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Global Trade Fragmentation. An EU Perspective

By Norbert Gaál, Lars Nilsson, José Ramón Perea, Alessandra Tucci and Beatriz Velázquez

Abstract

The risk of global trade fragmentation has increased significantly. Rising geopolitical tensions, a growing number of trade restrictions and a weakening of multilateral institutions have been important geopolitical drivers. These trends have been accompanied by a drastic rise in trade-inhibiting policy measures, particularly after the Covid-19 pandemic and Russia's invasion of Ukraine. In this context, the EU's integration in the global economy via trade and value chains remains resilient thus far. Yet, a more fragmented world trade in the future would result of selected decoupling between countries, a general re-balancing towards resilience of value chains and efforts to secure access to key raw materials in lieu of efficiency. This would come at a significant cost. Global trade fragmentation in the form of an increase in trade barriers and higher trade policy uncertainty could lead to significant reduction in global output in the long-term, with low-income countries likely to be more negatively affected.

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1. INTRODUCTION

De-globalisation is a key theme in the current policy debate. Globalisation refers to the growing integration and interdependence of the world's economies, cultures, and populations through international trade, technology transfers, investment, migration of persons and flow of information¹. As it proceeds, globalisation hence becomes increasingly complex and multi-faceted pertaining for instance to migration, financial flows or technology diffusion. This paper focusses on specific aspects of (de-)globalisation related to trade and global value chains (GVCs)².

According to trade indicators, the speed of globalisation has been slowing since 2008. The period of 1990s and early 2000s were coined as the “hyper-globalisation” era, characterised by large and sustained increases in cross-border trade and rapid expansion of GVCs (Antràs 2021). Since the Global Financial Crisis (GFC) in 2008, however, various indicators of trade-intensity (for instance the share of trade in GDP, share of trade in intermediate products or the raising of trade barriers) suggest that globalisation is losing steam, a phase often referred to as “slowbalisation”.

More recently, the risk of global trade fragmentation has increased. In this paper, we refer to global trade fragmentation as a policy-driven change of global trade flows and rearranging GVCs, often guided by strategic considerations. Rising geopolitical tensions, growing number of trade restrictions and a weakening of multilateral institutions highlight an increasing risk of geopolitical drivers behind trade fragmentation. The Covid-19 pandemic and Russia's invasion of Ukraine reinforced these trends and triggered a debate on the future of trade and supply chains.

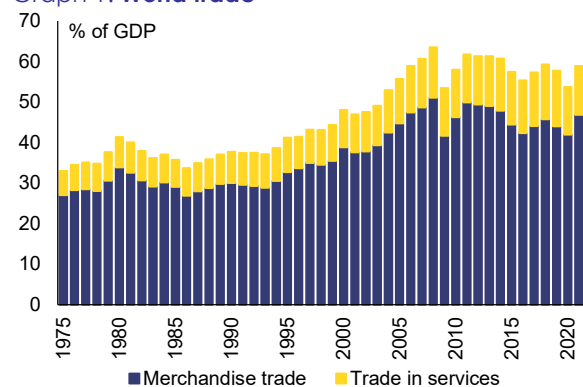
This paper reviews global trade developments from an EU perspective. Section 2 of the paper highlights the factors responsible for the change in the pace and nature of cross-border trade after the GFC. Section 3 examines how these global trends

have impacted EU trade and value chain networks. The paper outlines several recent trends that are expected to shape global trade developments in the medium term in Section 4 and discusses the global macroeconomic implications of an increasingly fragmented trade landscape in Section 5.

2. THE TRADE SLOWDOWN IN THE LAST DECADES

After rapidly expanding during previous decades, global trade slowed down after the GFC but remained close to the 2008 peak. World trade as a share of GDP increased rapidly from around 40% in 1990s to more than 60% in 2008 but has been hovering around this value since then (see Graph 1). GVC-related trade as percentage of world trade increased from 40% in 1986 to a peak of 52% in 2008 but has been stagnating around 50% since then (OECD 2023).

Graph 1: **World trade**



Source: World Bank – World Development Indicators.

Baldwin (2022) considers that the peak of 2008 was a “coincidental confluence of disparate peaks”. For instance, China's goods trade-to-GDP ratio has already peaked in 2006 and has been decreasing since then, while the EU goods trade as a share of GDP has stagnated during this period, but not declined. For the US, the decline in goods trade-to-GDP started only in 2011 and for Japan in 2014 but gaining strength recently. Part of the decline in the world goods trade share of GDP after 2008 can be explained by relative prices: the drop in commodity prices (including fuel) after 2010 has lowered the numerator, trade, more than the

¹ See for instance Peterson Institute for International Economics: <https://www.piie.com/microsites/globalization/what-is-globalization> or IMF (2023a).

² Global value chains (GVCs) refer to international production sharing, whereby different production steps and tasks are carried out in different countries.

denominator, GDP, which is mostly made up of services³.

The global downward trend reversed after 2020. Trade in both goods and services strongly rebounded as world trade normalised following the pandemic related shock. By 2022, both goods and services trade to GDP ratios converged back to their 2008 heights and are forecast to remain around these levels over the short-term forecast horizon continuing the “*slowbalisation*” trends.

Contrary to goods trade, services trade in value terms has kept rising throughout the whole period almost without interruption - until a temporary dip caused by the pandemic. Within services, flows of knowledge-intensive services - including professional services, government services, IT services, and telecommunications - have been growing the fastest (World Bank 2021, ILO 2021, McKinsey 2022). Digital technologies made it possible for intermediate services to become tradable⁴ and have further incentivised cross-border service activities. Tourism related services have been also expanding at a robust pace. They were temporarily disrupted by the pandemic, also impacting aggregate services trade figures. Albeit this proved a temporary dip and services trade keep expanding at a solid pace thereafter.

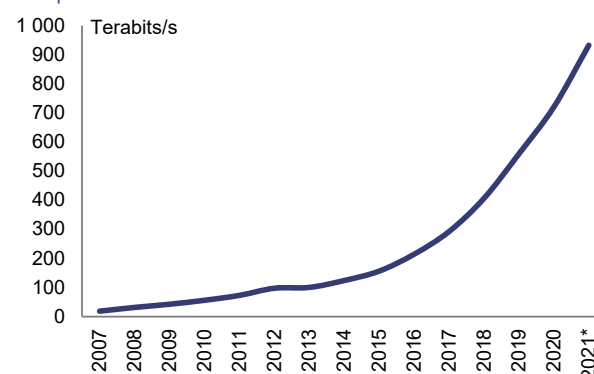
Overall, the last decade has seen a shift in the relative importance of flows of data⁵ and intangibles. This is due to their faster rate of growth compared to growth rates of trade in manufactured goods. For instance, data flows have grown exponentially (Graph 2), while intellectual property, services have grown more modestly but double the pace of traded goods (McKinsey, 2022).

³ World trade in goods as a percentage of world GDP decreased from 48.3% in 2008 to 39.9% in 2020. According to Baldwin (2022), 60% of this decline can be explained by decreasing commodity prices.

⁴ Examples of intermediate services include call centres, accountants, graphic designers, personal assistants, travel agents, IT help staff, software engineers, financial analysts etc. Baldwin (2022) argues that India performed its intermediate service-export boom without signing a single trade agreement and digital technology development opens the door for more intermediate service trade supported by the significant wage differentials between developed and emerging markets.

⁵ International use of bandwidth.

Graph 2: **World bandwidth use**



Source: International Telecommunication Union (ITU).

Note: 2021 are ITU's estimates.

2.1 Drivers behind the trade slowdown

The moderation of global trade after 2008 follows the relative exhaustion of trade-facilitating levers and structural changes across advanced and emerging economies. First, the world's weighted average tariff applied on manufactured goods fell from 13.6% in 1986 to 7.5% in 2008 and to a low of 3.9% in 2019 (Guimbard and Lefebvre 2022). Second, the marginal benefits of technological progress in communication, which facilitated the vertical disintegration of productive processes, including across borders, are diminishing over time. The decrease in transportation and communication costs (ICT “revolution”) led to massive outsourcing of production to emerging markets, but the offshoring expansion phase appears to have been saturated because most of the available opportunities have been exploited (Antràs 2021). The unbundling and offshoring of some manufacturing has attained a new equilibrium, where the share of manufacturing in high-income nations has stabilised. The share of intermediate goods in imports (which can be considered as a proxy for value chain expansion) has been gradually declining as emerging markets are increasingly relying on their own industrial base to provide the inputs⁶ (Baldwin 2022). Fourth, in some key emerging economies, notably China, an increasing share of services in the economy and growing domestic production replacing intermediate

⁶ G7 countries' share from world manufacturing as of world GDP declined from 66% in 1999 to 37% in 2020. By contrast, emerging markets' (China, India, Korea, Indonesia, Thailand and Brazil) share increased from 10% to 38% during the same period. While the rest of world's share remained stable around 25%. All ratios have been relatively stable between 2014-2020 (Baldwin 2022).

goods import contribute to the decline in trade openness, ultimately contributing to the moderation in global trade⁷ (Wozniak and Galar, 2018). Since 2005, goods trade-to-GDP share of China is falling and converging to ratios that are common among other major economies like the US, Japan, and the EU⁸.

The global political environment has become less favourable for a continuous expansion of cross-border economic exchange. Despite the overall aggregate positive effects of trade, some analysts suggest a positive causal link between trade and income inequality, partially due to worsening returns for medium and low-skill workers and the decrease of manufacturing jobs in several advanced economies. These issues led to several governments pursuing a policy-driven push back against globalisation, fuelling trade tensions (IMF 2022) and a weakening of the existing multilateral institutions, such as the World Trade Organisation (WTO). Examples are the United States abandoning the Trans-Pacific Partnership in 2017 or the disabling of the World Trade Organisation's dispute settlement system. In this context, the ability of multilateral institutions to facilitate global trade flows has been waning (Dadush 2022b).

The shift from a rules-based order to a more power-based international system, where economic and trade relations are increasingly used to pursue geopolitical goals, is an emerging headwind to global trade. There is a significant increase in the number of trade and economic measures imposed by the US and other Western countries, notably on China⁹. China has increasingly resorted to coercive or retaliatory trade measures as

a diplomacy tool. Calls in favour of “*friendshoring*”¹⁰ in value chains have increased alongside and in reaction to increasing geopolitical tensions, while new (protectionist) industrial policies will potentially affect trade patterns and production locations in several sectors (semiconductors, green technologies, etc.). These policies of “decoupling” (i.e. the weakening interdependence between nations or economic blocs) are likely to have significant repercussions not only for the participating countries but for the rest of the world (see also Goldberg and Reed 2023).

The Covid-19 pandemic and Russia's war of aggression against Ukraine reinforced these trends and triggered a rethinking of the global production system. Shortages in health-related products at the onset of the Covid-19 pandemic raised calls in favour of nearshoring or even nationalising some supply chain segments. The war in Ukraine has further raised geopolitical tensions, bringing to the fore risks that trade could increasingly be driven by geopolitical rather than economic considerations. Disruptions brought by the pandemic and Russia's war increased the value of resilience in lieu of efficiency or overall costs. Efforts to both boost resilience in sourcing, improve responsiveness to demand, prioritise national security and mounting environmental concerns call in favour of re-locating/shortening some supply chains.

Environmental considerations provide an additional argument for reorganising value chains. As climate change increases the frequency and intensity of extreme weather events, shortening supply chains could appear as a response to reduce the probability of disruptions. Yet, shortening supply chains could also increase exposure to climate shocks as it would concentrate production domestically (OECD 2020). Sustainability concerns may also foster reducing the number of participants and/or steps in a value chain, for instance if decarbonisation efforts require lowering intra-chain freight or removing the chain participants without access to renewables (Maersk 2021)¹¹. Taxation on

⁷ From geographical regions, China has an outsized role in the process: almost one-third of the global trade slow-down is due to China's decrease in trade to GDP ratio (Dadush 2022a). Recent typical example for growing domestic production in China relates to green technologies, where China had considerable imports a decade ago and which is now replaced by sizable exports in several areas (such as solar panels).

⁸ China's goods and services trade to GDP share declined from 65% of GDP in 2006 to below 40% of GDP by 2022. During the same period, Japan's trade share increased from around 30% to close to 40% of GDP, the US' trade share declined from around 30% to 27% of GDP, while EU's external trade increased from 26% to 43% of GDP.

⁹ Data from Global Trade Alert confirms that the number of harmful trade policy interventions on China from trade partners increased rapidly after 2019, reaching a maximum of 1,546 interventions in 2022.

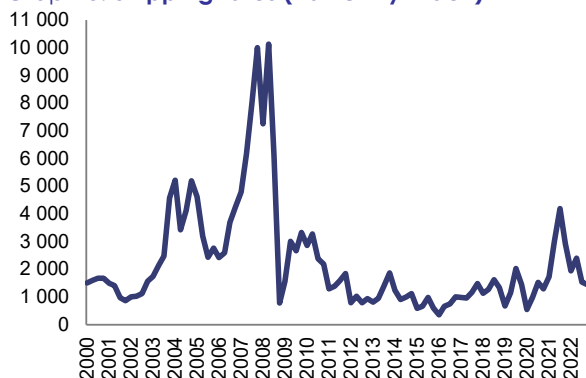
¹⁰ “*Friendshoring*” (or “ally-shoring”) entails building supply chains between allies or geopolitically aligned countries.

¹¹ The transport sector, including passenger transportation, accounts for around 20% of global CO₂ emissions, while the International Transport Forum (ITF) estimates that international trade-related freight transport accounts for about 7% of global CO₂ emissions.

greenhouse gas emissions and carbon ‘cap-and-trade’ schemes may also lead to re-organise and re-assess the value added of choosing certain locations. In addition, growing fragmentation could also hinder the development of technologies and production of goods needed to accelerate the decarbonisation process (OECD 2023).

There is no compelling evidence that transportation costs can be blamed for the reduction in trade since the GFC. The skyrocketing transport costs witnessed during the 2008/2009 crisis have not been sustained and with the exception of the relatively moderate increase seen during the Covid-19 pandemic, in the last ten years, shipping costs have been on average lower than before 2008 (Graph 3).

Graph 3: Shipping rates (Baltic Dry Index)



Source: <https://www.investing.com/indices/baltic-dry-historical-data>.

Note: The Baltic Dry Index (BDI) is a shipping freight-cost index issued daily by the London-based Baltic Exchange. It is reported around the world as a proxy for dry bulk shipping stocks as well as a general shipping market bellwether.

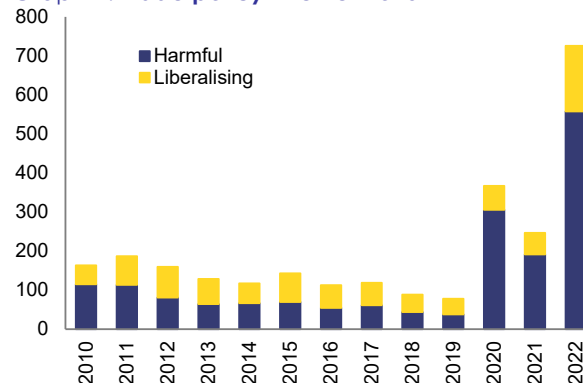
2.2 Trade policy instruments: non-tariff measures and distortive subsidies

Global trade tariffs remain low except to certain bilateral trades. The progress in trade liberalisation since 2001 has come largely from unilateral cuts in tariffs, accounting for about 45% of the decline in global tariffs (measured by the world’s weighted tariff applied on traded manufactured goods), followed by multilateral cuts (38%) and bilateral cuts between trade partners (18%). These liberalisation initiatives were more limited than the ones witnessed in the 1990s, in particular the 1994 Uruguay Round and this already can be one of the

drivers of the flattening out of the trade-to-GDP ratio. Barriers to trade and investment were instead increased mostly by the US against China in 2018, and later through the sanctions imposed on Russia. The average US trade-weighted tariff towards China increased significantly after 2018 (from around 3% to around 20% according to the estimates of Bown, 2021).

Although tariffs have remained at low levels overall, the number of non-tariff trade restrictions has risen significantly since 2020. First, many new non-tariff restrictions were introduced in the context of the pandemic and later as a result of Russia’s war against Ukraine and the ensuing food and energy crises. Consequently, the annual average of harmful trade restriction measures, which was 71 between 2010-2019, rose sharply to 530 in 2022 (Graph 4). Export and investment restrictions have also been introduced in several (strategic) sectors notably in the US-China trade relations.

Graph 4: Trade policy interventions



Source: Global Trade Alert: <https://www.globaltradealert.org/>

Subsidies are expected to increase considerably in the next decade¹² and to be linked to trade-distortive conditions. Evenett (2022) argues that subsidies are the preferred tool¹³ of states that can afford them and that more of them are likely to follow, even though they are already an important

¹² For instance, US subsidies in the next decade could double compared to the previous decade (The Economist 2023).

¹³ Besides addressing market failures, subsidies are increasingly used to accelerate green transition, create domestic (manufacturing) jobs or to respond to subsidy measures in main trade partners.

source of trade tensions. Several countries are designing policies that aim to foster reshoring in strategic sectors and reduce dependence on foreign technologies and inputs, notably through subsidies and local production requirements. A prominent example is the semiconductor industry where several major economic have implemented measures and subsidies to build domestic manufacturing capacity or to counterbalance excessive foreign dependencies. This raises the risk of technological decoupling (IMF 2023a).

Subsidies can bring along additional trade-distortive elements. For instance, several measures in the US climate and energy subsidy scheme (Inflation Reduction Act) will grant significant subsidies for companies over the next ten years if they comply with the local production manufacturing and sourcing requirements. Such criterion could distort the level playing field and likely lead to the reorganisation of some supply chains (see for instance Kleimann et al 2023)¹⁴. While other economies are considering introducing similar subsidy schemes also with local production criteria, the recently adopted European Green Deal Industrial Plan¹⁵ underscores the importance of an open rules-based trade regime for making trade work for the green transition at a global level.

3. EU TRENDS IN TRADE AND VALUE CHAIN PARTICIPATION

The EU trade-to-GDP ratio is significantly higher today than 20 years ago. This holds for both goods and services trade as a share of EU GDP, also when only looking at the share of extra-EU trade. Graph 5 shows that the EU goods trade share of GDP has increased by 10 percentage points from 57% in 2000 to 67% in 2021, partly as a result of an increase in the integration into the world trade system of newer EU Member States. If intra-EU goods trade is excluded, the share increased from 24% in 2000 to 30% in 2021.

¹⁴ The US federal agencies are currently working on several IRA implementation rules and provisions, hence the actual distortion cannot be fully assessed at this stage.

¹⁵ For further details see:

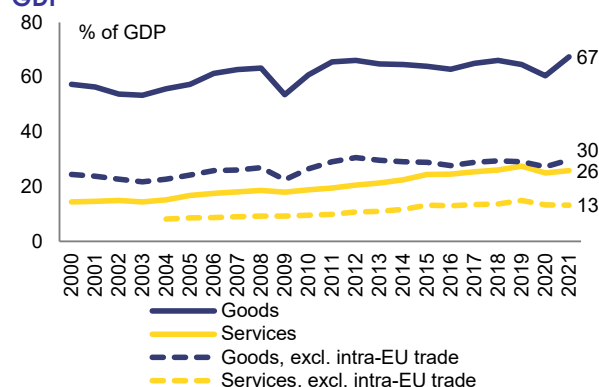
https://ec.europa.eu/commission/presscorner/detail/en/p_23_510.

The EU case illustrates some key characteristics of globalisation. First, globalisation has always involved both global and regional integration, and regional integration is typically denser than global integration. Second, the EU case also illustrates how globalisation has evolved in the recent years, towards an increased relevance for services. But the EU case also highlight some specific patterns.

Importantly, the dynamics of EU trade did not mirror the slowdown in world goods trade following the GFC. The trade-to-GDP ratio increased until the GFC in 2008-2009, during which it dropped but has then remained above 60%. The last two years, it has been driven especially by the goods trade share including intra-EU trade. In fact, looking at the EU goods trade share of GDP, the change between 2020 and 2021 indicates not only going back to pre-pandemic levels, but beyond also surpassing the prior 2008 peak.

The EU's trade in services increased more than trade in goods between 2000 and 2021, outpacing global trends¹⁶. The EU services trade share of GDP, including intra-EU trade, has increased from 14% in 2000 to 26% in 2021, while the services trade share of GDP excluding intra-EU trade has increased from 7% in 2004 (first year with comparable data) to 13% in 2021. Meanwhile, the share of world services trade over GDP increased from 9.5% in 2000 to 11.9% by 2021.

Graph 5: EU goods and services trade as share of GDP



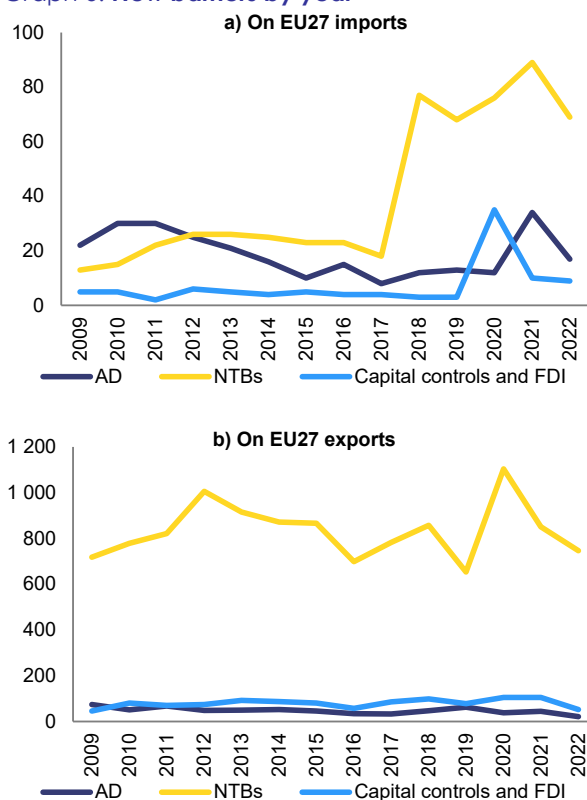
Source: World Bank - World Development Indicators and own calculation.

Note: Trade measured as $(X+M)/GDP$.

¹⁶ Baldwin (2022) shows that trade in all commercial services has grown twice as fast as goods trade since the 1990s, excluding tourism and transport that were hit hard by the pandemic (lockdowns and mobility restrictions).

Notwithstanding the above trends, extra-EU trade is increasingly exposed to trade restrictions, particularly non-tariff barriers (NTBs) and Anti-Dumping (AD) measures. Evenett (2022) shows that even before the US-China “trade war”, world trade was distorted: more than 80% of world trade in goods is affected by some form of harmful trade measure. For the EU in particular, Graph 6a shows that the number of NTBs introduced by the EU over the past five years has increased, while AD measures are similar to the early 2010s despite a temporary increase in 2021. Graph 6b also shows that EU exports have faced a rather constant pace of introduction of both NTBs and AD measures over the period.

Graph 6: New barriers by year

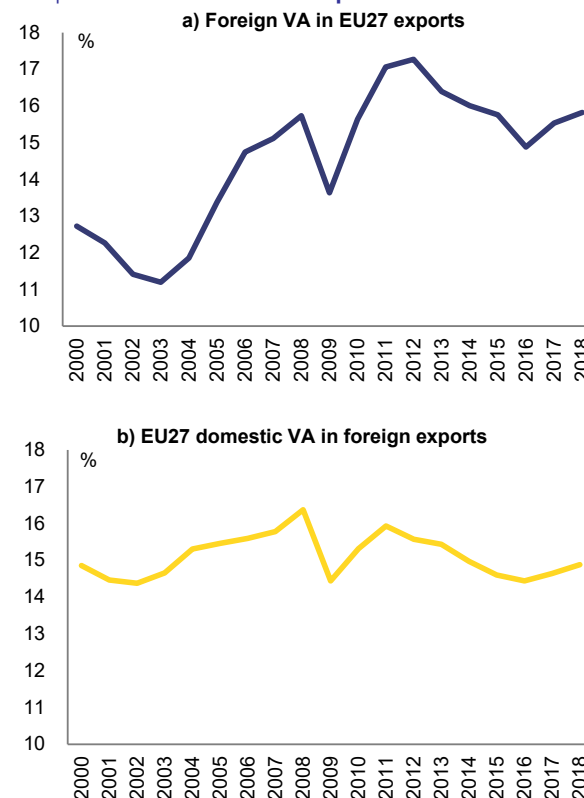


Source: Own calculations based on Global Trade Alert (<https://www.globaltradealert.org>).

Note: NTBs include Sanitary and phytosanitary measures, Technical barriers to trade, Pre-shipment inspection and other formalities; Non-automatic import licensing, quotas, prohibitions, quantity-control measures and other restrictions not including SPS measures or measures relating to TBT; Price-control measures, including additional taxes and charges; Finance measures; Trade-related investment measures; Distribution restrictions; Government procurement restrictions and Measures on intellectual property.

Available data (until 2019) shows no signs of a retreat in EU firms’ integration in GVCs. The foreign value added (FVA) content in EU gross exports (the so-called “backward participation” in GVCs or the extent to which a country imports intermediates to produce its exports) has increased since the beginning of the 2000s (Graph 7a) from 13% to 16%. Latest, provisional, data shows an increase of 1 percentage point in 2020. The EU domestic value added (DVA) in partner countries’ exports (also known as “forward participation” in GVCs or the domestic value added contained in inputs exported to third economies for further processing) has remained relatively stable at 15% since 2000. (Graph 7b). Latest data indicate a continuation of this stable trend up to 2020.

Graph 7: Value added in exports



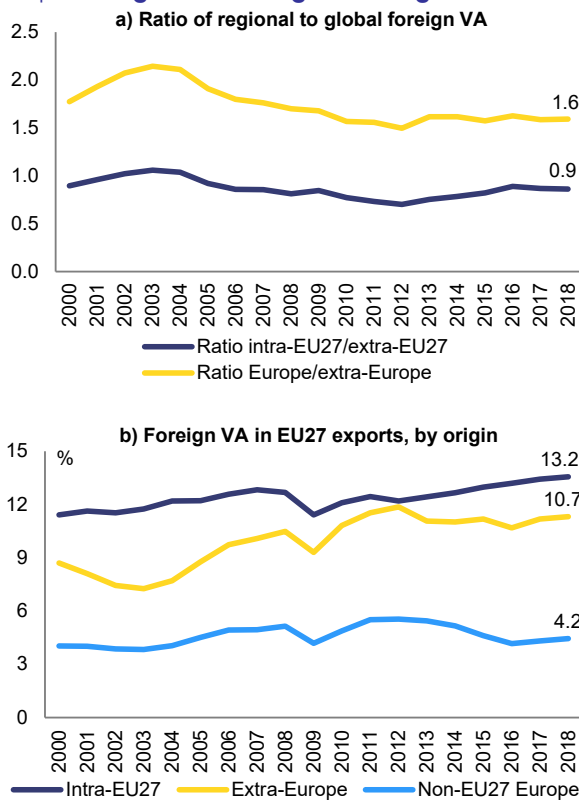
Source: OECD - Trade in value added database.

Note: World FVA (excluding intra-EU) in gross EU exports (%).

When looking at regional versus global integration, over the past 20 years, regional integration remained stronger than the global ones. The integration of the EU27 with the wider region that also includes the UK, EFTA countries

and Russia¹⁷, despite declining recently, was still deeper than EU27 integration with the rest of the world in 2018 (the last available data point) as shown in Graph 8b. At the same time, the intra-EU value added (VA) content in gross exports has remained strong although lower than the extra-EU VA content, as shown in Graph 8a by the ratio of the two being lower than 1¹⁸. This trend does not correspond to a decline in regional integration, but rather to global integration growing faster than intra-EU integration.

Graph 8: Regional versus global integration



Source: OECD - Trade in value added database.

Note: "Europe" includes the United Kingdom, Iceland, Norway, Switzerland, the Russian Federation and EU27 Member States.

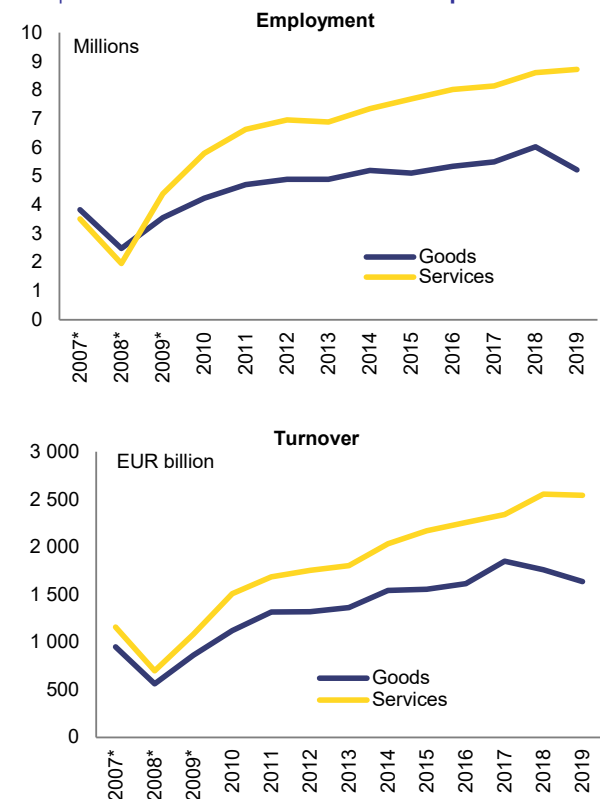
Data on foreign direct investment (FDI) shows a continuous expansion of both EU firms abroad and foreign firms in the EU. The structure and the dynamics of GVCs is for the most part shaped by

¹⁷ The inclusion of Russia is motivated by the fact that before 2022, the country was part of the 'wider Europe' region.

¹⁸ This is an adaptation to the ratio suggested by Bontadini et al. (2022) for comparing regional and global integration.

Multinational Enterprises (MNEs). Investments abroad can be a substitute for trade but are often complementary mainly because when affiliates serve local markets the inputs are generally sourced from the home countries (Gereffi 2018, Buelens and Tirpak 2017). Graph 9 shows that, after a decline in 2008, both the employment and the turnover of EU companies outside the EU has been constantly increasing. This is particularly the case for services industries: between 2007 and 2019, employment and turnover in EU firms' foreign affiliates in services sectors increased by almost 150% and 120%, respectively. In manufacturing, the corresponding increases are 36% and 72%.

Graph 9: Extra-EU affiliates of EU enterprises



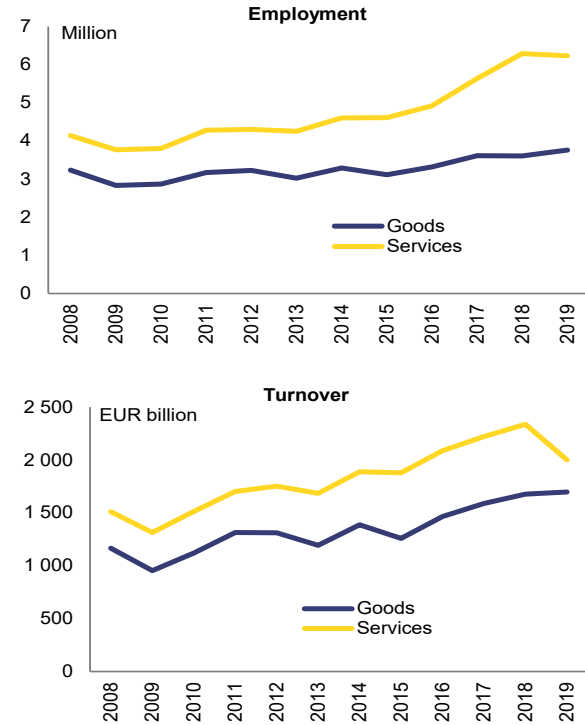
Source: EUROSTAT – FATS (Foreign Affiliates Statistics).

Note: *Break in series (data collected with Nace Rev1).

In addition, employment and turnover activity related to inward FDI in the EU has also increased until 2019. Since 2008, EU employment in non-EU companies in services sectors increased by 51%, while turnover increased by 31%. In manufacturing, employment increased by 16% and turnover by 46% (Graph 10). Overall, the strong dynamism of EU investments abroad, especially in the services sector, confirms that there are no clear

signs of slower integration of the EU into the world economy.

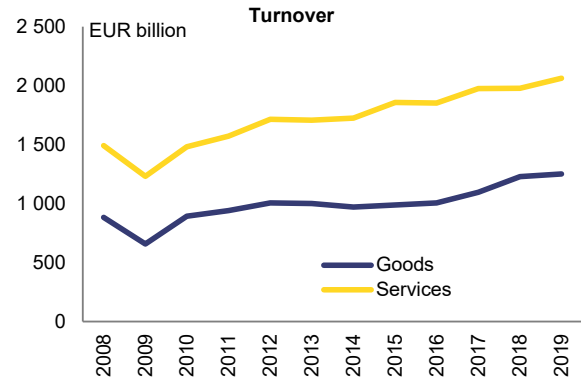
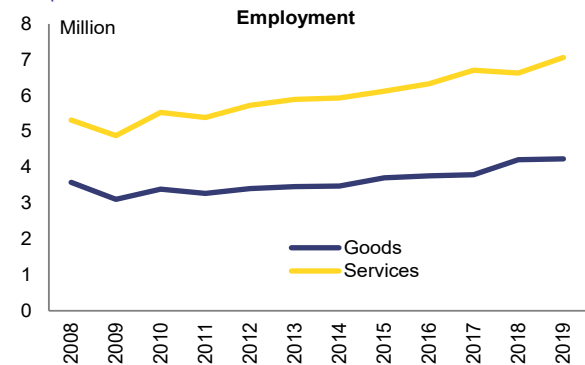
Graph 10: EU affiliates of non-EU enterprises



Source: EUROSTAT – FATS (Foreign Affiliates Statistics).

Foreign affiliate activity related to intra-EU FDI shows a more subdued behaviour (Graph 11). Since 2008, employment in EU companies controlled by nationals of another Member State have increased by 33% in services and by 18% in manufacturing, while turnover has risen by 38% in services and by 41% in manufacturing. The slower growth of intra-EU27 investments is linked to the decrease in intra-EU27 regional integration relative to extra-EU27.

Graph 11: Intra-EU investments



Source: EUROSTAT – FATS (Foreign Affiliates Statistics).

4. THE WAY AHEAD: INCREASING TRADE FRAGMENTATION?

Recent policy trends suggest an increasingly restrictive landscape in cross-border trade. Section 2.2 highlighted a significant increase in non-tariff measures and distortive subsidies following the pandemic and Russia’s war against Ukraine and policies to satisfy goals related to national security and strategic competition. As the impact of these measures on trade flows - particularly intermediate trade - appears with a lag, it is too early to speculate on the future trends.

Businesses are likely to adapt their strategies in response to these trade-related challenges. For instance, a survey conducted by the US-China Business Council in June 2022 found that 87% of respondents (US multinationals in China) declared that US-China tensions are having an impact on their operations and investment decisions, with 26% shifting away from industry segments in China, 29% developing separate US and China-specific value chains and 24% disinvesting in China (to relocate elsewhere, for instance to Vietnam). A similar survey conducted by the EU Chamber of Commerce in China in April 2022 noted that geopolitical tensions were negatively impacting EU investments in China, with 7% of surveyed firms considering disinvesting in China as a result of the war in Ukraine, and 33% declaring that geopolitical tensions were decreasing China’s attractiveness as an investment location.

Policy pressure to relocate supply chains may not immediately result in a significant change in standard aggregate trade indicators, but they are likely to alter trade patterns. Punitive costs and technological challenges stand in the way of

reshoring practices, which are unlikely to increase significantly (Antràs 2021). In the short term, companies appear to choose overstocking inventories as a preferred method of improving supply chain resilience (Goldman Sachs 2022). That said, trade relationships are likely to change in response to these policy efforts. In Asia, for instance, recent years have seen a notable shift in China's export shares, with shares to the US declining and those to ASEAN countries increasing¹⁹, and with India emerging as a potential new engine for global value chain development (Banga 2022).

Efforts to rearrange supply chains appears to lead to greater trade diversification and even a moderate increase in aggregate trade flows. For instance, Fajgelbaum et al (2021) estimate that US-China trade tensions increased aggregate global trade by 3% because of new trade opportunities for “bystander” countries, not involved in the trade war. The emergence of new trade patterns provides initial evidence of the reconfiguration of supply chains in Asia, in response to the deteriorating trade and geopolitical relationship between the US and China. Similar reconfigurations are expected to take place in other regions. Re- or nearshoring would allow Central and Eastern Europe to increase their participation within European value chains, with similar benefits accruing to some Latin American countries, notably Mexico, in US value chains (AMRO 2021).

Greater trade fragmentation could leave trade flows more exposed to shocks. Engagement in GVCs allows unexpected shocks to be managed better than in a world of predominantly domestic production, traditional trade or regional value chains (Mancini et al 2022). IMF (2022a) showed that the resilience of supply chains can be better enhanced through diversification across sources of inputs or overstocking instead of “*friendshoring*”. Less international diversification of sourcing and sales would imply larger adjustments in the domestic markets to absorb shocks (OECD 2020).

5. MACROECONOMIC IMPLICATIONS

A fragmented trade landscape would limit the gains from specialisation and efficient resource allocation. International trade generates growth through a more efficient allocation of resources and through technology transfer when knowledge acquired in one country can be used to facilitate research in another (Grossman & Helpman, 2015). Hampering the efficient allocation of resources, limiting innovation exchange and technology transfer would therefore limit these gains. Increasing barriers to trade will reduce trade specialisation, so that less productive firms would remain operative, limiting the flow of production factors to exporting, more productive firms (Melitz 2003, Clerides et al., 1998; Bernard and Jensen, 1999). Reduced exposure to foreign competition would increase firms' input costs, make them more inefficient and provide greater incentives to demand special protection, particularly in import-competing sectors (Posen, 2022). Specifically for value chain arrangements, OECD (2021) suggests that the economic justification for policy-induced reshoring is weak, as countries that reduce their interconnectedness via GVCs have significantly lower levels of economic activity and lower incomes, without a reduction in their exposure to shocks.

Overall, the fragmentation of global trade would have significant economic costs. All things considered, and in light of the research identifying a causal link between trade and productivity and potential output growth (Singh 2010), sustained trade fragmentation could entail significant potential economic costs. For instance, the IMF (2023a) estimates that a relatively intense fragmentation of the global economy would lead to permanent global output losses, which could range from 0.2% up to 7% of GDP, depending on the severity of fragmentation. Scenarios that combine trade fragmentation with technological decoupling could lead to output losses between 8% and 12% of GDP in some countries. Cerdeiro et al (2021) estimate that a severe trade and technological fragmentation could result in a GDP loss at the magnitude of around 5% of GDP, reaching up to 8.5% for the most severely affected countries. A reduction in international trade would likely lower innovation and exert upward price pressures. The OECD (2020) and the WTO (2023), estimate an impact of similar magnitude, albeit with large divergence across countries. Global

¹⁹ While China's share in US import have decreased by almost 4 pps from almost 22% in 2017 to about 18% in 2021, ASEAN countries' share in US imports increased by around 3 pps, from 7% in 2017 to 10% in 2021 and EU27 share went from 16% in 2017 to 17% in 2021 increasing by 1 pp. (Source: IMF DoT).

trade fragmentation with significant reallocation of GVCs could lead to higher (long term) unemployment and rising inequality (ECB 2021), though the employment impact could vary according to the GVC integration patterns (Bontadini et al 2022).

The analyses suggest that the more intense fragmentation, the larger the losses would be. Importantly, these estimates should not be considered as upper bound, since the models have not incorporated additional negative impacts through other deglobalisation channels, such as the reduction of labour and capital flows, the deterioration of public policy and goods, etc. (IMF 2023a). In a summary of the recent literature on economic fragmentation, efficiency losses increase with the intensity of trade disruptions, and increased trade policy uncertainty is likely to be more detrimental for investment and growth prospects in relatively open and emerging economies (IMF 2022b, IMF 2023a). Similarly, a slowdown in FDI and fragmentation of FDI resulting from geopolitical tensions may lead to output losses in the range of 2% in the long term, unevenly distributed among countries affecting emerging markets and developing economies the most (IMF 2023b).

The costs of trade fragmentation are likely to be asymmetrically distributed. Reduced trade-led income convergence across countries will have significant welfare costs for low-income countries, while, in advanced economies, low-income consumers would be disproportionately hurt by higher prices (IMF 2023a). A fragmenting global economy would likely hurt technology-intensive exporters given the dismantling of complex production networks, with benefits instead accruing to energy exporters, given the higher elasticity of substitution of their exports (IMF 2022b). Similarly, increasing barriers to FDI and other capital flows would limit economic prospects in countries relying on external capital to support their balance of payments and/or foreign technology to sustain their development plans. Nevertheless, almost all countries could lose from fragmentation with countries relying heavily on GVCs and trading extensively with other blocs could experience the largest losses (ECB 2023).

A handful of emerging economies could nevertheless initially benefit from trade fragmentation. These are typically countries which

combine a high degree of integration with a strong institutional alignment to the US and/or the EU. For instance, countries in Central and Eastern Europe and some Latin American countries, notably Mexico, are likely to benefit in the short to medium-term from near- and friendshoring EU and US value chains, respectively. In Asia, China has registered a notable shift in export shares, with those to the US and Hong Kong declining, and shares to ASEAN countries increasing. These trade patterns are an initial confirmation of the regional reconfiguration of supply chains in Asia in response to the deteriorating trade and investment relationship between the US and China. Malaysia appears to have been a key beneficiary of this trade conflict, increasing its participation in the semiconductor value chain, one of the most exposed to US-China tensions. Another likely beneficiary is Vietnam, which is successfully attracting productive capacity out of China in low value-added supply chain segments (JP Morgan 2022). In addition, Taiwan and South Korea could reinforce their position as established operators in advanced manufacturing value chains (Capital Economics 2022).

6. CONCLUSIONS AND POLICY RECOMMENDATIONS

Although world trade growth has slowed since 2008, available trade data does not point to a decline in trade. In fact, global trade as a share of global GDP remains close to its all-time high, although admittedly a more appropriate comparison would have been with the level the global trade-over-GDP ratio could have reached had the observed pre-GFC trend be sustained. While some trade in goods is showing signs of saturation, the development of digital technologies continues to contribute to the expansion of trade in services.

For the EU, data trends available at the time of the writing suggest that trade and value chain integration remain strong. Trade growth in the EU has been above global trends. Both intra-EU and extra-EU trade has been growing at a decent pace (the former also driven by the integration of the CEE countries) and trade as a share of GDP surpassed prior peaks in 2021 further expanding in 2022. Data available until 2019 on GVCs indicates that EU integration is hovering around the current level and is not showing any retreat. The strong growth of EU

trade and investments abroad, especially in the services sector, confirms that up to this point there are no clear signs of slower integration of the EU into the world economy.

While still not fully reflected in the data, recent shocks and policy trends could point to a more fragmented world trade ahead, however.

Significant policy changes since 2018 (mainly involving the US and China), global and geopolitical shocks are likely to lead to a further selected decoupling and an ensuing relocation of supply chains and thus altering trade flows in the near future. Some of the shocks have triggered changing the balance between resilience of value chains and securing access to key inputs (rare earths, etc.) in lieu of efficiency gains. Subsidy schemes are increasingly linked to local production and sourcing requirements that, in turn, are likely leading to reshoring of some supply chains. Available data on intermediate trade do not yet show the impact of these forces, but company announcements suggest that these incentives are considered and may well have an important impact on investment decisions.

Changing trade patterns would not necessarily negatively impact aggregate trade indicators but could deliver significant economic costs.

In general, increasing barriers to international trade and FDI could make resource allocation less efficient, with harmful effects for productivity growth. Rising trade restrictions and/or higher trade policy uncertainty would lead to increased global economic fragmentation with some studies (e.g., IMF 2023a) pointing to an up to 5-7% long-term global output loss in case of a severe trade fragmentation scenario, which could be further aggravated if combined with technological decoupling – and not considering additional negative impacts through other deglobalisation channels, such as the reduction of labour and capital flows, the deterioration of public policy and goods. These trends would not necessarily lead to a decrease of trade and value chain integration indicators, as near- and friendshoring practices would result in substantial trade creation and diversion.

The macroeconomic impact of global economic fragmentation is set to be unevenly distributed across countries.

Low-income countries are likely to suffer the highest welfare cost from reduced trade-led income convergence, while in advanced economies low-income consumers could be

disproportionately hurt by higher prices. On the other hand, some countries could initially turn out as net beneficiaries of GVC reallocations, typically those that combine a high degree of integration with a strong institutional alignment to the US and/or the EU. The impact is likely to differ across countries within the EU, with countries in Central and Eastern Europe likely to increase their already relevant presence in European supply chains.

Overall, multiple factors cloud the prospects for global trade, posing a downside risk to economic growth.

Some of the structural factors inhibiting trade growth over the last decade, such as the reduced scope for major technological breakthroughs in communication and information technologies, are likely to remain broadly unchanged. In addition, recent exogenous shocks and trade policy developments, both at country and multilateral level, suggest that headwinds against the expansion of global trade are intensifying. In this context, the growth-enhancing impacts from global trade openness that many EU Member States have registered in the past may become weaker.

As regards policy recommendation, governments should identify the areas where the benefits of inducing the re-location of value chains would outweigh the costs.

Ideally, public intervention should concentrate in those chains where vulnerabilities are greater and/or where shocks could compromise broader socioeconomic objectives, and without undermining the principles of fair competition and open trade. As European Commission President von der Leyen emphasised: the goal should be “de-risking” not de-coupling. In a context where trade relationships are exposed to various exogenous shocks, it is important to accurately identify those sectors and products where policy efforts to diversify trade or rearrange value chains can contribute to secure access to critical products or to build resilience in value chains. For instance, the EU Critical Raw Materials Act aims to ensure the EU’s access to a secure and sustainable supply of critical raw materials through a careful monitoring of products that are essential to EU’s green and digital transition and defence, while also being subject to potential supply risks.

Multilateral cooperation should be leveraged to mitigate the risks from further trade fragmentation.

The WTO remains a fundamental institution; the guarantor of rules-based open trade

and therefore more important than ever in the current difficult geopolitical climate. The EU market's attractiveness confers its trade policy strong leverage to foster a multilateral solution in important policy areas. On this regard, the prospects from multilateral solutions will depend largely on the extent of alignment of countries' preferences. In areas where interests are relatively aligned, e.g., food security or pandemic preparedness, multilateral efforts remain the preferred solution to prevent trade-inhibiting measures (see also IMF 2023a). By contrast, where country interests differ and unilateral trade measures proliferate, certain multilateral rules can help to reduce the risk from global trade fragmentation. Examples for such rules would be multilateral consultations, ex ante notification of trade measures, discussion of potential spillovers and policies to address them.

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