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De-Globalization and Fragmentation

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Abstract

Is the world de-globalizing? Is the global economy fragmenting along geopolitical lines? This article provides an overview of the available empirical evidence on de-globalization and fragmentation. This evidence does not point to a generalized phenomenon of de-globalization; it is more consistent with a process of slow-balization. At the same time, there are clear signals of geopolitical fragmentation. Against this backdrop, the article then provides: a systematic analysis of the underlying phenomena, including both structural drivers and idiosyncratic shocks; a broader reflection on the globalization backlash observed in politics already from the mid-1990s; and a discussion of the costs of de-globalization and fragmentation, both in terms of economic growth and welfare and in terms of peace and security.

Keywords: De-globalization; fragmentation; slow-balization; globalization backlash.

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1 Introduction

At the time of writing, in early 2025, de-globalization and fragmentation are hot topics of discussion not only in academia and in policy circles, but also in mainstream media outlets. Is the world de-globalizing? Are we witnessing a phase of increasing economic fragmentation among different regions and geopolitical blocs? What are the reasons for this phenomenon and what could be its consequences?

These questions are not entirely new. After a phase of hyper-globalization between the mid-1980s and the Great Financial Crisis of 2007-2008, a slowdown of cross-country trade and investment activities has begun. A sequence of shocks, from Brexit to the US-China trade war, followed by the Covid-19 crisis and the war in Ukraine, have then hit the global economy. These have reinforced a pre-existing shift in trade policy stances in a protectionist and isolationist direction, with rising uncertainty and a general re-thinking of international business strategies. All this is having tangible implications on the size and shape of international trade and investment flows, nourishing fears of a significant step back of globalization.

Several studies have investigated these dynamics from different disciplinary perspectives, ranging from international economics to international business and political economy (e.g., Aiyar *et al.*, 2023a; Alfaro and Chor, 2023; Antràs, 2021; Bellucci and Rungi, 2023; Blanga-Gubbay and Rubínová, 2024; Conteduca *et al.*, 2024; Goldberg and Reed, 2023; Ottaviano, 2022; WTO, 2023c). These studies have yielded a number of stylized facts and interpretations. Building upon this body of research, this article aims to provide: (1) an updated overview of the available evidence on de-globalization and fragmentation; (2) a systematic analysis of the underlying phenomena, encompassing both structural drivers and idiosyncratic shocks; (3) a broader reflection on the globalization backlash observed in politics, as related to rising inequality and the distributional consequences of structural economic changes; and (4) a discussion of the costs of de-globalization and fragmentation,

both in terms of economic growth and welfare and in terms of peace and security.

As a starting point, it is important to define the objects of analysis: de-globalization and fragmentation. De-globalization is defined in opposition to globalization. Globalization describes the growing cross-country integration of the markets for goods, services, capital, and labor. In contrast, de-globalization refers to a process of diminishing integration, characterized by rising barriers to international trade, investment, and migration, as well as declining cross-border flows. Fragmentation has been defined by the World Trade Organization (WTO, 2023c, p. 22) as "the turning away from the cooperative approach embedded in the current multilateral trading system towards more local and bloc-based trade and unilateral policies. It is characterized by increased trade restrictions and deviations from commitments to international agreements. Examples include broad trade restrictions on subsets of economies or unilateral policies that do not account for spillovers and externalities on other economies".

De-globalization and fragmentation are closely related, yet distinct concepts. In fact, while fragmentation can contribute in principle to de-globalization by dividing the global economy into specific regional or geopolitical blocs, it may also lead to rising economic integration within blocs. The net effect of fragmentation on cross-border integration at the global level is therefore not obvious ex-ante. In general, one could say that de-globalization refers to the overall *size* of cross-border flows, while fragmentation refers to their *shape*. Fragmentation may not necessarily lead to de-globalization, but it may still change the shape of the global economy. For instance, Ottaviano (2022) refers to fragmentation dynamics as "selective re-globalization".

Against this backdrop, Section 2 presents a number of stylized facts on international trade, investment, and migration flows from the 1970s onwards. Focusing on global aggregate figures, one notices a slowdown, though not a reversal of globalization from 2008 onwards. In particular: (1) the global trade-to-GDP ratio seems to stabilize after three decades of robust growth; (2) the ratio of net Foreign Direct Investment (FDI) over GDP

drops close to zero; and (3) the growth in the share of migrants over the global population declines by roughly half. Yet, while the process of economic integration slows down, it does not seem to recede. Overall, as already first noticed by Antràs (2021), these dynamics seem to point more to a process of "slow-balization" rather than de-globalization.

Yet, looking beyond the aggregate figures, a significant degree of heterogeneity emerges as one considers the group of major economies separately. For instance, the trade-to-gdp ratio drops substantially in China and India, and declines slightly in the US, while it keeps growing both in the EU and in Japan. The ratio of net FDI inflows over GDP drops more substantially in China and the EU, and less markedly in India, while it remains essentially stable in the US, and grows slightly in Japan. Overall, while the aggregate evidence points to slow-balization, some signals of de-globalization seem to be detectable especially in China, which was a main player, and beneficiary, of the fast-speed globalization wave prior to the Great Financial Crisis.

Evidence of fragmentation in the global economy can be detected especially from the onset of the war in Ukraine, in February 2022. This is when growth in trade *within* what has been called the West bloc—including the EU, the US and other aligned countries—and the rival East bloc—including China, Russia and other aligned countries—starts significantly outpacing growth in trade *between* these blocs. An important dimension of fragmentation is the so-called "de-coupling" between the US and China, which is visible already from the beginning of the trade war in the summer of 2018. In fact, this is when growth in bilateral trade between the US and China starts being outpaced by growth in their trade with other countries. Overall, fragmentation takes the form of a reconfiguration of trade patterns along geopolitical lines, while there is no evidence of a regionalization of trade along a purely geographical dimension. In fact, trade between different geographical areas of the world is sustained by the emergence of connecting countries such as Mexico and Vietnam, for which we observe in parallel both growing imports from China and growing exports to the US. This suggests that there may be less de-coupling going on between China and the

US than one could think at first glance. In fact, their global value chain connections may just be getting longer.

Similar dynamics of fragmentation are visible when considering FDI flows. Specifically, investment flows between blocs have declined with respect to investment flows within blocs. The drop is particularly strong when one considers investment flows from the US to China. At the same time, consistent with the evidence on trade flows, connecting countries such as Mexico and Vietnam are witnessing stronger FDI inflows, especially from China. Overall, underneath the observed reallocation of trade and investment patterns, globalization shows signs of resilience.

Section 3 discusses the phenomena that are driving the described dynamics of de-globalization, or slow-balization, and fragmentation. To put the analysis in perspective, the overview starts with an assessment of the three main factors behind the acceleration of globalization between the mid-1980s and 2008: (1) developments in information and communication technologies (ICT); (2) reductions in transportation costs; and (3) trade liberalization through declining tariffs and a rising number of regional trade agreements, along with political developments that led several countries—such as China, India, and the former Soviet Union members—to join the global trading system. These factors were important especially for the rapid expansion of Global Value Chains (GVCs), which gave a major boost to both cross-border trade and investment flows. The subsequent natural slowdown in the expansion of GVCs is then identified as a first structural factor behind the stabilization of the global trade-to-GDP ratio. A second structural factor is the compositional effect driven by the enduring shift of the global economy from trade-intensive manufacturing activities towards less-tradable services. According to WTO (2023c), such structural factors actually account for most of slow-balization taking place between 2008 and 2018.

The article then addresses the sequence of shocks that have hit the global economy in recent years: the Great Financial Crisis; the Brexit referendum; the first election of Trump in 2016, which led to the US trade war with China and to other protectionist measures; the

Covid-19 pandemic; and, most recently, the war in Ukraine and the mounting geopolitical tensions in the Middle East and Asia. Beyond their immediate, short-run impact on cross-border activities, these shocks have prompted a dual reckoning of globalization: both in the sphere of government policy and, relatedly, from the perspective of business strategy.

At the level of governments, national security concerns have become very salient, and there is a growing tendency to think that high economic interdependence makes countries more vulnerable, especially in the current context of rising risks and diminished mutual trust. This new "zeitgeist" is driving a push for self-reliance and strategic autonomy especially in key industries, such as those related to green technologies and semiconductors. We observe a return to industrial policy based on subsidies and restrictions to investments and exports, and a general protectionist shift in trade policy. This happens for instance via more anti-dumping and countervailing duties measures, which also tend to entail rising protection rates. National security concerns are also increasingly invoked to justify rising tariffs within the WTO framework. At the same time, the WTO Dispute Settlement Body is impaired since all the seven members of its Appellate Body have expired since November 2020 and no new judges have been appointed. This is mostly due to the US decision to block new appointments, first with President Trump and then with Biden. In general, from being a main proponent of the WTO-centered, rules-based system of multilateral relations, the US has shifted to much more protectionist and isolationist positions. This shift is being consequential at the global level.

Concerning global business strategies, all the recent events have raised the salience of risks entailed by complex global value chains. Sources of risk encompass pandemics, extreme climate events, volatility in transportation costs, as well as bottlenecks due to concentrated supply. Moreover, the favorable trade policy stance, which was one of the main factors pushing globalization until 2008, has been significantly reverted. There is now more uncertainty around trade policy, and companies need to adjust their strategies accordingly. Calls for reshoring, nearshoring, and friendshoring of supply chain activities have become

widespread, and we start seeing some evidence in the data along these directions also at the micro level (e.g., Bellucci and Rungi, 2023). At the same time, multinational companies hedge against trade policy risks by building more insulated regional value chains that would not be disrupted by future trade wars. This happens for instance within China, which has become a market too big to leave.

Globalization is a phenomenon driven by market dynamics that hinge upon a trade and investment friendly political environment. Even with the best communication and transportation technologies available, cross-border activities can only take place if trade policy allows it. In this sense, globalization is ultimately a political phenomenon. The recent protectionist and isolationist turn in trade policy is not an entirely new development. It reinforces a general trend of globalization backlash that started in advanced democracies already from the mid-1990s. Colantone *et al.* (2022) define the globalization backlash as the political shift of voters and parties in a protectionist and isolationist direction, with substantive implications on governments' leaning and enacted policies. Section 4 makes the connection with this broader phenomenon, and discusses its structural drivers, as related to the distributional consequences of structural economic changes, chiefly globalization and technological progress. Specifically, the globalization backlash is related to rising inequalities across both regions and social groups, leading to political discontent that breeds support for anti-globalization parties and candidates. In this respect, the political sustainability of globalization is tightly related to successful attempts at reducing economic inequalities and making structural changes more inclusive. Importantly, this consideration also applies to the transition towards a decarbonized economy, which is already creating winners and losers, and needs effective "just transition" policies.

Finally, Section 5 addresses the costs of de-globalization and fragmentation. From an economic standpoint, globalization contributes to growth and welfare in several ways, from efficiency gains in production to higher variety of goods and lower prices for consumers. Globalization is a growth engine especially for emerging economies, that benefit in terms

of capital inflows, technology transfer, and export-led growth opportunities. The observed dynamics of slow-balization and fragmentation are already slowing down global growth, which is at the lowest levels in decades (IMF, 2024). The costs of further steps back of globalization are estimated to be sizable, up to 7% of global GDP in the most pessimistic estimates (Bolhuis *et al.*, 2023). Beyond the purely economic costs, de-globalization and fragmentation may go hand in hand with a crisis of liberal democracies, and hamper peace. From this perspective, the current global events carry ominous parallels to what occurred around the two world wars in the 20th century.

2 The evidence

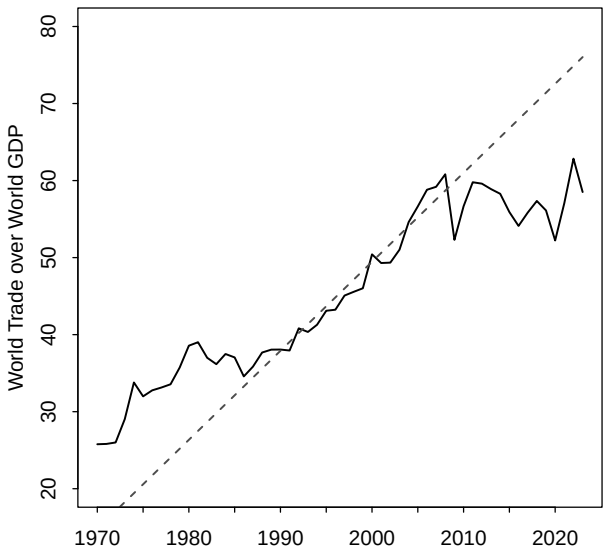
This section provides an overview of the available evidence on de-globalization and fragmentation. It starts by considering aggregate figures on international trade, investment, and migration at the global level. It then moves on to assessing heterogeneity across different economies, and dynamics of fragmentation between geopolitical blocs.

2.1 De-globalization or slow-balization?

A main measure of globalization is the global trade-to-GDP ratio. That is, the sum of world exports and imports of goods and services measured as a share of gross domestic product. Figure 1 displays the evolution of this indicator between 1970 and 2023, based on World Bank data. As in Antràs (2021), the dashed line represents the linear forecast based on the time-interval 1986-2008, which was a period of fast-paced growth of globalization. After the peak of 2008, the global economy clearly deviates from this trajectory of hyper-globalization. Net of some year-on-year fluctuations, the world trade-to-GDP ratio seems to stabilize around a slightly lower level.

Moving to foreign direct investment flows, Figure 2 shows the evolution of world FDI net inflows over world GDP, between 1980 and 2023. FDI net inflows are obtained as the

Figure 1: World trade over world GDP



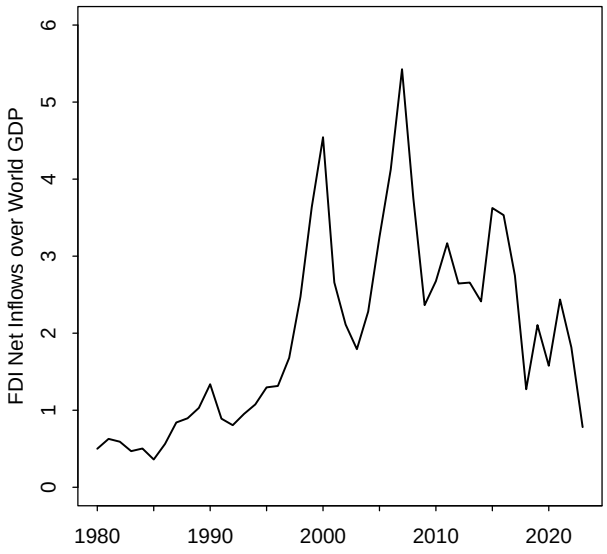
Source: Author's elaboration based on World Bank - World Development Indicators data (link).
Note: The solid line displays the sum of exports and imports of goods and services measured as a share of GDP, between 1970 and 2023. The dashed line is the linear fit based on the 1986-2008 period.

difference between new investment inflows minus disinvestment. Similar to the evolution of the trade-to-gdp ratio, net of yearly fluctuations this index drops substantially after the peak around the Great Financial Crisis.

Finally, considering the cross-border flows of people, Figure 3 displays the share of international migrants over the world population (left panel), and its growth rate over time (right panel), between 1990 and 2019. Data are sourced from the Global Migration Database of the United Nations. The pattern is less stark in this case. In fact, the share of migrants keeps growing from 1995 onwards, yet the growth rate slows down after 2010.

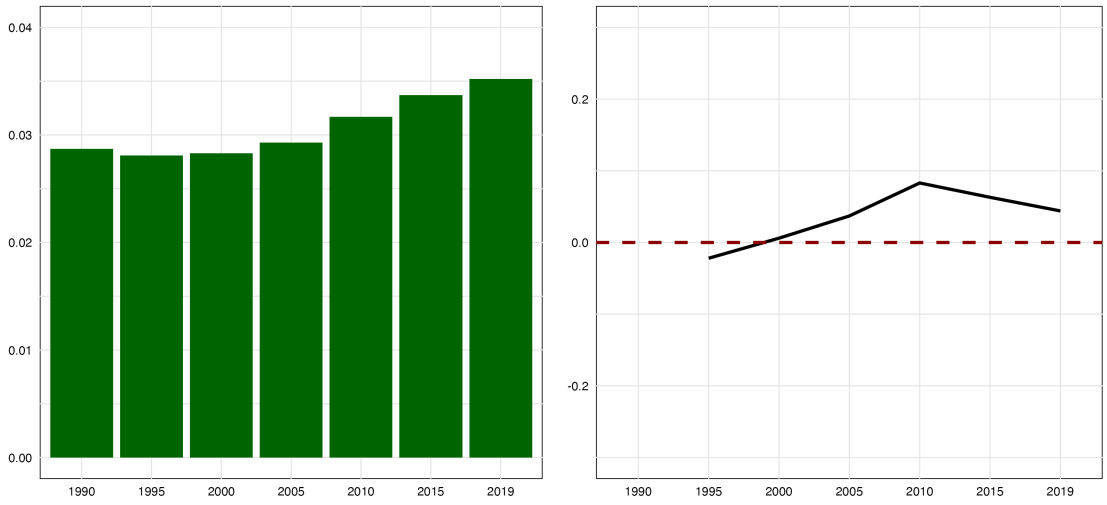
Taking stock of the evidence, there seems to be a slowdown of globalization, as the aggregate indexes of trade, investment, and migration consistently point to a sort of stabilization in the process of economic integration in recent years. Yet, there is no real evidence of de-globalization, which would require negative growth rates in these indicators. The observed dynamics thus far point more to a process of slow-balization, rather than

Figure 2: World FDI net inflows over world GDP



Source: Author's elaboration based on World Bank - World Development Indicators data (link).
Note: The figure displays FDI net inflows, that is, new investment inflows minus disinvestment, as a share of GDP, between 1980 and 2023.

Figure 3: International migrants over world population



Source: Author's elaboration based on United Nations - Global Migration Database data (link).
Note: The left panel displays the share of international migrants over the world population, between 1990 and 2019. The right panel displays the growth rate of the same ratio.

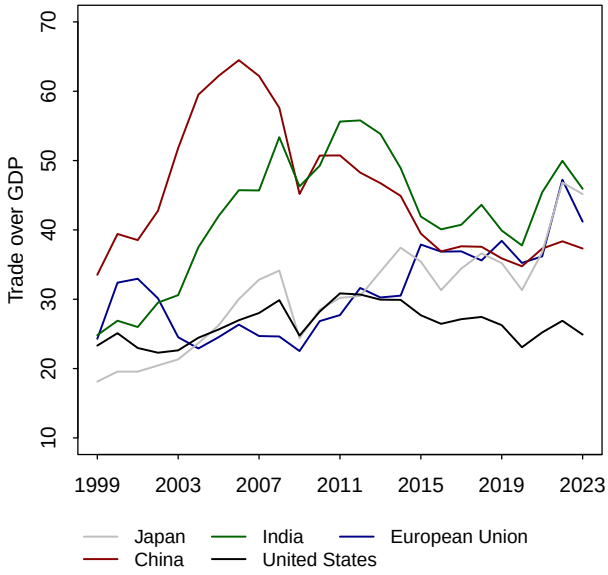
de-globalization. This was already noticed by Antràs (2021) and Goldberg and Reed (2023), and continues to hold true when the analysis is updated to include the most recent available years of data.

Next, I explore heterogeneity in trade and FDI flows across five major economies: China, the European Union, Japan, India, and the United States. Specifically, Figure 4 considers the trade-to-GDP ratio, while Figure 5 displays the net FDI inflows over GDP for each economy. Overall, there seems to be a significant degree of heterogeneity. In particular, the trade-to-GDP ratio decreases significantly in China and India, experiences a slight decline in the US, and continues to grow in both the EU and Japan. The ratio of net FDI inflows to GDP declines more sharply in China and the EU, decreases more moderately in India, remains essentially stable in the US, and shows a slight increase in Japan. In sum, while the aggregate evidence suggests a trend of slow-balization, some signs of de-globalization are visible particularly in China, which had been a key driver and major beneficiary of the rapid globalization wave until the Great Financial Crisis.

2.2 Fragmentation

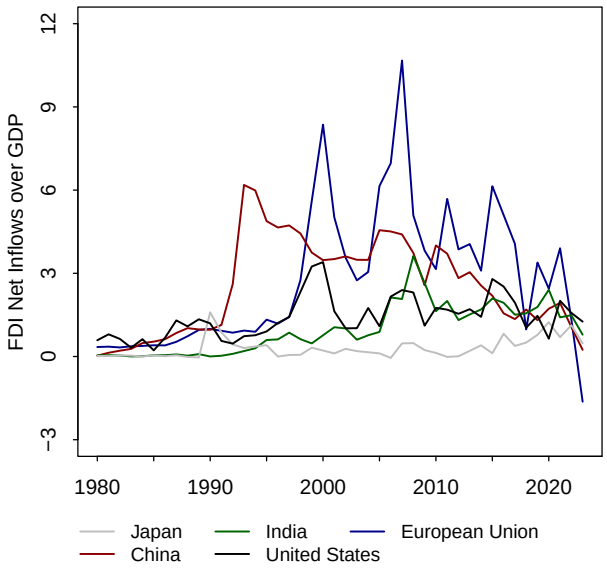
This section provides an overview of the available evidence on fragmentation in the global economy. As a first stylized fact, Figure 6 reproduces a finding by Blanga-Gubbay and Rubínová (2024). They split the world in two hypothetical geopolitical blocs: the East—including China and the Russian Federation—and the West—including the US and EU countries. Countries are assigned to one or the other bloc based on their voting patterns at the UN General Assembly (Bailey *et al.*, 2017; Góes and Bekkers, 2022). As can be seen in the left panel of Figure 6, after the beginning of the war in Ukraine, in February 2022, trade within blocs (red line) outpaces trade between blocs (blue line). The right panel shows the difference in between- vs. within-blocs trade, indexed at 0 in January 2022. This is negative throughout the period after the onset of the war. Overall, there seems to be a relative reconfiguration of trade flows along geopolitical lines, which is confirmed

Figure 4: Trade over GDP



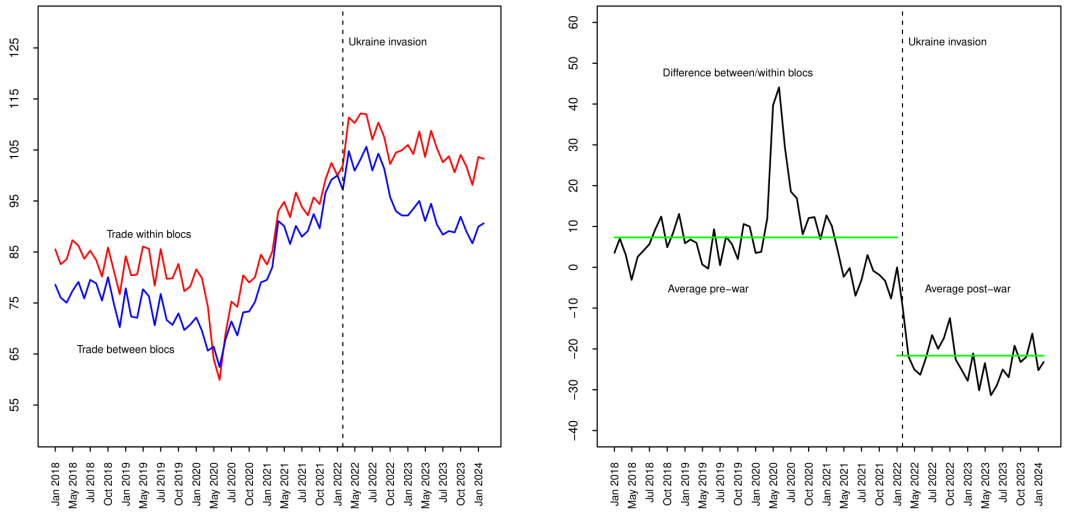
Source: Author's elaboration based on World Bank - World Development Indicators (link) and Eurostat (link) data.
Note: The lines display the economy-specific sum of exports and imports of goods and services measured as a share of GDP, between 1999 and 2023. Trade data for the European Union do not include intra-EU trade, and are available from the Balance of Payments only from 1999 onwards.

Figure 5: FDI net inflows over GDP



Source: Author's elaboration based on World Bank - World Development Indicators data (link).
Note: The lines display the economy-specific FDI net inflows, as a share of GDP, between 1980 and 2023.

Figure 6: Trade within and between geopolitical blocs

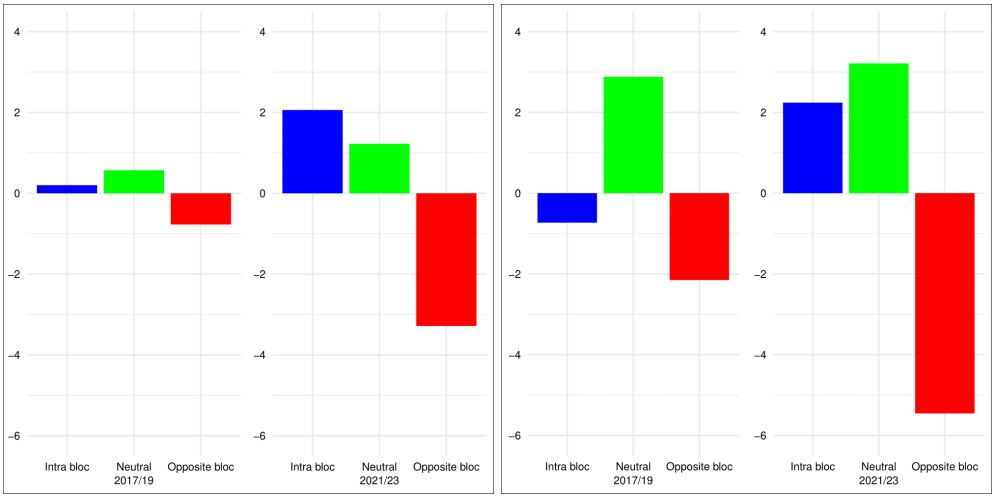


Source: Author's elaboration based on Blanga-Gubbay and Rubínová (2024) data.
Note: In the left panel, the red (blue) line shows trade in goods within (between) the East and West blocs, between January 2018 and February 2024; the series are seasonally adjusted and indexed at 100 in January 2022; Russian Federation, Belarus, and Ukraine are excluded. The right-panel reports the difference in between- vs. within-blocs trade, indexed at 0 in January 2022; the green lines display the average difference before and after the beginning of the war.

by regression analyses based on monthly trade data. This is particularly impressive since countries directly involved in the war—i.e., Russian Federation, Belarus, and Ukraine—are excluded from the analysis of trade flows. This means that, for instance, the dramatic drop in natural gas imports from Russia to the EU does not contribute to the figure.

What if these countries are included in the analysis? Figure 7 reproduces findings by Conteduca *et al.* (2024), who focus on three blocs: US-EU and their aligned countries (West bloc), China-Russia and their aligned countries (East bloc), and neutral. Over the period 2021-2023, countries in both the West and the East bloc witness an increase in import shares from other countries belonging to the same bloc, as well as to the neutral bloc, and a sharp decrease in import shares from countries of the opposite bloc. This tendency was already visible in the pre-Covid period, 2017-2019, but was much less pronounced. A closer examination of the data reveals that, within the West bloc, the reduction in import shares from the East bloc is driven in particular by the sharp drop in the share of EU imports from Russia, and in the share of US imports from China (each accounting for about 30%

Figure 7: Changes in import shares within and between geopolitical blocs



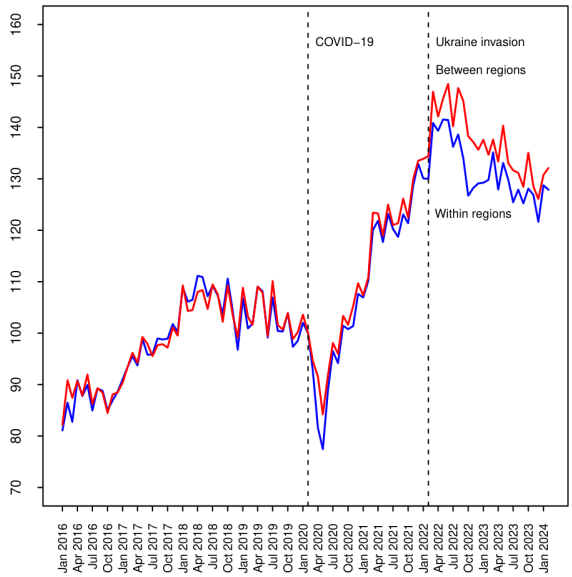
Source: Author's elaboration based on Conteduca *et al.* (2024) data.
Note: The bars display percentage-point changes in import shares.

of the overall reduction). In the East bloc, the decline in import shares from the West is due in particular to a reduction in China's imports from US-aligned Asian countries, such as South Korea, Taiwan, and Japan (around 60% of the total drop), and to the fall in Russian imports from the EU (around one-third of the total drop). Evidence along the same lines is also provided by Gopinath *et al.* (2024). Specifically, their estimates point to a decline by around 12% in trade between geopolitical blocs, relative to trade within blocs, since Russia's invasion of Ukraine.

While trade seems to re-allocate across geopolitical lines, there is no evidence of fragmentation along purely geographical lines. This is visible in Figure 8, that shows the evolution of trade within continents (red line) vs. between continents (blue line), as in Blanga-Gubbay and Rubínová (2024). There is no relative increase in trade within regions in correspondence of the Covid-19 crisis, nor in correspondence of the beginning of the war in Ukraine. If anything, there is actually some evidence of higher sensitivity to shocks for trade within regions, which declined more sharply in correspondence with both shocks. Yet it also rebounded in both cases. Overall, the observed fragmentation of the global economy seems more a geopolitical phenomenon than a merely geographical one.

An important dimension of fragmentation is the so-called "de-coupling" between the US and China. That is, a trajectory of reduced economic interdependence between these two countries, as driven by trade policy decisions and the resulting market dynamics. Section 3 will discuss the strategic considerations underlying this process—essentially based on US geopolitical and national security concerns—as well as its potential drawbacks. Here, the focus is on the available empirical evidence on de-coupling, which is not scant. In fact, several studies have provided evidence pointing to weakening trade and investment linkages between the US and China. Notable contributions in this direction include: Aiyar *et al.* (2023a), Alfaro and Chor (2023), Blanga-Gubbay and Rubínová (2024), Bown (2022), Conteduca *et al.* (2024), Gopinath *et al.* (2024), Grossman *et al.* (2024), Fajgelbaum *et al.* (2024), Freund *et al.* (2024), and Utar *et al.* (2023).

Figure 8: Trade within and between geographical regions



Source: Author's elaboration based on Blanga-Gubbay and Rubínová (2024) data.
Note: The red (blue) line shows trade in goods between (within) continents, between January 2018 and February 2024. The series are seasonally adjusted and indexed at 100 in January 2022. Russian Federation, Belarus, and Ukraine are excluded.

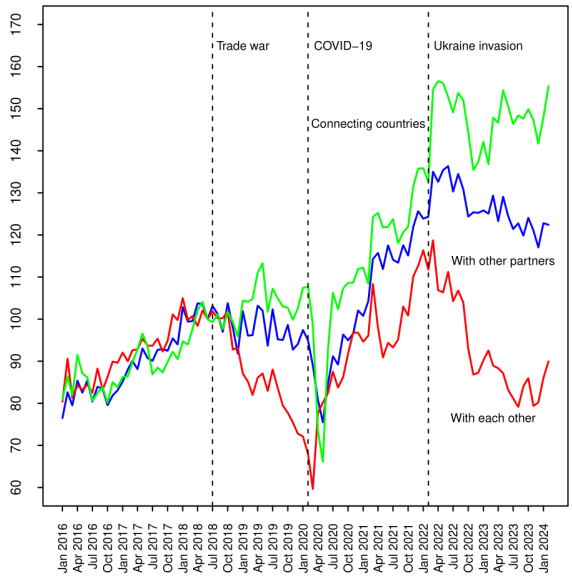
A main stylized fact emerging from this stream of studies is displayed in Figure 9, based on Blanga-Gubbay and Rubínová (2024). The red line shows trade in goods between the

US and China; the blue line shows trade in goods of the US and China with other trading partners. Both series are normalized to 100 in June 2018, just before the beginning of the trade war between the US and China. When the trade war starts, bilateral trade between the US and China starts growing less than their trade with third partners. The gap is partially reduced during the Covid-19 pandemic, until the beginning of 2021. It then grows amid mounting geopolitical tensions, and becomes much larger after the beginning of the war in Ukraine.

As documented by Alfaro and Chor (2023) and Conteduca *et al.* (2024), China is the country that has lost the most in terms of share of total US imports between 2017 and 2023. At the same time, there is an emerging role of connecting countries, such as Vietnam and Mexico, that witness in parallel both growing imports from China and growing exports to the US. This pattern can also be observed in Figure 9, where the green line displays the dynamics of trade taking place between the US and China, on the one hand, and Mexico and Vietnam on the other. Growth in this trade outpaces growth in bilateral trade between the US and China, as well as growth in their trade with other partners. This is true for most of the period following January 2019, and especially after the start of the war in Ukraine.

Several studies are providing evidence consistent with the fact the direct links between the US and China are being replaced by indirect links (e.g., Alfaro and Chor, 2023; Conteduca *et al.*, 2024; Dahlman and Lovely, 2023; Freund *et al.*, 2024; Gopinath *et al.*, 2024; Utar *et al.*, 2023). For instance, Gopinath *et al.* (2024) find that a 1 percent increase in the US import share between 2013-17 and 2018-23 is associated with a 1.6 percent higher share of Chinese exports over the same period. Alfaro and Chor (2023) point to a looming "great reallocation" in supply chain activity, by which direct US sourcing from China is replaced by sourcing from low-wage locations, such as Vietnam, and near-shoring/friend-shoring alternatives such as Mexico. Conteduca *et al.* (2024) find similar signs of de-coupling from China also in the EU, starting in 2023. At the same time, they stress how dependence on China for both the US and the EU remains very high, especially with respect to goods that

Figure 9: Trade between China, US, and others

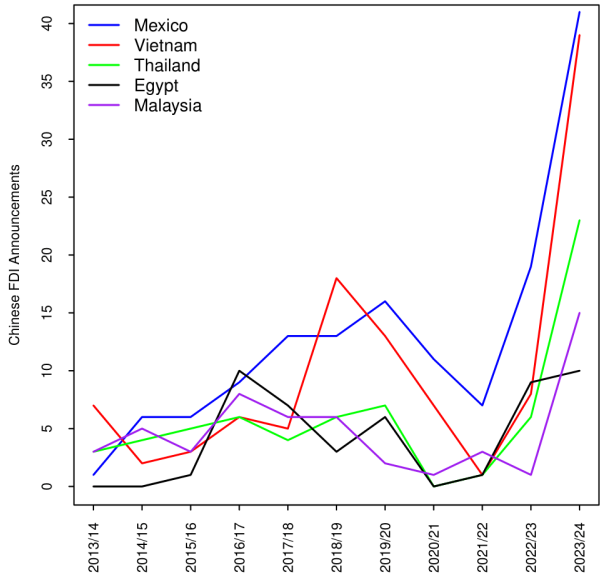


Source: Author's elaboration based on Blanga-Gubbay and Rubínová (2024) data.
Note: The red line shows trade in goods between the US and China; the blue line shows trade in goods of the US and China with other trading partners; the green line shows exports of China to Mexico, and imports of the US from Vietnam and Mexico (the data lacks information on imports of Vietnam). The time-span is January 2018 to February 2024; the series are seasonally adjusted and indexed at 100 in June 2018; Russian Federation, Belarus, and Ukraine are excluded.

are critical for the green transition. Overall, the available evidence suggests that there may be less de-coupling going on than one could think at first glance. In fact, even in areas where direct trade linkages between the US and China are relatively declining, their global value chain connections may just be getting longer.

In principle, a decline in trade flows between two countries—or two blocs of countries—could be compensated by an increase in foreign direct investment flows, as a way to jump tariffs and trade restrictions. Hence, when assessing de-coupling—and fragmentation more at large—it is important to consider not only trade but also FDI flows. Yet the evidence on FDI is actually very similar to the evidence on trade over the period of analysis. For instance, Alfaro and Chor (2023) document a declining trend in US greenfield investments in China already from the early 2010s. This decline in FDI is evident across key industries such as automobiles, semiconductors, and electronics. Similar evidence is found in a report by the IMF (2023), which documents a sharp drop in FDI inflows into China, not only from the US but also from western European countries and from other Asian economies. The drop is particularly pronounced in strategic sectors such as semiconductors. More generally, estimates by Gopinath *et al.* (2024) point to a decline by around 20% in FDI between geopolitical blocs, relative to FDI within blocs, since the start of the war in Ukraine. This is actually stronger than their estimated decline in trade flows, equal to roughly 12%, as reported above. At the same time, the role of connecting countries emerges also when considering FDI. For instance, Gopinath *et al.* (2024) find that a 1 percent increase in the US import share between 2013-17 and 2018-23 in a given country is associated with a 0.7 percent increase in the share of FDI from China. In fact, there is growing evidence that China is increasingly investing in connecting countries (e.g., Alfaro and Chor, 2023; Conteduca *et al.*, 2024). As an illustration of this trend, Figure 10 reports the number of Chinese FDI projects announced in the manufacturing and logistics sectors in Malaysia, Mexico, Thailand, and Vietnam, as in Conteduca *et al.* (2024). A sharp rise is visible especially after 2022.

Figure 10: Chinese FDI announcements



Source: Author's elaboration based on Telling *et al.* (2024), as in Conteduca *et al.* (2024).
Note: The lines report Chinese FDI announcements by destination.

To conclude, while there is some clear evidence of fragmentation in the global economy, in the form of a reallocation of trade and investment patterns along geopolitical lines, globalization still shows signs of resilience.

3 The driving dynamics

This section discusses the phenomena that are driving the dynamics of de-globalization—or slow-balization—and fragmentation described in the previous section.

3.1 Hyperglobalization factors and structural drivers of slow-balization

To put the analysis in perspective, it is important to discuss the factors behind the second historical globalization wave, that started after the Second World War, focusing especially on its hyperglobalization phase from the mid-1980s until the Great Financial Crisis of 2007-2008. There are essentially three driving factors that are acknowledged in the

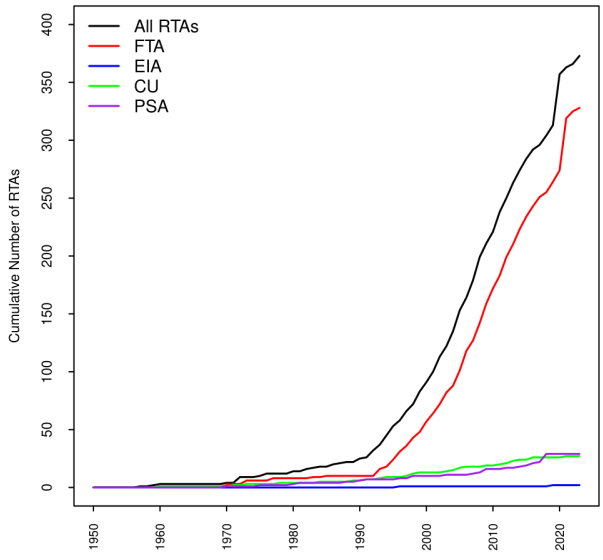
literature (e.g., Antràs, 2021; Goldberg and Reed, 2023). The first factor is advancements in information and communication technologies (ICT), which reduced dramatically the communication costs across countries, thus allowing for smoother coordination of cross-border economic activities. The second factor is improvements in transportation, both by air and by sea, which significantly reduced transportation costs. The third factor is related to trade policy, which was strongly in favor of trade liberalization throughout this period. Trade liberalization entailed both declining tariffs, as documented in Figure 11, and a sharp rise in the number of regional trade agreements, as displayed in Figure 12, especially in the form of free trade areas. During the hyperglobalization phase, these developments in trade policy were boosted by major political shifts that led many countries to be increasingly involved in the global trading system. Chiefly, this was the case for China, India, and the former Soviet Union countries. According to Rodrik (2011, 2019), the hyperglobalization phase involved not only a quantitative shift, but also a qualitative shift in the policy approach. In fact, in the decades following WWII and the Bretton Woods agreements, the international rules were mainly about ensuring the global economy adjusted to the perceived needs of domestic economies, in line with the "embedded liberalism" paradigm (Ruggie, 1982). This led for instance to capital controls, GATT escape clauses, and the use of voluntary export restraints. From the 1990s onwards there has been a sort of reversal in the order of priorities, with domestic policies increasingly adapting to the demands of globalized markets in a growing array of policy domains. This qualitative policy shift boosted globalization, although at the cost of raising issues that contributed to the subsequent globalization backlash, as discussed in Section 4.

A major driving force of the hyperglobalization wave, made possible and enhanced by technological, transportation, and trade policy developments, was the surge of Global Value Chains (GVCs). That is, the increasing division of production processes across countries, by which different stages of production are performed in different locations. This division is driven by a range of firms' strategies aimed to optimize costs, access relatively cheap, or

Figure 11: Tariffs

Source: Author's elaboration based on Clemens and Williamson (2004), Antràs (2021), and World Bank - World Development Indicators data.
Note: The figure displays the unweighted world average applied tariffs by year.

Figure 12: Regional Trade Agreements



Source: Author's elaboration based on WTO data (link).
Note: FTA stands for Free Trade Agreement; CU for Customs Union; EIA for Economic Integration Agreement; PSA for Partial Scope Agreement.

Figure 13: GVC-trade as a share of total trade

Source: Author's elaboration based on GVC-trade measure by Borin *et al.* (2021). The chart is an update of Figure 1.2 of the World Development Report 2020.
Note: The figure displays GVC-trade as a share of global trade.

skilled labor, and exploit comparative advantages globally (e.g., Antràs, 2016). Intuitively, besides boosting FDI, the development of global value chains tends to generate a rise in the global trade-to-GDP ratio: for every unit of output of final goods, there is more trade going on already in the upstream phases of production. This was a main driver behind the fast growth in the ratio of trade to GDP observed between the mid-1980s and 2008, as presented in Figure 1. The contribution of GVCs to the growth of global trade can be appreciated in Figure 13, based on work by Borin *et al.* (2021). Specifically, the figure displays the share of total trade accounted for by GVCs. Between 1986 and 2008, this share increases from 40% to 52%, with a trajectory that mirrors closely that of the trade-to-GDP ratio displayed in Figure 1.

Just as the the ratio of global trade to GDP, also the ratio of GVC-trade to global trade seems to have peaked around the Great Financial Crisis, and has been on a downward trajectory until the latest available year of data, 2020. This suggests that the slowdown in the expansion of GVCs was one of the drivers behind slow-balization. This is likely to be a

structural driver. In fact, in theory there is an optimum level of fragmentation of production activities across countries, beyond which there are no economic incentives to move further. As suggested by Antràs (2021), we may have reached, or at least approached that level, and therefore the slowdown in the expansion of global value chains is a natural phenomenon that can be expected to last.

A second structural driver of slow-balization identified in the literature is the continuing shift of the global economy from trade-intensive manufacturing activities towards relatively less tradable services. According to WTO (2023c), this compositional change in global economic activities, along with a relative shift of global GDP from more to less open economies, and the slowdown in the expansion of GVCs, account for most of the trade slowdown between 2010 and 2018, which can therefore be read essentially as a structural phenomenon. In this perspective, Baldwin (2022) argues that the globalization peak around the financial crisis may just be coincidental.

The financial crisis led to a "trade collapse" between 2008 and 2009, i.e., a decline in global trade that was relatively stronger than the decline in global GDP (e.g., Baldwin, 2009). This pattern has been largely attributed to three main causes. First, there was a large drop in demand that was relatively more pronounced for durable goods, which tend to be more traded than other goods and services (e.g., Eaton *et al.*, 2016). Second, international trade activities are relatively more finance-intensive than domestic activities—e.g., due to longer operating cycles and the need for letters of credit—and therefore more affected by financial instability and credit crunches (e.g., Chor and Manova, 2012). Third, GVC connections propagated demand shocks across countries, amplifying the decline in trade due to the large extent of trade in intermediates through what has been called a "bullwhip effect" (e.g., Altomonte *et al.*, 2013). Anyhow, despite being severe, the trade collapse was short lived. As can be seen in Figure 1, the trade-to-GDP ratio rebounded already in 2010, and got very close to the pre-collapse peak in 2011.

Overall, taking stock of the evidence, the Great Financial Crisis does not seem to

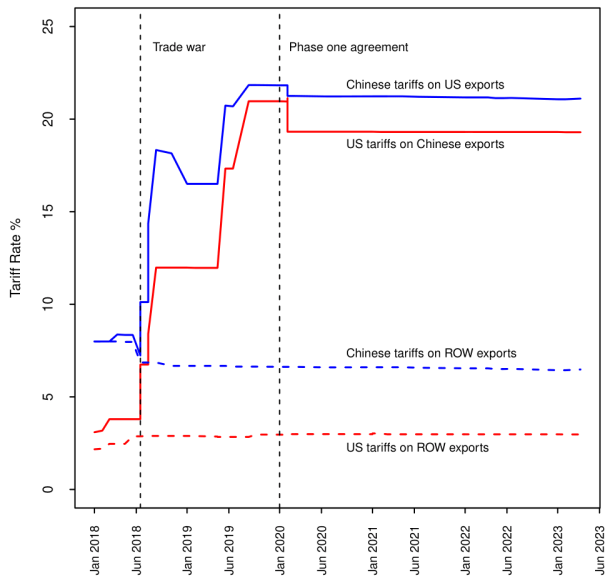
have had a long-lasting impact on globalization. The slowdown observed in the next ten years seems mostly attributable to structural factors, chiefly the natural slowdown in the expansion of GVCs and the compositional shift of the global economy. A general conclusion that emerges from the literature (e.g., Alfaro and Chor, 2023; Antràs, 2021; Baldwin, 2022; Goldberg and Reed, 2023) is that the speed of globalization up to 2008 was essentially unsustainable, and some structural slowdown was inevitable. Beyond these structural shifts, however, a sequence of shocks has then hit the global economy from 2016 onwards, reinforcing this slowdown and leading to rising fragmentation. This is discussed in the remainder of this section.

3.2 A sequence of shocks

Brexit, Trump, and Trade War 2016 was a year of significant political events, that had important implications for the trajectory of globalization. On June 23, the UK held a referendum as to whether the United Kingdom should "Remain a member of the European Union" or "Leave the European Union". The Leave option won by almost 4 percentage points (51.9% vs. 48.1%). This triggered a process of negotiations leading to Brexit on January 31, 2020. It was the first major step back in European economic integration since WWII.

On November 8, 2016, Donald Trump was elected President of the United States. He ran for the election with a very nationalist, protectionist, and isolationist platform. Indeed, one of the main slogans of his campaign was "America First". With the election of Trump, the (already problematic) negotiations for the Transatlantic Trade and Investment Partnership (TTIP), a deep and comprehensive free trade area between the US and the EU, were effectively abandoned. Moreover, on January 23, 2017, just three days after taking office, Trump signed an executive order formally withdrawing the US from the Trans-Pacific Partnership (TPP), another major free trade area with 12 countries spanning America, Asia, and Oceania. In August 2017, he then started to block appointments of judges to

Figure 14: US-China Trade War



Source: Author's elaboration based on Bown (2023).
Note: The lines display trade-weighted average tariffs computed from product-level tariff and trade data, weighted by exporting country's exports to the world in 2017.

the WTO Appellate Body. This crucial component of the WTO Dispute Settlement Body works normally with seven members, and needs at least three to operate. As the mandates of previous members expired, and no new appointments were made, the Appellate Body stopped functioning in December 2019. This impasse, which remains unresolved, has seriously undermined the rule-enforcing power of the WTO.

A key motivation behind Trump's anti-globalization campaign in 2016 was the idea that foreign countries were exploiting WTO's multilateral rules at the detriment of the US. China, with its long-standing and large trade surplus vis-à-vis the US, was the main case in point. Consistently, raising tariffs on imports from China was a flagship promise Trump made to voters in the event of an electoral victory. The promise was kept. After some initial tensions in early 2018, with rising US tariffs on imports of solar panels and washing machines, a full-blown trade war erupted in July 2018, as further increases in US tariffs on Chinese imports triggered retaliation by China. Figure 14, based on data by Bown (2023), shows

the evolution of the trade war. US average tariffs on Chinese imports reached a peak of 21% in September 2019, and then stabilized at 19.3% in February 2020, after the Phase One agreement. Chinese tariffs on US imports peaked at 21.8%, and stabilized around 21.3%. The change in US presidency from Republican Trump to Democratic Biden, in January 2021, did not alter the equilibrium reached in 2020. Further escalation may now be expected during Trump's second presidential mandate, which started in January 2025.

Trump's protectionist measures were not restricted to China. Most notably, in March 2018 the US administration imposed 25% tariffs on imports of steel, and 10% tariffs on imports of aluminum, that also hit strategic partners such as the EU, Japan, India, Taiwan, and Turkey, citing national security concerns. This led to retaliation against US exports. Moreover, Trump pushed for a renegotiation of the North American Free Trade Agreement (NAFTA) with Canada and Mexico, which was replaced by the United States-Mexico-Canada Agreement (USMCA) in July 2020. Similar to the case of China, the main motivation was to reduce the US trade deficit with Mexico. For instance, one important change negotiated by Trump was about imports of vehicles. They now qualify for duty-free access only if they have at least 75% North American content (up from 62.5% under NAFTA). Moreover, at least 40-45% of vehicles must be produced by workers earning at least 16 US dollars per hour, which is higher than typical wages in Mexico. This was aimed at reducing the cost advantage of manufacturing in Mexico, with the intent to bring production activities and jobs back to the US.

Covid-19, war in Ukraine, and geopolitical tensions The Covid-19 pandemic was another major shock for the global economy. Similar to the trade collapse during the financial crisis, also in this case global trade dropped more markedly than global GDP in 2020, as can be seen in Figure 1. Yet there was an immediate rebound of the trade-to-gdp ratio already in 2021, and a further increase in 2022, followed by a contraction in 2023.

The Covid-19 shock propagated quickly from China to the rest of the world through

global value chain connections. For instance, even before the disease spread substantially to the EU and the US—and lockdowns were imposed in these economies—many companies had to slow down or stop production activities due to missing deliveries of inputs from China (see, e.g., Supply Chain Dive, 2020). In general, the pandemic highlighted the vulnerabilities of GVCs. While slicing up production activities across countries can bring substantial gains in terms of firm performance, this comes with exposure to risks, as shocks hitting anywhere along the supply chain can trigger consequences globally. This is true especially in cases of production bottlenecks involving concentrated and difficult-to-replace suppliers. The Covid-19 pandemic made this evident, and triggered reflections on the need for shifting from "just-in-time" to "just-in-case" considerations when designing global supply strategies (e.g., Elia *et al.*, 2021; Jiang *et al.*, 2022).

An influential McKinsey Global Institute report by Lund *et al.* (2020), published in August 2020, estimated that companies could lose up to 42% of annual earnings over a decade due to supply chain shocks, including not only pandemics but also geopolitical tensions, natural disasters, and cyberattacks.[1] The authors identified 180 products across value chains in which one single country accounts for 70% or more of global exports, thus creating the potential for global bottlenecks. A prominent example is that of semiconductors, whose production is highly concentrated in South Korea and Taiwan. In fact, shortages of semiconductors over the Covid-19 pandemic created disruptions worldwide, chiefly in the automotive industry. Another example of concentrated supply is in pharmaceutical products, where China alone accounts for more than 60% of global exports of basic items such as antibiotics, sedatives, ibuprofen, and acetaminophen.

GVCs disruptions related to the pandemic led to longer delivery times, higher production costs, and contributed substantially to the inflationary wave observed from the second half of 2020 onwards (WTO, 2023c). An important role was played by shipping and logistic

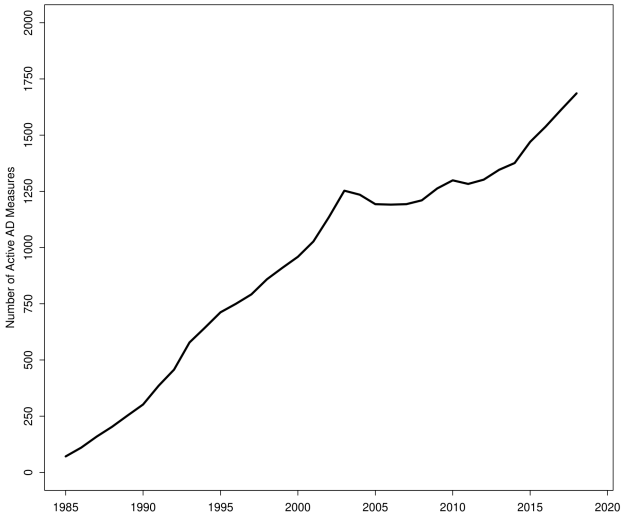
[1] Specifically, the report refers to 42% of annual EBITDA, which stands for Earnings Before Interest, Taxes, Depreciation, and Amortization.

bottlenecks, due to changing trade patterns, shortages of containers, and quarantines of port operators. To give an idea, the cost of shipping a container across the world's major transoceanic trade routes surged by a factor of seven within 18 months after March 2020, and the shipping costs for bulk commodities experienced even steeper increases (IMF, 2022).

The pandemic shock was then compounded by the war in Ukraine, starting in February 2022. This led to an energy crisis hitting especially the European Union, and particularly countries such as Germany and Italy, that relied relatively more on natural gas imports from Russia. Besides energy, the shock to GVCs was sizable more broadly. Russia and Ukraine are key suppliers of fertilizers and food commodities (e.g., corn and wheat), as well as neon gas, which is crucial for silicon chips (e.g., World Bank, 2022). Moreover, Ukraine is an important supplier of electronic wiring systems, and Russia of palladium and nickel: these are all particularly relevant, among others, for the automotive industry.

In parallel with the war in Ukraine, further shocks have hit the global economy. A prominent one is the Israeli-Palestinian crisis, which escalated after the attacks of October 7, 2023, and has been having broader repercussions across the Middle East. For instance, since November 2023 Yemen's Houthi rebels have intensified attacks on commercial vessels in the Red Sea, significantly disrupting global shipping routes. These attacks are prompting vessels traveling from Asia to Europe to reroute around the southern tip of Africa, resulting in longer voyages and rising shipping costs (e.g., Financial Times, 2024). Moreover, geopolitical tensions are intensifying in Asia, especially as related to China's claims over Taiwan and the South China Sea. All this is happening against the backdrop of the strategic rivalry between the US and China, which is getting increasingly salient. These dynamics are contributing to the fragmentation of the global economy along geopolitical lines, as described in the previous section.

Figure 15: Anti-dumping



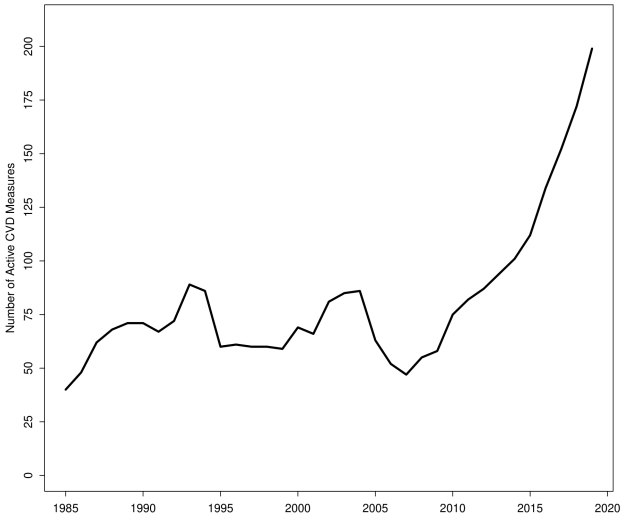
Source: Author's elaboration based on World Bank - Temporary Trade Barriers Database data (link).
Note: The figure displays the number of active anti-dumping measures over time.

3.3 Policy shifts and market reactions

Beyond the immediate impact of the sequence of shocks on international trade and investment flows, there has been a general move of trade policy in a protectionist direction. Figures 15-16, based on data from the World Bank Temporary Trade Barriers Database, display the number of active anti-dumping and countervailing duties measures, respectively, over the period 1985-2019. There is an increase in the use of both types of measures from the Great Financial Crisis onwards, and especially towards the end of the sample. Not only these temporary trade protection measures are used more frequently, but they also entail increasing average ad-valorem protection rates, as displayed in Figure 17. More in general, Figure 18, based on Global Trade Alert data, shows that the number of new protectionist measures per year has consistently exceeded the number of new liberalizing measures from 2009 onwards. Moreover, there was a sharp increase in protectionist interventions during the Covid-19 pandemic in 2020, with only a slight decline in the following years.

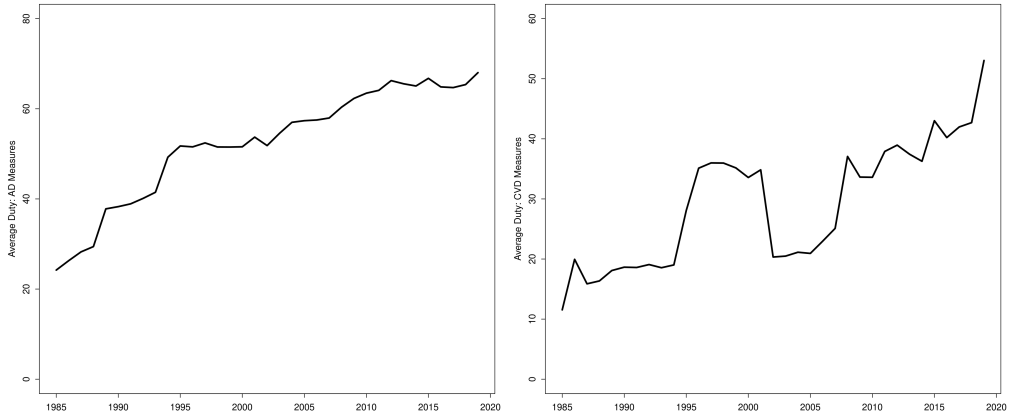
Overall, the trade-friendly policy environment that characterized the hyperglobalization

Figure 16: Countervailing duties



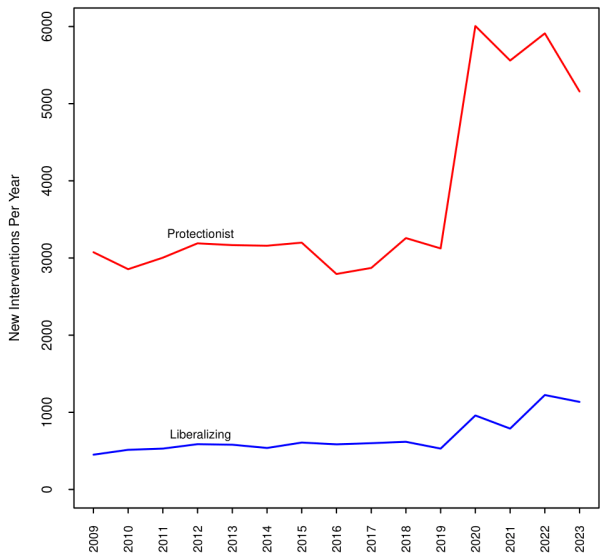
Source: Author's elaboration based on World Bank - Temporary Trade Barriers Database data (link).
Note: The figure displays the number of active countervailing duties measures over time.

Figure 17: Temporary measures - protection rates



Source: Author's elaboration based on World Bank - Temporary Trade Barriers Database data (link).
Note: The figure displays the average ad-valorem rate of anti-dumping (left panel) and countervailing duties (right panel) measures in force over time.

Figure 18: Trade policy developments



Source: Author's elaboration based on Global Trade Alert data (link).
Note: The blue line displays liberalizing interventions, the red line protectionist interventions.

wave has essentially come to an end. This shift seems to be driven by a fundamental reckoning of governments concerning the benefits and drawbacks of globalization, in a context of diminishing mutual trust across countries. National security concerns have become increasingly salient, and there is a growing tendency to think that economic interdependence among countries is a source of vulnerability, rather than strength and resilience. There have been widespread calls for self-reliance, economic independence, as well as strategic autonomy. As WTO (2023c) effectively puts it, "security concerns percolate through trade policy". The number of national security-related trade concerns invoked at the WTO to justify protectionist measures has been on the rise since 2008, with an acceleration after 2017 (WTO, 2023c). Export restrictions have shown an upward trend, especially during the Covid-19 crisis and after the start of the war in Ukraine (WTO, 2023a). In particular, restrictions on exports of critical raw materials have increased by more than five times over the last decade (WTO, 2023b).

A notable example of export restrictions explicitly meant to address national security and foreign policy concerns is the one imposed by the US on semiconductor exports to China, in October 2022. These restrictions target advanced technologies with potential military applications, and are aimed at hampering China's progress in supercomputing and military modernization. The measures ban the export of high-performance chips, chip-making equipment, and software used in advanced semiconductor manufacturing. Importantly, the restrictions apply not only to US companies but also to non-US firms that employ US semiconductor technology in their production processes, effectively extending the reach of these controls beyond US borders.

Another important trend that has been identified is a return to industrial policy through a global race for subsidies and state aid, especially in advanced economies (e.g., Evenett *et al.*, 2024). This is taking place particularly in strategic industries, such as those related to semiconductors and computing, and those related to green technologies, batteries and electric cars. Two notable examples are coming from the US. One is the CHIPS And Science Act, of August 2022. This program grants subsidies and tax credits for semiconductor research and development and manufacturing in the US. It is aimed at boosting US innovation and production capabilities, while reducing reliance on foreign sources.

The other example is the US Inflation Reduction Act (IRA), which was launched in parallel with the CHIPS and Science Act. The IRA provides, among others, generous subsidies and tax credits for electric vehicles and renewable energy projects. This program has been praised for being the largest environmental investment plan in US history. At the same time, it has sparked global criticism due to its "Buy American" provisions (e.g., on EV tax credits), that are seen as a violation of the non-discrimination principle of the WTO. For instance, these measures were heavily criticized in the EU (e.g., EU Parliament, 2023). In "normal times", this would have likely led the EU to initiate a formal dispute at the WTO. Yet, as discussed above, the Appellate Body of the WTO is currently not operating,

making a formal dispute unlikely to be effective in reasonable time. Instead of following the multilateral way of settling disputes, the EU resorted to bilateral diplomatic negotiations in order to minimize the potential adverse impact of the IRA on European companies, leading to the launch of a US-EU Task Force on Inflation Reduction Act. This is an effective illustration of what happens to global relations as we move from a rules-based multilateral system towards a power-based system in which bilateral relations become more central.

The US is not the only country to display a protectionist shift in trade and industrial policy. Similar initiatives have been launched in the EU (e.g., the European Chips Act), Japan, India, and, not least, China, which has a long-standing tradition of industrial policy and state intervention in the economy. However, what happens in the US is particularly consequential for the global economy. This is due not only to the sheer size of the US economy, but also to the fact that the US was a main actor behind the development of the multilateral trading system, from the General Agreement on Tariffs and Trade (GATT) of 1948 to the establishment of the WTO in 1995. For decades, this system was seen as aligned with US interest, but there is now a broad re-thinking on that, under the idea that China has been exploiting WTO rules, potentially unfairly, to accelerate its development and boost its transition to becoming a huge strategic rival of the US. This reckoning started with Trump but has become bipartisan. In fact, there has been a large continuity in trade policy between Trump and Biden. Trump's second mandate is now expected to exacerbate this trajectory further.

Seen from the perspective of companies, the world looks like an increasingly trade-unfriendly and risky environment. In fact, as reported by WTO (2023c), not only the global trade policy stance has become more protectionist, but there is also rising uncertainty around economic policy developments. Such policy-related risks are compounding rising risks related to climate change and extreme weather events, as well as terrorist attacks and geopolitical tensions. The evidence presented in Section 2 suggests that the changing global scenario is having implications for company activities, leading to slow-balization and

fragmentation.

Underlying the aggregate evidence, there are company evaluations regarding changes in their global strategies aimed at reducing risk exposure. Three main options have been identified: reshoring, nearshoring, and friendshoring. Reshoring entails transferring (part of) the supply chain back to the home country. Nearshoring refers to relocating the supply chain to countries that are geographically closer to the home country. Friendshoring entails relocating the supply chain to countries that are geopolitically close, i.e., countries allied with the home country and trusted partners that share similar values (e.g., IMF, 2023). Several papers have shown that companies are increasingly mentioning such strategies in their earnings calls (e.g., Alfaro and Chor, 2023; Conteduca *et al.*, 2024; IMF, 2023). Bellucci and Rungi (2023) have provided some first evidence of shifting investment patterns by multinational companies, based on firm-level data over 2019-2022. Specifically, employing a global dataset with about 2 million parent-affiliate linkages, they find evidence consistent with reshoring. In fact, divestments abroad by a parent company in a specific industry tend to be associated with domestic investments in the same industry. More in general, domestic subsidiaries are more likely to be established and less likely to be divested, and a relevant share of divestments over the period of analysis has not been offset by new investment decisions. To the extent that trade policy is a lead indicator for future trade and investment patterns, we may expect more reallocation of supply chain activities in the coming years.

4 The globalization backlash

The protectionist shift in trade policy observed in recent years is not an entirely new phenomenon. It is part of a broader trajectory of "globalization backlash" that started in advanced democracies already from the mid-1990s. In their chapter of the Handbook of International Economics, Colantone *et al.* (2022) have defined the globalization backlash

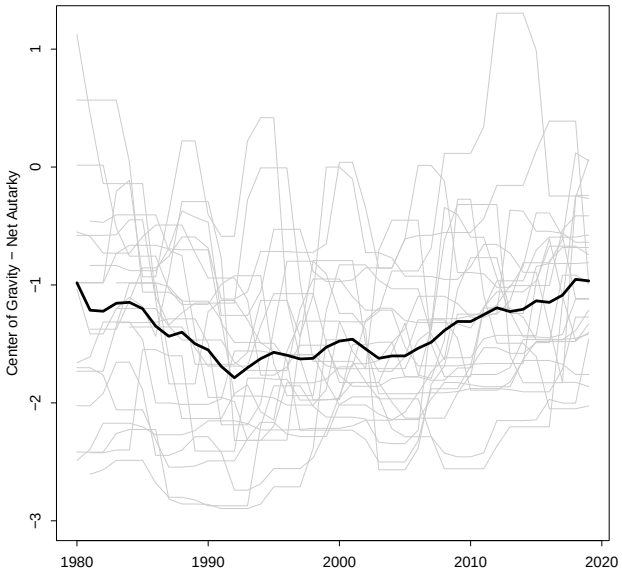
as the political shift of voters and parties in a protectionist and isolationist direction, with substantive implications on governments' leaning and enacted policies. To illustrate this trend, Figure 19 displays the evolution of the electorate location in terms of protectionism and isolationism in 23 advanced democracies, from 1980 until 2019.[2] The light-grey lines refer to each single country, while the black line is the year-specific average across countries. The electorate location for a given country in a given election, called center of gravity, is computed as the weighted average of the *Net Autarky* score of each party competing in the election, where weights are given by the party-specific vote shares. The Net Autarky score is based on party manifesto data from the Manifesto Project (Volkens *et al.*, 2020). It captures party stances related to trade policy issues such as tariffs and export restrictions, as well as their broader positions on sovereignty, multilateral relations, and the role of international organizations such as the WTO and the European Union. Higher scores reflect more protectionist and isolationist positions. As can be seen, there is a pro-globalization move, on average, from 1980 until the early 1990s, followed by a shift in the opposite direction until the end of the sample period. That is, growing shares of voters have been supporting relatively more protectionist and isolationist parties already from the mid-1990s.

While Figure 19 captures only movements of the electorate, Colantone *et al.* (2022) provide evidence of a similar pattern also in terms of composition of legislatures and executives. This is done by taking weighted averages of Net Autarky scores using legislature seat shares as weights, taken over the full legislature or restricted to legislative majority seats only. Overall, the protectionist and isolationist move of the electorate is consequential in terms of legislatures and governments leaning, consistent with the policy shifts discussed in the previous section.

Interestingly, while the globalization backlash is clear in terms of political dynamics, there is no evidence of a generalized rise of protectionist preferences in public opinion (e.g.,

[2]The list of countries is: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, South Korea, Spain, Sweden, Switzerland, United Kingdom, United States.

Figure 19: Electorate location



Source: Author's elaboration based Colantone *et al.* (2022) data.
Note: The light-grey lines display the electorate location for each single country, while the black line is the year-specific average across countries.

Antràs, 2021; Colantone *et al.*, 2022; Walter, 2021). This may raise the question whether it is warranted to speak about globalization backlash. Yet, as argued by Colantone *et al.* (2024a), the globalization backlash—intended as the shift of electorates, legislatures, and executives in a protectionist and isolationist direction—does not necessarily hinge upon a society-wide deterioration of globalization stances. It is instead related to the existence of persistent and widening differences in globalization stances across parties and groups of voters, with rising polarization and relatively more protectionist parties obtaining increasing electoral support over time.

The globalization backlash involves both left- and right-wing parties. Up until the Great Financial Crisis, it is mostly driven by rising support for anti-globalization parties of the right, chiefly radical-right parties. After the crisis, there is also growing support for globalization-skeptic parties of the left, pushed by discontent with crisis management and austerity policies (Colantone *et al.*, 2022; Foster and Frieden, 2019; Hobolt and De Vries,

2016; Hobolt and Tilley, 2018). The globalization backlash overlaps to a significant extent with the populist wave of recent years (e.g., Guriev and Papaioannou, 2022), but is also driven by a protectionist turn of non-populist parties, such as observed for the Democrats in the US.

A large literature has investigated the causes of the globalization backlash, focusing on both economic (e.g., Guiso *et al.*, 2024) and cultural factors (e.g., Mutz, 2018; Norris and Inglehart, 2019).[3] From the economic perspective, the backlash has been related to the distributional consequences of structural economic changes, and specifically to globalization and automation. Regarding globalization, Colantone *et al.* (2022) show theoretically how the backlash may emerge within standard models of international trade when taking into account what they call the "social footprint" of globalization, i.e., trade-induced inequalities and foregone positive externalities from strategic industries that decline in a country due to import competition. Positive externalities may be related not only, say, to the security of countries, but also more broadly to the well-being of citizens. Consider for instance manufacturing industries that used to provide not only secure and well-paid jobs, but also a sense of identity, self-esteem, and purpose for entire communities. When such industries decline, for example due to import competition from lower-wage countries, these positive externalities are lost.

The simple intuition is that, while rising trade openness generates net welfare gains at the country level, not everybody benefits to the same extent. There are winners and losers, at least in relative terms. As effectively noticed by Franzese (2019), these distributional consequences are actually an inherent characteristic, not a flaw of globalization: welfare gains emerge as countries specialize along comparative advantage lines, which entails firm and job losses in some sectors to the advantage of others. To the extent that reallocation is not frictionless, this is likely to generate concentrated grievances and discontent until the adjustment is complete, which may take a long time. Moreover, basic Stolper-Samuelson

[3] See also Rodrik (2021) and Walter (2021) for extensive reviews.

intuition tells us that there are also winners and losers in the long run. Factors of production used intensively in comparative advantage sectors—that expand as trade liberalization progresses—will win. The opposite applies to factors of production that are used intensively in shrinking comparative disadvantage sectors. Globalization may thus contribute to create, or widen, cleavages across social groups and geographical regions. These cleavages may in turn be politically consequential, fostering the success of anti-globalization forces.

At the empirical level, many contributions have provided evidence on the distributional consequences of trade. In particular, starting from the seminal work of Autor *et al.* (2013), considerable attention has been paid to the effects of rising import competition from China from the end of the 1980s onwards, with an acceleration after China's entry into the WTO in 2001. In a short time, China transitioned from being a relatively closed, and mostly agricultural economy, to being the leading manufacturing exporter of the world. This contributed to fast-paced growth in China, lifting millions of citizens out of poverty, but also generated a competitive shock for manufacturing companies and workers in advanced economies such as the EU and the US. This led to firm, job, and wage losses that were disproportionally felt in manufacturing regions historically specialized in more trade-exposed industries (e.g., textiles). The impact was felt more strongly by unskilled workers, who have been found to face permanent income losses (Autor *et al.*, 2014). Furthermore, the impact on regional economic performance has also been found to be long lasting, as relatively more affected regions have kept under-performing in terms of economic growth over the next decades (Autor *et al.*, 2021; Broz *et al.*, 2021; Colantone and Stanig, 2018a). Consistent with the broader idea of social footprint, the adverse effects of trade are not restricted to economic performance, but expand to worsening outcomes in terms of local public goods provision (Feler and Senses, 2017), family dynamics (Autor *et al.*, 2019), crime (Dix-Carneiro *et al.*, 2018), social mobility (Colantone *et al.*, 2024b), as well as health and mortality (Adda and Fawaz, 2020; Colantone *et al.*, 2019; Pierce and Schott, 2020).[4]

[4]See Autor *et al.* (2016) and Redding (2022) for more extensive reviews of the literature.

The socio-economic distributional consequences of globalization have generated significant political repercussions, leading to rising support for relatively more nationalist, protectionist, and isolationist parties, particularly of the radical right. The empirical literature pointing in this direction is vast. For instance, Colantone and Stanig (2018b) find that regions of 15 western European countries that were more exposed to import competition from China, between 1988 and 2007, have witnessed an increase in support for nationalist and isolationist parties, an increase in support for radical-right parties, and a general shift to the right in the electorate. Higher exposure to the China shock has also been found to raise support for the Leave option in the Brexit referendum of 2016 (Colantone and Stanig, 2018a). To (plausibly) identify the causal impact of trade exposure, imports from China to Europe are instrumented using Chinese exports to the US. This is meant to isolate variation in trade exposure driven by changes in supply conditions in China, in the spirit of Autor *et al.* (2013). Building on the same empirical approach, several other studies have found similar effects of trade exposure on voting across several European countries (e.g., Barone and Kreuter, 2021; Caselli *et al.*, 2020b; Caselli *et al.*, 2021; Malgouyres, 2014; Milner, 2021).

Import competition from China has been found to have political effects also in the US. In particular, Autor *et al.* (2020) find that greater trade exposure increased the likelihood of electing Republican legislators into Congress between 2000 and 2016. It also raised support for Republican candidates in presidential elections, playing a significant role for Trump's first election victory in 2016.[5] In sum, globalization, through its distributional consequences, emerges as a significant driver of its own backlash.

Yet globalization is not the only driver of the backlash. Automation has also been found to generate similar political repercussions. For instance, working with individual-level data from 13 western European countries over 1999-2015, Anelli *et al.* (2021) find that individ-

[5]Additional effects in terms of anti-incumbent voting in the US have been found by Margalit (2011) and Jensen *et al.* (2017).

uals that are more exposed to automation, in the form of robot adoption in manufacturing, are more likely to support radical-right parties. Speaking to the distributional consequences of automation, more exposed individuals also show worse self-reported socioeconomic outcomes, such as lower probabilities of having a permanent and stable job, and a satisfactory income. Similar results are found by several other papers at the individual level, as surveyed by Gallego and Kurer (2022). Evidence that exposure to automation raises support for the radical right has also been found at the regional level across several European countries (e.g., Caselli *et al.*, 2021; Milner, 2021). Similarly, in the US Frey *et al.* (2018) find that support for Trump in the presidential election of 2016 was stronger in local labor markets that were more exposed to robot adoption between 2011 and 2015.

Taking stock of the evidence, the globalization backlash appears to have structural roots in the unequal economic effects of both globalization and automation. These have also been found to contribute to an authoritarian, traditionalist, and nativist shift in cultural attitudes that has tilted voters towards the radical right (e.g., Agnolin *et al.*, 2024; Anelli *et al.*, 2021; Ballard-Rosa *et al.*, 2021; Ballard-Rosa *et al.*, 2022; Franzese, 2019; Gidron and Hall, 2017). In this perspective, economic and cultural explanations of the globalization backlash are to be seen as closely intertwined rather than dichotomic. Cultural and economic considerations are also closely connected when we consider the role of immigration, which has been found to act both as a catalyst for the political effects of economic grievances—driven, for instance, by globalization (as in Colantone and Stanig, 2018a)—and as an independent driver of radical-right support (e.g., Dustmann *et al.*, 2019; Hangartner *et al.*, 2019).

The political sustainability of globalization needs an effective approach to managing the distributional consequences of globalization itself—and of structural changes more in general—in a more inclusive way. Looking ahead, this message is particularly relevant as the world moves forward with the decarbonization transition, which is already generating sizable and politically impactful distributional consequences. On one hand, losers of the green transition tend to support anti-globalization parties of the radical right (Colantone

et al., 2024a; Voeten, 2022; Vona, 2019). On the other hand, globalization losers are less likely to support environment-friendly parties, as environmental issued are de-prioritized when trade-induced economic grievances become more salient (Bez *et al.*, 2023).

5 The costs

Globalization contributes to economic growth and welfare in several ways, from efficiency gains in production induced by international competition, to larger variety of products available to consumers in open markets. A step back from globalization can therefore be costly. The dynamics of slow-balization and fragmentation of recent years seem to be having already negative repercussions on global growth, which is at the lowest levels in decades (IMF, 2024). The negative impact on growth is likely to be more serious for the most dynamic part of the global economy, i.e., emerging markets and developing economies, which benefit from globalization through foreign capital inflows, technology transfers, as well es export-led growth opportunities. In this respect, the extraordinary growth of China from the end of the 1980s onwards is an excellent case in point. Similar opportunities may not be available for emerging economies in the coming years.

Several papers have started to quantify the economic effects of fragmentation. Focusing on different dimensions of this phenomenon, e.g., trade or FDI flows, and using various methodological approaches, they all point to significant output losses. A comprehensive collection of these contributions was put together in a CEPR volume edited by Aiyar *et al.* (2023c). Some of them have already been published in the meantime. For instance, Javorcik *et al.* (2024) build a general equilibrium model to estimate the repercussions of friendshoring. Their results suggest that friendshoring may lead to real GDP losses ranging between 0.1 and 4.7%. Losses are relatively larger for countries that have strong trade linkages with partners across opposite blocs. Countries that manage to remain non-aligned may witness real output gains, but these are small in magnitude and not guaranteed.

Bolhuis *et al.* (2023) perform a similar exercise accounting for trade and production in commodities. Under a limited fragmentation scenario, global output would be permanently reduced by 0.3%. In a more extreme scenario, featuring no trade between blocs, global output losses would reach 2.3%. Losses can get as high as 7% of global GDP if fragmentation occurs quickly and adjustment costs are particularly high. Aiyar *et al.* (2023b) focus on the costs of fragmentation in terms of foreign direct investment. According to their estimates, FDI fragmentation could reduce global output by about 2% in the long run. Emerging markets and developing economies would be more heavily affected due to their reliance on FDI for capital formation and productivity growth through foreign technology transfer. According to WTO (2023c) estimates, the cost of splitting the world trade system into separate trade blocs would be about 5% of real income at the global level, yet some developing economies would face double-digit losses.

Campos *et al.* (2023) investigate the impact of geopolitical fragmentation on trade and welfare. In their model, countries are categorized in three blocks: a Western one, an Eastern one, and a Neutral one. The allocation of countries to blocs is based on their vote at the UN General Assembly of April 2021 on the resolution concerning the suspension of the rights of membership of the Russian Federation in the Human Rights Council. Countries that were in favor of the suspension are assigned to the Western bloc; countries that were against are assigned to the Eastern bloc; countries that abstained fall in the Neutral bloc. In a severe fragmentation scenario, trade flows between blocs could be reduced by up to 57%. Welfare losses are estimated to be smaller but still sizable. They would be largest in the Eastern bloc, where the median country would experience a welfare loss of up to 3.4%. Attinasi *et al.* (2023) estimate long-run welfare losses from generalized de-coupling in the range between 2 and 15.2%. Losses are more contained in case of less severe de-coupling limited to strategic industries: between 0.7% and 2.9%. Goes and Bekkers (2022) focus on disruptions to knowledge flows across countries due to de-coupling. These are shown to contribute substantially to welfare losses, which are estimated to be as large as 12% in

some regions. In general, the largest losses are found for lower income regions, that depend relatively more on foreign knowledge flows.

One could interpret the costs of fragmentation as a price to pay for enhancing the resilience and economic security of countries. Yet this remains an unclear benefit. On one hand, trade-induced specialization may increase income volatility at the country level by raising exposure to sector-specific shocks. On the other hand, trade openness can reduce income volatility by reducing exposure to domestic shocks, allowing countries to diversify sources of demand and supply at the international level. Caselli *et al.* (2020a) show that this second mechanism has prevailed in recent decades, with international trade reducing economic volatility for most countries. Along these lines, Bonadio *et al.* (2021) find that the impact of the Covid-19 shock would have been slightly larger in case of "renationalized" supply chains, as opposed to global supply chains. In fact, having the possibility to rely on foreign inputs allows to diversify sourcing options, and this was beneficial during the pandemic especially for countries witnessing stricter-than-average domestic disruptions due to lockdowns. Overall, even though GVC connections contributed to the cross-border transmission of the shock, most of the negative impact at the level of countries is actually explained by domestic lockdown measures, and global connections fostered resilience.

Besides potentially raising risks, de-globalization and fragmentation are also costly for consumers. For instance, available evidence suggests that US tariffs on Chinese imports have led to rising prices, with an almost complete pass-through according to some estimates (Amiti *et al.*, 2019; Fajgelbaum *et al.*, 2020; Cavallo *et al.*, 2021). Moreover, lengthening supply chain linkages through connecting countries may also lead to rising production costs and prices. Evidence along these lines is found by Alfaro and Chor (2023) with respect to US imports from Mexico and Vietnam. Specifically, working at the product level, they find a negative correlation between the change in the Chinese share of US imports between 2017 and 2022, and the change in unit values of US imports from both Mexico and Vietnam over the same period. Trade diversion from China to connecting countries is likely to generate

upward pressures on prices and wages down the line.

Finally, the costs of de-globalization and fragmentation are likely to reach beyond purely economic outcomes. The globalization backlash is associated with a widespread crisis of liberal democracies that is testing the resilience of democratic institutions with checks and balances (e.g., Colantone and Stanig, 2019). The nationalist and isolationist turn in international relations is determining a shift from a rules-based multilateral order to power-based dynamics of rivalry between countries and geopolitical blocs. The idea that economic integration and international cooperation can enhance shared prosperity and contribute to peace seems currently out of fashion. The historical literature suggests that these dynamics have already been observed in the past. In particular, the first globalization wave, which ended with the First World War, generated distributional implications that triggered a deadly nationalist backlash (e.g., James, 2009; Franzese, 2019). Among others, the WTO (2023c) has warned about a return to the "zero sum" thinking that harmed the global economy in the 1930s, fostering authoritarian regimes and contributing to the Second World War. The current parallels to those times sound ominous.

6 Conclusion

Echoing Rodrik (1998), globalization went perhaps too far, and maybe even too fast, leaving a toxic social footprint that contributed to the current backlash. This was evidently unsustainable, but de-globalization and fragmentation are likely to be much worse. A process of "re-globalization", as proposed by the World Trade Organization (WTO, 2023c), based potentially on somewhat less economic integration than before, but with more international cooperation and more inclusiveness for those that have remained at the margins of the trading system—from least developed economies to workers in the industrial heartlands of advanced economies—seems to be a more promising way forward. Unfortunately, it is also a politically challenging one.

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