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Lessons from a Decade of Disruptions

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Acknowledgements

This paper builds on the policy brief published by the same authors in February 2024, titled “Global supply chains - lessons from a decade of disruptions”. This longer policy brief can be accessed on the RETHINK-GSC website here as well as on Bruegel’s website here. The purpose of this shorter piece is to provide a quick overview of the points made in the larger policy brief.

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1 Introduction

After a period of rapid globalisation, the last decade was marked by a series of major shocks to global value chains. First, the US-China trade war under the first Trump administration rapidly increased the barriers to trade between the two largest world economies. When COVID-19 hit, lockdowns disrupted the global economy and caused shortages of essential goods such as chips and medical supplies. Then, the Russian invasion of Ukraine led to a surge in energy and food prices that compounded disruptions to value chains, particularly in Europe.

As the second Trump presidency begins, one could worry that it will deal the final blow to globalisation. However, global value chains have proven remarkably resilient in the face of the extraordinary shocks of recent years.

2 Trump-Biden trade wars

The first test for global value chains came in the form of the US-China trade war. In July of 2018, the Trump administration started to aggressively increase the tariffs on a number of imports coming from China, to which China retaliated in kind. The average US tariff rate on Chinese goods increased from 3 percent to 21 percent, while the Chinese tariff rate on imports from the US increased from 8 percent to 22 percent. The trade war ended in 2020 with a truce, the so-called Phase I agreement. At that time, roughly two-thirds of bilateral trade was directly affected by these tariffs. While this agreement ostensibly ended the trade war, trade barriers continued to increase in high tech areas, notably chips.

The direct impact of the trade war was significant, with US exports to China decreasing by an estimated 23% and Chinese exports to the US stagnating in an overall growing market. The broader effects of the trade war were both trade diversion and trade replacement, with other countries seizing these opportunities. Vietnam, Thailand, Korea and Mexico were among the largest beneficiaries of the trade war. US and Chinese real income declined as a result of the trade war, with US consumers paying most of the import tariffs through higher prices. The purchasing commitments made by the Chinese government in the Phase I agreement largely failed to materialise. Furthermore, the US government had to intervene to subsidise soybean producers in order to mitigate the effect of Chinese retaliatory tariffs.

3 COVID-19

While the US-China trade war mainly affected two countries, COVID-19 shook the world economy. Lockdowns, factory closures and logistical barriers to cross-border trade disrupted large parts of global trade, notably 'just-in-time' value chains. In-person services such as hospitality were most severely affected. The pandemic induced a simultaneous supply and demand shock to the economy. While supply contracted due to restrictions and difficulties procuring input, demand decreased as consumers saved in the face of high uncertainty. In the first months of the pandemic, the savings rate doubled. As government stimulus programs in advanced economies started to kick in, demand for physical goods rapidly recovered (while demand for services took much longer to return). This shift in demand from services to goods aggravated the experience of shortages.

The combination of lockdown measures, logistical bottlenecks due to sick workers and general economic uncertainty led to a mismatch between supply and demand. This was reflected in shipping prices, with the shipping rate from China to Europe increasing seven-fold. In some markets, such as new cars, producers anticipated a collapse in demand and cancelled orders for inputs such as chips, only to then struggle to cope with quickly recovering demand. The ensuing price spikes in many markets were often described as ‘shortages’. However, they were often not shortages in the strict economic sense, as price changes reflected a real increase in scarcity.

Given the level of disruption of the pandemic to economic activity, global value chains recovered remarkably quickly. After only a relatively short time, most prices returned to their long-term levels and global trade recovered to its pre-pandemic trend quite quickly.

4 Russian invasion of Ukraine

As the effect of the pandemic started to subside, Russia’s full-scale invasion of Ukraine induced the next large shock to the global economy. Ukraine and Russia are both significant exporters to global commodity markets, and the disruption of their supply to these markets led to a surge in prices.

The energy shock was most acutely felt in Europe, where fixed pipeline infrastructure meant that Russia had significant monopolistic power in gas markets. Price spikes were much more muted in markets for liquified natural gas, which are traded on global commodity markets with less market concentration. European policymakers intervened heavily in their gas markets in order to wean the economy off Russian gas, and sought to mitigate the effect of the rapid increase in energy prices on the economy. Despite the rapid increase in energy costs, industry overall increased output and employment in 2022, with the exception of energy-intensive industries such as chemicals. The long-term effect on energy-intensive industries is yet to be seen, as certain energy prices can be expected to remain above the pre-war levels.

Apart from energy markets, Ukraine and Russia were responsible for a large share of global trade in certain agricultural goods. They accounted for roughly 30 percent of wheat exports and are crucial suppliers of barley, sunflower oil, maize and rapeseed. Their role in global agriculture markets is amplified by their importance in fertiliser markets. The war led to a spike in agriculture and fertiliser prices. This has made keeping Ukraine’s Black Sea grain shipping routes open and developing alternative trading routes key priorities. Policies in this regard helped to reduce global food prices.

Overall, despite a very large effect on the European economy and on food markets, the Russian invasion of Ukraine had only limited effects on global value chains more generally. Despite the energy crisis in Europe and wide-ranging sanctions against Russia, global trade overall grew strongly in its recovery from the pandemic. However, the war has changed policy significantly. It has sharpened focus on strategic supply chains even further and discredited ideas of peace through economic integration.

5 Conclusion

Despite their unprecedented size, global value chains have survived the shocks of recent years largely intact. However, the disruptions were severely felt by many consumers and producers and necessitated large-scale stabilising policies. The US-China trade war disrupted bilateral trade but created new opportunities for other countries to trade with the conflicting parties. The pandemic, an economic shock of enormous magnitude, severely disrupted much of global trade, but it took only two years to recover. Similarly, it took Europe less than two years to replace Russian gas with alternative supplies. In both cases, the resilience was bought with unprecedented government intervention.

From this perspective, it seems likely that trade among the rest of the world will survive an inward turn of the US economy. However, this optimistic view has to be complemented by a massive shift in perspective on value chains from policymakers. While the shocks were overcome in an objectively short time, it was subjectively a very disruptive experience. As a result, global trade is increasingly not only seen as an economic opportunity but also a geopolitical liability. This has led to a new policy agenda centred around managing these risks. Whether this policy agenda will, in the medium-term, lead to disintegration of value chains is yet to be seen.

rethink GSC

ABOUT RETHINK-GSC

The project ‚Rethinking Global Supply Chains: Measurement, Impact and Policy‘ (RETHINK-GSC) captures the impact of knowledge flows and service inputs in Global Supply Chains (GSCs). Researchers from 11 institutes are applying their broad expertise in a multidisciplinary approach, developing new methodologies and using innovative techniques to analyse, measure and quantify the increasing importance of intangibles in global supply chains and to provide new insights into current and expected changes in global production processes.

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