

C The impact of security concerns on trade

A series of crises over the past years has changed the perceptions about trade and interdependence. What used to be considered as critical to economic progress and security is now sometimes perceived as a source of risk that needs to be limited. Moreover, security concerns are no longer exclusively expressed in relation to conflict but encompass the much wider notion of economic security. As a result, security concerns percolate through trade policy more widely. This chapter highlights that despite disruptions in global supply chains, trade remains a source of security, especially when embedded in a multilateral rules-based system. It argues that fragmentation would weaken security and increase the likelihood of conflict, while re-globalization is a more promising avenue to strengthen security going forward.

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KEY POINTS



The multilateral trading system is increasingly affected by rising security concerns. Several crises over a short period of time have raised the awareness about growing risks related to geopolitics, health and climate change. As a result, concepts of security encompass many more issues than the traditional understanding limited to conflict. This has important implications for the multilateral trading system, as evidenced, for example, by an increase in the number of trade concerns referring to security.



Trade is critical to economic security as it allows for diversification. Trade was central in responding to the sharp fluctuations in demand during the COVID-19 crisis and to the adaptation by food importers to the war in Ukraine. Disruptions did occur in both instances, but evidence shows that less openness would have worsened the impacts. While the relationship between trade and conflict is more complex, empirical evidence suggests that trade plays a conflict-reducing role. The multilateral rules-based system is key for trade to play this positive role.



Fragmentation tends to reduce security and increase the likelihood of conflict. Policies that contribute to fragmentation are difficult to implement and unlikely to achieve their goals. Alliances can be volatile and geopolitical crises are hard to predict. Even if reducing the number of trading partners reduces exposure to geopolitical risks, it raises exposure to other risks such as natural disasters. When the source of future shocks is unknown, the safest strategy is to maintain a large number of potential suppliers across the world.



Re-globalization can help trade contribute further to security. Addressing existing barriers to trade where they are high, such as in agriculture and services, or in economies outside of global value chains, would significantly facilitate diversification. The WTO provides a platform for peaceful exchange and dispute resolution and can help to remove sources of obstacles between economies, for instance by increasing transparency. Ongoing reform initiatives can greatly enhance the capability of the system to advance global security.

1. Introduction

This chapter examines the links between security and international trade and cooperation. It first seeks to highlight – without taking a position on any views expressed by members on these issues – how security concerns increasingly affect trade policy, as governments adapt their risk perceptions to a succession of shocks. The chapter then assesses the evidence on the role of trade vis-à-vis economic security and conflict.

The chapter goes on to show that fragmentation tends to weaken security and increase the likelihood of conflict. It concludes by explaining how re-globalization is a more promising avenue to strengthen security going forward. Too many sectors and economies still cannot participate in the multilateral trading system, often because they are plagued by high trade barriers. Addressing this could boost diversification. Adapted and expanded WTO rules could also help navigate trade restrictions during crises and limit the growing overlap between trade policy and security issues.

The chapter makes frequent use of four terms: security, conflict, economic security and resilience. Security is used as an overarching term encompassing economic security and conflict. Economic security captures issues such as access to and productive capacity for critical raw materials or other inputs to production. More formally, the report defines economic security by borrowing the definition used by the World Trade Organization (WTO) (2021a) for resilience as the ability of a system, including households, firms and governments, to prevent and prepare for, cope with, and recover from shocks. Resilience will be used in this report more narrowly in the context of responding to crises, whereas economic security will apply more broadly to responding to and preventing crises. Conflict is used

when referring to security in the more traditional sense covering military disputes.

2. The changing relationship between trade and security

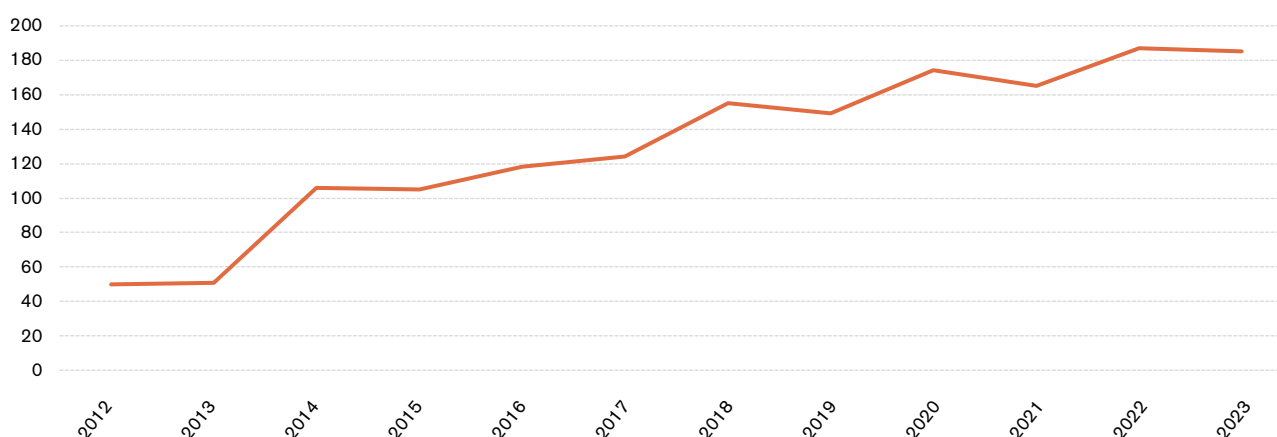
This section illustrates the rising frictions in the multilateral trading system stemming from an increased focus on security. It then reviews the evidence on the relationship between trade and security.

(a) How trade policy reflects broader and increasing security concerns

The role of trade in reducing risk and volatility by enabling diversification has long been recognized. For instance, the 1993 Decision on Measures in Favour of Least Developed Countries taken as part of the Uruguay Round refers explicitly to trade as a means to help the diversification of production and exports.¹ A recent study suggests that the aim to lower risk from demand volatility is an important determinant of international trade patterns and can increase the welfare gains from trade (Esposito, 2022).

Security and geopolitical concerns have also always been an important aspect of the multilateral trading system. The founding of the WTO's predecessor, the General Agreement on Tariffs and Trade (GATT), was in part a response to the disastrous effects of two world wars and the first era of deglobalization in which bloc-based trade had started to dominate multilateral cooperation. As one pillar of the international system established in the aftermath of the Second World War, the GATT's aim

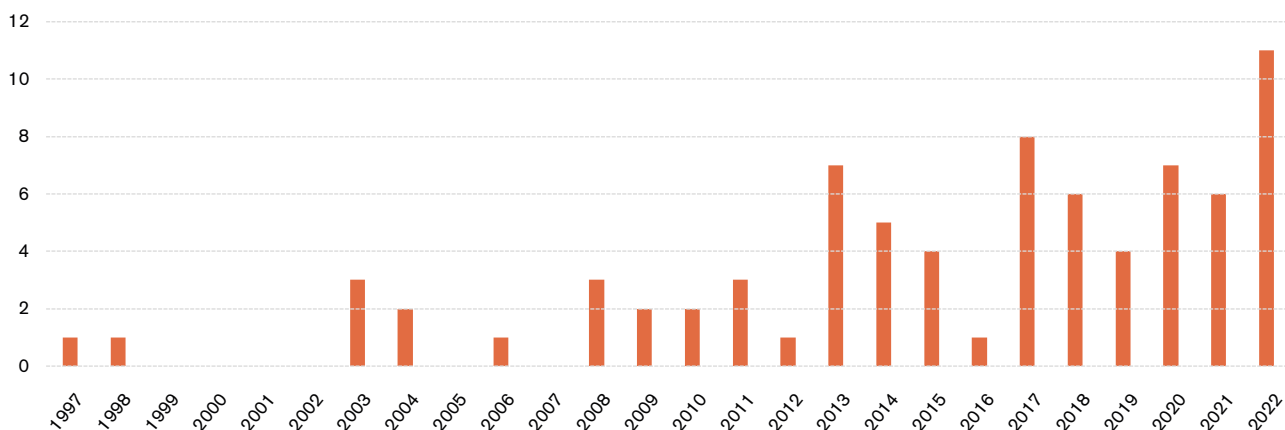
Figure C.1: Quantitative restrictions in force notified under GATT 1994 Article XXI are increasing



Notes: Figure C.1 shows the evolution of the number of quantitative restrictions in force justified by WTO members under Article XXI of the GATT 1994 from 2012 to 2022.

Source: WTO Quantitative Restrictions (QR) Database. Available at: <https://qr.wto.org/en#/home>.

Figure C.2: National security-related trade concerns raised in WTO committees are rising



Notes: Figure C.2 depicts the number of specific trade concerns (STC) relating to national security between 1997 and 2022 raised in the Market Access and Import Licensing Committees and in the Committees on Sanitary and Phytosanitary (SPS) Measures and on Technical Barriers to Trade (TBT). Trade concerns raised before the Council for Trade in Goods (CTG) are not reported in the STC Database.

Source: WTO STC Database. <https://tradeconcerns.wto.org/en>

was to promote cooperation and address the underlying causes of the war in combination with the United Nations, the World Bank and the International Monetary Fund (IMF) (Mavroidis, 2008). More recently, the accession of several fragile and conflict-affected states to the WTO is driven at least in part by the expectation that trade can promote peace and security (WTO, 2017).

However, the positive role of trade for security is increasingly being overshadowed by concerns of overdependence on foreign suppliers. This has a visible impact on trade policy. In line with evidence presented in Chapter B, the number of quantitative restrictions in force notified under Article XXI of GATT 1994 (see Figure C.1), the Security Exceptions, and the number of trade concerns about measures referring to “national security”, has risen sharply in recent years (see Figure C.2). This suggests that trade policy is more and more influenced by security concerns.²

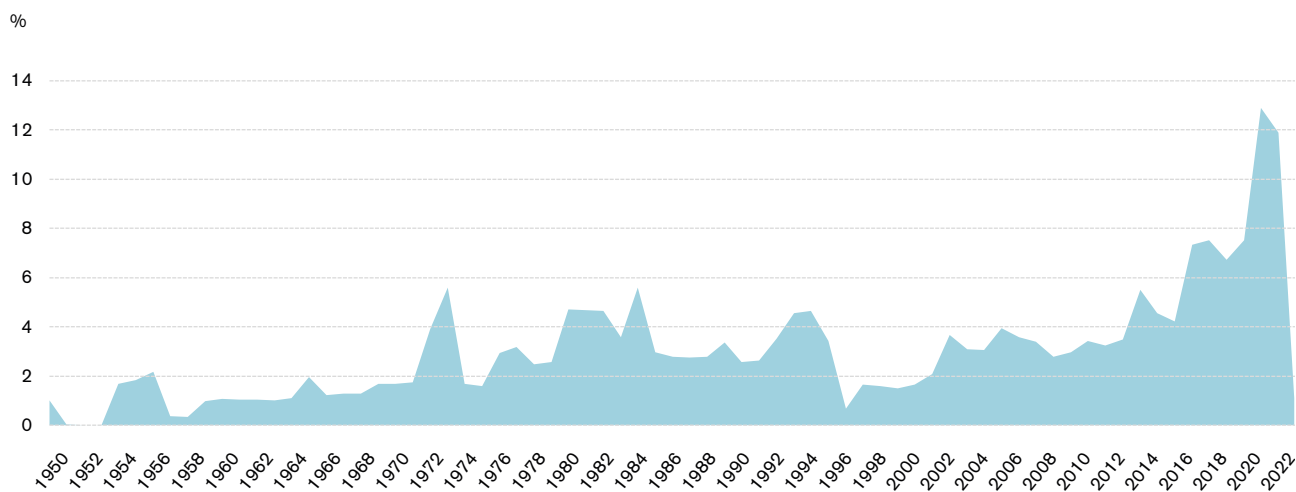
The trade policy measures taken in relation to security can take very different forms reflecting that the notion of security has become much wider. WTO trade monitoring data shows, for instance, how the onset of the war in Ukraine was followed by an increase in export restrictions (WTO, 2023c), a trend also observed during the COVID-19 pandemic. Export restrictions on critical raw materials have increased more than five-fold in the last decade (WTO, 2023d). Trade concerns in WTO committees show that GATT security exceptions are also increasingly invoked as justifications for the imposition of import restrictions. They also show that technical standards are another domain where national security concerns are growing. One example is the debate around the deployment of 5G mobile telephony services. Similarly, there has been an increase in sanctions and export controls, especially on advanced technologies

(Bown, 2023). This is confirmed by data from the Global Sanctions Database. Figure C.3 shows that the share of trade affected by sanctions displays steep increases in recent years.

Recent trends have also led to the development of new institutionalized mechanisms. For instance, the European Union is about to implement a regulation designed to respond to situations in which a third country seeks to put pressure on the European Union or one of its member states to make a particular policy choice by applying, or threatening to apply, measures affecting trade or investment against them. The stated purpose of this regulation is to de-escalate and induce discontinuation of coercive trade measures through dialogue and provides for the adoption of countermeasures “as a last resort” (EU, 2021b).

A policy shift can also be observed in regional trade policies where new forms of cooperation do not systematically take the form of binding trade agreements. For instance, the European Union and the United States have established the US-EU Trade and Technology Council (TTC). The TTC is intended to foster transatlantic coordination on semiconductor and critical mineral supply chains, artificial intelligence, disinformation, technology misuse threatening security and human rights, export controls, and investment screening (US, 2022). The Indo-Pacific Economic Framework (IPEF), the members of which represent 40 per cent of the world’s GDP, also covers trade and the digital economy, supply chains and resilience, clean energy and decarbonization, in addition to tax and anticorruption. The European Union has negotiated digital partnerships in the Indo-Pacific through non-binding agreements as part of a strategic building of alliances (EU, 2021a).

Figure C.3: The share of trade affected by trade sanctions is increasing



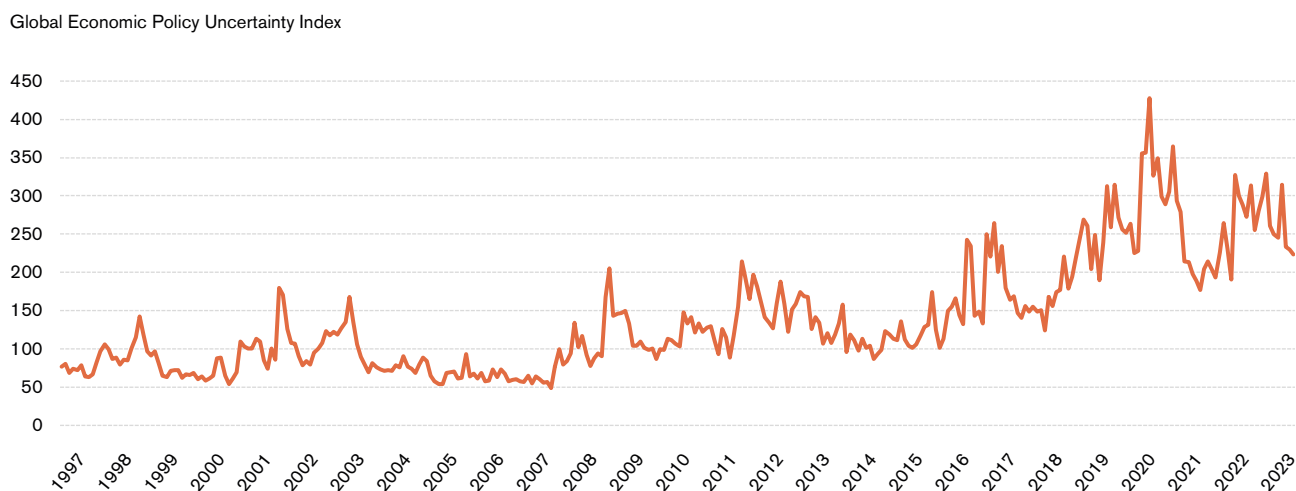
Notes: Figure C.3 displays the share of trade affected by sanctions using the Global Sanction Database (GSD) which includes data on trade sanctions from one economy to another by year. There is only partial information on whether imports or exports are affected and the coverage of sanctions by product and. Providing an upper bound, all trade between two economies in a year is included when information on sectoral coverage is missing. All sanctions whose objectives are tagged “other” are dropped since the aim of the chart is to reflect the trend in sanctions volume from a security perspective.
Source: Global Sanctions Database: <http://globalsanctionsdatabase.com> (Felbermayr et al., 2020) and IMF Direction of Trade Statistics.

There are several interrelated factors that may be responsible for governments changing their policy stance. First, there is an increase in risks. A series of shocks – from the global financial crisis to COVID-19 – reflect that global risk and uncertainty are increasing. Accordingly, measures of economic policy uncertainty have been on the rise since approximately 2008 (see Figure C.4). This is aggravated by

a rising risk of natural disasters driven by climate change and an increase in geopolitical crises, most prominently the war in Ukraine (see Figure C.5).

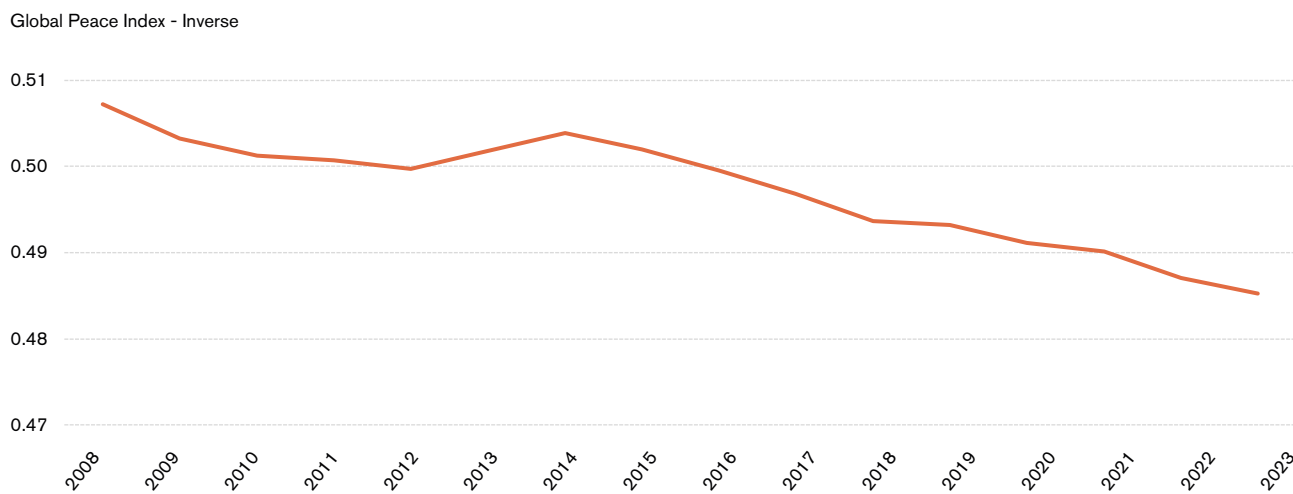
Second, the narratives around trade and international cooperation have been changing, as also highlighted in Chapter B. This trend is not independent of the rising risks,

Figure C.4: Economic policy uncertainty is on the rise



Source: Baker, Bloom and Davis (2016). Available at: <https://www.policyuncertainty.com/index.html>.
Notes: The Economic Policy Uncertainty (EPU) Index is calculated as the GDP-weighted average of monthly EPU index values for the United States, Canada, Brazil, Chile, the United Kingdom, Germany, Italy, Spain, France, the Netherlands, Russia, India, China, the Republic of Korea, Japan, Ireland, Sweden and Australia, using GDP data from the IMF’s World Economic Outlook Database. National EPU index values are from www.PolicyUncertainty.com and Baker, Bloom and Davis (2016). Each economy’s national EPU Index is renormalized to a mean of 100 from 1997 to 2015 before calculating the Global EPU Index.

Figure C.5: The world is becoming less peaceful



Source: The Institute for Economics and Peace (2023). Available at: <https://www.visionofhumanity.org/public-release%20-data/>
Notes: The Global Peace Index (GPI) ranks 163 independent states and territories according to their level of peacefulness. An increase in the index indicates a decline in peacefulness. The index was inversed for improved readability. The index is based on 23 indicators capturing the absence of violence or fear of violence, normalized on a scale from 1 to 5 (before inversion).

but it predates most of the recent crises. There has been a backlash against globalization since at least the mid-2010s, partly driven by labour market effects in developed economies and a falling manufacturing share in output (WTO, 2017). In addition, the slow progress of multilateral trade negotiations – with some notable exceptions – since the beginning of the century has led to a perception from some observers that multilateralism is unable to address new challenges and that in the WTO litigation has replaced negotiation (Elsig, Hoekman and Pauwelyn, 2017; Wolff, 2022).

Finally, there has been a shift in the global power structure with implications for trade policy making (Mattoo and Staiger, 2019). Due to the economic growth of several emerging economies and European integration, the world has become more multi- and less uni- or bipolar. According to the international relations theory, major changes in power distribution can lead to a period of instability and conflict which reduces the probability of cooperation (Houweling and Siccama, 1988; Organski, 1958; Organski, 1980). This also has implications for trade and industrial policy, with economies keener on assuring the existence of an industrial base to be able to produce goods deemed essential domestically.

More broadly, security-driven trade policy can be understood as a policy aiming to minimize the risk that welfare becomes very low in case of adverse shocks. Technically, trade policy aimed at increasing security could be characterized by a utility function with a large risk aversion parameter. Yet, irrespective of the reasons behind the policy shift, an increase in risk, in perceived risk, or in risk aversion, many current measures targeting security are likely to cause a fall in efficiency and an increase in costs. Sections C.3 and C.4 discuss which of the

two approaches (unilateral or cooperative) is better suited to increase security without major efficiency costs.

(b) The evidence on trade and security

(i) Trade is critical for economic security

In theory, the relationship between trade and economic security is ambiguous. Trade can contribute to the spread of shocks by exposing economies to foreign risks. Trade can even be a source of shocks, as the Suez Canal blockage by a large container ship illustrated. Indeed, it is estimated to have cost trade growth between 0.2 and 0.4 percentage points (Allianz Research, 2021). On the other hand, trade contributes to more economic security by helping economies to better prepare for, cope with, and recover from shocks. Trade expands the resources available to invest in security by raising incomes. It facilitates the efficient supply of critical services such as weather services, insurance, telecommunications, logistics and health services. Trade makes it easier for economies to cope with shocks by offering alternative sources of supply in case of domestic shortages and alternative markets in case of a fall in domestic demand (WTO, 2021a). Beyond crises, the diversification effect of trade reduces asymmetric dependencies and reduces the likelihood that trade can be weaponized by dominant suppliers.

In effect, trade has been a source of economic security. As illustrated in Chapter B, trade tends to rebound quickly after shocks. Empirical research shows consistently that the beneficial effects of trade for resilience dominate the harmful ones. In the last 50 years increased trade openness has reduced macroeconomic volatility in most



OPINION PIECE

The Future of Global Trade

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The future of trade has been debated since trade growth slowed in the aftermath of the financial crisis of 2008-09. To this day, data on trade and capital flows do not support a “de-globalization” thesis. Yet profound changes in the policy environment during the past three years suggest the beginning of a new era.

To dismiss these changes as inconsequential is tantamount to saying that policy does not matter. But policy does matter – if not immediately, then certainly in the long run. The explosive growth of trade in the 1990s and 2000s would not have been possible without the trade liberalization wave that swept the world in those decades, and the bolstering of multilateralism. And as some of the world’s largest economies are turning inward, distancing themselves from the principles of multilateralism, the future of trade is becoming uncertain.

Of course, this is not the first time in history that protectionism has taken hold. Typically, protectionism is the result of domestic lobbying efforts, an attempt to protect the interests of some groups (be they low-skill workers threatened by import competition from low-wage countries or specific firms/industries) at the expense of the average consumer. This time however, it was not the private sector that demanded protection. Instead, the change happened top-down, as governments decided to prioritize national security over economic welfare.

Economic historians will likely debate the true causes of the recent shift in the political landscape for years to come. In some advanced economies, government policy and public sentiment towards globalization began to change around 2015, with increasing concerns about the labour market impacts of imports and immigration from low-wage countries. But these developments were not enough to reverse decades-old globalization trends. The COVID-19 pandemic raised questions about the fragility of global supply chains and generated demands to “reshore” production domestically.

Nevertheless, despite claims to the contrary, trade enhanced economies’ resilience to the pandemic. After

a temporary decline in 2020, trade increased sharply. Neither the so-called “China shock” nor the COVID-19 pandemic put a halt to the growth of global trade. It was not until the outbreak of war in Ukraine in February 2022, which exposed Europe’s dependence on Russia for energy, that demands for reshoring and “friend-shoring” in the name of national security led to drastic policy changes, most prominently the United States’ sweeping restrictions on semiconductor exports to China introduced in October 2022.

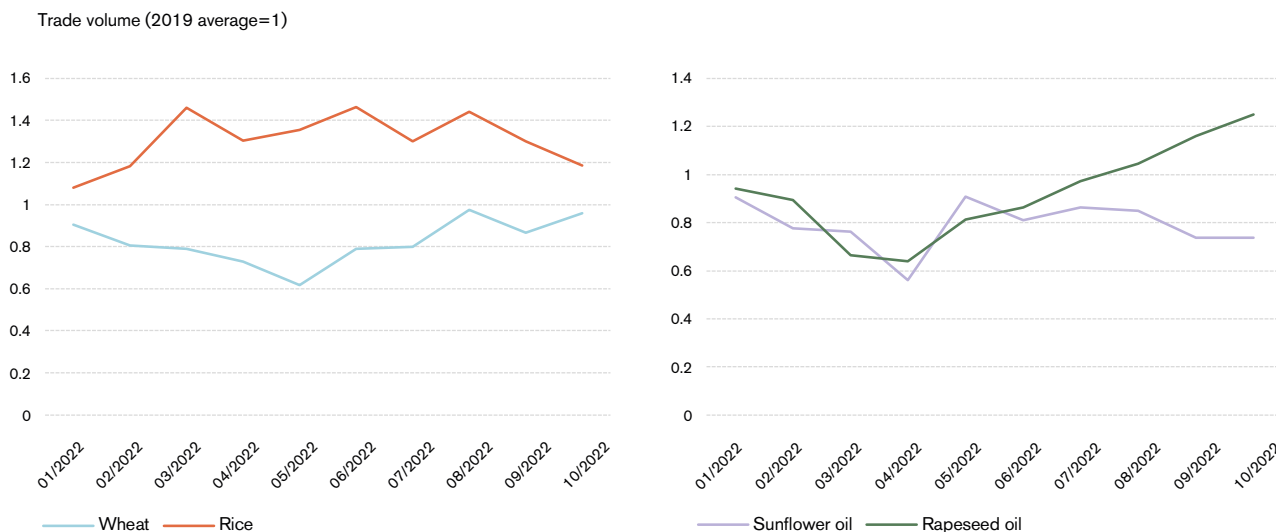
Is the demand for “resilience” to geopolitical risk the true cause of the recent developments? Or was the outbreak of war in Ukraine a trigger for a policy change that was inevitable, given the challenges that China, and perhaps certain emerging economies in the future, present to currently prosperous economies?

No matter what the answer is, the world has entered a new phase and what this means for the world economy, we will learn gradually in the coming years.

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Figure C.6: Trade substitution across products eased export shortfalls



Source: World Trade Organization (2023a).

Notes: Trade is estimated based on national customs statistics compiled by the Trade Data Monitor. Volume indices are calculated by deflating value indices by unit value indices.

economies (Caselli et al., 2020). One study finds that GVC participation has lowered demand volatility in over 90 per cent of economies and sectors worldwide, as idiosyncratic domestic shocks are mitigated by a higher market differentiation (Mancini, Taglioni and Borin, 2022). Another study finds that, taking into account its positive impact on risk, diversification magnifies the welfare gains of trade by 17 per cent (Esposito, 2022).

The positive effect of trade on resilience has been demonstrated by recent crises, most notably the COVID-19 pandemic and the war in Ukraine. While disruptions did occur in both instances and there were hiccups to the distribution of vaccines at the beginning of the pandemic, they would have been substantially larger in the absence of trade. Evidence shows that GVCs helped cushion the blow of COVID-19 lockdowns by providing access to foreign inputs. Income losses would have been sharper if economies had been self-reliant during the pandemic (Bonadio et al., 2021). Trade was also essential to respond to large surges in demand for vaccines, medical goods, and electronics. Trade in medical goods exhibited a yearly growth rate of 14.4 per cent between 2019 and 2021. In 2020, world exports of personal protective products alone rose by 44.6 per cent (WTO, 2022). Exports of COVID-19 vaccine doses increased from nearly zero in 2020 to 4.4 billion in all of 2021 (World Bank and WTO, 2022).

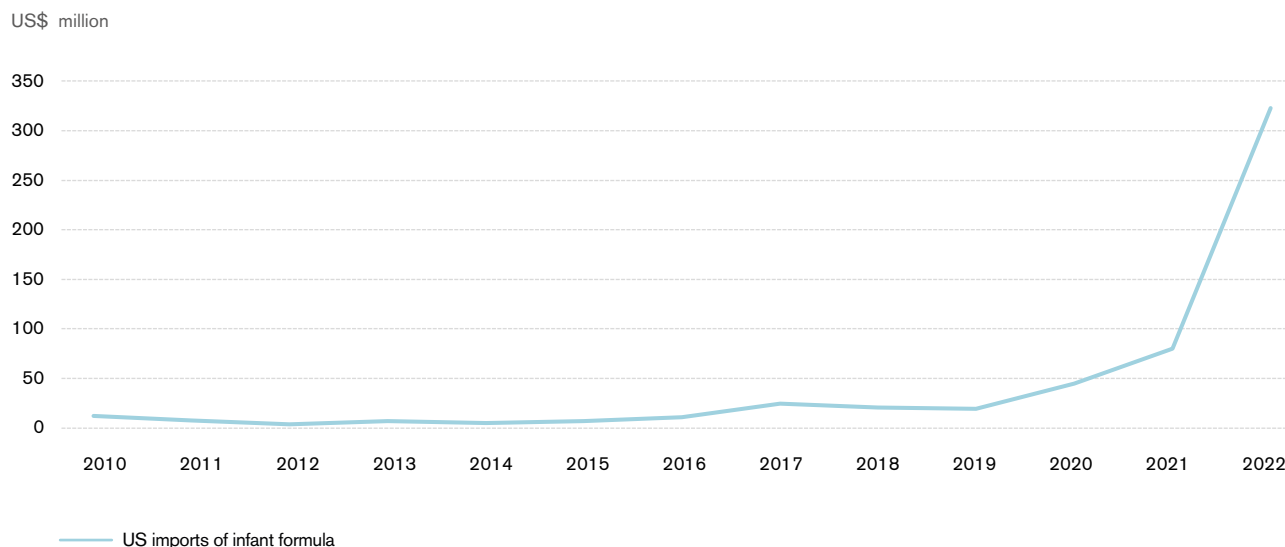
Since the onset of the war in Ukraine, trade has been an important part of the adaptation of net food importing economies. Estimates show that the sharp drop in Ukrainian grain exports to several African economies was made up for by increased exports by other major grain suppliers including

Argentina, France, and the United States. Moreover, price increases remained below expectations as trade facilitated substitution across suppliers and products. For instance, imports of rice initially replaced imports of wheat and rapeseed oil imports took the place of sunflower oil until markets adjusted (see Figure C.6 and WTO (2023a)).

Trade has also been a vital part of the response to other crises like the US infant formula shortage. The temporary shutdown of a major production facility of infant formula in the United States led to a sharp fall in domestic supply, which accounts for 99 per cent of the market. In response, emergency measures facilitated the heavily restricted import of infant formula (Congressional Research Service, 2022). Relative to the pre-shortage period in 2019, imports increased by a factor of 17 by 2022 accounting for 17 per cent of domestic demand relative to 1 per cent in 2019 (see Figure C.7). This substantially eased the supply shortfall.

To reap the resilience effects of international trade, the multilateral trading system embedded in the WTO is crucial. The system allows economies to source inputs from almost everywhere in the world under transparent and comparable conditions. The war in Ukraine highlights that this allows for a rapid adaptation of trade flows when unexpected shocks occur. In line with this, evidence from French firms during the COVID-19 pandemic suggests that even the ex-post diversification of input sources led to a relatively mild impact of foreign lockdowns (Lafrogne-Joussier, Martin and Mejean, 2022). In addition, COVID-19 incidence measures had a smaller impact on exports when intermediate inputs used in production were more diversified (Bas, Fernandes and Paunov, 2023).

Figure C.7: Imports were critical to respond to the infant formula shortage in the United States



Source: Source: WTO based on US Census data.

Notes: Imports of baby formula approximated by data on imports of HS code 190110 "Food Preparations For Infants".

(ii) Trade tends to reduce the likelihood of conflict

As with economic security, trade can in theory either increase or decrease the likelihood of conflict. The literature identifies three main mechanisms through which trade raises the probability of conflict. First, trade generates economic dependencies (Carr, 1939; Hirschman, 1945). Such dependencies can limit the range of actions available to policymakers and expose economies to the effect of changes in rules or policies of other governments. Second, trade relations can be a source of conflict, as highlighted by the Second Anglo-Dutch War or Napoleon's Continental Blockade, taking place respectively for the control of the world's sea trade routes and the European market. Third, trade raises economic output and, thus, resources that can be used for conflict (Aron, 1962; Morgenthau, 1948).

These conflict-inducing effects of trade are countered by at least four mechanisms through which trade lowers the likelihood of conflict (Oneal and Russett, 1997). If two economies with a significant trade relationship were to go to war, both sides would suffer economically. This channel has become particularly important after the rise of GVCs that leads to intricate dependencies between economies that are difficult to disentangle. A study on mobile phones shows how the extreme modularization of inputs has led to stark cross-dependencies which would be extremely costly to sever (Thun, 2023). Seminal work quantifying the gains from trade highlights how accounting for input-output linkages that reflect GVCs significantly increases the welfare benefits from trade (Costinot and Rodriguez-Clare, 2014). In turn, the opportunity costs of conflict have greatly increased for economies engaged in GVCs relative to a scenario where trade takes part mostly in final goods or raw materials.

Second, trade promotes open attitudes and mutual understanding. Trade can contribute to enhancing communication and fostering contacts between public and private actors in different economies (Dorussen and Ward, 2010).³ Third, trade shifts resources within economies to interest groups that have an interest in peaceful and stable relationships (Bentham, 1781; Cobden, 1867). Fourth, trade provides non-violent tools during crises. Measures such as imposing import barriers, export restrictions and ultimately cutting off trade might efficiently fill the gaps in asymmetric information. In other words, governments can use costly signals to inform their counterparts about their resolve without resorting to force.

Empirical work finds support for a pacifying role of trade, even if trade can certainly not prevent conflict altogether. Arguments abound on the role of trade in conflict, observing for example that, on the one hand, high levels of interconnectedness did not prevent the First World War (Barbieri, 1996; Mearsheimer, 2001)⁴ and, on the other hand, that protectionism and falling trade interdependence in the 1930s came just before the Second World War. However, the majority of empirical studies concludes that the conflict-reducing effect of trade tends to be stronger. Figure C.8 provides suggestive evidence in this direction by showing that there has been an inverse relationship between trade openness and the probability of conflict since the Second World War.

Early work focusing on bilateral trade concluded that a doubling of trade between two economies reduces the probability of conflict by 20 per cent on average (Polachek, 1980), a finding confirmed by numerous studies (Hegre, 2000; Oneal et al., 1996; Oneal and Russett, 1997).

Focusing on trade openness at the country level, multilateral interdependence is found to reduce the likelihood of conflict (Barbieri and Peters, 2003; Gartzke and Li, 2003a, 2003b; Oneal, 2003). More recent work finds that both bilateral and multilateral interdependence exert a peace-promoting effect. Greater bilateral trade independence is pacifying for contiguous economies, whereas global trade openness promotes peace between economies at a larger distance (Lee and Pyun, 2016; Yakovlev and Spleen, 2022).⁵

While there are some studies that challenge these findings (e.g. Barbieri and Levy, 1999; Beck, Katz and Tucker, 1998; Kim and Rousseau, 2005; Martin, Mayer and Thoenig, 2008), they mostly have been rebutted or qualified in subsequent literature. For instance, some of the work did not include distance and country size as control variables. Bilateral trade has a negative and significant impact on the probability of conflict once these variables are included (Hegre, Oneal and Russett, 2010; Martin, Mayer and Thoenig, 2008). Other results are based on a particular way of measuring interdependence, which only indirectly indicates the degree of dependency of a country on another one (Gartzke and Li 2003; 2005).

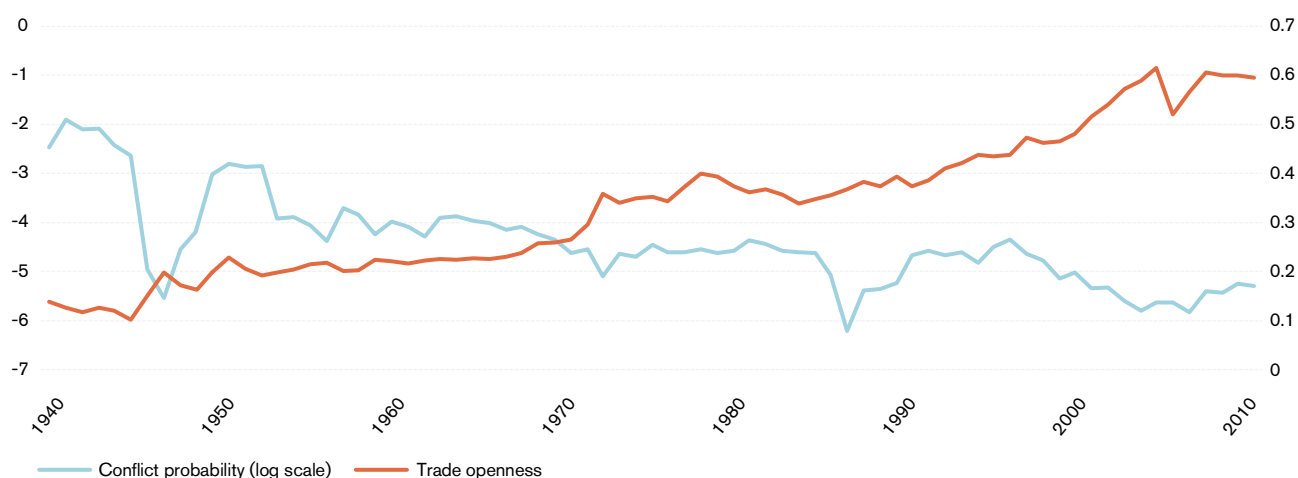
Importantly, multilateral trade and institutions are significant amplifiers of the conflict-reducing effect of trade. There is evidence that particularly multilateral trade and participation in trade networks reduce the probability of conflict (Maoz, 2006, 2009). For example, more diversified trade reduces the risk of interstate hostility and violent disputes (Kleinberg et al. 2012), since multilateral trade reduces exploitable dependencies between economies. Furthermore, multilateral trade might greatly limit the conflict-generating role of asymmetries, the main theoretical channel through which trade would

incite conflict. Economies involved in trade networks are less exposed to the conflict-inducing effects of asymmetric dependence, as individual relationships matter less and, therefore, provide less scope for external coercion.

In addition, multilateral trade incentivizes third parties to mediate between conflicting parties. Conflicts hurt trading links with third parties and create negative externalities for trade partners that share relevant economic linkages with the belligerents (Lupu and Traag, 2013). Interdependence also gives third parties the means to strengthen credible “signalling ties” such as threats or sanctions (Kinne, 2014). Due to the structural changes in the trade system since the end of the Second World War, the role of indirect links might be declining, and the overall involvement in global trade, intended as “general engagement with the international trade network”, seems to hold greater significance in fostering peace than single trade connections with third parties.

International organizations and agreements can help to consolidate peace. One study finds that regional trade agreements can promote peaceful relations through a likely increase in the opportunity costs of war (Martin, Mayer and Thoenig, 2012). By ensuring predictability and transparency in trade, international institutions, whether regional or multilateral, like the WTO, stabilize international relations. The current system helped avoid war among major powers in the last 70 years and gives governments an important platform to cooperate. While institutions tend to lack enforcement mechanisms, shared participation promotes the stability of the system through various channels, for example by mediating among conflicting parties, reducing uncertainty by conveying information, generating narratives of mutual identification, as well as by shaping norms.

Figure C.8: There is a strong correlation between trade openness and lower conflict probability



Notes: Trade openness is defined as the sum of world imports and exports divided by world GDP. Conflict probability is defined as the occurrence of dyadic militarized interstate disputes, excluding threats to use force and lower levels of hostility, divided by the number of countries.

Source: Feenstra, Inklaar and Timmer (2015) and Klasing and Milionis (2014) for trade openness, and Maoz et al. (2019) and the Correlates of War Project (2017) for conflict probability.

Empirical evidence reveals that shared membership in international organizations reduces governments' propensity to violent conflict at a bilateral level through these channels (Bakaki, 2018; Russett, Oneal and Davis, 1998), in particular among those who share more joint memberships at a systemic level (Böhmelt, 2009; Dorussen and Ward, 2008; Oneal, Russett and Berbaum, 2003). Other work does not find empirical support for the peace-promoting thesis, but still observes a pacifying effect on conflict duration in the second half of the 20th century (Shannon, Morey and Boehmke, 2010).

3. Fragmentation is unlikely to increase security

Fragmentation would be costly to the global economy, cause the position of low-income economies to deteriorate, and, in effect, harm security. This negative effect is driven by four main channels.

First, fragmentation would come at a substantial cost that lowers available resources to invest in security. As geopolitical and climate change-related risks increase, so does the need for investments in disaster risk reduction. Estimated direct economic losses from disasters increased from an average of around US\$ 70 billion a year in the 1990s to US\$ 170 billion in the 2010s (International Science Council, 2023). Yet, funding for disaster risk reduction is already limited. Only 5 per cent of the official development assistance to developing economies for disaster-related purposes from 2011 to 2022 was provided for preparing for and mitigating disasters with the rest allocated to post-disaster relief and reconstruction (Benson, 2023).

Fragmentation reduces global income by reducing trade. Fragmentation limits specialization and, thus, the gains from trade coming from comparative advantage, the increased availability of different varieties of goods, the sharing of fixed costs among economies, and the diffusion of ideas and technologies. Chapter D discusses how trade fragmentation of the global economy would reduce global output, particularly in developing economies. Fragmentation would also adversely affect welfare through reduced employment-related migration and investment flows. In a stylized scenario the global drop in output from a 50 per cent drop in foreign direct investment (FDI) flows between an Eastern and a Western bloc (with a set of regions remaining non-aligned) is about 2 per cent (IMF, 2023). Furthermore, such fragmentation would raise trade policy uncertainty, thus further raising welfare costs (Caldara et al., 2020; Osnago, Piermartini and Rocha, 2015).

Limiting fragmentation to a set of selected strategic goods would not necessarily reduce the welfare losses. A total of 90 per cent of the welfare gains from trade come from the ability to trade 10 per cent of the most critical goods for welfare, i.e., those goods for which alternative or substitute sources of supply are hard to find (Ossa, 2015). In addition,

these calculations do not consider the costs of disorderly disintegrating GVCs, which would be particularly high in the strategic sectors where high levels of concentration at the product level, large sunk costs, and relationship-specificity are most likely to prevail. For example, the production of smartphones is characterized by many stages as well as high degrees of vertical specialization and concentration in each of the production stages (Thun et al., 2022). More generally, evidence from the United States highlights that value chains are concentrated, with only a small share of firms importing the same product from more than one source country (Antras et al., 2023). Dismantling such value chains would be costly and would reduce efficiency since in any other system fixed costs must be incurred multiple times and the sunk costs of forming value chains are large.

Second, and relatedly, fragmentation would deteriorate the position of low-income economies even though they are the most affected by disasters and security concerns. As also discussed in Chapter D, low-income regions would lose most from fragmentation because of the importance of the technology spillovers they would miss out on (Goes and Bekkers, 2022) and the fact that they benefit most from FDI inflows (IMF, 2023). Furthermore, low-income regions would be worse off since their market access would no longer be guaranteed by a well-functioning multilateral trading system with rules-based commitments for all regions. Under fragmentation, large importers could exploit their market power to obtain better terms-of-trade at the expense of exporters (Bagwell and Staiger, 1999). These effects could reduce global security as they would limit resources to invest in resilience where they are most efficient.

Third, fragmentation would reduce the number of potential suppliers, and thus limit firms' flexibility during crises. This is an especially costly effect in an environment of increased shocks of uncertain origin. It makes both ex-ante and ex-post diversification of exports and imports harder and, thus, raises macroeconomic volatility. Although the vulnerability to foreign shocks would fall if value chains were no longer organized internationally (Eppinger et al., 2021), the vulnerability to domestic shocks would rise and the latter effect dominates (Bonadio et al., 2021). Because trade costs are high for most economies, the share of intermediates sourced domestically is already too high to optimally exploit the spreading of risks. Thus, re-shoring would raise economic volatility by further increasing the share of domestic sourcing, in particular in case of economic shocks which are uncorrelated between economies (IMF, 2022).

Fourth, fragmentation weakens the mechanisms through which trade reduces the likelihood of conflict. Fragmentation limits interdependencies between economies and reliance on rules-based international cooperation, which are key to trade supporting security as explained in Section C.1. All the channels outlined above would suffer from fragmentation. The opportunity costs of conflict would decline, influence and resources would shift away from interest groups supporting peaceful relations, and regular exchanges between economies that advance mutual understanding would

decrease. In addition, the number and relevance of tools and platforms to de-escalate issues of common interest would fall. Finally, fragmentation has in the past been a prelude to military conflict. For instance, before the Second World War, trade policy of the United Kingdom can explain the majority of Britain's shift toward Imperial Preference, which contributed to geopolitical tensions (de Bromhead et al., 2019; Jacks and Novy, 2020).

Aside from these effects, certain forms of fragmentation may not provide the degree of security expected by their proponents. This is the case, for instance, with friend-shoring, which is based on the geopolitical alignment of trading partners. The reason is that the geopolitical alignment of governments is at times volatile. A simple analysis based on UN voting patterns and how they have evolved between 2006 and 2015 relative to the period 1972 to 1981 is suggestive in this regard, as it finds sizeable changes over time. Geopolitical affiliation in the earlier period explains only 40 per cent of the affiliation in the later period. This trend could even accelerate for some governments, as advancing political polarization (Boxell, Gentzkow and Shapiro, 2020) increases the potential differences in geopolitical alignment from one electoral cycle to the next.

To summarize, addressing security through fragmentation would generate large economic costs, which would be particularly high for the most vulnerable low-income regions. More importantly, it is unlikely to respond to security challenges facing the globe. Economic resilience would shrink, and a disintegrated world could increase the likelihood of conflict. Instead, re-globalization could be a more suitable approach as discussed in the next section.

4. Re-globalization can contribute to a more resilient and thus safer world

Security concerns are here to stay for the foreseeable future. However, there remains ample room for international cooperation to promote security through re-globalization. First, expanding the multilateral trading system to new actors and new areas can facilitate diversification and the “flexicurity” the system provides during crises. Second, more cooperation on trade restrictions during crises can limit their negative impact. Third, cooperation within the WTO instead of unilateral policies can help to reduce the overlap between security and trade. This may require the adaptation of the multilateral trading system to a new trade environment. The capacity of the WTO to respond to emerging security concerns can be improved both at the level of its substantive norms and of its functions.

(a) Diversifying trade and expanding the multilateral trading system contributes to economic security

The multilateral trading system is central to economic security. The legal principles underpinning the multilateral

trading system, such as the most-favoured-nation clause or national treatment, limit the risk of discrimination between exporters and between exporters and domestic producers. They facilitate viable and durable trade diversification based on comparative advantage, which is an effective tool to avoid excessive dependencies on individual suppliers. Moreover, the prohibition of quantitative restrictions limits the risk of export taxes or quotas being imposed discriminatorily but allows them to deal with legitimate concerns such as domestic shortages or the protection of the environment.

Addressing trade barriers where they remain high could advance the role of trade for economic security. Chapter B has highlighted two important findings in this regard. First, trade flows in certain products have increasingly become concentrated which limits trade's role for security. Second, trade costs faced by low-income economies are much higher than in advanced economies, including for those who could supply products in which trade is concentrated. By removing trade barriers for these economies, the concentration of trade would fall naturally in an optimal way by shifting production to locations of comparative advantage.

While tariffs faced by low-income economies are already low, there remains scope to address non-tariff measures as well as the capacity and infrastructure of these economies to expand trade. The Trade Facilitation Agreement (TFA) serves as a model in this regard. It facilitates the exportation, transit and importation of goods, including essential goods in times of crisis. Recent evidence suggest that its benefits accrued mostly to LDCs, whose exports increased more than twofold relative to the global average as a result of the Agreement (Beverelli et al., 2023).

The joint statement initiative on investment facilitation for development (IFD) is similarly an important step in the process of a more diversified trading system. The TFA estimates bode well for the IFD as the agreement would similarly aim at facilitating trade by cutting red tape and making regulations more transparent, but with a focus on investment measures. As regulations tend to be more restrictive in developing economies, the joint statement initiative on IFD could further advance the participation of developing economies and LDCs in the trading system, just as the TFA has done. In this regard, it is very promising that negotiators announced on 6 July the conclusion of the negotiations on the text of the Agreement.

More generally, ongoing reform efforts targeted at improving the operation and functioning of WTO committees and councils can be an important avenue for diversifying the trading system. While less visible than negotiations or disputes, work in the committees and councils is important to grease the wheels of the trading system. The work adds transparency and addresses information barriers regarding members' measures affecting trade. In that regard, committees and councils effectively lower the trade costs associated with non-

tariff measures (NTMs). This, in turn, is central for making trade more accessible and, thus, more diversified and resilient. For instance, evidence from Indonesia highlights that NTMs can slow down the response of firms to shocks and lead to sharper reductions in export volumes during crises (Cali et al., 2023; Ghose and Montfaucon, 2023).

Relatedly, specific provisions in the WTO agreements assist developing and least-developed members to overcome trade barriers. Joint programmes with other international organizations and contributing members, such as the Aid for Trade initiative, the Enhanced Integrated Framework (EIF) or the Standards and Trade Development Facility (STDF), hosted by the WTO, allow developing and least-developed members to adapt to certain exigencies of modern trade such as technical standards or sanitary requirements, thereby creating opportunities for them to increase their share in global trade.

Another area in which extending the multilateral framework would contribute to economic security is e-commerce. Digital trade could help diversify economies' production and export patterns, especially for remote or landlocked economies which face high physical trade barriers (WTO, 2018). At the WTO, negotiations to facilitate digital trade are under way within the framework of a joint statement initiative (JSI) among members accounting for over 90 per cent of global electronic commerce. As is the case for all joint statement initiatives, participation in the e-commerce negotiations is open to all WTO members. A consolidated negotiating text was produced in December 2022. Digital trade also benefits from the WTO moratorium on the imposition of customs duties on electronic transmissions, which has been in force since 1998, and was further extended at the 12th WTO Ministerial Conference. While e-commerce may also cause new security concerns, such as increased exposure to cyber-criminality, a uniform framework can promote the development of technologies defending against cyber-crime through economies of scale (Chen, 2022).

The development of trade in services and, particularly, the relaxation of substantive and procedural regulatory requirements to facilitate the trade in professional services, including medical or engineering services, would enhance economic security against natural shocks or sanitary crises by allowing foreign professionals to provide services to the areas concerned. In this respect, the successful conclusion in 2021 of the joint statement initiative negotiations to increase the transparency, predictability and efficiency of authorization procedures for foreign service providers will contribute to facilitating increased trade in professional services (WTO, 2021).

(b) Limiting trade restrictions contributes to ensuring the provision of essential goods

International organizations, as neutral actors, play a major role in food supply, and the WTO works closely with other

international entities to ensure that trade contributes to improving food security. In particular, the WTO participates in the Global Crisis Response Group on Food, Energy and Finance. This group was established by the UN Secretary-General in March 2022 to help decision-makers find global and systemic solutions to the unprecedented three-dimensional food, energy and finance crisis that had arisen from the combination of the war in Ukraine with pre-existing crises. As part of its Trade Dialogues initiative, the WTO also regularly organizes Trade Dialogues on Food, bringing together experts from governments, non-governmental organizations, businesses, academia, think tanks and foundations to foster a debate on the role of trade in food security.

The current context of growing economic and geopolitical tensions could justify a reinforcement of disciplines on trade-restrictive measures. These disciplines could include commitments in the implementation of export restrictions such as in the MC12 Ministerial Declaration on the Emergency Response to Food Insecurity (WTO, 2022), in which members resolved to ensure that any emergency measures introduced to address food security concerns must minimize trade distortions as far as possible, must be temporary, targeted, and transparent, and must be notified and implemented in accordance with WTO rules. Moreover, WTO members imposing such measures might want to consider their possible impact, especially on least-developed and net food-importing developing economies.

More advanced rules could take the form of commitments not to impose any export restrictions or duties at all on a number of goods deemed essential. This could be based on the model of the MC12 Decision not to impose export prohibitions or restrictions on foodstuffs purchased for non-commercial humanitarian purposes by the World Food Programme, which nevertheless does not prevent the adoption by any WTO member of measures to ensure its domestic food security in accordance with the relevant provisions of the WTO Agreements. Such commitments could extend to non-automatic licences and export taxes. This said, even though there are obvious candidates for this list (e.g., food, energy, medications, green technologies), an agreement on the exact goods and services to be covered could be difficult to reach. Alternatively, members could define their own list of goods on which they would unilaterally commit not to apply trade restrictions.

On the basis of more exhaustive information gathered and shared through WTO transparency mechanisms, members would be in a position to individually commit to keep the level of stockpiling in check. Members could also commit to put in place procedures facilitating food shipments during crises, based on the provisions of the Trade Facilitation Agreement (TFA). Other arrangements could be agreed upon to avoid disruptions of food shipment during conflicts (WTO, 2022e).

(c) The functions of the WTO can be improved to reduce the risks of overlap between security and trade policy

(i) The WTO deliberative process can be enhanced on security matters

The debate around the interpretation of the WTO security exceptions, including whether and in which circumstances their invocation can be challenged through recourse to WTO dispute settlement, has led to proposals to reinforce the WTO deliberative process and extend it to security issues (Hoekman, 2022; WTO, 2022a). Proposals for a reinforced deliberative process at the WTO are largely based on the existing “specific trade concerns” (STC) process before the WTO TBT Committee, the SPS Committee, and the Committee on Market Access. These proposals are based on the view that, in those committees, trade measures alleged to affect the interests of some members are discussed at a technical level and issues solved through dialogue and information sharing.

The above-mentioned committees are not the only forums available for policy dialogue. The Council for Trade in Goods (CTG) is increasingly playing a role in this domain. The number of trade concerns raised before the CTG surged to an unprecedented level in 2022, in part due to the sanctions imposed by some members in the context of the war in Ukraine (see Section C.2). GATT 1994 Article XXI and national security concerns were often raised as justifications for trade restrictions and a significant part of the trade concerns discussed before the CTG resulted from geopolitical tensions.

(ii) Transparency can be reinforced to limit the impact of economic shocks

To discuss security exceptions more effectively, the deliberative process mentioned above and the WTO functioning in general would greatly benefit from the improvement of transparency instruments under the WTO agreements. In this regard, the WTO Trade Monitoring Exercise, the relevant WTO notification requirements, and peer reviews by WTO members (such as the Trade Policy Review Mechanism) could play an even greater role in a world economy increasingly exposed to different types of shocks. However, progress needs to be made regarding the rate of compliance with notification requirements. For instance, only 14 per cent of the total number of export restrictions initiated following the beginning of the war in Ukraine were notified to the WTO (WTO, 2023).

Agriculture is a particularly good illustration of the significance of transparency in responding to economic security concerns and limiting the occurrence of interferences with trade. Increased transparency in the area of agriculture would provide trading partners with the additional information necessary to develop a better knowledge of existing stocks, ensuring that more production surpluses could be exported to economies that need them. This would maintain trade in times of crises and enhance food security while reducing export restrictions or excessive

stockpiling. Regarding essential agricultural products, the WTO participates in the Agricultural Market Information System (AMIS, 2023). AMIS is a mechanism set up by the G20 agriculture ministers to enhance market transparency for essential crops and promote policy dialogue in the wake of the global food price hikes in 2007-08 and 2010. Its scope is being extended to cover more essential agricultural products.

(iii) Options are available to disentangle national security from trade policy

To limit the tension between security and international cooperation on trade, it has been proposed that a form of “rebalancing” could be introduced. Under this mechanism, governments could restore the balance of rights and obligations further to the adoption of a security-related trade measure by another member government by negotiating equivalent concessions (Lester and Lew, 2022). Should the parties be unable to agree on a suitable compensation, the affected government could unilaterally suspend equivalent concessions. The proponents of this idea consider that this could be done without prior recourse to dispute settlement or while a dispute is under review. They are of the view that this would allow an immediate restoration of the balance of rights and obligations between the members concerned, whereas the completion of a dispute could take several years. Another option that has been flagged would be for members to adopt an agreed interpretation on the use of security exceptions, pursuant to Article IX:2 of the Marrakesh Agreement Establishing the World Trade Organization (WTO Agreement). This approach may, however, first require a consensus among members on the nature and justification of security exceptions.

Another approach suggests expanding the coverage of WTO security exceptions, e.g., to cover cybersecurity or critical infrastructure (Lester and Lew, 2022), or to expand the coverage of the general exception clauses to include various types of trade measures that members could, otherwise, not justify or would be tempted to justify under the arguably less demanding conditions of the security exceptions. Members could agree on instances where specific use of trade policy to pursue non-trade objectives would be acceptable, such as in sector-specific agreements. An amendment to the WTO general exceptions clauses in the GATT and the General Agreement on Trade in Services (GATS) could expand the current list of acceptable nontrade objectives as well as the conditions to invoke them, preserving a balance between trade and security (Hoekman, 2022).

Another option proposed by commentators could be for members to agree to exclude security exceptions from the scope of dispute settlement altogether and, instead, to subject situations in which security exceptions are invoked to a non-binding consultation mechanism (Hoekman, 2022). This mechanism could be reinforced by combining it with the possibility for members affected by a measure for which security reasons are invoked to “rebalance” rights and obligations by suspending substantially equivalent

obligations toward the member concerned (Benton-Heath, 2020).

Disentangling national security from trade policy could also contribute to economic security by reinvigorating WTO dispute settlement. Over close to 25 years, the Dispute Settlement Understanding (DSU) has enabled the peaceful resolution of hundreds of trade disputes. In an era increasingly dominated by security concerns and power-based diplomacy, a dispute settlement mechanism is more than ever necessary to preserve the rights and obligations of all members. In this regard, members committed at the 12th WTO Ministerial Conference to conduct discussions with a view to having a “fully and well-functioning dispute settlement system” accessible to all members by 2024 (WTO, 2022b).

5. Conclusions

There are many indications that security, especially in its broader sense of economic security, plays an increasing role in trade policies, at the national, regional, and multilateral

level. The involvement of security in trade policy can lead to higher trade barriers, and there is a risk that this could lead to fragmentation in the global economy as economies resort to re-shoring and friend-shoring. However, fragmentation would reduce global welfare as economies would forego gains from trade based on comparative advantage, increased product variety, the sharing of fixed costs, and the diffusion of ideas and technologies.

More importantly for the purpose of this chapter, fragmentation would also fail to increase security. Trade interdependence, open trade policies, and cooperation among economies through international organizations can reduce the probability of conflict and raise economic security. Therefore, fragmentation is an ineffective answer to the security challenges the world is facing. Instead, re-globalization and thus geographical diversification, the expansion of trade to new areas, and continued and expanded multilateral trade cooperation can contribute to greater security.

Endnotes

1. Ministerial Decision on Measures in Favour of Least-Developed Countries, adopted by the Uruguay Round Trade Negotiations Committee on 15 December 1993 and annexed to the Final Act Embodying the Results of the Uruguay Round Multilateral Trade Negotiations.
2. The number of members that notified quantitative restrictions notifications increased substantially in 2020, and hence this also contributes to the fact that more measures in relation to GATT 1994 Article XXI are present in the QR database.
3. Montesquieu famously maintained that the virtues of trade lie in making the “manners of man gentler”, promoting tolerant attitudes toward pluralism and training people in the habits of reciprocity and fairness.
4. The failure of interdependence in 1914 should not be overstated, since war was prevented in several instances preceding the beginning of the hostilities and it started between the least integrated powers (Gartzke and Lupu, 2012).
5. Further empirical work shows that the strength of the pacifying effect of trade depends on the circumstances and type of trade as well.