

Chapter 5

Global Value Chains in the Time of COVID-19 (Coronavirus)

Key findings

- The COVID-19 (coronavirus) pandemic brought unprecedented challenges to global value chains (GVCs) worldwide, with global trade projected to fall by 9.5 percent and foreign direct investment (FDI) by 42 percent in 2020. This stark drop in FDI and trade reflected the confluence of pandemic-induced supply and demand shocks with geopolitical and policy uncertainties.
- Most of the underlying trends in GVC development, such as the increasing focus on supply chain resilience and digitalization, began before the outbreak. However, the urgency and magnitude of these shifts have markedly increased. The search for diversification, resilience, and sustainability is happening for both economic and political reasons. Financial incentives, as well as considerations of national security and environmental sustainability, may affect the geographic configuration of some GVCs and locational decisions within them.
- It is, however, premature to conclude that firms should or will shift gears from “just-in-time” GVCs to “just-in-case” GVCs. Shorter GVCs and localized production are not necessarily less vulnerable to shocks. Supplier diversification and relocation can be costly and impractical for highly complex products. And holding more inventory and building redundant capacity could create inefficiencies in many industries.
- GVCs have proven their resilience during the pandemic, facilitating efficient production and timely delivery even when demand surged for certain goods and services. An extensive supply chain network with diversified and geographically dispersed suppliers can adjust better and contribute to a firm’s speedy recovery. GVCs should be viewed as the solution in the pandemic rather than the problem.
- GVCs are always evolving, and opportunities belong to the firms that become more efficient and agile. COVID-19 response measures will not suddenly solve the global economy’s preexisting structural issues, but developing countries should use the crisis as a stress test to prioritize reforms that improve their investment competitiveness in certain GVC segments and support robust economic recovery.
- The pandemic has further revealed the complex interdependence of firms and economies around the world. Tackling the complex challenges presented by the COVID-19 crisis will require global collaboration and coordination. Once again, the times are testing global leaders and policy makers. They must resist the lure of protectionist policies and work together to secure the hard-earned gains derived from GVCs.

Impact of COVID-19 (coronavirus) on foreign direct investment and global value chains

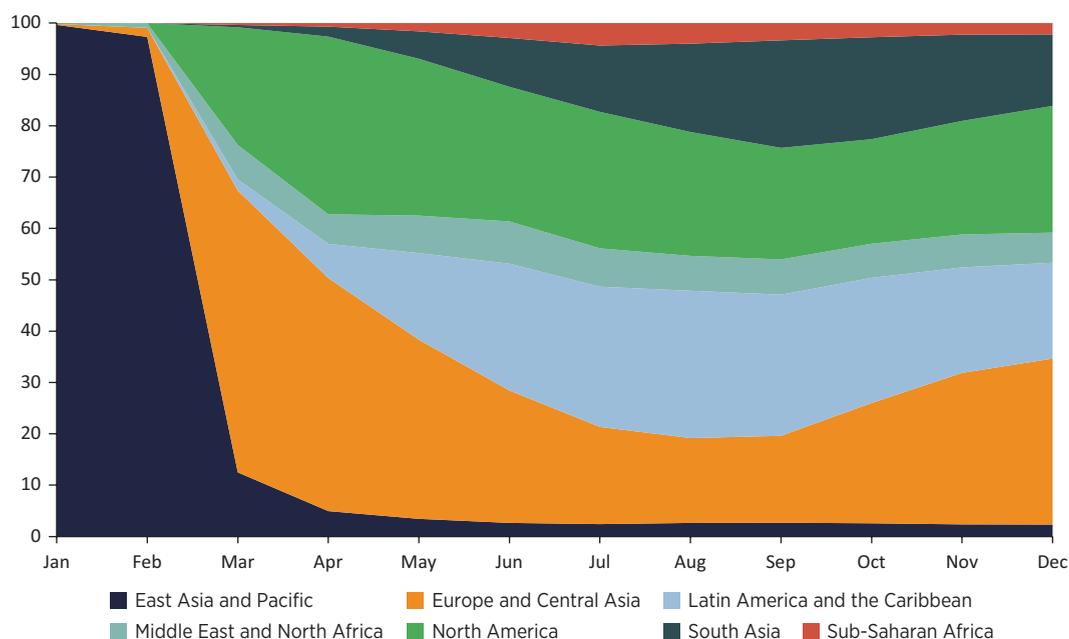
The COVID-19 (coronavirus) pandemic presented unprecedented shocks to the global economy, and particularly to global value chains (GVCs). The pandemic itself is still unfolding, as infections subside in certain regions and surge in others (figure 5.1). Its precise impact on businesses across regions and sectors continues to evolve, and its ultimate implications may take years to unfold. Nevertheless, emerging data can already provide evidence on the pandemic's distressing impact on GVC activity in the immediate term as well as on the adjustments businesses are making to their operations to cope with the new disruptions and business challenges.

Overall impact

The COVID-19 pandemic has posed unprecedented challenges to GVCs. Global trade is projected to fall by 9.5 percent in 2020, a 10.6-percentage-point decrease from 2019 (World Bank 2021). Indeed, stark drops in trade are already evident in recent data: merchandise trade is estimated to have fallen by 5 percent and 27 percent, respectively, in the first and second quarters of 2020 (UNCTAD 2020a). Although trade is expected to recover in 2021, the timing of this recovery depends on the duration of the outbreak and the effectiveness of policy responses to it (WTO 2020).

COVID-19's impact on foreign direct investment (FDI) has already been stark, and it may persist longer than the impact on trade. FDI, which was already in decline before the pandemic, fell by 42 percent in 2020 (UNCTAD 2021). The pandemic's

FIGURE 5.1 Regions' shares of new COVID-19 (coronavirus) cases by month, January–December 2020



Source: World Bank calculations based on data from Our World in Data (<https://ourworldindata.org/coronavirus>).

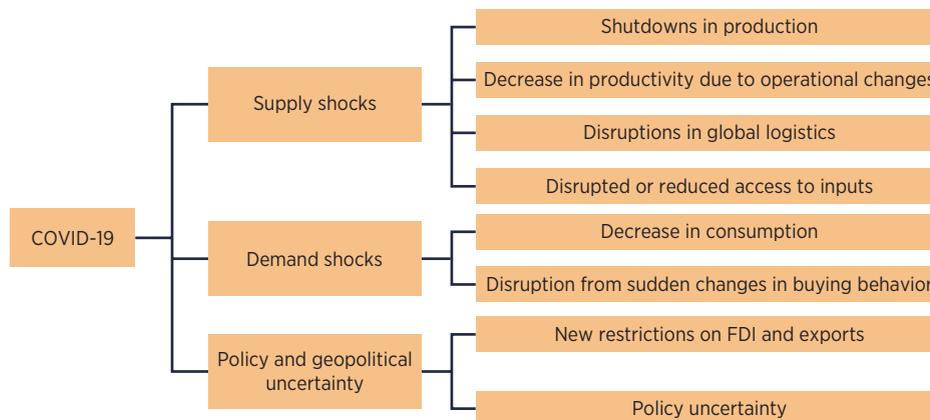
immediate impact on FDI stemmed from a reduction in reinvested earnings as multinational companies' affiliates experienced large drops in profits. Equity capital flows also shrank as companies put new investment projects on hold amid travel bans, demand contractions, a liquidity crunch, and increased uncertainty. The pandemic affected all types of investment: greenfield investment projects announcements were down by 35 percent, cross-border merger and acquisition (M&A) fell by 10 percent, and new international project finance deals were 2 percent lower in 2020 compared with 2019 (UNCTAD 2021). Although profits and reinvestment of earnings will increase as the pandemic subsides, investor confidence (and, by extension, new greenfield and M&A projects) may take longer to recover. This slow recovery may bring long-term consequences for host economies, given FDI's role in development finance, knowledge transfers, and economic transformation.

The stark fall in trade and FDI in the early months of the pandemic reflected the confluence of pandemic-induced supply and demand shocks and policy and geopolitical uncertainty (figure 5.2).

Supply shocks have resulted from shutdowns in production and related disruptions to input supplies and supply chains. Lockdowns imposed by governments have led many businesses to close their operations, causing serious disruptions. Even where shutdowns are only partial, shifts to remote work, the health impacts of the virus on workers, and modifications to production lines to improve safety have decreased productivity and the labor supply at some firms. Finally, even where production has not been affected, the rapid reduction in air traffic has decreased belly cargo capacity (the space under the main deck of an aircraft where cargo is stowed), which accounts for roughly half of global air cargo capacity (World Bank 2020b). Production and logistics disruptions have also translated to lower trade volumes because producers either cannot meet or cannot ship global orders. And, where operations of multinational corporation (MNC) affiliates have been disrupted, drops in production have also decreased FDI by lowering profits and thus reinvested earnings.

These impacts extend beyond regions and firms that have been forced to shut down because of the integrated nature of GVCs: downstream producers of firms that

FIGURE 5.2 Impact of COVID-19 (coronavirus) on global value chains



Source: World Bank 2020d.

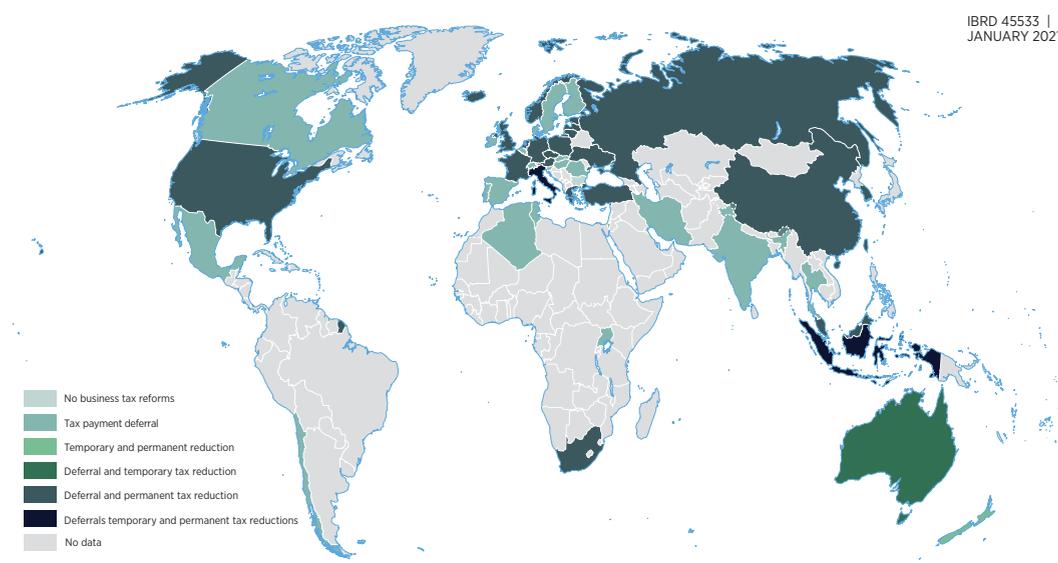
Note: FDI = foreign direct investment.

have been shut down have faced input shortages and delays, especially if they rely on just-in-time deliveries, and have been unable to identify new suppliers to fill their gaps (Baldwin and Tomiura 2020; Qiang et al. 2020). As a result, about three-quarters of MNCs operating in low- and middle-income countries were already reporting decreases in worker productivity and supply chain reliability by the first quarter of 2020, and these impacts are expected to worsen over time (Saurav et al. 2020a). These domino effects have led to further decreases in trade (by reducing output) and FDI (by reducing profits) that have cascaded through GVCs.

The pandemic has also reduced demand for many goods and services. Both practical barriers to consumption, such as store closures, and declines in disposable income and consumer confidence have led to reductions in spending (Baldwin and di Mauro 2020). In June 2020, for example, 40 percent of consumers in the United States reported becoming more mindful of where they spent their money as a result of the pandemic.¹ As with supply shocks, these impacts transcend sectoral and geographic borders. Reductions in end-consumer demand translate into reduced demand for intermediate inputs and raw materials, leading to cancelled or reduced orders (Teodoro and Rodriguez 2020). In the context of GVCs, lower demand directly leads to reduced production, sales, and profits—and therefore reduced reinvestment FDI—at MNCs affiliates. In addition, lower business confidence caused by low demand leads to delays or cancellations of new FDI projects.

Governments have adopted various policies in response to the crisis. Several countries have stepped up their policies to support GVCs, including by providing tax relief to companies involved in GVCs. Map 5.1 shows preliminary evidence that 50 out of 51 countries analyzed have relaxed their business taxes (on value added, sales, payroll, or corporate income) in response to COVID-19. This aid came most often as either tax

MAP 5.1 Business tax reforms adopted during COVID-19 (coronavirus)



Source: World Bank calculations based on Kronfol and Chan, forthcoming.

Note: Updated on June 30, 2020. The business taxes analyzed are value added taxes, sales taxes, payroll taxes, and corporate income taxes.

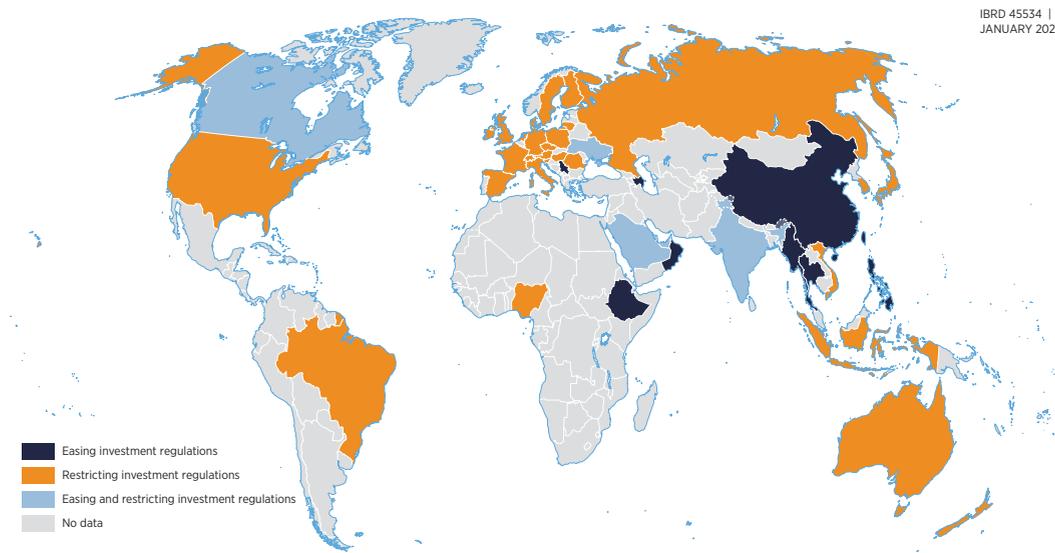
payment deferrals (22 countries) or permanent tax reductions (23 countries). Similarly, many investment promotion agencies (IPAs) have adopted investment retention initiatives. These initiatives include expediting foreign exchange approvals and advocating for urgent government actions to solve these companies' grievances more systematically and in ways that would benefit other, similar investors. Some countries are also allowing companies in export-oriented industrial parks to supply locally and are facilitating MNCs' expansion into new production lines as part of the countries' strategic reorientation to in-demand products and services in light of COVID-19.²

In contrast, other countries have introduced more restrictive investment and export measures in light of the pandemic. FDI restrictions were already increasing before the pandemic because of alleged national security considerations (World Economic Forum 2020b). Common pandemic-related restrictions include new screening legislation to prevent foreign acquisitions in strategically important sectors (UNCTAD 2020a) and export bans on goods such as medical equipment. Such measures hamper GVC activity by directly restricting trade and cross-border investment. Map 5.2 provides a preliminary analysis of investment regulation during COVID-19. Out of 42 countries included, only 8 have eased their investment regulations, 29 have tightened their regulations, and 5 have enacted both types of measures (map 5.2). Even where restrictions have not yet been introduced, uncertainty regarding the future course of government policies can hold back investment decisions.

Impact differentials across sectors

The pandemic has depressed GVC activities in different sectors to varying degrees. Although declines are evident across nearly all sectors, certain sectors have experienced

MAP 5.2 Easing and restricting investment regulation around the world during COVID-19 (coronavirus)



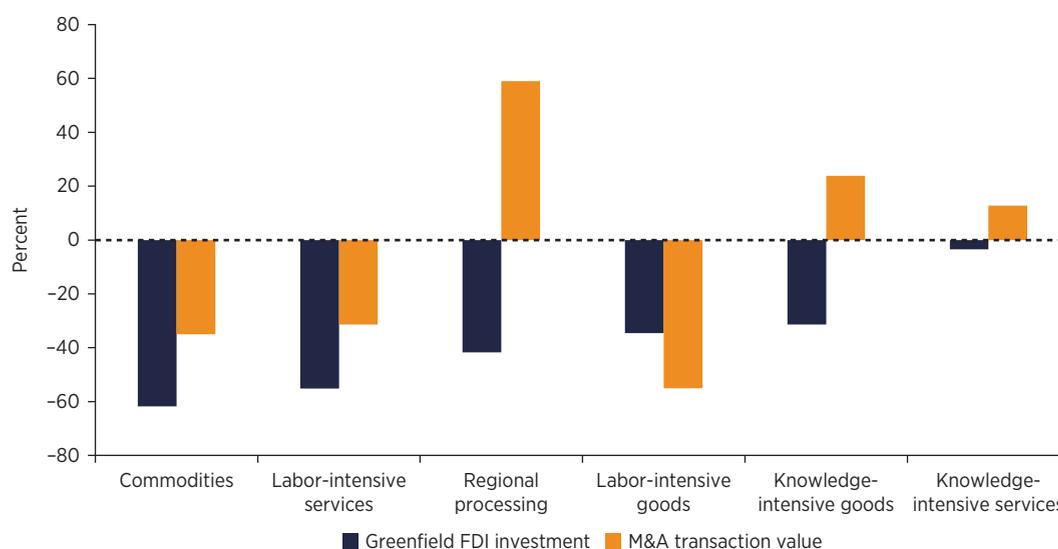
Source: World Bank calculations using Forneris and de Bonneval, forthcoming.

Note: Updated January 13, 2021.

more severe supply disruptions or bigger drops in demand than others. From a supply perspective, sectors whose supply chains are more concentrated in areas heavily afflicted by the pandemic and those whose supply chains are longer or more complex have felt greater supply chain pressure. For example, during the early stages of the pandemic, the textile sector faced severe disruptions as critical raw materials factories in China shut down (Aung and Paul 2020). On the demand side, the direct effect of lockdowns and travel bans has been greater for sectors that rely on in-person spending, such as hotels and accommodations (Gourinchas et al. 2020). In contrast, the medical and health sector experienced steep surges in demand in the early phases of the pandemic. In addition, certain sectors, such as energy and financial services, are more procyclical than others, making them more vulnerable to the general decline in economic activity caused by the pandemic. As a result, sector performance has varied with regard to greenfield FDI and cross-border M&A (figure 5.3).

Unsurprisingly, sectors related to tourism and food service have faced particularly sharp declines. Travel bans have forced many tour operators to suspend or drastically curtail their operations, and the decline in consumer confidence and buying power has decreased demand even where travel is allowed. As a result, according to the Financial Times's fDi Markets and Thomson Reuters data, greenfield FDI projects in the hotel and restaurant sectors are down 69 percent in 2020 compared to 2019, while cross-border M&A transaction value in the sector is down about 51 percent. Similarly, trade in services related to travel and transportation is down sharply. In Mauritius, for instance, the number of international tourist arrivals in March 2020 was less than half the level in March 2019, although the country has had very few confirmed COVID-19 cases. As the virus quickly spread around the world and governments implemented stringent restrictions on international travel, the number of

FIGURE 5.3 Change in greenfield foreign direct investment announcement values and cross-border merger and acquisition transaction values, 2020 vs. 2019



Source: World Bank calculations based on data from fDi Markets and Thomson Reuters.

Note: This figure compares the value of greenfield FDI project announcements and cross-border M&A transaction values in 2020 (whole year) with 2019. FDI = foreign direct investment; M&A = merger and acquisition.

arrivals plummeted further in April and remained near zero throughout the rest of 2020 (see chapter 9 of this report).

Commodity sectors—especially energy—have also been hit hard by the pandemic. Countries in full lockdown have experienced an average 25 percent decline in energy demand, and even countries that never closed or have reopened have cut back on energy use because of lower economic activity (International Energy Agency 2020). In turn, this drop in demand has adversely affected earnings and future investment prospects for the energy sector. The global market capitalization of energy companies fell by more than one-third from January to June 2020. Many other commodity sectors have experienced similar hits because they are also procyclical, although not necessarily to the same degree as the energy sector.³ For FDI, greenfield project announcement values and cross-border M&A transaction values for deals related to commodity sectors declined by 62 percent and 35 percent, respectively, in 2020 relative to 2019 (figure 5.3). Trade in fuels and lubricants was also down sharply year over year (table 5.1).

Various subsectors of manufacturing—covering both labor- and knowledge-intensive goods—have also disproportionately suffered from the pandemic-induced economic crisis. Supply chain disruptions across GVCs, factory closures, drops in demand caused by store closings (for many labor-intensive goods, such as apparel), and drops in consumer confidence (for many knowledge-intensive consumer durables, such as automobiles) have affected the sales, profits, and investment prospects of many manufacturing firms (International Labour Organization 2020). Compared with 2019, the total value of greenfield FDI project announcements for labor-intensive and knowledge-intensive goods dropped by 35 percent and 31 percent, respectively. Similarly, cross-border M&A transaction values for labor-intensive goods have declined by 55 percent; knowledge-intensive goods, in contrast, have seen a 24 percent increase (figure 5.3). These impacts on manufacturing are reflected in how trade in transportation equipment has fallen even more than trade in most other sectors (table 5.1).

In contrast, certain knowledge-intensive service sectors have been more resilient, although their performance has generally declined as well. Demand for some software products has risen because of COVID-19 because many firms have switched to remote work and virtual meetings, customers have adopted or increased their use of digital entertainment and information technologies at home in lieu of going out, and school courses have gone online. As early as March 2020, Microsoft reported a 40 percent increase in users for its online collaboration software (Wakabayashi et al. 2020). Morgan Stanley Capital International's global index for information technology stocks actually increased 12 percent from January to June 2020, and trade in information and communication technology services has increased year over year as well. Greenfield FDI for knowledge-intensive services declined only slightly, by 3 percent, in 2020. This decline is smaller than that of other sectors, although the sector is still underperforming. M&A activity in this sector recorded a 13 percent growth (figure 5.3).

Sectors corresponding to consumer staples—notably food and beverages—have also been relatively resilient, although they have still faced some disruptions. Although a large part of the population has stayed indoors amid the crisis, food and beverage supply chains have continued to function mostly unhindered. Demand for essential products has remained relatively stable despite extended lead times and higher prices. Consumer staple sectors also tend to have more localized supply chains than other goods (that is, food value chains are often national or regional rather

TABLE 5.1 China, European Union, Japan, and the United States exports and imports, by detailed end use, March–May 2020

	Exports (year-over-year % change)			Imports (year-over-year % change)		
	March	April	May	March	April	May
Capital						
Capital goods	-9.7	-6.2	-10.0	-4.4	-4.6	-6.3
Transport equipment	-30.4	-54.3	-63.3	-30.9	-58.6	-71.4
Intermediate						
Food and beverages	7.7	8.6	3.7	7.2	-1.1	12.3
Industrial supplies	0.7	-8.7	-16.8	-0.4	-7.9	-10.8
Fuels and lubricants	-0.5	-33.4	-44.0	-22.3	-49.3	-58.4
Capital goods	-8.5	-11.4	-18.7	2.0	-7.5	-13.3
Transport equipment	-11.5	-40.2	-46.0	-10.4	-38.6	-48.7
Consumption						
Food and beverages	2.7	-2.6	-11.5	11.7	-0.1	-3.0
Transport equipment	-34.2	-40.5	-19.4	-12.1	-30.7	-19.6
Consumer goods	-6.7	-11.3	-6.5	-3.4	-9.8	-13.4
Not classified						
Food and beverages	-6.9	-17.8	-20.5	0.1	-15.5	-27.4
Fuels and lubricants	-14.5	-42.4	-67.2	-33.1	-63.2	-59.5
Transport equipment	-16.7	-65.2	-62.0	-6.5	-53.3	-69.7
Goods	-13.5	-31.0	-45.1	-5.0	-17.2	-38.5
Total	-7.0	-16.9	-22.4	-5.6	-18.4	-23.7

Source: World Bank estimates using official data from China, Eurostat, Japan, and the United States.

Note: Trade flows for the European Union (EU) include only extra-EU trade because of data availability. End-use categories are based on United Nations Broad Economic Categories (Rev 4).

than global). Thus, sectors corresponding to consumer staples have experienced lower-than-average stock market index declines as well as lower declines in FDI and trade activities. Greenfield FDI in food and beverages dropped by 13 percent in 2020, whereas M&A transaction value quadrupled.

Firms' responses to the disruption

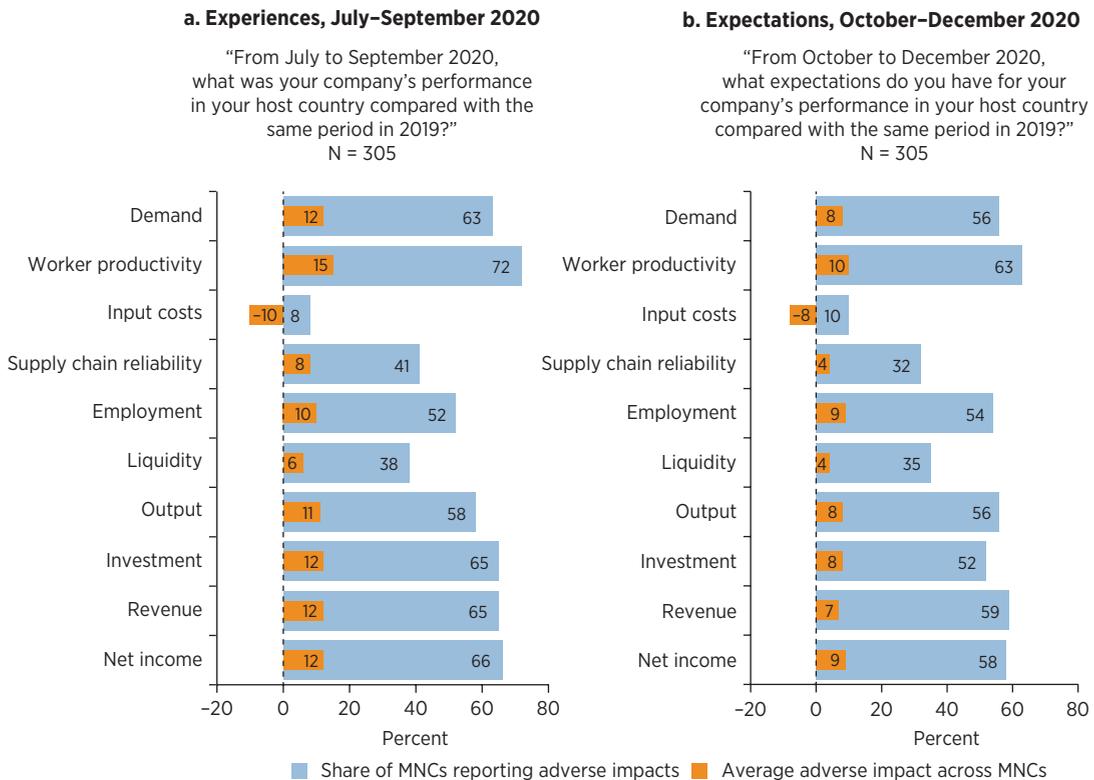
Impacts on global value chain firms

Ultimately, the adverse effects of the COVID-19 pandemic on GVCs translate into impacts on the firms involved in GVCs, which range from MNCs and other large corporations to small local suppliers and customers. Emerging data illustrate the stark impact of the pandemic on the large firms and MNCs that anchor many GVCs. The earnings per share of the S&P 500 companies in the fourth quarter of 2020 have

climbed to US\$33 from US\$12 in the first quarter of 2020, but that figure is still lower than their earnings per share in the fourth quarter of 2019.⁴ A survey by the World Bank Group of MNC affiliates in low- and middle-income countries found similar results: two-thirds of respondents had experienced drops in their net income and revenue, among other adverse impacts, in the third quarter of 2020 compared with the same period in 2019 (figure 5.4).

Supply chain disruptions stand out as particularly important challenges for multinationals in the early phase of the pandemic. Of the MNC affiliates surveyed by the World Bank, 77 percent reported a decrease in the reliability of their supply chains in middle- and low-income countries in the second quarter of 2020, but the share of firms had dropped to 41 percent in the third quarter of 2020 (figure 5.4). Country-level surveys echo this trend: among large and medium-size firms in China, about 20 percent reported experiencing supply chain pressures (UNDP 2020). In another survey conducted in mid-February among the 169 member firms of the American Chamber of Commerce in China, 30 percent of respondents reported local supply chain disruptions (in China) and 17 percent reported global supply chain disruptions (AmCham China 2020). In the United States, about 30 percent of large firms reported supply chain impacts (JUST Capital 2020). A survey of chief financial officers of UK businesses, conducted in April 2020, showed that about half of their firms had

FIGURE 5.4 Impact of COVID-19 (coronavirus) on multinational corporations’ affiliates, July–December 2020



Source: Saurav et al. 2020b (November 2020).
 Note: MNCs = multinational corporations.

suffered from supply chain disruptions and a quarter of their firms were experiencing disruptions to at least 25 percent of the inputs they buy, including service inputs. Supply disruption was well correlated with expected sales impacts, suggesting that supply disruptions constrain output (Bloom, Bunn, et al. 2020).

In turn, suppliers to MNCs, many of whom are small or medium enterprises (SMEs), are facing the most pressure. They are an integral part of GVCs and are exposed to ripple effects from both demand and supply shocks. A survey of Bangladeshi garment suppliers, for example, reveals how they have been affected in three phases of the pandemic and through various channels. In phase 1, Wuhan's lockdown reduced their access to raw materials (fabrics). About 90 percent of suppliers reported delayed shipments and higher prices for raw materials. In phase 2, as the pandemic began to hit buyers' bottom lines, 80 percent of suppliers began to face delays in payments of more than 10 days. And, in phase 3, the scourge of COVID-19 led buyers to cancel orders either in progress or completed, leaving suppliers in dire financial conditions. These firms, integrated into GVCs, are normally the most productive ones in their sector. However, in the wake of COVID-19, they are also likely to be more exposed to shocks. Losing this part of the Bangladeshi economy would slow the country's recovery and depress overall productivity.

The aforementioned impacts are alarming because SMEs are more financially fragile than larger firms and may lack the capacity to adjust their business models in light of the COVID-19 pandemic. The pandemic has thus far exacerbated preexisting credit and liquidity constraints among SMEs. For example, in Uganda, about 70 percent of surveyed firms reported a decline in access to credit, with 34 percent experiencing a decline of more than 50 percent (Lakuma and Sunday 2020). Furthermore, SMEs may not be able to afford preventive health measures such as offering hand sanitizer and distributing personal protective equipment to employees and customers.

Immediate response during the crisis

Firms have taken various measures to survive the crisis, such as furloughing employees, repurposing production lines, and adopting new technologies. Some of these measures were taken immediately at the start of the outbreak to keep businesses afloat, whereas other measures are intertwined with long-term megatrends and will take time to materialize.

Shrinking market demand and disruptions to supply chains push firms to aggressively reduce their expenditures. Some of their cost-cutting measures include freezing hiring, ending travel, tightening management of discretionary costs, and reducing their numbers of contractors. According to the JUST Capital corporate response tracker,⁵ among the largest firms in the United States, the most common cost-cutting measure has been pay cuts taken by top executives (28 percent), followed by furloughing (25 percent) and laying off workers (11 percent). Even in countries where salary reductions or freezes are not normally allowed, such as Italy, companies were given special permission to reduce working hours and pay while nonessential business is suspended.

To mitigate the pandemic's adverse impacts, suppliers to MNCs, especially SMEs, are adopting all possible measures to cut labor costs. In Uganda, a significant percentage of manufacturing businesses have laid off employees, and 40 percent of them have

reduced their numbers of employees by more than half (Lakuma and Sunday 2020). In South Africa, more than 40 percent of SMEs have already reduced capacity, laid off employees, or suspect they will need to lay off employees. In Bangladesh, at least 1.2 million garment workers have been furloughed because of order cancellations. Many suppliers in Bangladesh, Cambodia, and Myanmar have suspended work without paying workers for orders already completed because some MNCs, operating in survival mode, have not been paying their suppliers. This nonpayment has added to the gloomy prospects for employment in many developing countries, which may take years to recover from this crisis.

Many MNCs are also trimming their product offerings or rationalizing their SKUs (stock-keeping units, numbers that each represent a unique item). For example, Coca-Cola is ruthlessly prioritizing core SKUs to drive efficiency in its supply chains and streamline operations for retail customers. Procter & Gamble also narrowed its production focus to core SKUs to ensure supply flow despite an influx of demand (Cosgrove 2020). However, cost-cutting is less likely to occur in areas that are perceived to be critical to sustaining growth in the midst of the pandemic, such as digital transformation, customer experience management, and cybersecurity (Edwards 2020). In contrast to the cuts they've made to labor costs, firms are seizing the opportunity to roll out new technologies in these areas and to speed up their digital transformations.

Several businesses, across industries and countries, are repurposing their production lines and research and development (R&D) capabilities to supply critical materials for the fight against COVID-19 or are pivoting to new ways to generate revenue. For example, textile companies are switching their production lines from making garments to making hygienic masks and medical robes, cosmetics companies are making hand sanitizer, hotels have become quarantine centers, distilleries are creating disinfecting alcohol, and automotive companies are evaluating their options to produce urgently needed medical devices such as ventilators. Repurposing can simultaneously serve the greater good, help businesses keep their production lines up and running in times of low demand, generate moderate revenue, and positively affect businesses' reputations. In several cases, MNCs are leveraging their existing supplier bases to avoid lengthy qualification and onboarding processes and to maintain those suppliers' jobs (Betti and Heizmann 2020).

MNC support to suppliers is another critical way to create resilient production networks. MNCs increasingly recognize that their suppliers are their intricately linked partners. Thus, some MNCs (such as global garment retailers [Hughes 2020] and Boeing [Cameron 2020]) have accelerated payments to suppliers for goods that either have been produced or are in the process of being produced. MNCs have also helped suppliers adapt their production processes to the post-COVID-19 world. For example, Apple is helping its partners redesign and reconfigure their factory floorplans to maximize their workers' personal space (Gurman 2020). Evidence suggests that strengthening these long-term relationships is associated with more rapid recovery (Jain, Girotra, and Netessine 2016).

Megatrends and firms' medium- to long-term responses

In the medium to long term, firms' responses to the COVID-19 pandemic will take into consideration the megatrends that are either already altering the GVC landscape

or emerging on the horizon. The pandemic has accelerated some preexisting trends and has triggered new changes. Disruptive technologies and policy uncertainty are among the most important of these megatrends, and they could profoundly influence the world's globalization trajectory.

Technology

The extraordinary advancement of technology is the ultimate enabler and driver of GVC expansion. Technologies have created new stages of production and have affected the distribution of value added in GVCs. New technologies have enabled more asset-light forms of investment; they have also changed production lengths in both directions and increased the market power of MNCs.

COVID-19 has been an unexpected catalyst for technology adoption across the world. When the outbreak and lockdown measures snarled GVCs, firms realized the importance of value chain visibility and risk management, as they have in previous crises. Because of this heightened understanding, 88 percent of MNCs surveyed by the World Bank in the fourth quarter of 2020 reported increasing their use of digital supply chain management technologies (Saurav et al. 2021). In an example from an earlier crisis, Toyota undertook a massive effort to build a risk-proof supply chain after the 2011 Japanese earthquake. As the founder of lean inventory management and just-in-time delivery systems, Toyota had stretched its supply chain thin before the crisis to maximize efficiency and reduce waste in storage and handling. However, because many of its components were single sourced, the 2011 earthquake and tsunami caused widespread parts shortages that persisted for several months. As a result, Toyota had to dramatically throttle production. To minimize supply chain risks in the future, Toyota developed its RESCUE (REinforce Supply Chain Under Emergency) system by establishing a database of supplier information that identified the vulnerabilities and parts information of more than 650,000 supplier sites. This supplier mapping effort allowed Toyota to track components and replace them easily during the COVID-19 outbreak. COVID-19 has boosted demand for this sort of end-to-end visibility, and big data, Internet of Things devices, and artificial intelligence will be increasingly deployed to help firms achieve greater efficiency, minimize waste, and enhance their robustness.

The pandemic also drove a rapid migration to online settings across every domain, and many of those changes are here to stay. At present, most firms have to serve their customers through online channels and allow employees to work remotely whenever possible, which has created a boom for video conferencing, online shopping, contactless payment, and delivery services. According to a survey by Adobe, COVID-19 spurred a spike in e-commerce in the United States: total online spending in May 2020 hit \$82.5 billion, a 77 percent jump compared with the previous year (Koetsier 2020). A McKinsey survey of more than 20,000 European consumers in May 2020 found that digital adoption⁶ in Europe jumped from 81 percent to 95 percent because of the COVID-19 crisis—a rise that would have taken two to three years in most industries at prepandemic growth rates (Fernandez, Jenkins, and Vieira 2020). And, all around the world, grocery stores have shifted to online ordering and delivery as their primary business, schools have pivoted to online learning and digital classrooms, doctors are providing telemedicine, and banks have made the transition

to remote sales. Some of these shifts in the ways people live and work are likely to stay: firms are embracing the digital transformation as a core component of their competitiveness, and the rise of e-commerce and platform firms has allowed people to transact directly with one another, brought down prices, and increased match quality.

The COVID-19 lockdowns have also increased interest in robotics adoption. Although many firms have frozen their budgets, automation is the one place where some are increasing spending. The outbreak has had a severe impact on manufacturers' operations because factory work cannot be performed remotely. Plant shutdowns and the consequent labor shortages have rippled through industries from food processing to automotive manufacturing. Firms are increasingly looking to robotics to augment locked-down employees, support health and safety measures, and tap into new opportunities or salvage their operations. The biggest US meat company by sales, Tyson Foods, is speeding up its shift from human to robot meat cutters. Pilgrim's Pride Corp., the second-largest US chicken processor, now sees its deboning machines trail humans by only 1.0–1.5 percent in meat yield per chicken (Bunge and Newman 2020). However, robots still have a long way to go before they can match human dexterity and experience.

In service sectors, Walmart is now using robots to scrub its floors, and McDonald's has been testing robots as cooks and servers. In warehouses, such as those operated by Amazon and Walmart, robots were already used to improve efficiency. COVID-19 has both companies looking to increase their use of robots in sorting, shipping, and packing (Thomas 2020). YouTube is having machines do more content moderation (YouTube Team 2020). AMP Robotics, a US-based robotics company, has seen a significant increase in orders for its robots that use artificial intelligence to sift through recycled material and weed out trash (Corkery and Gelles 2020). And UVD Robots, a Danish manufacturer of ultraviolet light–disinfection robots, shipped hundreds of its machines to hospitals in China and Europe as demand for cleaning and sanitizing robots soared during the pandemic (Thomas 2020). With minimal human involvement, automation can achieve greater accuracy, improved efficiency, and higher productivity at many tasks. However, this development may dislocate certain jobs and pose additional challenges to the future of work.

Additive manufacturing and 3D (three-dimensional) printing also saw accelerated adoption because of the pandemic. 3D printing enables on-demand solutions for a wide spectrum of needs, ranging from personal protection equipment to medical devices and isolation wards. For example, an Italian engineering company, Isinnova, came up with a 3D-printable mask connector design to manufacture masks; 3D printing was also used to produce emergency respiration devices, testing swabs, and so on (Choong et al. 2020). The versatility and agility of 3D printing could bring a revolution to traditional manufacturing in the coming years and become a novel solution to the supply chain challenges faced by businesses today.

Increasing market power

Across the globe, corporate market power has increased noticeably over the past several decades. De Loecker and Eeckhout (2018) analyzed the evolution of markups over the past four decades using data from more than 70,000 firms in 134 countries.

Their research shows that the average global markup has increased from close to 1.1 in 1980 to 1.6 in 2016. Markups have risen the most in North America and Europe and the least in emerging economies in Latin America and Asia.

Technology has been a major force behind the rising market power of superstar firms. Innovation is getting more expensive, whereas returns to research are diminishing (Bloom, Jones, et al. 2020). Often, only large corporations can afford the exorbitant costs of conducting R&D that pushes the frontier of knowledge. In the meantime, digital technologies inherently favor incumbents and first movers, allowing big companies to seize market share from smaller ones and entrench their dominance. The rise in business lobbying and campaign finance contributions has also contributed to this market power effect (Philippon 2019).

COVID-19 could cause a further rise in corporations' market power because large corporations are in the best position to withstand the economic downturn and deploy new technologies. History suggests that economic slowdowns widen existing divisions between companies (Aviva Investors 2020). In the past three recessions, the share prices of US firms in the top quartile across 10 sectors rose by an average of 6 percent whereas the share prices of those in the bottom quartile fell by 44 percent. The same divergence has been evident since the start of the COVID-19 outbreak. Moreover, there has already been a wave of business bankruptcies (Mathurin, Aliaj, and Fontanella-Khan 2020) and permanent closures since the pandemic began, and the wave is expected to grow in the following months. Increasing corporate market power could lower consumer well-being, decrease demand for labor, and dampen investment in capital, eventually distorting the distribution of economic rents and discouraging innovation.

Policy uncertainty and geopolitical risks

Economic nationalism was the new norm even before the COVID-19 crisis, and it has gained further momentum since the outbreak began. Defensive nationalism—closing borders, building walls, imposing tariffs, and cutting back on migration—was a defining feature of the past decade as countries retreated into their national silos (Bush 2020). Such protectionist policies began in developed economies, stemming from their domestic backdrops of rising inequality and political polarization. An analysis of the policy platforms of the largest political parties in the Group of Twenty countries found that these parties have increasingly emphasized policies that stress national sovereignty, reject multilateralism, and seek to advance national interests at the expense of foreign interests (De Bolle and Zettelmeyer 2019). The trade frictions between China and the United States further escalated global uncertainty: global supply chains are at risk as the world's two biggest economies threaten to decouple.

The pandemic has reinforced recent trends toward restrictive investment and trade policies and economic nationalism. Concerned about the undervaluation of critical national assets and opportunistic acquisition by foreign investors during the pandemic, many countries have already adopted more stringent approaches to screening foreign investment to protect domestic businesses and industrial actors (see map 5.2). Of the 42 countries included in map 5.2, 34 have taken measures to tighten their investment regulations. The most common measure was increasing screening (29 countries), followed by restrictions on hiring foreign workers (7 countries), and tightening

regulations on land ownership (1 country) (figure 5.5, panel a). Some countries are also emphasizing self-reliance and taking an inward-looking stance on both economic and foreign policy (Baldwin and Evenett 2020). As a result, the Global Economic Policy Uncertainty Index reached a historical peak in March 2020 (figure 5.5, panel b).

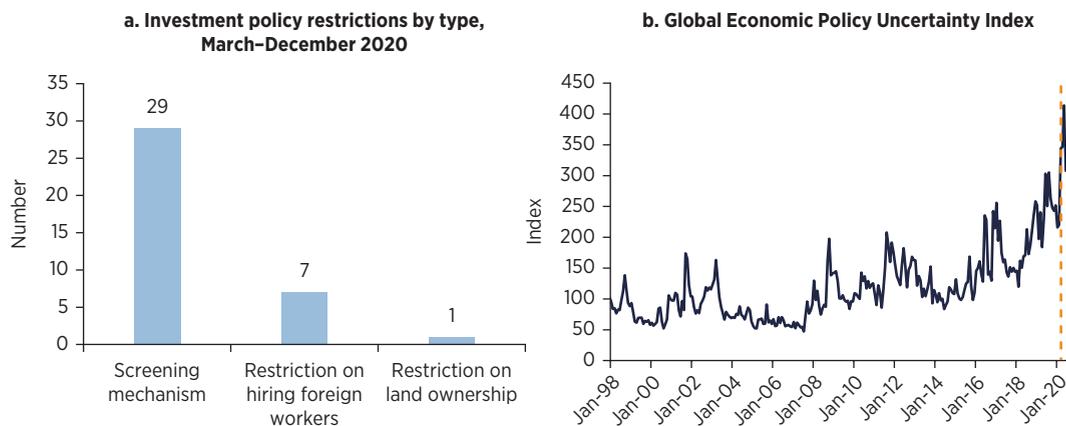
Policy uncertainty is detrimental to trade and is even more so to investment. A rise in policy uncertainty has confounded the already uncertain situation caused by COVID-19. The inability to estimate the probability of future events increases general uncertainty, which suppresses firms' hiring and R&D, delays investment and new business formation, and postpones households' consumption of durables. All these effects aggravate the devastating impact of the outbreak and delay economic recovery.

Sustainability

GVCs are a mixed blessing for the environment (World Bank 2020c). Whereas GVCs expand the scale of economic activity, alter the composition of economic activity, and bring about changes in production techniques that may have a positive effect on the environment (Grossman and Krueger 1991), hyperspecialization and agglomeration of economic activities could negatively affect the environment and health in regions specializing in pollution-heavy industries (Bombardini and Li 2020). Companies might deliberately migrate to jurisdictions where environmental regulations are lax. The composition effect is ambiguous.

Sustainability will play a bigger role in influencing the future development of GVCs. The COVID-19 crisis has raised critical awareness of the links between nature, health, and sustainable development. Recent climate change policies and green deals now being adopted in major constituencies and trading blocs will have a much more fundamental impact on the way firms operate (UNCTAD 2020b). A recent World Bank Group IPA survey also shows that two-thirds of the countries include green investment as a priority segment in their investment promotion strategies (Sanchiz and Omic 2020). The same report reveals that 60 percent of IPAs evaluate environmental

FIGURE 5.5 Rising policy uncertainty



Sources: Panel a, World Bank calculations using Forneris and de Bonneval, forthcoming; panel b, Global Economic Policy Uncertainty Index (<https://www.policyuncertainty.com/index.html>).

Note: Panel a was updated on January 18, 2021.

and social impacts of investment projects they work with. Increased caution and scrutiny from regulatory authorities, consumers, investors, business partners, insurers, banks, and financial markets could all push firms to be more environmentally responsible and identify synergies between sustainability and business rationale.

A rising number of MNCs have already pledged to work only with suppliers that adhere to their social and environmental standards (Villena and Gioia 2020). This trend is likely to continue and accelerate, though it is important to recognize the costs associated with building up green production networks and develop collective approaches to address externalities and share the costs and responsibilities. By transforming private sector activity through sustainable investment, countries can accelerate recovery and stimulate resilient growth.

Global value chain adjustments

Economists and policy makers have drawn various conclusions about the performance of cross-border supply chains during COVID-19. Does the evidence so far support the reconfiguration of supply chains? Will nearshoring or reshoring take place? Will GVCs be regionalized? Has globalization gone too far?

GVC disruptions caused by crises are not new, and previous lessons suggest that an extensive supply chain network could contribute to a firm's speedy recovery. The 2008 global financial crisis, the 2011 Japanese earthquake, and the 2011 Chao Phraya River floods in Thailand each tested firms' ability to cope with value chain disruptions and in many ways made GVCs more resilient. A global pandemic is different from a financial crisis or a natural disaster, but some lessons from previous crises are still relevant to the present scenario (box 5.1).

Diversification of suppliers has always been a key strategy of MNCs to mitigate their risks and increase their bargaining power. Firms that have diversified suppliers and geographically dispersed production networks can adjust their production when a disaster occurs in one place. For example, Apple has long maintained a supply chain strategy of using multiple suppliers for the same component wherever possible (AICD 2015). For instance, in 2016 it sourced 70 percent of its cellular modems for iPhones from Qualcomm and the remaining 30 percent from Intel (Tayal 2017). And, when COVID-19 hit East Asia and the Pacific in February 2020, Samsung switched part of its smartphone production from the Republic of Korea to Vietnam, where it operates other factories (Song 2020). Supply chain diversification also allows for greater flexibility, enabling MNCs to respond to changing market trends and provide higher-quality service. Working with a diverse range of suppliers can also introduce innovation and creative approaches from outside the MNCs' thinking. By geographically broadening their supplier bases, MNCs are more likely to cut production costs by offering more competitive wages at the local level and more likely to better serve local customers by tailoring products to their demands.

The COVID-19 outbreak has highlighted the importance of supply chain robustness and resilience and reopened the debate on reshoring, nearshoring, and GVC regionalization. On one hand, some economists foresee more unexpected shocks and argue for a rethinking of GVC strategies, with an emphasis on holding more inventory, diversifying suppliers, and shortening supply chains (Javorcik 2020). The World Economic Forum (2020a) has recommended that firms "aggressively evaluate

BOX 5.1 Global value chain disruptions: Lessons from the 2011 Japanese earthquake

On March 11, 2011, Japan's northeastern shore was struck by a 9.0 magnitude earthquake, often referred to as the Great East Japan Earthquake. It was the most powerful earthquake ever recorded in Japan. The total economic cost of the quake was estimated by the World Bank to be US\$235 billion, making it one of the costliest natural disasters in history. About 24,000 people were recorded dead, injured, or missing, and more than a million buildings were damaged to some extent. The devastating impact of the earthquake and the tsunami it caused was compounded by a subsequent accident at the Fukushima nuclear reactors, which in turn caused evacuations and radioactive contamination, and by continuing aftershocks and widespread infrastructure damage, including to transportation, electricity, telecommunications, and water infrastructure.

Although the physical shock of the Great East Japan Earthquake was confined to Japan's northeastern coastal areas, the earthquake wrought great economic damage on the whole country and even the rest of the world (Behravesch 2011; Rosenbush 2011; Zarathustra 2011). Although the four affected prefectures accounted for only 4.7 percent of total Japanese output (Carvalho et al. 2016), the shock to a small subset of firms was propagated and amplified throughout the economy via a network of input-output links, resulting in significant economic costs for other parts of Japan (Acemoglu, Akcigit, and Kerr 2015; Barrot and Sauvagnat 2016; Carvalho et al. 2016). When a firm that is connected in a production network reduces its output because of an idiosyncratic shock, its upstream or downstream firms might be influenced as well through their supplier-customer relationships (Acemoglu, Akcigit, and Kerr 2015). For example, Toyota and Honda had to suspend production in the United States because of the disruption to their supply chains in the disaster-stricken areas. Approximately 90 percent of Japan's output loss caused by the earthquake resulted from indirect effects through the supply chain network rather than from direct effects caused by the natural disaster (Tokui, Kawasaki, and Miyagawa 2017).

Nevertheless, Todo, Nakajima, and Matous (2015) argue that extensive supply chain networks could also help firms quicken their recovery from destruction. Firms with such connections are more likely to receive support from their suppliers and clients during the recovery, and supply chain networks provide information and input sharing that firms can use to replace their damaged property (as well as overall benefits from agglomeration). Econometric analysis by Todo, Nakajima, and Matous (2015) shows that affected firms connected with networks outside of the areas that received impacts were more likely to resume production in the early stages of recovery, and networks within the affected areas contributed to firms' sales recovery in the medium term.

The Japanese earthquake also prompted domestic firms to offshore production to other countries. Using Japanese firm-level data from 2010 through 2013, Zhu, Ito, and Tomiura (2016) find that increases in offshoring after the earthquake were higher among manufacturing firms than among service firms. This effect could be explained by the fact that manufacturing firms often require the transportation of physical intermediates and were thus more likely to be influenced by the earthquake's disruption.

However, the earthquake's shock did not lead to significant reshoring, nearshoring, or diversification by foreign multinationals (Freund et al. 2020). Some major global importers of automotive components have moved away from Japan in favor of lower-cost suppliers in developing countries. There was, however, no evidence of supplier diversification across countries after the crisis—the Herfindahl-Hirschman index of input suppliers remained flat. The finding that the earthquake's shock led suppliers to switch rather than widen their sources may have occurred because few countries are capable of producing auto components and such production often requires relationship-specific investments.

near-shore options to shorten supply chains and increase proximity to customers.” Some policy makers are even calling for their countries’ manufacturers to bring their production back home. On the other hand, many business executives find that such prescriptions oversimplify the problem. These calls for reshoring may be just wishful thinking because doing so on a large scale would defy economic rationality (Freund 2020). A recent World Bank survey of MNCs found that 37 percent and 18 percent were diversifying their sourcing and production bases, respectively, in response to COVID-19, but only a relatively small portion (14 percent) planned to nearshore or reshore (Saurav et al. 2020a).

It might be premature to conclude that firms should shift gears from “just-in-time” to “just-in-case” GVCs. It is important to distinguish between the resilience and robustness of a supply chain, which require different strategies to promote (Miroudot 2020). Resilience is defined as the ability to return to normal operations within an acceptable period after a disruption. Robustness is the ability to maintain operations during a crisis (Brandon-Jones et al. 2014). For strategic industries, such as key medical supplies in the case of COVID-19, robustness is what matters. Building redundant capacity and diversifying suppliers are strategies for robustness.

For most other industries, resilience is more of a concern. Firms need to accept the risk that their supply chains can be disrupted and production can grind to a halt, and invest in reducing the time needed for recovery. Resilient firms try to mitigate risk when it happens, but they do not invest significantly in anticipating and avoiding every possible type of disruption. Some firms diversify their suppliers even before crises; others invest in long-term relationships with single suppliers instead of switching to other suppliers and incurring sunk costs, to facilitate more rapid recovery (Jain, Girotra, and Netessine 2016). Each of these findings also points to the fact that the effects of GVC reconfiguration would likely differ greatly depending on the characteristics of the firms’ products and services.

Shorter supply chains and localized production are not necessarily less vulnerable to shocks. In a global pandemic, almost every economy is affected by both supply and demand shocks, although to different degrees. Consumers’ fear of contagion and government restrictions on the movement of people hit labor-intensive services most severely, and these sectors’ GVCs are among the shortest. Supply chain risks could stem from all kinds of sources, such as production accidents, natural disasters, health shocks, financial risks, exchange rate volatility, political instability, macroeconomic crises, cyberattacks, quality issues, or delivery failures. These risks could happen in any location, so reshoring or nearshoring is no guarantee of more robust supply chains.

Supplier diversification or relocation, however, can be costly, and it is not an option for highly complex products in the short term. As explained in chapter 2, it takes time to identify, qualify and build relationships with potential suppliers. Diversification is not feasible if the product supplied is highly specialized or unique. For some GVC-intensive industries, such as the automotive industry, highly sophisticated supply chains involve thousands of different components, some manufactured to extremely low tolerances, and diversifying into different suppliers would require impractical effort and cost (Beattie 2020).

Furthermore, traditional supply chains have transformed over time into supply networks. This configuration makes it difficult to relocate suppliers to another country.

Supply networks are so complex that building them somewhere else would incur substantial cost and take a long time—and thus risk the lead firm losing its competitive position. Even if production facilities can be relocated, a whole ecosystem of talent, good infrastructure, and nearby upstream and downstream industries would be required to scale up production in a new location (Qiang et al. 2020).

Finally, holding excess inventory and building redundant capacity would create inefficiencies and waste that would outweigh these measures' benefits for most firms. Although many firms boosted their inventories and stocked up on raw materials during the COVID-19 crisis, this development is unlikely to turn into a long-term trend. Profit-oriented companies can hardly hold excess inventory because doing so not only ties up capital but also requires managing this inventory, including warehousing it, maintaining it, and preventing damage or theft of it. In addition, many products can expire or become obsolete while they are stored in inventory. Extra inventory could also cause management lapses—production managers could resort to simply replacing a defective part without investigating the underlying problem and taking corrective actions. Toyota Motor Corporation has proved that reducing inventory improves quality (Sheffi 2020). As consumers increasingly demand newer, better products with faster delivery, and as firms face increasing pressure to price competitively, losing cost advantage could result in a firm's downfall.

The geopolitical situation and financial incentives offered by some governments, however, are tilting investors' locational decisions. US lawmakers and officials are crafting proposals to push US companies to move operations or key suppliers out of China by offering tax breaks, new rules, and carefully structured subsidies (Shalal, Alper, and Zengerle 2020). Japan has set aside a record US\$2.2 billion support package to subsidize manufacturers to move their production out of China (Bloomberg 2020). Already, 87 companies have signed up to benefit from the first round of subsidies, with 57 companies receiving a total of US\$535 million to open factories in Japan and 30 others being paid to expand production in Myanmar, Thailand, Vietnam, and other Southeast Asian countries (Denyer 2020). And Taiwan Semiconductor Manufacturing Company, the world's largest contract integrated circuit manufacturer, announced it will invest US\$12 billion to build an advanced semiconductor fabrication plant in the US state of Arizona (TSMC 2020).

The extent to which firms will move their supply chains out of China remains to be seen. Recent cases of GVC relocation are not all pandemic-specific; rather, they are a result of tariffs, rising labor costs in China, and geopolitical risks. Surveys of firms' plans to leave China show mixed results. A survey of more than 3,000 companies released in February 2020 by Bank of America revealed that companies in 10 out of 12 sectors said they intended to shift at least a portion of their supply chains from their current locations (BofA Securities 2020). A Gartner survey of 260 supply chain leaders in February and March 2020 also found that one-third of the firms had either already moved sourcing and manufacturing activities out of China or planned to do so in the next two to three years (Gartner 2020).

In contrast, a joint survey by the American Chambers of Commerce and PricewaterhouseCoopers in March 2020 showed that most US firms in China had no plans to relocate production to other parts of the country or abroad (Goh 2020). Despite high tariffs and a looming threat of US-China decoupling, many firms may not pull out of China completely. China's economy has swiftly bounced back after

the COVID-19 crisis, whereas many other economies are still mired in recession. The country is deeply embedded in GVCs and has grown into a sophisticated producer as well as a huge market. Both foreign and domestic firms have invested decades in building up entire ecosystems of suppliers in China that will not be easily replicated or replaced (Brown 2020). And businesses have invested in China both to source there and to sell there. Even if firms wish to relocate, the change will not come soon because cash-starved companies currently lack the funds to invest in new operations and because such strategic decisions require more deliberation.

Eventually, firms' supply chain strategies should adhere to the same principles as ever: assess risks and costs, take risk-based precautions, and build tools to enhance agility and flexibility. Mapping supply chains, investing in digital technologies to monitor risks and make timely adjustments, standardizing inputs to facilitate replacement, stockpiling strategically important inputs, building extra capacity (in low-risk tolerance businesses), and rationalizing production lines are all options. As business leaders struggle to guide their firms through the COVID-19 crisis and to plan for the long term, decisions from where to sell to how to manage supply chains will eventually hinge on business rationales as well as expectations about the future of globalization.

Implications for developing countries

Challenges and opportunities

The COVID-19 crisis and emerging megatrends pose new challenges and opportunities for developing countries. This pandemic has plunged the world into the worst recession since World War II. The World Bank's baseline forecast envisions a 5.2 percent contraction in global GDP in 2020, and the crisis will likely cause lasting scars to the global economy through subdued trade, investment, and mobility; erosion of human capital; heightened policy uncertainty; reduced innovation; and, more seriously, increasing inequality. Developing countries are especially vulnerable to these economic headwinds because of weak health care systems, dwindling remittances, and tight financial conditions amid mounting debt (World Bank 2020a). A substantial economic downturn would reverse years of progress toward development goals and tip tens of millions of people back into extreme poverty.

Meanwhile, potential GVC reconfigurations could create opportunities for some developing countries that are close to major markets and have both comparative advantages in relevant sectors and open and conducive business environments (IFC 2020). Nearshoring could benefit certain developing countries near major markets, but those countries would need to demonstrate their capability to meet MNCs' quality, speed, scale, and reliability requirements in the value chain segments they enter. Developing countries far away from consumer markets and those that fail to meet the minimum requirements for joining certain GVCs may stand to lose. GVCs are ever evolving, and opportunities belong to the firms that constantly adapt to become more efficient and resilient.

Optimists and pessimists are divided on what cutting-edge technologies may mean for developing countries, just as they are on technology's impact on employment

and inequality. New technology is generally biased toward skills and other capabilities, which reduces the comparative advantage of low-income countries in traditional labor-intensive manufacturing activities. GVCs also make it harder for low-income countries to use their labor cost advantage to offset their technological disadvantage. New technologies therefore present a double blow to low-income countries (Rodrik 2018).

However, optimists believe that disruptive technologies create opportunities for low-income countries to leapfrog stages of development and catch up with more advanced economies. Latecomer countries can be in advantageous positions to embrace disruptive technologies because they are not locked into existing technologies (Mathews and Lee 2018). Mobile phones are a clear example of technology leapfrogging: they have given poor people in low-income countries access to long-distance communications without requiring costly investments in landlines and other infrastructure (Rodrik 2018). Technology is also a great equalizer that dramatically improves quality of life by removing barriers caused by a person's social characteristics, geographic location, or physical or sensory abilities (Kanevsky 2012). Digital technologies have allowed people from low-income countries to access information, goods, and services all over the world, creating more opportunities in education, health, and employment. For example, mobile banking has helped poor women in Kenya move out of subsistence agriculture into nonfarm businesses, providing a significant bump up the income ladder for those at the very bottom (Suri and Jack 2016). However, such ad hoc examples are not sufficient to generate meaningful long-term growth effects on low-income countries.

An increase in policy uncertainty, superpower frictions, and protectionism might be very destructive to many developing countries. Greater policy uncertainty deters new investment and rattles existing investors. A downward spiral of US-China relations would further push MNCs to either deeply localize their businesses or to withdraw to one of the two spheres. And nationalist policies could substantially dim developing countries' prospects of becoming new outsourcing or offshoring locations.

Policy implications

Policy makers need effective strategies to preserve and improve countries' investment climates through the COVID-19 pandemic and to expand the private sector's role in driving productive jobs and economic transformation.⁷ The crisis is disrupting the pathways by which countries achieve productivity growth—and, by extension, job and wage growth—by threatening spatial integration (by disrupting international production), reallocation (by reducing competitive pressure), and technological upgrading (by reducing cross-border investment). However, the crisis also provides opportunities for deep structural change and for rebuilding old systems better than they were before.

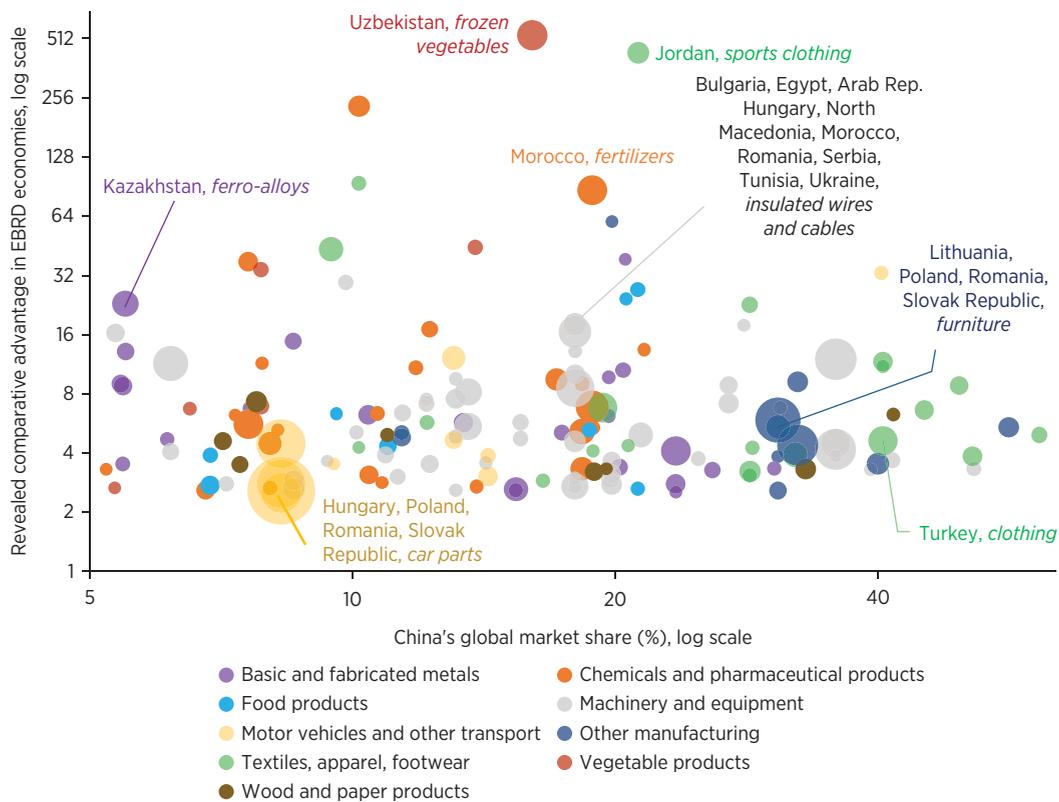
In the postcrisis recovery stage, governments will have to deal with the immediate aftermath of the pandemic by focusing on long-term growth in a changed global economy. From an investment climate perspective, governments should review their FDI policies and promotion strategies, strengthen their countries' overall business environments, and promote robust competition to reallocate resources toward sectors and firms that will drive long-term employment and economic transformation. In most

cases, countries' underlying bottlenecks to growth existed before the COVID-19 outbreak but have been amplified or accelerated by the crisis. However, the unique circumstances of the pandemic have provided many governments with unprecedented mandates for reform. Countries that manage to turn the crisis into an opportunity to undergo much-needed structural reforms (in areas such as climate change, business regulation, and gender equity) and to enact cutting-edge regulatory measures will see more resilient and sustainable recoveries. Along the way, governments should adjust their strategies to account for shifting postpandemic realities, such as changes to GVCs and the rise of the digital economy. Governments should also ensure a level playing field for all companies and should vigorously enforce competition law to defend competition in the markets both during and after the crisis.

Trends in GVC development push in different directions. As discussed in this chapter, it is still unclear whether COVID-19 will significantly change GVCs. Some economists foresee little significant change and predict that adjustments will be concentrated in health-related industries because the economic rationales for most GVCs continue to hold. Others believe that COVID-19 has become a wake-up call for a new risk-reward balance for GVCs (Baldwin and Evenett 2020) because pandemics, climate change, natural disasters, and human-caused crises may expose the world to more frequent shocks.

It is far too early to call the end of GVCs and globalization, as some are doing. The COVID-19 outbreak is a stress test for globalization. This pandemic has revealed the complex interdependence of economies around the world. For years to come, many will likely cite this crisis as one of the inflection points calling for a reevaluation of collective attitudes toward globalization. Protectionism and nationalism, like the world's other preexisting conditions, started before the COVID-19 crisis. It is not surprising to see heightened consideration of national security (in areas such as health, food, and information) and environmental sustainability in light of the outbreak. However, some of the new restrictions on investment and trade are not necessarily meant to increase productivity. Policy makers need to understand business rationales and how companies produce and trade goods and services, and these realities must guide policy deliberations.

Policy makers should pay attention to regional supply chains and to changes in sectoral dynamics to seize opportunities. Recent trade tensions between the United States and China had already prompted US firms to diversify their production facilities among other East Asian countries. Now, because of COVID-19, the push to diversify supply chains may intensify, and regional supply chains may gain more momentum. For example, Javorcik (2020) identifies the emerging competitive sectors in European and Central Asian countries that investors might consider if they decide to diversify away from their current China-based suppliers (figure 5.6). Hence, when updating their strategies, investment promotion agencies may choose to reemphasize the sports clothing sector, and Eastern European countries could look for new opportunities in the production of car parts. Policy makers may also respond to changes in sectoral dynamics, such as the rise in e-commerce and digital health services or the decline in fossil fuels (UNCTAD 2020b). Both types of changes may offer opportunities for developing countries according to their comparative advantages, and economic fundamentals will be increasingly important to attract FDI in a challenging context.

FIGURE 5.6 Which countries will take advantage of the diversification of global supply chains?

Source: Javorcik 2020.

Note: EBRD = European Bank for Reconstruction and Development.

Should new investment opportunities emerge, they will require new priorities for investment policies and investment promotion reforms. Policy makers should reflect on the market's possible shifts and let business realities guide their policy responses, building on economic fundamentals. These suggestions will entail realigning investment incentive regimes to the new national development priorities likely to emerge after COVID-19, such as job creation. Governments should also resist protectionist policies. And reforms are needed to ensure the limitation or phasing out of crisis-related investment screening and approval mechanisms to allow FDI to resume normal entry.

Tackling the complex challenges presented by the current global environment will require global leadership and cooperation. The pandemic has illustrated the shared public health and economic vulnerabilities that countries face. It has also highlighted the critical importance of exchanging data, sharing information on good practices, and strengthening collaboration. The magnitude and scale of the current crisis require policy makers to deploy their full arsenal of policy tools to improve business confidence and boost countries' investment competitiveness. An unprecedented synchronized and coordinated policy response was critical to containing the 2008 global financial crisis. Once again, the times are testing policy makers. They must rise to the occasion by showing global leadership and collaboration.

Notes

1. “COVID-19: Implications for business” (<https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/survey-us-consumer-sentiment-during-the-coronavirus-crisis>).
2. These countries include Ethiopia, Ghana, Ireland, and Saudi Arabia. See Qiang et al. (2020) for details.
3. The energy sector was also hit by disagreement among the Organization of the Petroleum Exporting Countries, the Russian Federation, and the United States about how to handle the pandemic-induced drop in demand.
4. These data can be explored at Ycharts (https://ycharts.com/indicators/sp_500_eps).
5. For more information, see “The COVID-19 Corporate Response Tracker: How America’s Largest Employers Are Treating Stakeholders Amid the Coronavirus Crisis” (<https://justcapital.com/reports/the-covid-19-corporate-response-tracker-how-americas-largest-employers-are-treating-stakeholders-amid-the-coronavirus-crisis/>).
6. In this survey, “digital adoption” measures whether a respondent has used at least one digital service in at least one industry in the six months ending in May 2020. The industries asked about include banking, insurance, grocery, apparel, entertainment, social media, travel, telecommunications, utilities, and the public sector. Details are available at <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/europes-digital-migration-during-covid-19-getting-past-the-broad-trends-andaverages>.
7. This section provides a summary of Qiang, Elgten, and Kuo (2020) and the overview in World Bank (2020b).

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