

► Policy Brief

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COVID-19: Impact on trade and employment in developing countries

Summary

- This policy brief addresses the impact of COVID-19 on global trade and the subsequent impact on employment, with an emphasis on implications for developing countries. Given the large share of global trade that takes place through global supply chains (GSCs) – over two thirds by some measures – GSCs figure centrally (WB and WTO 2019). The employment impacts of these trade shocks are estimated to be large and extensive (ILO 2020a; ILO 2020b). Importantly, estimated impacts vary considerably across sectors, depending on their reliance on imported intermediate inputs and their exposure to falling consumer demand as a result of lockdown measures (ILO 2020b).
- This brief takes further steps to address the impact of COVID-19 on trade and employment for policy discussion. First, it compares the impact of the current crisis on trade and jobs with the “great trade collapse” of 2008–09. Second, it elaborates on the possible impact of COVID-19 on the restructuring of GSCs and the possibilities of as well as constraints on the reshoring of production. Third, it addresses risk reduction strategies not just from the point of view of lead firms in GSCs but also from the perspective of developing countries, particularly as regards diversification and structural transformation as risk reduction strategies.

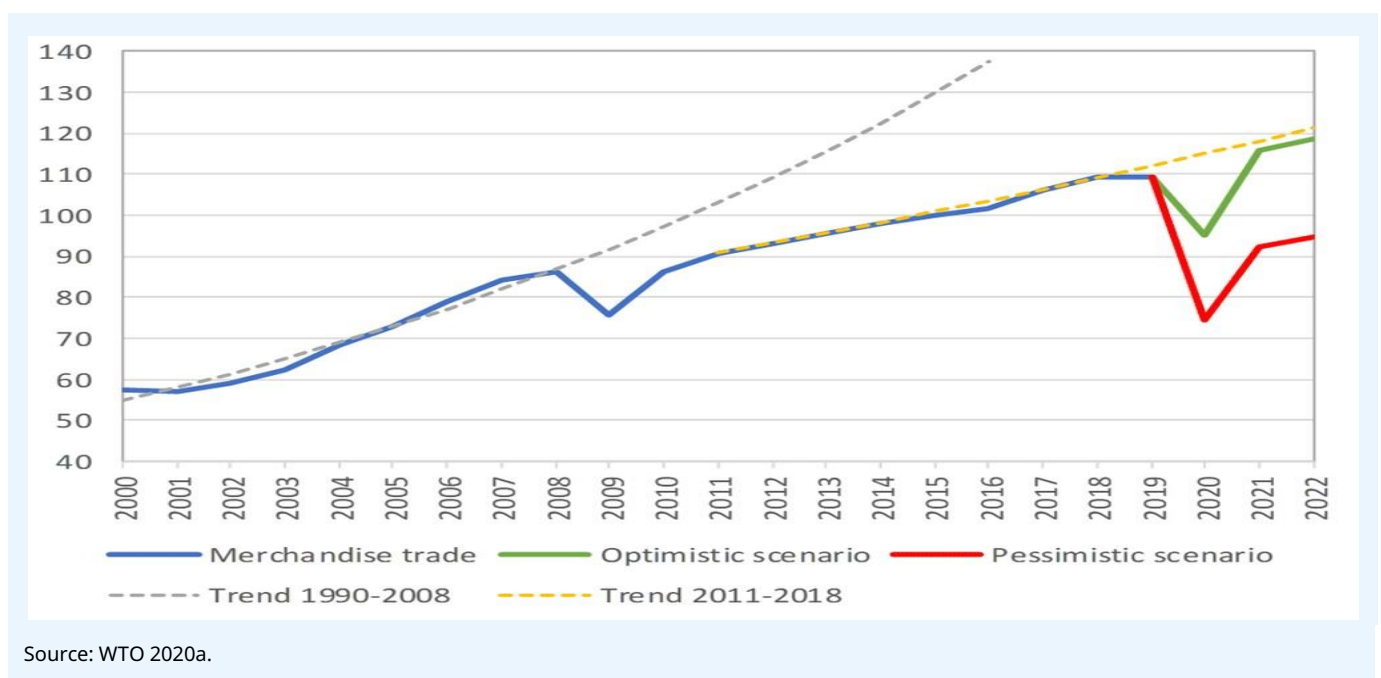
The impact of falling exports on employment in the 2008–09 and COVID-19 crises

During the last global crisis, global output fell by 2.2 per cent in 2009 while global trade fell by much more, fully 12.2 per cent, in the so-called “great trade collapse” (WB 2010; WTO 2010; Baldwin 2009a). Even countries not directly affected through financial contagion were affected by falling exports, particularly to the European Union and the United States, and this resulted in substantial job losses in developing countries (Kucera, Roncolato and von Uexkull 2012; Kucera and Jiang 2018). As dramatic as these declines were, the World Bank projects global output to fall as a result of the COVID-19 crisis by between 5.2 and nearly 8 per cent in 2020 and the World Trade Organization projects global merchandise trade to fall by between 13 and 32 per cent in optimistic and pessimistic scenarios (see figure 1) (WB 2020; WTO 2020a).¹ Data as of mid-June 2020 are more consistent with the optimistic scenario, yet this will vary among countries (WTO, OECD and UNCTAD 2020). The Republic of Korea, for example, experienced an export decline of 16.6 per cent between the second

¹ The IMF projects that global output will decline by 4.9 per cent in 2020 and the WTO projects that it will decline by between 2.5 and 8.8 per cent (IMF 2020b; WTO 2020a).

quarters of 2019 and 2020, the largest export decline in nearly 60 years (Kim and Roh 2020). Trade in services also fell sharply in early 2020 (WTO 2020a). It should be noted that the estimates for falling global trade are based on trade volumes, but trade values are likely to decline by even more, given the largest recorded fall in global commodity prices in early 2020, which creates a further challenge for developing countries given their reliance on commodity exports (CCSA 2020). Alongside these developments are the largest recorded capital outflows from emerging countries, while the United Nations Conference on Trade and Development (UNCTAD) projects declines in foreign direct investment for 2020 of between 30 and 40 per cent (IMF 2020a; UNCTAD 2020).

► **Figure 1. World merchandise trade volume, 2000–22 (index, 2015=100)**



The numbers for both crises raise the question of why the declines in global trade were, or are projected to be, so much greater than the declines in global output. The efforts by a number of economists to understand the causes of the earlier “great trade collapse” settled on the importance of the compositional effect and the synchronicity effect (Baldwin 2009b). The compositional effect describes how the demand shock associated with the 2008–09 crisis focused on postponable consumer durable and investment goods, including electrical and non-electrical machinery, transport equipment, chemicals, steel and other metal products and raw materials. Since these goods make up a much larger share of traded goods than output, a given change in the demand for them has a much larger effect on trade than on output. The synchronicity effect describes how GSCs cause the effects of falling exports to be rapidly transmitted across borders.

The economic causal channels differ fundamentally between the last and current global crises. The crisis of 2008–09 was primarily a demand shock whereas the COVID-19 crisis is both a supply and demand shock. In the early months of the current crisis, the six countries with the most cases of COVID-19 were China, Germany, Italy, Japan, Republic of Korea and the United States. These countries make up between 50 and 60 per cent of the global share of overall output, manufacturing output and exports and are central hubs of GSCs, and so the global impact of supply and demand shocks emanating from these six countries are inevitably outsized (Baldwin and Tomiura 2020).

Factory shutdowns in these countries resulted in initial supply shocks for which shortages of intermediate inputs were rapidly transmitted along GSCs, creating secondary factory shutdowns in a process of supply chain contagion. Though supply chain contagion is generally presented as a supply shock moving downstream in GSCs, it can also spread as a demand shock moving upstream, as evidenced by the shutdowns of garment factories in developing countries such as

Bangladesh resulting from plummeting demand from lead firms in garment GSCs (Anner 2020; ILO 2020c). Restrictions on air travel created another supply shock, given the importance of the use of cargo holds on passenger planes for global freight transport. Restrictions on air cargo had a devastating impact on firms in GSCs involved with perishable horticultural goods, such as the production in Kenya of cut flowers and fruits and vegetables for the EU market (Fleming 2020). Factory shutdowns have resulted in mass lay-offs, a significant initial demand shock of the COVID crisis. Yet the biggest demand shock came from what the IMF has called “the great lockdown”, arguably of greater immediate importance for global output, trade and employment than the supply shock resulting from disruptions to GSCs (IMF 2020c; Seric et al. 2020).

In order to estimate the impact of the trade collapse on employment, it is useful to work with sectoral-level trade data. This is because sectors differ greatly in terms of export orientation, the labour intensity of production and (in terms of production linkages) the labour intensity of intermediate inputs, as well as the extent to which these intermediate inputs are imported or produced domestically. Working with more detailed sectoral trade data is particularly useful for targeting policy interventions towards hard-hit sectors and assessing possible gender or skill biases of trade impacts. Such trade data is only available with a time lag, and so it is not possible at the time of writing to undertake such estimates.

Yet it is instructive to consider the findings of ILO studies for China, India and South Africa estimating the impact on employment of the trade collapse of 2008–09, to get a sense of the scale of the employment challenge countries may face during the COVID-19 crisis (Kucera, Roncolato and von Uexkull 2012; Kucera and Jiang 2018). Looking at the direct, indirect and income-induced effects of falling exports to the EU and the United States reveals estimated job losses (full-time equivalents) of between 3.3 and 5.4 per cent in China (depending on the months considered), 1.1 per cent in India, and 4.4 per cent in South Africa.² These studies find a gender bias against women workers in China – those sectors in which women workers were disproportionately represented were harder hit – but a gender bias against men workers in South Africa and no gender bias in India. These are *ceteris paribus* estimates, isolating just the impact of falling exports to the EU and US, and do not account for the other factors having positive and negative effects on employment, not least government stimulus packages. Yet global output and trade may well decline by considerably more in the current crisis than in 2008–09 crisis, in which case developing as well as developed countries will experience greater job loss through falling exports as a result of the COVID-19 crisis.

Restructuring GSCs and risk reduction strategies: Possibilities and constraints

While falling exports as a result of COVID-19 have a more immediate impact on employment, a more fundamental challenge for developing countries may result from the possible restructuring of GSCs. This could include the reshoring or near-shoring of production from developing countries back towards developed countries, greater reliance on regional supply chains, and increasing supplier diversity by sourcing of intermediate inputs from different countries – referred to as “multiple sourcing”. As discussed in an ILO report, the discussion on reshoring is closely linked to that of the automation of production, which could in principle offset the importance of labour costs in determining multinational enterprises’ production location decisions, particularly as regards efficiency-seeking foreign direct investment (Barcia de Mattos et al. 2020).

The COVID-19 crisis has led to a number of voices calling for a rethink of GSCs. In the initial stages of the crisis, this resulted from many countries – developed and developing alike – more clearly realizing how dependent they were on imports for medical supplies and equipment to combat COVID-19. This led a large number of countries to impose export prohibitions and restrictions on these goods as well as food products (WTO 2020b).

² For all three countries, the estimated percentage decrease in jobs is roughly proportionate to the percentage decrease in total exports to the EU and the United States. In other words, China and South Africa have higher estimated jobs losses than India because their total exports to the EU and the United States declined by considerably more.

The supply shocks transmitted through GSCs by factory closures added additional impetus to the rethinking of GSCs. For instance, it has recently been suggested that:

The combination of trade-policy shocks and COVID-19 may have created a perfect storm. Each of the events by itself would not be enough to spark a rethinking of global value chains, but the two combined may just do so ... Going forth, firms will need to diversify their supplier base and look at reshoring ... There may be some reshoring, especially as automation has already reduced the importance of labour costs. But this rethinking will also create opportunities for less popular investment destinations (Javorcik 2020, 111–112, 114).

This rethinking points out the potential of new opportunities for countries to enter into GSCs created by the multiple sourcing of intermediate inputs but also the potential for production to shift away from developing countries in the process of reshoring. It is *production* more than *jobs* that are envisaged to shift, since these shifts would be facilitated by automation particularly of labour-intensive production in such sectors as garments and electronics, for which developing countries' competitive advantage is based on their low labour costs. In this scenario, in other words, reshoring is accompanied by a reduction in the labour-intensity of production. However, ILO case studies focusing on the producers and potential users of new automation technologies illustrate that there remain substantial technical (on top of economic) impediments to the automation of certain labour-intensive activities in the garment and electronics sectors, including aligning pliable fabrics for sewing and inserting small flexible parts into tightly-packed consumer electronics (Kucera and Barcia de Mattos 2020). The case of the Adidas Speedfactory initiative in Germany and the US also provides a cautionary tale for the reshoring hypothesis, in which proximity to suppliers in Asia among other factors outweighed the benefits of reshoring (see box 1). Nor is multiple sourcing without costs, in terms of both information management costs resulting from increasing the complexity of the GSC and higher input costs, since, in the absence of risk, lead firms in GSCs would tend to single source from the supplier able to deliver the best combination of cost, quality and delivery time. Relevant in this light are concerns raised by the WTO and others that more complex GSCs are more vulnerable to risk (WTO, 2020a).

Drawing from the GSC management literature, Miroudot argues that the evidence is inconclusive that more complex GSCs have been more adversely impacted by the COVID-19 crisis, for which he takes automobiles and electronics as examples of complex GSCs (Miroudot 2020). He argues that the response to complexity should not be to reduce it but rather to manage it in light of the benefits that complexity confers, at least to lead firms in GSCs. The growing use of information technology and artificial intelligence in GSCs illustrate the emphasis firms are putting on the management of GSC complexity (Balte 2020). Miroudot argues for the importance of distinguishing between *robustness* and *resilience* as objectives in reducing GSC risk in the context of COVID-19 and crises more generally. Robustness is defined as “the ability to maintain operations during a crisis” while resilience is defined as “the ability to return to normal operations” after a crisis (Miroudot 2020, 122). These different objectives require different strategies, each with different implications for the restructuring of GSCs and production location decisions.

For medical supplies and equipment, robustness is obviously the key consideration, which is more likely to be achieved through multiple sourcing as well as close monitoring of inventories and production along the supply chain. Especially for countries without significant domestic production capacity of essential intermediate inputs, a degree of reshoring is consistent with multiple sourcing and thus greater robustness. Yet relying too heavily on domestic sourcing can reduce robustness, in that domestic factories may be as vulnerable as overseas factories to closures resulting from crises. Miroudot argues that while there is a degree of overlap in robustness and resilience strategies, the key difference is that firms pursuing a resilience strategy are less inclined to make sizable investments to forestall supply shocks. Indeed, there is evidence that resilience can be achieved through long-term relationships with single suppliers of intermediate inputs, including by lead firms making investments in these suppliers. Resilience can also be achieved through regional trade agreements, for instance, the African Continental Free Trade Area (AfCFTA) and the Pan Arab Free Trade Area (PAFTA) (UN 2020a; UN 2020b).

Given the different implications for production location decisions of robustness versus resilience strategies – not least for developing countries – it would be useful to have a deeper understanding of what determines which strategies different firms pursue, both within and across sectors. From the ILO's perspective based on the resolution concerning decent work in global supply chains adopted by the International Labour Conference at its 105th Session (2016) it is important that the outcomes of risk reduction strategies achieve coherence between economic outcomes and decent work in GSCs (ILO 2016). Essential to this is assessing compliance with the application of international labour standards as well as the United Nations Sustainable Development Goal Indicator 8.8.2 on labour rights, which focuses on freedom of association and collective bargaining rights for workers and employers and their organizations (ILO 2018).

► Box 1. Adidas Speedfactory and reshoring

One of the more interesting reshoring cases is the rise and fall of the Adidas Speedfactory. Speedfactory was initially part of the Adidas Made for Germany (MFG) initiative, which had the explicit objective of bringing production closer to customers in Europe and the United States. Shoes from the first Speedfactory in Germany hit the market in 2016 and from the second Speedfactory in the United States in 2018. The technology used in these factories included a combination of 3D printing, robotics and automated knitting, as well as computer simulation and modelling for developing new designs and producing custom-fitted running shoes. Since these factories were owned and operated directly by Adidas, they ran counter to the broader trends of outsourcing as well as offshoring. The reasons provided by Adidas for such a move are the familiar ones regarding reshoring: reduced time between design and production and faster delivery times more generally, reduced transport costs, and concerns about rising labour costs in Asia. In a striking turnabout, Adidas announced in November 2019 that it would shut down the Speedfactory in both Germany and the United States in early 2020 and move the associated technologies to factories in Asia. The reasons given by Adidas are closer proximity to the vast majority of its suppliers and that factories in Asia were more flexible in producing a wider range of products beyond running shoes with knit uppers.

Source: Kucera 2020.

Risk reduction through structural transformation

Much of the discussion on the restructuring of GSCs is from the viewpoint of lead firms and their risk reduction strategies. This is unsurprising given the strategic role of lead firms in GSCs, but no less important are the viewpoints of manufacturing and supplier firms and their workers in developing countries and the implications of the restructuring of GSCs for economic development strategies. This policy brief closes with a brief consideration of two sectors that have been hard hit by the COVID-19 crisis, the garment and horticultural sectors. These are among the less complex GSCs, illustrating that complexity is only one of the factors that determines the extent to which GSCs are adversely affected by the crisis.

The garment sector has seen a large number of factory closures, slowdowns and mass layoffs in a number of countries in Asia and Latin America (Anner 2020; ILO 2020c). The focus here is on Bangladesh given the country's heavy reliance on garment exports, making up around 80 per cent of the country's export earnings and second only to China in terms of global garment exports, and that over 1 million garment workers lost their jobs. These workers are overwhelmingly women, contributing to the disproportionate effect of the COVID-19 crisis on women (ILO 2020d). Particularly useful in this regard is the in-depth information available through research undertaken by Anner based on a survey of garment manufacturers in Bangladesh (Anner 2020). Anner describes how COVID-19 hit the Bangladeshi garment sector in three waves. First was a supply shock resulting from the closure of textile factories in China, second were late payments by lead firms (brands and retailers), followed by lead firm cancellations of orders, including in-process and completed orders. As Anner documents, the vast majority of workers who lost their jobs received neither legally mandated severance nor

furlough pay. This is particularly problematic given these workers' low earnings, their families' reliance on these earnings, and the additional medical costs if these workers or their families fall ill with COVID-19.

The rapid growth of Kenya's exports of horticultural goods to the EU in recent years has been a widely touted success story, with around 3 million workers in Kenya involved in growing and processing these goods (Fleming 2020). Restrictions on air freight as a result of COVID-19 saw these exports fall by around 75 per cent, resulting in large-scale layoffs and the outright loss of perishable produce. Though the domestic market for cut flowers is limited, a positive development has been a reorientation of fruit and vegetable sales to within Kenya:

After decades of high dependency on exports, the opportunities for tapping local and regional markets are becoming clearer, especially as African economies and income levels grow. Exports aren't going away, but growing domestic markets opens new frontiers for trade while supporting our local populations, many of whom are small farmers (quoted in Fleming, 2020).

As the cases of the Bangladesh garment and Kenya horticulture sectors make clear, risk reduction through diversification is relevant not only for lead firms in GSCs but also for manufacturing and supplier firms. Indeed, diversification is integral to structural transformation in the process of economic development, defined in terms of shifts in output and employment toward higher-value-added sectors as well as toward higher value-added activities within sectors. Studies of the garment sector show there are substantial opportunities for technological upgrading within the sector, while raising concerns about the defeminization of employment in the face of such upgrading (Rossi 2013; Kucera and Tejani 2014). The associated productivity gains enable higher worker incomes, shorter working hours, and better working conditions more generally, provided productivity gains are equitably distributed. In this sense, structural transformation is concerned with both the quantity and quality of employment. Countries such as Bangladesh and Kenya have a particular challenge to face in this regard, in that the knowledge required for production and marketing of garments and horticultural goods may have limited spillovers to other sectors. In the parlance of the literature on "economic complexity", garments and horticultural goods are relatively isolated in "product space" in which proximity in product space is meant to indicate the extent of similarity in the knowledge required to produce different products (Hidalgo and Hausmann 2009).

The COVID-19 crisis profoundly illustrates the importance of broad-based sectoral strategies. In a narrow sense, industrial policies and sectoral strategies are about facilitating structural transformation towards more productive sectors and product and process upgrading within all sectors. Yet no less important are skills development policies and conducive macroeconomic, trade and investment policies. Investment policies include investments in infrastructure to support sales to local and regional as well as overseas markets, and all of these policy realms are central to the ILO's mandate and daily work.

Summing up

ILO studies show that the "great trade collapse" of 2008–09 resulted in a large number of jobs lost in developing countries, but the impact of COVID-19 is likely to be even worse, given the combined supply and demand shocks on trade and the large projected trade declines for 2020. While the employment impact depends on the changing composition of trade, given differences in the labour intensity of production, such compositional effects are likely to be swamped by the sheer magnitude of the projected trade declines for 2020. Global trade is projected to bounce back in 2021, but even short-term job loss can do long-term harm, so called "scarring effects," particularly in developing countries with weak social safety nets.

The COVID-19 crisis has reinvigorated the debates on the rethinking of GSCs, particularly on the reshoring of production back towards developed countries and multiple sourcing of intermediate inputs in GSCs as a risk reduction strategy. The former could reduce employment prospects for developing countries while the latter could create new opportunities for

developing countries to enter into GSCs. Yet there remain substantial benefits for manufacturers in GSCs to remain close to their suppliers in developing countries. There also remain technological bottlenecks to automation-enabled reshoring for such key activities as garment sewing and electronics assembly. Moreover, risk reduction in GSCs can be achieved not just through multiple sourcing but also through maintaining long-term relationships with fewer suppliers. While the COVID-19 crisis is likely to result in a consolidation of manufacturers in GSCs, not least in the hard-hit garment sector, it is difficult to foresee a clear-cut tendency in the restructuring of GSCs.

Risk reduction and diversification strategies are relevant not just for lead firms in GSCs but also for manufacturing and supplier firms in developing countries, especially countries which are highly export-dependent and reliant on very few sectors. Diversification into new sectors and new products and processes within established sectors are defining objectives of structural transformation, for which well-designed and well-managed sectoral strategies have historically played an important role. At the same time, there is a growing emphasis on the objectives of learning and knowledge accumulation in sectoral strategies to improve the prospects of late-developing countries, especially in a rapidly changing and highly uncertain global context.

► Box 2. What the ILO can offer

The ILO has developed *A Policy Framework for Tackling the Economic and Social Impact of the COVID-19 Crisis* (ILO 2020e). The *Policy Framework* is defined by four pillars: stimulating the economy and employment; supporting enterprises, jobs and incomes; protecting workers in the workplace; and relying on social dialogue for solutions. The *Policy Framework* emphasizes the importance of multilateral collaboration and builds on what makes the ILO distinctive: the application of international labour standards and social dialogue (ILO 2020e; UN 2020a; UN 2020b; UN 2020c).

To complement the *Policy Framework*, the ILO can work on a number of fronts to provide assistance in the face of trade-related employment shocks resulting from the COVID-19 crisis. As some examples, the ILO can:

- ▶ Conduct analyses of which countries and sectors are particularly adversely affected by job loss resulting from falling exports, including the gender and skills biases of these job losses.
- ▶ Undertake research on the implications of the COVID-19 crisis and other factors, such as automation, on the restructuring of GSCs as well as the implications of such restructuring for development prospects and strategies.
- ▶ Provide guidance to countries seeking economic diversification, by helping identify potentially promising sectors for structural transformation and job growth as a means of reducing risk in the face of economic crises and for economic development more broadly.
- ▶ Undertake research on macroeconomic and labour market policies for sustainable and resilient economic diversification and transitions to higher-value-added activities.
- ▶ Provide guidance on skills development policies for economic diversification and structural transformation.
- ▶ Provide guidance on public employment programmes as both a means of providing livelihoods in the crisis but also a means of contributing to structural transformation through investments in strategic infrastructure.

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Contact details

International Labour Organization

Route des Morillons 4
CH-1211 Geneva 22
Switzerland

Development and Investment Branch
(DEVINVEST)

E: kucera@ilo.org
leung@ilo.org