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POLICY INSIGHTS

The policy response to global value chain disruption

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Abstract

This article considers how policymakers should react to the disruption of Global Value Chains, which became dramatically evident during the pandemic. It argues that repeated shocks to GVCs, as seen in recent years, are not purely random and disjointed events. They are the result of fundamental shifts in the geopolitical environment, global economy, and climate. Firms have concluded that international supply chains have become endemically riskier, and this is changing their risk/efficiency calculus. But there is no reason and – so far – little evidence to suggest that GVCs will stage a large-scale retreat. Powerful economic forces are at work that will prompt increased reliance on GVCs and improve their operability in the future. Governments tend to overreact when faced with supply shocks, and unnecessarily impede GVCs; more nuanced and coordinated responses are needed. The WTO can play an important role, promoting the resilience of GVCs.

Global value chains (GVCs) – international networks of suppliers that contribute to the production of a good or service along lines of comparative advantage – are vital sources of efficiency. According to the World Bank (2019), GVCs account for over 50% of world merchandise trade. GVCs underlie modern prosperity, helping to ensure abundance, quality, and low prices across much of the world economy. Insertion in GVCs plays a central role in development, providing poor countries with know-how, access to world markets, and – since key suppliers are often foreign-invested – financing capacity, enabling them to exploit untapped trade opportunities.

Global value chains disruptions – caused by wars, civic conflicts, natural disasters, and accidents that close transport routes – and that affect specific regions or sectors, are not unusual. However, in recent years, they have become more frequent and severe. The ongoing Covid-19 pandemic inflicted a shock of unique ferocity to production in terms of its breadth, intensity, and duration. The pandemic comes on the heels of numerous other major shocks to GVCs, such as the Trump tariffs on steel and aluminium, temporary closure of the Suez Canal, Brexit, and the China-US trade war. The long-standing negotiating stall on big multilateral agreements at the WTO and the disabling of its dispute settlement mechanism do not physically impede the operation of GVCs, but they contribute to the sense that all international trade has become less predictable. The war between Russia and Ukraine, which upended the world's supply of energy, food, and many minerals in 2022 exploded even as a fourth wave of the Covid-19 disease was engulfing the United States, Europe, and now China, while large populations in Africa and elsewhere in the developing world remained unvaccinated.

These high profile, sizeable, and repeated disruptions have caused shortages and delays in the supply of goods and services and contributed to a resurgence in global inflation. The disruptions raised pressing policy questions: is the frequent breakdown of GVCs a temporary glitch, or a permanent phenomenon? Have GVCs become endemically more accident prone, and why? How should macroeconomic and trade policy react? What role is there for international cooperation?

This article attempts to address these questions. It contributes to the policy discourse by documenting why and how GVCs became endemically vulnerable. Even so, contrary to much of the running commentary, the article shows that GVCs were essential to dealing with the pandemic shock and that – barring an escalation of

global conflicts – GVCs are likely to become even more prevalent in the future. Relying more on home production is neither efficient nor a guarantee against future supply shocks. The article also shows how national policymakers tend to overreact and react in wrong ways to shortages of traded commodities. Finally, the article shows how the WTO as it exists today is essential to the sustainability of GVCs, and how it could play an even more important role in supporting the resilience of GVCs in the future.

1 | ASSESSMENT

Persistent and severe GVC disruption is a recent phenomenon, and, at the time of writing, hard data needed to analyse its consequences on trade and investment flows are still scarce. Given the available data, and the reigning uncertainty, in this section I provide an interpretation of recent trends.

1.1 | Shocks to GVCs have become endemic

If the series of major shocks to GVCs were only the result of bad luck, firms and governments would draw lessons from each episode and make appropriate adjustments specific to each shock. But if the shocks are related in some way, the problems run deeper, requiring a rethinking of the GVC model itself and of the policy frameworks on which they rest.

Five relatively new features of the international environment have increased the risks to operation of GVCs in what may be described as a regime change. These new features – some evident decades ago but which have become increasingly prominent over the last several years – include deeper geopolitical rifts and more frequent confrontations, changing consumer preferences, greater need for decarbonisation, and partial erosion of the rules-based trading system. There is also the possibility (or the fear) that pandemics will become more frequent. This is placed last on the list because it is especially difficult to evaluate:

- *Geopolitical rifts* between China and Russia, the United States and its allies, are hardly new but are now profound, and represent the single most important risk to the continued operation of GVCs as we know them. Such divisions culminated in the trade war between China and the United States, and most recently in the war between Russia and Ukraine, which prompted unprecedented trade and financial sanctions levied against Russia, including withdrawal of its MFN treatment by NATO countries and other allied nations. The war has revealed geopolitical fault lines which cast additional doubt in the minds of many on the sustainability of the GVC model, and of the trading system as currently configured. UN votes, in which countries accounting for about half the world population abstained from condemning Russia's invasion, underscored that there is no longer a sole country of reference, a role the United States played in the decades that followed the fall of the Berlin wall. Today, even a bipolar or tripolar view of the world represents an oversimplification. Amid rising nationalism and the fragmentation of the world order, many small and large nations are inclined to chart their own separate course, unwedded to one ally or to multilateral principles. China and the United States are the largest economies, and China is at the centre of many supply chains that span across Asia and the world. As geopolitical and security challenges persist, or intensify as the dispute over Taiwan festers and China's rise increasingly challenges the primacy of the United States, GVCs are likely to be exposed to more frequent political shocks.
- *Consumers* have drawn great benefits from rising real incomes, open trade, containerisation, and technologies that enabled the rise of ecommerce. At the same time consumers have become increasingly demanding in all respects: price, quality, sustainability, and availability. Modern-day GVCs are forced by domestic and international competition to respond to these demands. They have become intrinsically more vulnerable to shocks that affect any link of the chain because in their quest for efficiency and low prices they have sought the cheapest supplier anywhere in the world and adopted 'just in time' methods of production, distribution, and inventory management. This does not mean that executives have ignored risks to supply chains – that they were naïve – rather that they optimised under the assumption that risks were significantly lower than they are today.
- Dealing with *climate change* effectively will require increased reliance on trade and on GVCs, especially in sectors such as agriculture and environmental goods – but may also greatly complicate the operation of GVCs. The complications will occur through at least three channels: more frequent weather catastrophes such as flooding and hurricanes; increased cost of sea and air transport due to the huge 'green premium' in those sectors given the present state of technology; and the competitive effects of uncoordinated and divergent decarbonisation policies across countries, which raise the spectre of a proliferation of specific subsidies and carbon border adjustment taxes that are each based on different criteria and parameters.
- *Partial erosion of the rules-based global trading system* has become increasingly evident in recent years as nationalist and isolationist ideologies came to prevail in some instances, and protectionist measures have proliferated. Even so, though WTO negotiations

remain stalled, and its dispute settlement system was disabled, major regional and bilateral agreements have been concluded across the world, most notably in Asia and Africa. Fragmentation of the trading system into regional blocks (Americas, Asia, and Europe), each only partly cohesive and with unstable links between them, is a real possibility (Dadush, 2022; Dadush & Dominguez Prost, 2023). This trend would represent a direct challenge to Global Value Chains, although not necessarily to regional production networks.

- The last *great pandemic* before the present one was the Spanish Influenza of 1918–20. The risk of more frequent major pandemics for the operation of GVCs is difficult to assess. However, the present episode is dramatic and the shock it imparted on the global economy was entirely unanticipated, highlighting features that could herald more bad disease scenarios. The world economy has become highly integrated, not only through trade and investment, but also constant movement of people, enabling the spread of infectious diseases of all kinds. The pandemic has also revealed how limited the existing arsenal of anti-viral vaccines and therapies is, and how quickly a deadly virus can mutate and create new waves of disease, which resist them. We simply do not know whether Covid-19 should be considered as just another 100-year shock or the harbinger of more frequent episodes. All we know is that a new source of risk for the operation of GVCs now exists.

1.2 | The risk/efficiency calculus has changed

Assuring resilience of GVCs is a complex undertaking, requiring understanding of the risk of disruption at three levels: individual firms that compose the value chains, the complexity of the value chain itself, and the role of state actors. In case studies of medical products during the pandemic deploying this framework, Gereffi et al. (2022) find that rubber gloves, a simple value chain with many alternative suppliers and which raise few regulatory channels, were the least disrupted, while vaccines – based on unique knowledge of few firms and subject to many regulatory processes – were the most disrupted.

According to a McKinsey report based on a survey of supply chain executives carried out in May 2020, during the height of the pandemic disruption, 93% were planning to increase resilience of their supply chain (Alicke et al., 2020). Since the McKinsey survey was published, the outbreak of the war in Ukraine and even greater China-US frictions reinforced concerns about resiliency of GVCs among executives. This is shown in numerous other surveys conducted by auditing and consulting firms, and business associations. For example, in a survey of 1064 international senior executives in June and July 2022, the consulting firm Protiviti found that 45% are deemphasising low-cost supply chains in favour of flexibility and resilience (Protiviti, 2022).

Measures contemplated to improve resilience include diversification of the supplier base, holding more inventories, improving knowledge of supply chains (the suppliers of suppliers) and making them more transparent, and improving ongoing monitoring of the supply chains for early identification of bottlenecks through applying IT. However, even at the height of the pandemic, McKinsey found that only 15% of executives plan to nearshore their own production, meaning bringing own production back to their home country or to one in geographic proximity. The McKinsey results are in line with surveys of China-based American, European, and Japanese executives carried out by their respective trade associations in recent years, which strongly suggest that few firms are intending to leave China despite frictions (Dadush & Weill, 2021).

Given the many voices arguing for self-reliance, how come, if GVCs have become so exposed to shocks, few firms are contemplating a return to home production? Cost, including large investments in supplier relationships over many years – that is sunk cost – is a major reason. In fact, the McKinsey survey found that less than half of the firms intending to increase resilience of their supply chain would do so even at the expense of short-term savings. Stated differently, executives are looking for more resilience without increased cost.

There are many reasons reshoring is not an attractive option. For example, many firms want to locate close to their biggest markets (e.g. produce in China for China). In some cases, offshoring is required because access to essential raw materials, specific skills and sufficient labour is not available nearby. But another reason to avoid reshoring – often overlooked – is that reshoring does not necessarily mean reduced risk. If the shock originates nearby or originates abroad and affects ability to export from nearby, overconcentration of production at home can also be a big source of disruption.

Take the case of the pandemic. Those arguing for self-reliance assume implicitly that domestic supply lines were far less affected than foreign supply lines by pandemic restrictions. Yet the case of North America, the world's largest economy, casts serious doubt on this notion. The disruption to volumes of shipments inside North America, that is those originating and destined for delivery inside the continent, as measured by the widely used Cass Freight Index, was extremely severe.

During the worst of the pandemic, shipments within North America fell 20% from the pre-pandemic level in volume terms and then recovered to about 10% above the pre-pandemic level in a year (Cass Information Systems, 2023). This cycle was about as pronounced as that of trade of the United States with the rest of

the world, and about 50% wider than that of world merchandise trade volume. Domestic supplies within North America were severely disrupted, just as were international supplies. This is hardly surprising, since – to take one example – a shortage of truck drivers as Covid restrictions forced people to stay home caused as much delay of shipments originating in North America and destined to North America as they did of those sourced outside the continent.

Indeed, as shown in the next section, the available data strongly suggests that international trade often relieved shortages, effectively functioning as a mechanism to pool pandemic risk to the supply chain. Since pandemic waves hit countries at different times, foreign suppliers often acted as a shock absorber of domestic supply disruption. In the case of medical equipment, where the shortage in individual countries was at times extreme, GVCs played an essential role in filling the gap. This feature is underscored in the recent IMF World Economic Outlook (2022), which identifies a pronounced 'home bias' in supply chains – meaning a reliance on domestic suppliers which is far greater than their weight in world production. The implication of this finding is that reshoring of production represents a further move away from diversification, thus potentially increasing risks to the supply chain.

Whether foreign or domestic shocks dominate at a given time will depend on the nature of the shock. Shocks tend to be specific to the supply chain in question, and their severity will depend on the location of customers and the actions that governments take in affecting production and trade, among other factors. While looking to lower costs, multinational companies recognised these risk factors long ago. They have sought to mitigate various sources of risk, including exchange rate fluctuations, the business cycle, industrial action, and protectionism. Firms that are especially concerned about exchange rate fluctuations and protectionism, for example will tend to source close to their customer. In contrast, firms for whom low cost and a steady source of supply are paramount will tend to source more widely across geographies and suppliers. There is no one-size-fits-all recipe for supply chain resilience; each firm differs. What can be said with certainty is that a diverse supply chain is more likely to be resilient than one that relies on only one or a small number of suppliers concentrated geographically. Drawing only on home suppliers is not a guarantee of resilience.

1.3 | Reliance on GVCs remains

At the time of writing, shocks such as such as the effect of the pandemic are not yet fully reflected in the available statistics, and the effect of the Russia-Ukraine war even less so. Nevertheless, the data at our disposal tends to confirm that there has been no large-scale withdrawal from GVCs; indeed, if anything, the evidence at our disposal points in the contrary direction. According to the World Trade Monitor, Figure 1 shows that the value of trade in intermediates – a widely used indicator of reliance on global suppliers of parts and components (excluding fuels) – was about 25 percent higher in the second quarter of 2022 than in the second quarter of 2019.[1] This is a rate of growth likely almost double the rate of growth of US dollar world GDP over the same period.[2] Continued or increased reliance on global suppliers is seen across all the world's regions.

As for the direct effects of the Russia-Ukraine war, the dependency of GVCs on Russian and Ukrainian inputs is low. The shares of Russia and Ukraine in world imports of intermediate goods were estimated at 3.4%, of which fuels account for the lion's share. Trade in value-added estimates show that the shares of Russian value-added in German and Chinese total exports of goods and services were only around 1%. However, smaller European economies like Bulgaria, Lithuania or Finland show far higher rates of Russian value-added in their exports, reaching almost 12% in Bulgaria. Still, even small value inputs can upend a large value chain if the input is critical and there are no alternative sources immediately available.

So far, one can say with some confidence – based on data – that the reports of the end of globalisation that are found in many journalistic accounts are exaggerated (Baldwin, 2022). To be sure, some governments have moved in the direction of trade and investment restrictions and import-substituting industrial policy. It is possible to imagine a worst-case scenario for GVCs, one where great power tensions intensify, China and the US decouple, the WTO unravels, and the world descends into a dark age of protectionism. However, this worst-case scenario remains unlikely. The large costs associated with decoupling are widely recognised, and there is no widespread support for isolationism or closing the economy in the US. Decoupling China and the US would make it far more difficult to deal cooperatively with global challenges such as climate change, disease, and macroeconomic and financial instability, while the risk of armed conflict and catastrophic escalation would be greater than it already is.

A recent WTO study has illustrated how 'technological decoupling' could be profoundly damaging to the prospects of all nations, and especially in developing countries (Bekkers & Góes, 2022). In the same vein, a recent World Bank Study of GVCs in the wake of the pandemic, concluded: 'Steps toward creating a more "hostile" environment for GVCs, with a shift towards global reshoring to high-income countries and China, could drive an additional 52 million people into extreme poverty… In contrast, measures to reduce trade barriers…could lift almost 22 million additional people out of poverty by 2030' (Brenton et al., 2022).

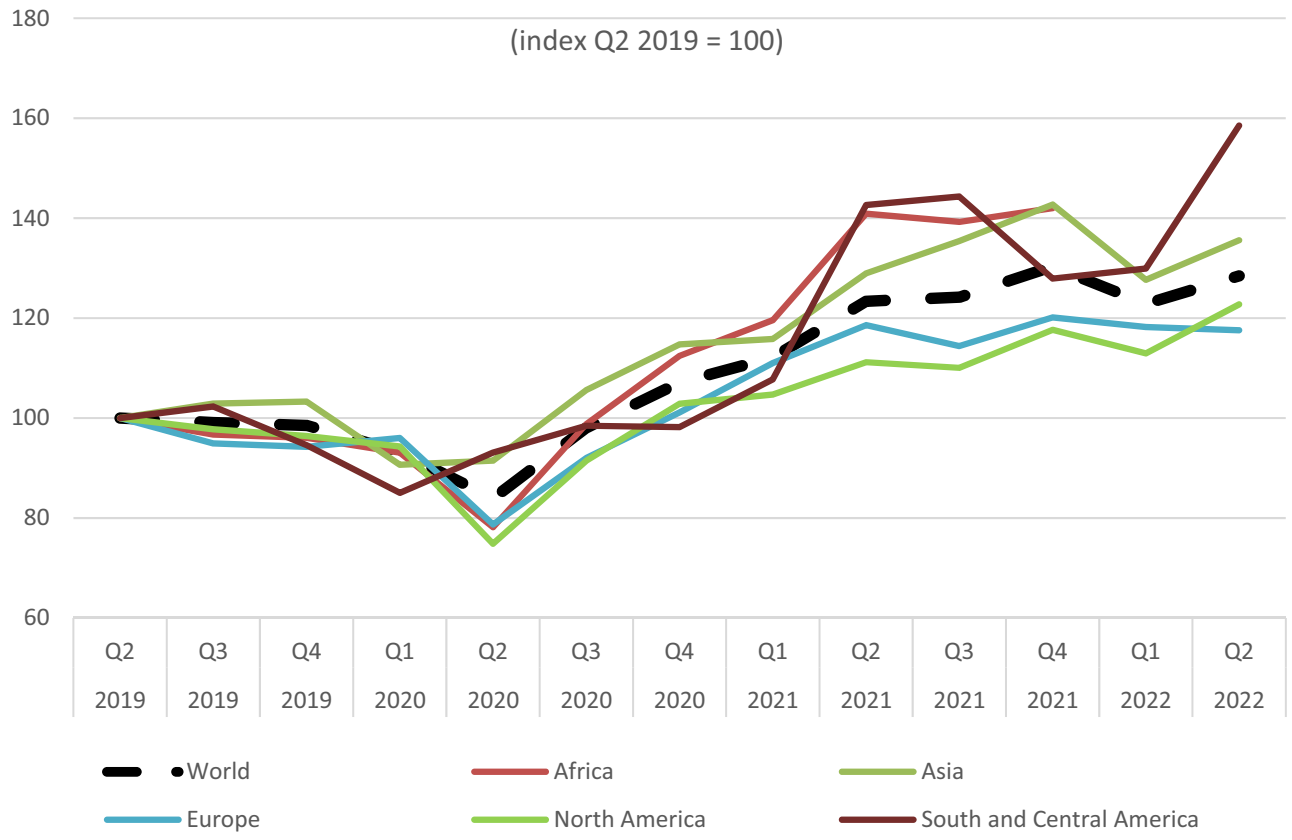

FIGURE 1 Trade in intermediates growing rapidly. World and regional exports of intermediate goods (excl. fuels), Q2 2019 – Q2 2022. (index Q2 2019 = 100). *Source*: Trade Data Monitor (99 reporting economies, including estimates for Africa, excluding fuels).

When policymakers think about the future of GVCs, it is important they recognise that GVCs have a life of their own: pushed by market forces, they tend to grow and proliferate. GVCs are only one manifestation of globalisation, a process which persists because vast arbitrage opportunities ('buy low, sell high') remain in the markets for goods, services, labour, capital and technology. These opportunities are difficult to resist. Severe restrictions on migration mean large wage and price differences can only be narrowed through trade and investment over a long time, with GVCs playing a central role in both.

Arbitrage opportunities remain because trade costs – natural and man-made barriers to international exchange – are high, and new arbitrage opportunities also arise continuously as economic conditions change. Most important, developing countries, home to some 80% of the world population, grow and undergo structural transformation that raises import demand and alters their comparative advantage, while product and process innovations originating mainly in advanced countries continue. These innovations – such as mRNA vaccines – are needed across the world, as shown in the pandemic. ICT-based innovations such as those that enable remote work, ecommerce, artificial intelligence, and blockchain, are not only needed across the world, but they also reduce trade costs, sometimes dramatically, thus improving the ability to coordinate and exchange, and enabling the operation of GVCs.

Meanwhile, globalisation itself and other structural shifts are continuously raising the stakes for international cooperation, of which trade is an essential part. Without trade in vaccines and personal protection equipment, for example, there would have been many more COVID-19 victims, and economies would have struggled even more than they did to compensate for domestic supply disruptions. Mitigation of climate change will not happen without international cooperation. And, to keep the cost of mitigation and adaptation to climate change within manageable bounds, international trade is essential, especially in sectors such as agriculture and environmental goods.

Those who worry that international divisions could herald the demise of globalisation and of GVCs, do so for good reason. However, as an antidote to the pessimism, it is useful to recall that two World Wars in the twentieth century interrupted economic integration but did not stop it. The rise of communism and the Cold War cut large populations off from the world economy, but it did not stop the advance of economic integration elsewhere. And as these tragic episodes came to an end, globalisation resumed at an accelerated pace.

2 | POLICIES

The disruption of global value chains raises three more specific policy questions: how should countries react to the inflationary pressures? How should countries react to sudden shortages in essential goods? How should the WTO adjust?

2.1 | Inflation pressures will not be resolved just by restoring orderly operation of GVCs

The pandemic was associated with a major shock to world merchandise trade, which, at the trough in mid-2020 fell by about 17% in volume terms relative to end 2019, pre-pandemic, and was about 4% higher than the pre-pandemic level in early 2021. The 21% swing in trade volumes in less than a year, huge as it is, refers to an aggregate and does not convey the scale of the disruption. A supply chain is only as strong as its weakest link and the cycle was even more pronounced in some regions and sectors, as the pandemic hit geographies at different times in a succession of waves. The United States, which accounted for 25% of world GDP in 2020, was among the worst hit by the disease and suffered a particularly pronounced trade cycle. During the pandemic, US export volume hit a low in the second quarter of 2020, falling by 25% year-on-year – more than world export volume during that same period, which fell by only 16%. US Export volume only recently returned to pre-pandemic levels (Figure 2).

The automotive sector was among the worst affected by the outbreak, as sales collapsed, and production was disrupted. Exports of transport equipment saw big declines in 2020 (–41% year-on-year in Q2 2020) followed by a sluggish recovery in early 2021. Car makers and manufacturers of electronic equipment were especially affected by a shortage of semiconductors, which persists. Demand for semiconductors is expected to strengthen since electric cars and many other goods are using semiconductors more intensively. In contrast, food supply chains showed remarkable resilience even during the peak of the pandemic. Exports of intermediates required in the food & beverages sector, grew by 10% in value terms in 2020.

Many international supply chains became stretched and subject to long delays. According to an IMF working paper, average world shipping times increased by 25% soon after Covid hit due to labour shortages, and ports quickly became congested – despite declining throughput (Cerdeiro et al., 2022). A shortage of containers, due to the longer shipping times and disrupted logistics, contributed to soaring freight rates. Subsequently, as the pandemic lockdowns were eased, pent-up demand for goods soared, but port capacity continued to lag. According to Freightos Data (2023), the cost of shipping a container internationally was about 7 times higher at the peak reached in the fourth quarter of 2021 and the first quarter of 2022 than pre-pandemic.

Still, the disruption caused by the pandemic in individual countries is diminishing and the cost of shipping a container internationally is now back to pre-pandemic levels (Telling & Romei, 2023). As the disease waned through rising immunity and vaccines, supply returned. For example, domestic shipments in North America have increased and are now near their pre-pandemic peak, prime-age labour force participation in the United States is almost back to pre-pandemic levels (as is unemployment), and about one-third of workers major US cities are working from home compared to about half during the worst of the pandemic (WFH Research, 2023).

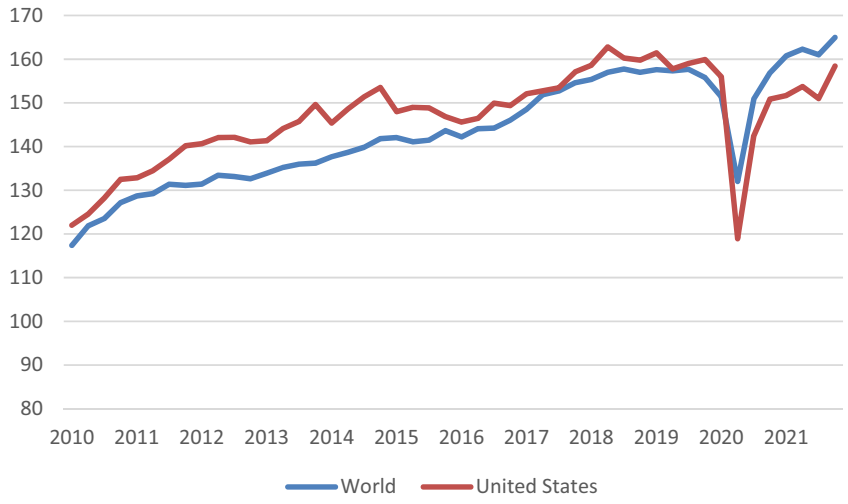

FIGURE 2 World and US quarterly merchandise export volume (seasonally adjusted), 2010–2021. Index 2005 Q1 = 100. *Source*: WTO Secretariat (April 2022).

This does not, however, mean that inflation – which was near 7% in the United States in 2021 and 2022 – will quickly abate. The persistence of inflation even as the physical supply–demand equilibrium is gradually re-established can be ascribed to two main factors. First, monetary policy, which works with long and variable lags, was loose until recently, with the expected real yield on one-year Treasury Bills well in the negative range, and the Fed, which purchased USD 5 trillion of government securities since March 2020, only starting to make a dent, reducing its holdings. Second, inflation, once triggered and then persisting for a while, becomes entrenched in expectations and is reflected in wage demands, as in the case of the United States where wages are rising at over 5% year-over-year. Higher wages will contribute to a round of cost-push inflation going forward. Helping reduce headline inflation from its peak in mid-2022, are lower energy prices. The disruption of global energy markets due to the Russia-Ukraine conflict and sanctions was less than expected. It has been offset, so far, by clement weather in Europe, slow growth in China due to its (now abandoned) zero-Covid restrictions, and remedial measures by energy importers in Europe that established alternative sources of supply.

Trade liberalisation and the proliferation of efficient international supply chains has played a significant role historically in reducing prices, controlling inflation pressures through efficiency gains, economies of scale, competition, and moderating wage demands. Trade liberalisation and GVC proliferation help explain why, over recent decades, the price of tradeable goods and of many tradeable services has risen less rapidly than that of non-tradeables. They can play the same role in the future. According to a Peterson Institute study, a feasible package of trade liberalisation in the United States could deliver a one-time reduction in consumer prices of around 1.3% (Hufbauer et al., 2022). Increased supply as the pandemic recedes will also help contain inflation.

However, the end of the pandemic, trade liberalisation, and a return to normality of GVCs are unlikely to be sufficient to tame inflation without a major and persistent shift towards tighter macroeconomic policies. Such a shift need not be as draconian as that of the Volker era, where US CPI inflation rose to 14% following extraordinary growth in the 1960s and the huge oil shocks of the 1970s. At the peak in June 1981, the Fed Funds rate was raised to 19%, triggering a major global recession and debt crisis. Inflation is much lower and is less entrenched (for now) than it was in the early 1980s.

2.2 | Governments tend to overreact or react in wrong ways to actual or potential shortages

Faced with increased GVC uncertainty, firms have strong incentives to respond and the capacity to do so, even without government intervention. The evidence shows that firms are not inclined to dismantle GVCs, but to modify them in many ways. In a highly competitive environment, CEOs know that withdrawal from the global division of production and from the scale available in world markets would not only be costly but also risk the viability of the firm.

Yet, governments are under intense political pressure to respond to supply disruptions, whatever their source, and often blame trade. Intentionally or unintentionally, they interfere with the operation of GVCs. It is important to understand where the pressures on governments come from. Three such sources can be identified.

First, insufficient supply of essential products – such as food, energy, medicines, or semiconductors – can disrupt the livelihood of large parts of the population, especially the most vulnerable, and impair national productive capacity. In theory, temporary shortages can be dealt with through the price mechanism, but surging prices of essential goods can be politically unacceptable for equity reasons, or because they may cause large-scale economic disruption. Governments deploy different instruments to deal with shortages, such as price controls and rationing (as in times of war or drought), tax reductions, the lifting of import barriers, and income transfers to the most vulnerable. In many instances such measures, if temporary and well designed, can be effective in minimising the damage and avoiding civil unrest. Other responses, such as stockpiling and releasing supplies when needed can also work though they are expensive, especially in the case of perishable commodities or those liable to obsolescence.

One of the easiest-to-apply interventions to a temporary shortage is export controls. Among the available responses, it is also potentially the most economically harmful. To participate in global supply networks, countries must view their partners not only as reliable clients but also as reliable suppliers. In normal circumstances, all benefit, and are seen to benefit, from GVC arrangements with little friction. In times of shortages, however, that is not the case, and the temptation to divert supply towards home needs is strong. Export controls imposed at a time of global shortages may provide temporary relief at home, but they are liable to backfire, entailing reputational risk, and triggering retaliation. Of course, when export controls become the response of choice, everyone is worse off – a classic coordination problem.

The second reason for governments to intervene in GVCs is national security; this is often to forestall shortages, not only to compensate for them once they have occurred. The forestalling of shortages is what motivates industrial policy interventions of various kinds – for example in alternatives for semiconductors from Asia or for gas and oil from Russia or for 5G network services from China. A long-standing and related measure is control of export of 'dual use' goods

and technologies, those that can serve an economic and military purpose. These national security concerns must be addressed but, if precautions are taken to extremes and the instruments used are too blunt, they can lead to vast losses of efficiency, create many opportunities for rent-seeking and government failure, and disrupt GVCs entirely.

It is worth noting some unintended consequences of overstating national security risks. Faced with the risk of lawsuits or impaired reputations, firms tend to engage in 'overcompliance', a form of extreme caution that impedes capturing trade and investment opportunities that could and should be taken. Sanctions can also lead to unintended consequences. For example, some experts have argued that restrictions placed on Russia on the use of the US Dollar, the Swift system, and the freezing of its Dollar and Euro reserves, will lead to China, Russia, and others, redoubling efforts to find alternatives to each of these instruments.

Times of shortage also tend to create pressures to become more self-reliant. This is the third reason governments intervene. Import substitution policies are a constant temptation even in normal times. The pandemic-induced recession, international supply shortages, and the associated GVC anxiety have created new opportunities for those seeking protection and judging from data gathered by Global Trade Alert – which identifies 7200 restrictive measures since the start of 2020[3] –, many have succeeded.

But import substitution is also an expensive and unsustainable course. Importing to export is a reality of GVCs, which is reflected by the foreign value-added content of gross exports derived from Trade in Value-Added (TiVA) data. On average, in 2018 world exports of goods and services contained 29% of foreign value-added, meaning imported inputs from GVC partners.[4] Tariffs on inputs penalise exports and home production and lead to retaliation. Multinational firms confronted with trade impediments at home and abroad can reconfigure their supply chains to favour third countries instead, or simply move production to where they sell, reducing their presence in their home base.

Faced with increased supply chain disruptions, countries should resist defensive policies such as export controls and import substitution. In some instances, crisis creates opportunities, such as those created by firms seeking geographic diversification. Countries that invest in their digital and transport infrastructure (especially ports), ensure adequate skilling of their labour force (often requiring more liberal and targeted immigration policies), assure low-cost and tariff-free access to inputs from abroad, and facilitate foreign investment will help their own citizens and have a distinct advantage over countries that turn inwards.

In sum, the pressures on governments to react to, or forestall, supply shortages are genuine and often legitimate. However, these interventions also carry the risk of sub-optimal outcomes, such as when they undermine the international division of labour through GVCs and the efficiency and diversification they bring. Instead, proactive policies to facilitate GVCs can pay high dividends. International coordination, in the form of norms or rules that restrain governments from overreacting to shortages, can help avoid many unintended consequences. This brings us to the role of the WTO.

2.3 | The WTO can play an important role in assuring the resilience of GVCs

The WTO sets trade rules that enable the international division of labour on which GVCs rest. However, imperfectly it carries out the role, the WTO is the de facto guardian of GVCs. International production networks depend on open and reliable trade in goods and services and perform most efficiently in regimes that minimise discrimination. They require predictability along all links in the chain, from final client to supplier. Thus, all WTO disciplines, whether on market access or rules, or on goods or services, serve to facilitate the orderly operation of GVCs. The most important role the WTO can play in dealing with the increased risk of GVC disruption is to do what it normally does – or what it is designed to do – better than it does at present.

For example, the recently concluded negotiations on domestic services regulation – which directly and indirectly help GVCs operate better – represent a step forward. All three ongoing Joint Statement Initiatives negotiations, on investment facilitation, ecommerce, and MSMEs are important for the operation of GVCs. The agreement on the IP waiver at MC12 is modest in scope but helps promote the orderly international production of vaccines.

Unfortunately, the disabling of the WTO Appellate Body means that that enforcement of WTO rules is greatly weakened. Trade disputes that could once be mediated peacefully by judicial process, are now allowed to fester or to turn into open trade conflicts. Even worse, trade sanctions have become a weapon of choice in political disputes. Still, countries continue to bring disputes, WTO panels are deciding cases, and 23 members (including the EU) have agreed to submit to arbitration under Article 24.

The agreed upon process to reform the WTO agreed at MC-12, which includes reforming Dispute Settlement, is essential for GVCs to continue to operate effectively. To operate effectively and sustainably, GVCs require a system of trade relations governed by laws and regulations that are transparent and enforceable. Trade disputes that are not resolved in negotiations must resort to judicial process, not the deployment of power.

WTO disciplines can be extended and deepened in some areas critical for the operation of GVCs, such as logistics services, ICT and digital trade, and export controls

(GATT Article 11).[5] The Trade Facilitation Agreement was a landmark deal for operators of GVCs, but the WTO needs better tools to monitor and encourage faster implementation of the agreement. Predictability is critical – one reason that the big uncertainties which arose recently due to the proposed EU carbon border adjustment mechanisms and US green subsidies must be dispelled.

If a sufficiently large coalition of willing members exists, it is essential that the WTO be able to conclude a deal even when not every member agrees. Therefore, Joint Statement Initiatives, which apply benefits to all WTO members on an MFN basis, represent an important innovation. However, willing members should not always be constrained to extend benefits to countries that do not want to participate. This means that 'closed', or non-MFN, plurilateral deals such as the Government Procurement Agreement, should be allowed under certain conditions without requiring a waiver from the whole membership. This procedure would extend to the exception for regional trade agreements under GATT article 24 for deals among members on specific issues, with due conditions (Akman et al., 2019).

The WTO must also find ways to support and harness the energy behind regional agreements, such as the African Continental Free Trade Area to advance trade disciplines in developing countries and to support Africa's integration in GVCs. Novel disciplines in areas such as digital trade and State-Owned Enterprises, as contained in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, for example, can be a source for new multilateral rules and promoted in other regional deals. This does not necessarily mean that the WTO gives up on universal non-discriminatory disciplines but that partial and interim deals, whether regional or plurilateral, should be waypoints towards enhanced multilateral agreements or at least open to a widening set of members who want to adopt them.

The WTO is and is likely to remain a member-driven organisation, but the WTO Secretariat can play a more prominent role in promoting open trade. To improve the resilience and efficiency of GVCs, the WTO Secretariat should promote negotiation of issues that are highest priority for their operation. To identify priorities and propose modalities, the Secretariat needs to strengthen its data gathering, monitoring and analysis of trends in the operation of GVCs. Consultations with CEOs in sectors of interest can help identify and anticipate issues, and even galvanise committee negotiations, as happened recently in the case of vaccines. Experience shows that cooperation with other international institutions, such as the OECD, UNCTAD, ITC, and the World Bank, can yield important results, such as the Trade in Value-Added Data, which is essential to monitor and understand the evolution of GVCs, and the Aid for Trade framework which helps integrate poor countries in GVCs.

Global value chains are vehicles of prosperity. They have been, and continue to be, essential instruments in sustaining economic growth and in the fight against poverty across the world. In conclusion, one can point to four urgent challenges that the WTO Secretariat and the membership must confront to respond to the disruption in GVCs and to facilitate their operation in the future. These are best cast in the form of questions: how can the WTO's negotiating function be revitalised using plurilaterals, both of the MFN kind and the non-MFN kind? What compromises are needed to re-establish the orderly functioning of the Dispute Settlement Understanding? How can the WTO better use the energy fuelling regional and bilateral trade agreements to advance free trade across the world? What approach should be taken to ensure that WTO rules help promote decarbonisation, without endangering the workings of the present system?

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DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

ENDNOTES

[1] See WTO (2022) for a review of trends in trade in intermediates.

[2] Comparable quarterly data for the world economy is not available in current US dollars. According to World Bank World Development Indicators, the value of world GDP expressed in current dollars grew by 9.6 percent from 2019 to 2021. In 2022, inflation is high, but the dollar is very strong, and a sharp slowdown in world economic growth is projected by international institutions.

[3] Most of these measures took the form of new subsidies in trade-exposed sectors. How many of these were intended for pandemic relief or for import protection or for both is unknown.

[4] Source: WTO calculations based on OECD TiVA database.

[5] Agreements that prohibit export controls exist but are difficult to enforce in a time of crisis, which is precisely when they are most needed. The WTO prohibits export controls (WTO, 2020) of various kinds, but recognises limits. Thus Article XI:2(a) of the GATT 1994 states that the general prohibition in Article XI:1 'shall not extend' to '[e]xport prohibitions or restrictions temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting [Member]'.

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