Trade, and Workers in a Globalized World*. Retrieved from https://www.wto.org/english/res_e/booksp_e/gvc_dev_report_2019_e.pdf
- Madhav, N., Oppenheim, B., Gallivan, M., Mulembakani, P., Rubin, E., & Wolfe, N. (2018). Pandemics: Risks, Impacts, and Mitigation. In D. T. Jamison, H. Gelband, S. Horton, P. Jha, R., Laxminarayan, ... R. Nugent (Eds.), *Disease Control Priorities: Improving Health and Reducing Poverty, Volume 9* (3rd ed.). Retrieved from http://dcp-3.org/sites/default/files/chapters/DCP3_Volume_9_Ch_17.pdf
- Malik, K., Meki, M., Morduch, J., Ogden, T., Quinn, S., & Said, F. (2020). COVID-19 and the Future of Microfinance: Evidence and Insights from Pakistan. *Oxford Review of Economic Policy*. Retrieved from <https://doi.org/10.1093/oxrep/graa014>
- Mann, C. L. (2020). Real and financial lenses to assess the economic consequences of COVID-19. In R. Baldwin & B. W. di Mauro (Eds.), *Economics in the Time of COVID-19*. Retrieved from

<https://voxeu.org/content/economics-time-covid-19>

- Mauro, B. W. di. (2020). Macroeconomics of the flu. In R. Baldwin & B. W. di Mauro (Eds.), *Economics in the 2Time of COVID-19*. Retrieved from <https://voxeu.org/content/economics-time-covid-19>
- McCarthy, G. (2020). *Covid-19 in Myanmar: Impacts & Pathways Forward*. Retrieved from https://www.academia.edu/42774077/Covid-19_in_Myanmar_Tracking_Impacts_Informing_Policy
- McKibbin, W. J., & Sidorenko, A. A. (2006). *Global Macroeconomic Consequences of Pandemic Influenza*. Retrieved from <https://www.brookings.edu/wp-content/uploads/2016/06/200602.pdf>
- Moussié, R. (2020). Covid-19 and the informal economy. *Covid-19 and the Informal Economy*. Retrieved from <https://www.ictd.ac/news/covid-19-informal-economy-event-summary-resources/>
- Munshi, N., & Pilling, D. (2020, April 11). Nigeria in 'crisis' as oil receipts plummet. *Financial Times*. Retrieved from <https://www.ft.com/content/334cfaf6-e876-45b3-9a54-8f0c4cc5c0c4>
- OECD. (2020a). *Coronavirus: The world economy at risk*. Retrieved from <https://www.oecd-ilibrary.org/docserver/7969896b-en.pdf>
- OECD. (2020b). *Evaluating the initial impact of COVID-19 containment measures on economic activity*. Retrieved from https://read.oecd-ilibrary.org/view/?ref=126_126496-evgsi2gmqj
- Oxford Business Group. (2019). Nigerian officials aim to reduce public reliance on energy subsidies. In *The Report: Nigeria 2019*. Retrieved from <https://oxfordbusinessgroup.com/analysis/price-pay-efforts-end-public-reliance-fuel-subsidies>
- Pangestu, M. E. (2020). Hunger amid plenty: How to reduce the impact of COVID-19 on the world's most vulnerable people. Retrieved from World Bank Blogs website: <https://blogs.worldbank.org/voices/hunger-amid-plenty-how-reduce-impact-covid-19-worlds-most-vulnerable-people>
- Raga, S., & te Velde, D. W. (2020). *Economic Vulnerabilities to Health Pandemics: Which Countries are Most Vulnerable to the Impact of Coronavirus*. Retrieved from <https://set.odi.org/wp-content/uploads/2020/02/Economic-Vulnerability.pdf>
- Rassy, D., & Smith, R. D. (2013). The Economic Impact of H1N1 on Mexico's Tourist and Pork Sectors. *Health Economics*, 22, 824–834. <https://doi.org/10.1002/hec.2862>
- Ray, D., Subramanian, S., & Vandewalle, L. (2020). *India's Lockdown* (No. 102). Retrieved from https://cepr.org/sites/default/files/policy_insights/PolicyInsight102.pdf
- Schmidhuber, J., Pound, J., & Qiao, B. (2020). *COVID-19: Channels of transmission to food and agriculture*. Retrieved from <http://www.fao.org/3/ca8430en/CA8430EN.pdf>
- Shretta, R. (2020). The economic impact of COVID-19. Retrieved from Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine, University of Oxford website: <https://www.tropicalmedicine.ox.ac.uk/news/the-economic-impact-of-covid-19>
- Smith, K. M., Machalaba, C. C., Seifman, R., Feferholtz, Y., & Karesh, W. B. (2019). Infectious disease and economics: The case for considering multi-sectoral impacts. *One Health*, 7. Retrieved from <https://doi.org/10.1016/j.onehlt.2018.100080>
- Sumner, A., Hoy, C., & Ortiz-Juarez, E. (2020). *Estimates of the impact of COVID-19 on global poverty* (No. 2020/43). Retrieved from <https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2020-43.pdf>
- UN. (2020). *Policy Brief: The Impact of COVID-19 on Women*. Retrieved from <https://www.unwomen.org/en/digital-library/publications/2020/04/policy-brief-the-impact-of-covid-19-on-women>

- UNCTAD. (2020). *Impact of the Coronavirus Outbreak on Global FDI*. Retrieved from https://unctad.org/en/PublicationsLibrary/diaief2020d2_en.pdf?user=1653
- UNDP. (2014). *Assessing the socio-economic impacts of Ebola Virus Disease in Guinea, Liberia and Sierra Leone: The Road to Recovery*. Retrieved from [https://www.undp.org/content/dam/rba/docs/Reports/EVD Synthesis Report 23Dec2014.pdf](https://www.undp.org/content/dam/rba/docs/Reports/EVD%20Synthesis%20Report%2023Dec2014.pdf)
- UNSDG. (2020). *Shared Responsibility, Global Solidarity: Responding to the socio-economic impacts of COVID-19*. Retrieved from <https://unsdg.un.org/sites/default/files/2020-03/SG-Report-Socio-Economic-Impact-of-Covid19.pdf>
- UNWTO. (2020a). *Covid-19 Related Travel Restrictions: A Global Review for Tourism, Second Report as of 28 April 2020*. Retrieved from [https://webunwto.s3.eu-west-1.amazonaws.com/s3fs-public/2020-04/TravelRestrictions - 28 April.pdf](https://webunwto.s3.eu-west-1.amazonaws.com/s3fs-public/2020-04/TravelRestrictions%20-%2028%20April.pdf)
- UNWTO. (2020b). *World Tourism Organization Underscores Tourism's Importance for Covid-19 Recovery in Audience with the King of Spain*. Retrieved from <https://www.unwto.org/news/unwto-underscores-tourisms-importance-for-covid-19-recovery-in-meeting-with-the-king-of-spain>
- WIEGO. (2020). *Impact of public health measures on informal workers' livelihoods: Rapid assessment*. Retrieved from <https://www.wiego.org/resources/impact-public-health-measures-informal-workers-livelihoods-rapid-assessment>
- World Bank. (2014). *The Economic Impact of the 2014 Ebola Epidemic: Short- and Medium-Term Estimates for West Africa*. <https://doi.org/10.1596/978-1-4648-0438-0>
- World Bank. (2017). *Tourism for Development: 20 Reasons Sustainable Tourism Counts for Development*. Retrieved from <https://openknowledge.worldbank.org/bitstream/handle/10986/28388/119954-WP-PUBLIC-SustainableTourismDevelopment.pdf?sequence=1&isAllowed=y>
- World Bank. (2019). *Leveraging Economic Migration for Development: A Briefing for the World Bank Board*. Retrieved from [https://www.knomad.org/sites/default/files/2019-08/World Bank Board Briefing Paper-LEVERAGING ECONOMIC MIGRATION FOR DEVELOPMENT_0.pdf](https://www.knomad.org/sites/default/files/2019-08/World%20Bank%20Board%20Briefing%20Paper-LEVERAGING%20ECONOMIC%20MIGRATION%20FOR%20DEVELOPMENT_0.pdf)
- World Bank. (2020a). *Commodity Markets Outlook*. Retrieved from <https://openknowledge.worldbank.org/bitstream/handle/10986/33624/CMO-April-2020.pdf>
- World Bank. (2020b). *World Bank Predicts Sharpest Decline of Remittances in Recent History*. Retrieved from worldbank.org website: <https://www.worldbank.org/en/news/press-release/2020/04/22/world-bank-predicts-sharpest-decline-of-remittances-in-recent-history>
- World Trade Organization. (2020). *Trade set to plunge as COVID-19 pandemic upends global economy*. Retrieved from https://www.wto.org/english/news_e/pres20_e/pr855_e.pdf
- Wren-Lewis, S. (2020). *The economic effects of a pandemic*. In R. Baldwin & B. W. di Mauro (Eds.), *Economics in the Time of COVID-19*. Retrieved from <https://voxeu.org/content/economics-time-covid-19>

Suggested citation

Lucas, B. (2020). *Impacts of Covid-19 on inclusive economic growth in middle-income countries*. K4D Helpdesk Report 811. Brighton, UK: Institute of Development Studies.

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