WORKING PAPER | ISSUE 18/2022 | 17 NOVEMBER 2022

DEGLOBALISATION AND PROTECTIONISM

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Trade in goods has slowed markedly since the global financial crisis (GFC), but there is no deglobalisation: most countries have seen increased international integration across nearly all goods, services and factor markets. China has become more self-reliant and is a notable exception in goods trade. Despite some dramatic instances, protectionism has largely been kept at bay and trade in goods remains quite free, perhaps freer than it was before the GFC. The proliferation and deepening of free trade agreements have contributed to this outcome. There has been deglobalisation of capital markets, but not because of protectionism. Despite efforts to erect barriers in some sensitive sectors, technology flows quite freely across borders because of the internet. However, trade policy uncertainty increased after the election of President Trump, a trend that persists under President Biden, and the biggest challenge is to avoid backsliding. There are many missed opportunities in the globalisation of services and of capital flows – especially those to developing countries. Increased migration remains potentially the largest source of gain from globalisation, but it is also the most fraught politically.

Anabel Gonzalez and Richard Newfarmer provided very useful comments on a previous draft. Thanks for helpful comments also go to Bruegel colleagues Alicia García-Herrero, David Kleimann, André Sapir, Nicolas Véron, and Jeromin Zettelmeyer. Robin Schindowski and Ryan Strong provided excellent research assistance, and Klaas Lenaerts provided technical support.

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Recommended citation:
Dadush, U. (2022) 'Deglobalisation and protectionism' *Working Paper* 18/2022, Bruegel

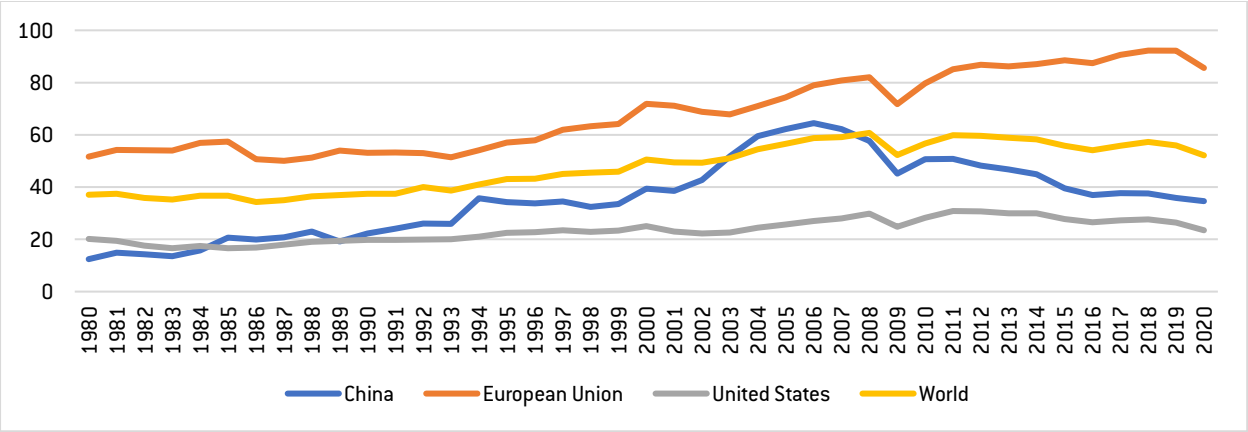
1 Introduction

The idea that deglobalisation is underway has become commonplace (Irwin, 2020). Deglobalisation means that most countries become progressively less connected through all or most channels: trade in goods, trade in services, capital flows, movement of people and the transfer of technology. Such a process would thus mark a reversal of economic trends that have prevailed over at least the last 150 years, interrupted only by world wars and economic depression.

The persistent slowdown in world trade after the great financial crisis (GFC) of 2008-2009 is exhibit one for proponents of the deglobalisation hypothesis. Between 1985 and 2008, a period of hyperglobalization, trade (exports plus imports) of goods and services surged as a share of world GDP, from 38 percent to 61 percent. But, in a sudden break, this slowed and reached 56 percent in 2019, before the COVID-19 pandemic disruption. Figure 1 shows the evolution of world trade/GDP and the differences between the three largest trading powers.

Many attribute deglobalisation, or what they perceive as deglobalisation, to protectionism. Since 2017, the world has seen events including Brexit, the abandonment by the United States under President Trump of the Trans-Pacific Partnership, the China-US trade war, the disabling of the World Trade Organisation's dispute settlement system, the disruption of global supply chains by the pandemic, and many calls for self-reliance. Trade sanctions imposed on Russia following its invasion of Ukraine have added evidence that global economic integration is coming to a stop or even reversing.

Figure 1: Trade (% of GDP)



Source: World Bank Data. Note: Data for the European Union includes intra-EU trade.

This paper presents a data-driven examination of whether deglobalisation has happened and whether protectionism was the cause. To keep a big subject within reasonable bounds, we focus principally on goods trade and cover the other channels of globalisation briefly.

The evidence gathered here shows that, while globalisation clearly slowed in some respects in the wake of the GFC, there is no deglobalisation (see Baldwin, 2022; Antras, 2021; and Arslan, 2018, for a similar view). Globalisation continues across most channels of international exchange and most large economies continue to see stable or rising trade/GDP ratios, with China – which has undergone a rapid process of structural transformation driven mainly by domestic factors – a standout case.

Globalisation is affected by many external forces, of course. From a policy perspective, and for the purpose of this paper, the central question is whether protectionism contributed to the slowdown of globalisation. We make the following assessment[1]:

- Increased protectionism was not a major cause of the sharp slowdown in world trade in goods post-GFC. This is a view reached by analysts during and immediately after the GFC, and it remains true a decade later. Despite notable examples of protectionism, trade in goods remains largely free, perhaps freer than it was before the GFC. Still, trade policy uncertainty has increased greatly in recent years.
- Barriers to globalisation remain high in trade in services, but are no higher than before; trade in services continues to grow, facilitated by technology.
- Deglobalisation occurred in international capital flows; the cause was the financial and macroeconomic fallout of the GFC, not protectionism.
- International migration is the most impeded channel of globalisation and is more impeded than before, but it continues.
- Despite frequent efforts to impede the flow of technology across borders, it is almost certainly occurring more easily than before the GFC because of the spread of the internet.

[1] Two caveats are in order. First, for the purposes of this paper, it is presumed that globalisation enhances efficiency, and is desirable for that reason. We do not address the many arguments made against globalisation, such as disruption, increased inequality, failure to compensate the losers, loss of national identity, loss of 'policy space', health risks from infectious diseases and environmental damage. This is not to minimise the importance of these arguments, nor of the need to mitigate the unfavourable effects of globalisation, but to keep the subject manageable. Second, much of the deglobalisation debate occurs in the media and among political science experts, who believe that nationalism, nativism, great-power competition and security concerns threaten the foundations of the post-war order and, therefore, of globalisation. Political analysis is not the focus of this paper, though concerns that the nationalism and geopolitical tensions of recent years will become severe enough to cause a retreat of globalisation across a wide front should be taken seriously.

- On policy, the biggest challenge is to avoid backsliding; moreover, there are many missed opportunities in the globalisation of services and of capital flows – especially those to developing countries. Increased migration is potentially the largest source of gain from globalisation, but also the most fraught politically.

The rest of this paper starts by setting the context, then reviews the trends in goods trade and the role played by protectionism. Trends in each of the other channels of globalisation are then reviewed briefly, before an assessment of the implications for policy.

2 From hyperglobalisation to deglobalisation?

Extremely rapid globalisation, measured by the growth of the volume of world trade in goods and services at 6 percent a year, and as observed between 1985 and 2008, has been ascribed to two epochal developments: a dramatic reduction in trade costs and the entry into world markets of formerly planned or previously inward-oriented economies, accounting for some 40 percent of the world population (World Bank, 2007; Subramanian *et al*, 2013; Dadush, 2017). Trade costs fell because of the application of relatively recent technologies including the increased use of containers, air transport and information and communication technologies. Also significant was trade liberalisation. For example, according to the World Bank the world simple average applied tariff rate was reduced from about 14 percent in the early 1990s to 7.5 percent in 2008.

The arrival of China, India, Russia and numerous other developing nations in global trade brought into the mainstream economies with vastly different institutions and factor endowments, upending markets across the world. As a creator of new opportunities for international arbitrage affecting nearly all the world's population, this episode finds no parallel in the historical record. The opening and settlement of the Americas from 1500 to 1900 is the closest comparison, but it was a far more gradual process and one that affected at most 20 percent of the world population, overwhelmingly Europeans.

The ongoing structural transformation of developing economies suggests that, while many opportunities for arbitrage may have already been taken – for example, China's unit labour costs have risen sharply – many more remain and are to come. Rising incomes and the emerging middle-class in developing nations continue to boost demand for sophisticated and branded consumer goods, and the industrialisation of those nations will require more imported raw materials, as along with parts, components and machinery produced in advanced countries, or produced with technologies mastered first in advanced countries. The ongoing rapid rate of product and process innovation in advanced

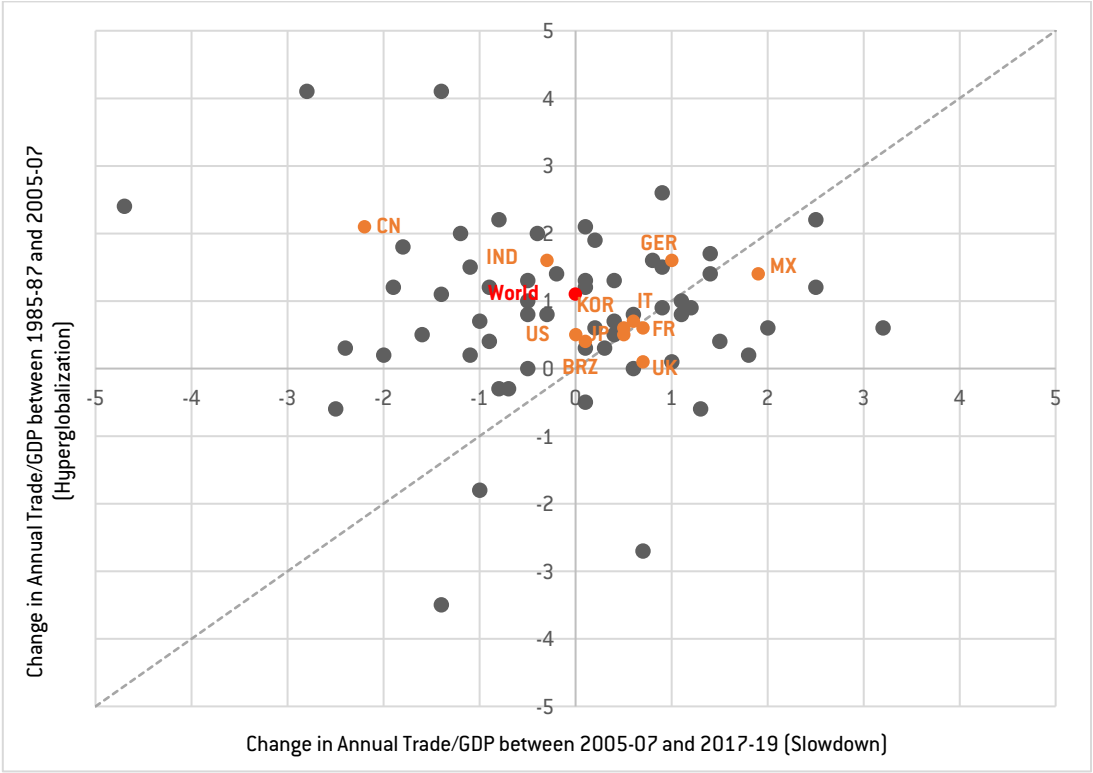
countries (think the internet search engine or the 3D printer or COVID-19 vaccines, for example) also points to many new trade opportunities.

Against this background, the sudden halving of trade growth from 6 percent a year to 3 percent a year after the GFC, and the stabilisation of trade/GDP at lower levels than achieved at the time of the GFC, pose a puzzle, which many have tried to solve. Darvas (2020) provided a summary of this literature. Studies have ascribed the slowdown to various factors, including the slower pace in the reduction of trade costs as they approach a lower limit (for example, the cost of international telephone costs fell to zero and so did many tariffs); the largely completed transition to the market of the newly-arrived economies; reduced vertical specialisation; lower commodity prices which disproportionately affected the import capacity of poor countries; the slowdown in world economic growth and its effect on heavily traded consumer durables and investment goods; and structural changes such as the increased weight of services, which are less traded. Authors who identify structural factors as especially important tend to downplay the effect of the GFC and to question whether it is the appropriate reference point (Baldwin, 2022; Constatinescu *et al*, 2015). In contrast, those that point to protectionism identify the GFC as a turning point that marked increased political resistance to globalisation (de Bolle and Zettelmeyer, 2019).

Here, four important features of the trade slowdown, which suggest that the deglobalisation narrative is overstated, can be highlighted. First, is the exceptional nature of the hyperglobalisation period. That phase is often compared to the prior great globalisation of 1870-1914. Yet, trade grew almost twice as fast during hyperglobalization than during the 1870-1914 episode, even though the trade share of world GDP was almost three times higher in 2000 than in 1900 (Estevadeordal *et al*, 2002). Thus, the great trade slowdown can, to some extent, be seen as a return to normality. It is the outcome of economic actors optimising under new conditions, while there is not another China to bring into the world economic mainstream, nor new inventions as transformational as the container.

The second feature is divergent outcomes during the trade slowdown. Figure 2 (Baldwin, 2022) shows that most non-oil exporting economies, including several European countries, Japan and large developing economies such as Mexico, saw continued advances in trade/GDP ratios after the GFC. Some countries – which appear below the 45 degree line in the north-east quadrant, saw more rapid advance in trade/GDP than in the hyperglobalisation period.

Figure 2: Change in Annual Trade/GDP for non-oil-exporting countries



Source: World Bank Data. Note: Some outliers (Hong Kong SAR, Luxembourg, Malta, Seychelles, Singapore, Ireland, Malaysia) have been excluded to make the chart legible.

As shown in Appendix Table 1, 45 non-oil exporting economies out of 78 for which data is available on the World Bank WDI database, have seen a rise in average annual trade/GDP since the GFC, and one country, the United States, saw no change. Oil exporters[2], shown in Appendix Table 2, are a special case because of the tripling of oil prices during the hyperglobalisation period and their moderation thereafter, as world economic growth slowed and the oil intensity of GDP declined. All 16 oil exporters for which data is available saw declines in their trade/GDP ratios post-GFC, with the exception of Australia[3].

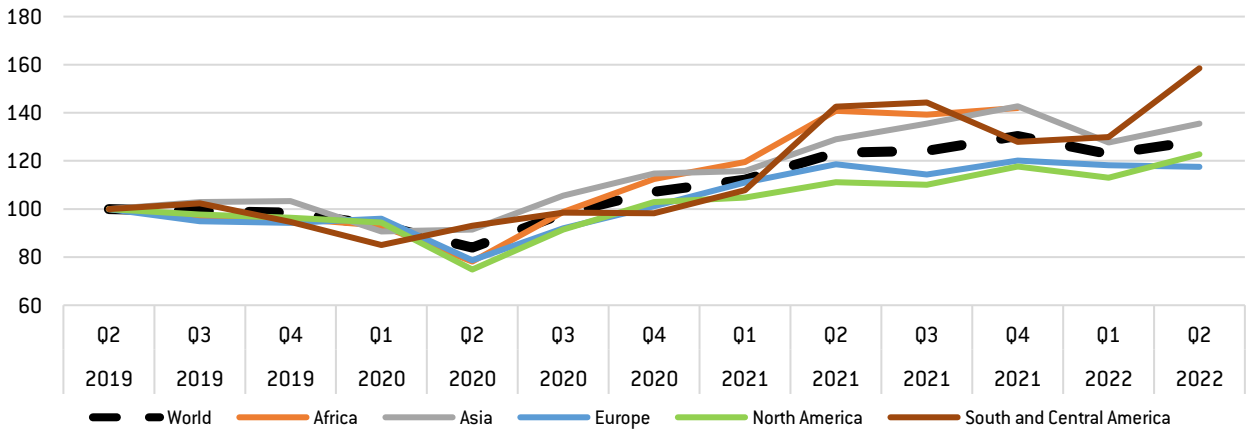
The third feature is the outsized role of China in the trade slowdown on account of its size and the sharp inversion in its trade/GDP ratio. The direct (arithmetic) effect of China's inward turn accounts for at least one third of the slowdown in the world trade/GDP ratio. Moreover, China's slowing economy adversely affected the exports of its trading partners, especially those of commodity exporters. The dramatic inversion of China's trade/GDP occurred despite the improvement in various measures of The

[2] Economies whose oil exports in 2005-2007 exceeded 20 percent of total merchandise exports.
[3] For a discussion of the effect of commodity prices on the measurement of trade/GDP ratios, see Baldwin (2022).

dramatic inversion of China's trade/GDP occurred despite the improvement in various measures of China's openness (discussed below), and can be ascribed largely to domestic developments. These include: a sharp rise in wages combined with a decline in the share of working-age population, which led to slower growth of labour-intensive exports; improved capacity to onshore the manufacture of sophisticated parts and components; increased share of consumption and government spending in GDP; and increased share of services, which are less traded (Yao, 2020; Huang and Smith, 2020; Constatinescu *et al*, 2015; Dadush, 2015).

The fourth feature is the remarkable resilience of global value chains even in the wake of the disruption caused by the pandemic, calls for reshoring, the China-US trade war and sanctions on Russia. Figure 3 shows that the value of trade in intermediates – a widely used indicator of reliance on global suppliers of parts and components (excluding fuels) – was about 25 percent higher in the second quarter of 2022 than in the second quarter of 2019. This is a rate of growth likely almost double the rate of growth of US dollar world GDP over the same period[4].

Figure 3: Trade in intermediates growing rapidly World and regional exports of intermediate goods (excl. fuels), Q2 2019 - Q2 2022 (index Q2 2019 = 100)



Source: World Trade Monitor.

In any event, only what can be changed matters for policy, and economic structures and technology are largely a given (certainly over the typical decision horizon). The main question, then, is whether

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

the trade slowdown was caused by protectionism. In the next section, we focus on trade in goods and show that this is not the case.

3 Slowdown of trade in goods: the role of protectionism

Protectionism can take many forms, of which tariffs are the most visible but not always the most damaging. Non-tariff barriers can include arbitrary technical and sanitary standards, quotas, exchange controls, import licenses, cumbersome customs procedures and complex rules of origin. They can also be 'behind the border', such as subsidies and local-content requirements in government procurement. A vast literature shows that non-tariff barriers are, or can be, as important as tariffs as impediments to trade (Kinzius *et al*, 2019). In all its forms, protectionism stands in the way of international arbitrage, causing major efficiency and welfare losses.

To evaluate protectionism as a cause of the slowdown of trade after the GFC, we examine in some depth trade in goods because it accounts for about three-quarters of world trade, and the data and techniques available to analyse it are better established than in services. Services trade is mainly restricted by difficult to quantify regulations and analysis of trade barriers in services is severely limited by the paucity of data on bilateral service flows. Trade in services and in factors is addressed briefly in the next section.

As discussed, tariffs were reduced sharply in the 1990s and the 2000s. Following the GFC, one can point to some major protectionist incidents, most notably the tariff war between the largest economies, China and the United States. However, US tariffs on China and Chinese tariffs on the US in retaliation were raised only in 2018, almost ten years after the GFC, and the trade affected by the dispute is $450 billion (of which $350 billion is US imports from China, and $100 billion is China imports from the US), accounting for only about 2 percent of world trade (including intra-EU trade). There have also been many instances of trade sanctions, affecting over 30 countries, including Russia and Iran. However, trade sanctions (which are usually the result of political and security tensions, not protectionism), are imposed by a few countries (the United States is the main user of them) and affect only about 2 percent of world trade, mainly exports of primary commodities. Moreover, their effect is mainly to redirect and distort trade, rather than to reduce it.

Without minimising the effects of trade wars and sanctions, it is important to look beyond these events to examine broad policy trends that affect the bulk of world trade. Here, we look in sequence at most-favoured nation (MFN) applied tariffs, trade preferences, non-tariff barriers and subsidies. Our method complements econometric studies such as Kee *et al* (2010) and Constaninescu *et al* (2015), which

explored the effect only of a subset of protectionist measures that can be quantified and arrive at a similar conclusion.

3.1 MFN applied tariffs did not change much

MFN applied tariffs under the WTO, whose disciplines cover almost all of world trade, have seen little change since the GFC. As shown by Kee *et al* (2013), even during and in the immediate aftermath of the GFC, there was no significant increase in tariffs and anti-dumping measures in a large sample of countries accounting for nearly all trade. According to the WTO Tariff Profiles (2008, 2021) the simple average MFN applied tariffs of the six largest trading entities (Brazil, China, India, EU, Japan, United States), which together account for over 80 percent of world trade, saw only marginal changes between 2007 and 2020, reflecting the stasis in WTO negotiations and a reluctance to reduce tariffs autonomously. The average MFN applied tariff of the six entities was near 8 percent in 2020, slightly less than the average of all WTO members. A notable exception was China, whose simple average tariff declined from 9.9 percent to 7.5 percent from 2007 to 2020. The share of tariffs that is high, above 15 percent, also saw little change among the advanced countries in the sample, remaining in the 3-5 percent range. However, the share of high tariffs in China declined sharply, from 15.7 percent to 5 percent, while it increased from 13.3 percent in Brazil and from 18.2 percent to 29.5 percent in India. Since China is now the largest trader in goods and its imports are over four times those of Brazil and India combined, one can conclude that – as measured by MFN applied tariffs – protection remains at levels similar to that before the GFC.

The United States deserves more scrutiny because of its special role in the trading system and because, beginning in 2018, it has placed tariffs (Bown, 2022) of about 20 percent on some $350 billion of imports from China under section 301 of the Trade Act of 1974 (unfair trade), departing from MFN treatment. Imports from China subject to the tariffs account for about 15 percent of total US imports of goods, using a 2017 base. The US measures affecting China came on top of other tariff increases that affected a wide swathe of countries, such as those on aluminium and steel, solar panels, washing machines, etc.

The effect of the US tariffs is difficult to evaluate since many exemptions have been granted on various grounds. A simple measure of their overall impact is customs revenue as a share of the value of imports. This measure, which is mainly composed of import duties but also includes small amounts of excise taxes and fees, increased from 1.6 percent of the value of US imports in 2018 to 3.2 percent in 2021 (US Customers and Border Control, 2022). The increase is certainly symptomatic of a shift in US

trade policy towards protectionism, at least as it affects China, but it is not one likely to account significantly for the deceleration in world trade since the GFC. It is true that Chinese goods export volumes to the United States in 2021 were about 10 percent lower than in 2017. However, total US imports were about 10 percent higher in 2021 than in 2017, and total Chinese exports were 27 percent higher, suggesting that the main effect of the tariffs was to redirect goods trade of China and the US away from each other, rather than to depress trade overall.

3.2 Regional arrangements cover more trade and are deeper

Regional trade agreements cover large parts of world trade, and many poor countries benefit from unilateral preferences. For example, the Least-Developed Countries (LDCs) export over 97 percent of their goods duty free and quota free to advanced countries and some higher middle-income countries. The share of world exports between any pair of countries that were parties to preferential agreements of any kind, whether unilateral or reciprocal, rose from around 22 percent in 1965 (largely accounted for by the European Community) to 60 percent in 2010, including through the expansion of the European Community (Limao, 2016). The effectively applied tariff is thus below the MFN applied tariff in many cases. According to the World Bank, in 2017 the average world effectively applied tariff on a trade-weighted basis was 2.6 percent, well below the applied MFN level, down from 8.6 percent in the early 1990s, and down from 3.4 percent in 2007. Because of the entry into force of trade agreements, effectively applied tariffs have declined by about 0.8 percentage points since the GFC. This is far less sharply than in the decades before the GFC, but still represent a significant liberalisation. Of course, effectively applied tariffs do not have nearly as much room to fall; in the four largest traders, China, the EU, Japan and the US, they are now in the 2-3 percent range[5].

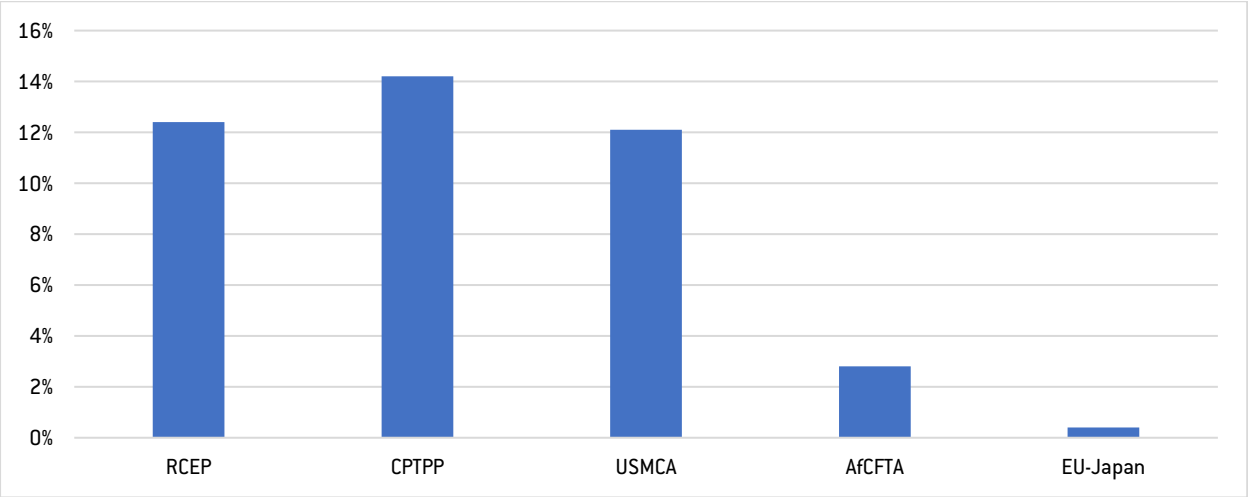
Estimating the effect of preferential trade agreements on trade flows, Limao (2016) concluded that they are large, surprisingly so given that low MFN tariffs often prevail. His findings confirmed previous studies that concluded that there are many trade-promoting effects of preferential trade agreements beyond tariff reductions, such as rationalisation of customs procedures, liberalised trade in services, common standards or mutual recognition which help the integration of production chains, spurring of foreign investment and reducing uncertainty. In this vein, Mattoo *et al* (2020) concluded that 'deep' trade agreements tend not only to stimulate more trade among members of the agreement, but also to

[5] UNCTAD (2021) produces a tariff trade restrictiveness index (TTRI), which accounts for import values and import demand elasticities. It estimates the TTRI of developed countries in 2020 at just 2 percent; although the TTRIs of developing countries are higher, developed country exports face a TTRI of only 2.1 percent on average.

spur more trade with third countries, because many of the reforms envisaged in deep trade agreements facilitate all trade without discrimination.

Moreover, the numbers cited above do not reflect the completion of preferential agreements over the last few years, which are in the process of ratification or are ratified and not yet in force. Figure 4 indicates the share of world trade covered by the largest new agreements.

Figure 4: Share of world trade covered by trade agreement



Source: WITS database.

Some of these agreements entail limited new tariff reductions as they revise prior agreements (eg the United States-Mexico-Canada Agreement, USMCA) or partly consolidate previous agreements (eg the Regional Comprehensive Economic Partnership, RCEP) or start from already low MFN applied tariffs (eg EU-Japan). However, based on calculations by Dominguez Prost and myself (Dadush and Dominguez Prost, 2022), new agreements that entered into force between 2010 and 2020 covered an additional 6 percent of world exports, those under negotiation or subject to ratification could add coverage to about 3 percent of world exports, taking the total to close to two-thirds of world exports[6]. Moreover, agreements negotiated since 2010 are deeper than the trade agreements negotiated in decades prior to the GFC (Hofmann *et al*, 2019), covering many behind-the-border impediments to trade, including many non-tariff barriers, to which we now turn.

[6] These estimates are consistent with those of UNCTAD (2021), which exclude intra-EU trade.

3.3 Non-tariff measures are everywhere but the evidence is weak that they are more prevalent since the GFC, or that their intent is predominantly protectionist

Some non-tariff measures are explicitly designed to regulate trade, eg antidumping and export controls. But many are not, such as sanitary standards, which have public health objectives. However, even when NTMs have a legitimate policy objective and even if they are implemented faithfully to avoid discrimination against foreign producers, they will affect trade flows in some way (UNCTAD and World Bank, 2018; Kee *et al*, 2009; Hoekman and Nicita, 2011; Niu *et al*, 2017).

The United Nations Conference on Trade and Development (UNCTAD) classification of NTMs, first issued in 2006, comprises over 170 measures organised into 16 chapters (the MAST classification, for the Multi-Agency Support Team that draws it up). The classification includes measures such as sanitary standards, contingent trade-protection (antidumping, etc), restrictions on distribution, subsidies, export controls, government procurement restrictions and so on. In this section deals we review NTMs other than subsidies, which are covered in the next section.

The overriding preoccupation of those studying NTMs is that they will restrict trade. But NTMs do not always have the effect of restricting trade. For example, tough sanitary standards in the EU make exporting Moroccan tomatoes to France more costly and cumbersome, but confidence that consuming Moroccan tomatoes is safe may result in more consumption and imports of Moroccan tomatoes, compared to a situation of no standards. Similarly, demanding technical standards can make imports of parts and components possible that would not otherwise occur. So, sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBT) can be seen not only as trade impediments but also as desirable policies since they incentivise better product quality and reduce information asymmetries between producers and consumers (Dolabella, 2020). Indeed, Global Trade Alert, a database that systematically monitors protectionist trade interventions, reports few STPS and TBT measures because only few can be shown to have a clear protectionist intent.

Based on UNCTAD (2018), three stylised facts relevant to our review of protectionism emerge from scrutiny of NTMs: technical standards (SPS and TBT) are the most widely used NTMs; TBTs are the most frequent form of NTMs; and developed countries are the most active users of NTMs. It is often claimed that this is because developed countries apply lower tariffs and are looking for alternative means of protection. But even though that may be the case in some instances, a more plausible explanation is that consumers and producers in developed countries demand high standards, and the capacity exists to apply them. Indeed, consumer demand and intense competition often force the adherence to private

standards even when official standards are absent or loose. Moreover, the same standards apply to domestic and foreign producers, so the potential for discrimination is limited. NTMs are more widespread in the agri-food sector, as would be expected given public-health concerns.

The effect of non-tariff barriers on trade is hard to evaluate. Econometric estimates of the tariff equivalent of NTMs using gravity models face many statistical challenges and vary greatly. An authoritative review by UNCTAD and the World Bank (UNCTAD, 2017) placed the median tariff equivalent of NTMs at 3 percent in products where NTMs apply, but with very large dispersion across products. In manufactures and raw materials, the average trade-weighted tariff equivalent is estimated at 2 percent and near zero, respectively in products where NTMs apply. But these are averages and, in many sectors, the additional restrictive effects of NTMs can be significant, especially in advanced countries where technical and sanitary standards are enforced strictly and tariffs are low. The most highly regulated products using standards are varied; they include, for example, fruits and vegetables, garments and automobiles.

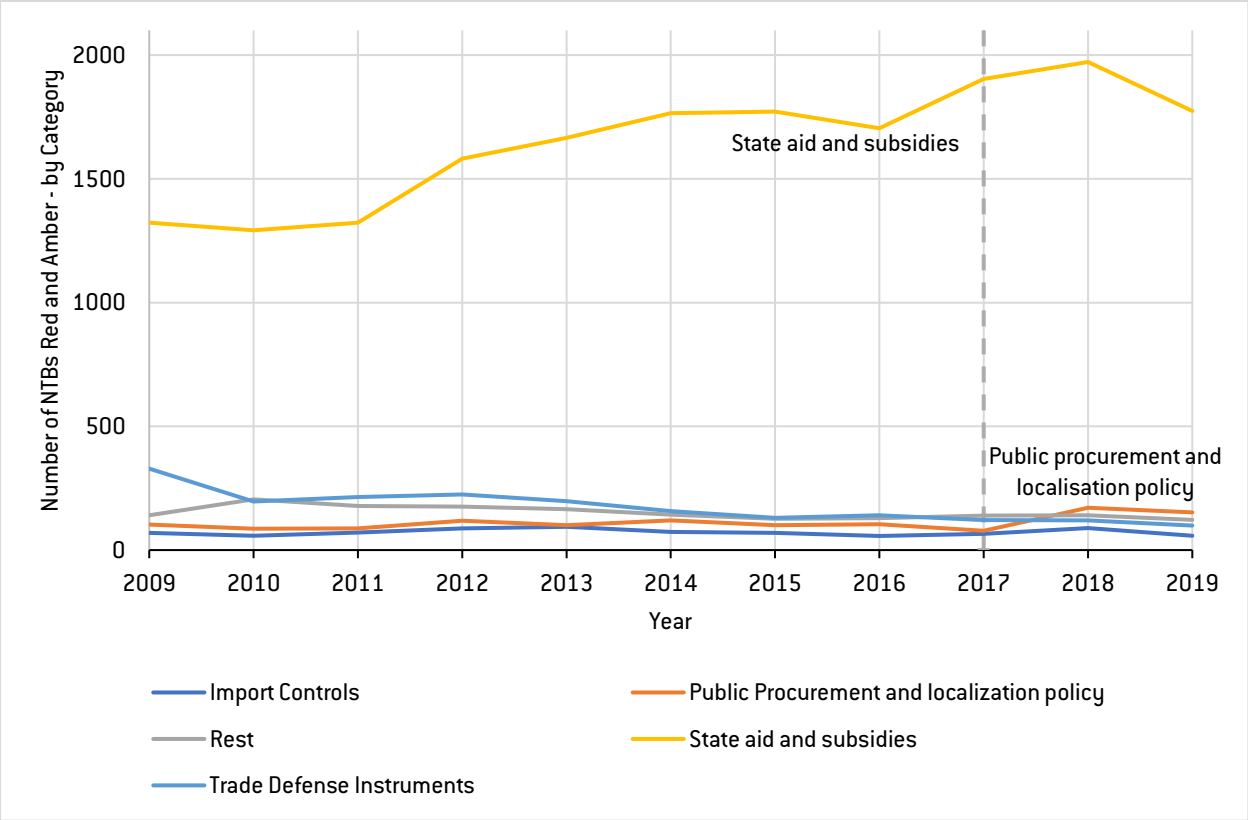
Have NTMs become more prevalent in recent years, and has trade become more restricted as a result, even as applied tariffs declined to low levels? Unfortunately, because of its spotty coverage over time (in many countries, surveys are infrequent or, as in the case of China, were only conducted once, in 2014), the UNCTAD data is of limited use to answer this question. Niu *et al* (2018), using the UNCTAD data, concluded that the use of SPS and TBT became more prevalent after measurement started around the time of the GFC and had large trade dampening effects, though with a large margin of uncertainty around the estimates.

Drawing on WTO notifications of SPS and TBT measures, which are spotty and incomplete, a report by UN ESCAP (UNESCAP, 2019) concluded that the application of SPS and TBT in the Asia-Pacific increased steadily between 1995 and 2009 but has since stabilised. The report attributes much of the increase in the use of standards in the early years to developing Asian nations, as they felt the need to apply them for public safety and technical reasons. While recognising that standards are set for legitimate policy purposes, the ESCAP report estimated that the cost for exporters of complying with SPS and TBT standards was twice that of tariffs.

To delve deeper into how NTMs have evolved, one needs to turn to the Global Trade Alert (GTA) dataset, which has been monitoring their effect on trade since the GFC of 2008-2009. As mentioned, GTA only reports SPS and TBT interventions if there is strong evidence of a protectionist intent, which is rarely. Figure 5 shows the number harmful interventions (which vastly exceed liberalising ones) from 2009 to

2019, just before the pandemic. Harmful interventions are based on the MAST classification, and we group them in five categories: subsidies, which are by far the most frequent harmful measure and saw a pronounced upward trend; import controls and trade defence measures, – which saw little change[7]; and public procurement and localisation policies, which have seen an increase in recent years. Increased harmful public procurement interventions are down mainly to the 'Buy America' programme. Increased harmful localisation policy interventions are attributable mainly to a surge of new rules in Germany, and may be the result of a failure to identify these rules in previous years.

Figure 5: Harmful interventions by type



Source: GTA database.

The GTA data suggests the big change in protectionism since the GFC lies almost exclusively in subsidisation, which we examine in greater detail in the next subsection.

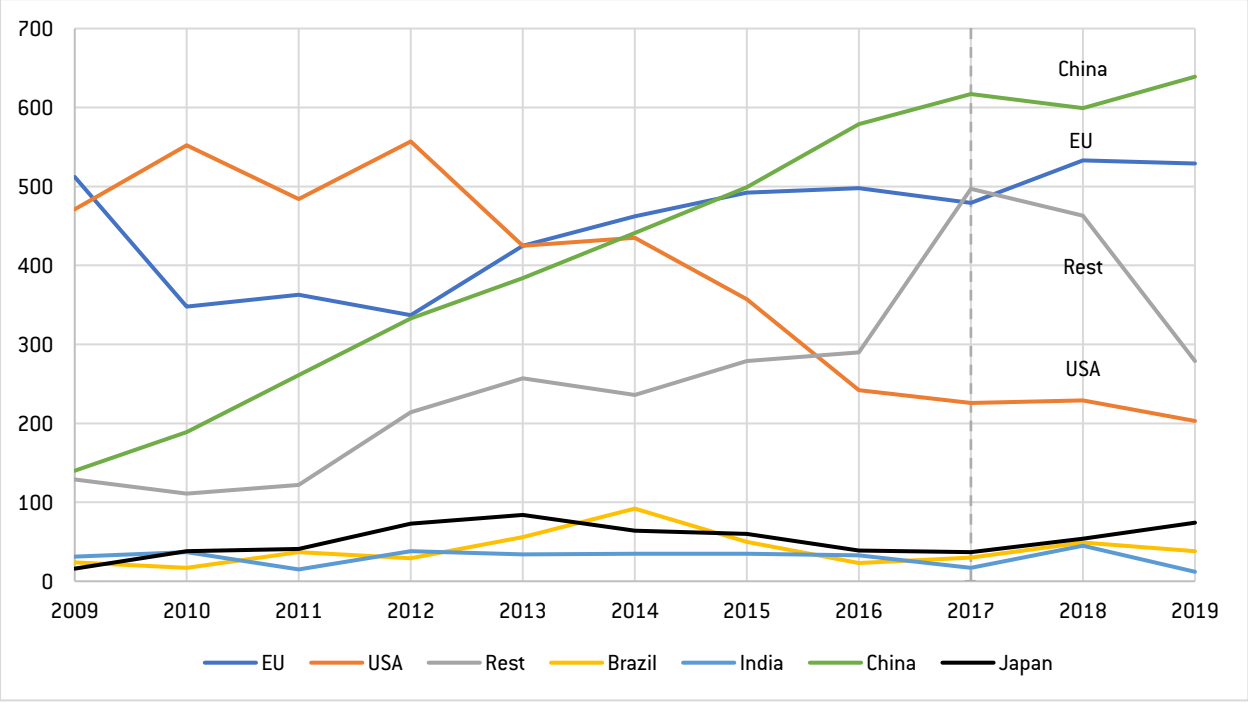
[7] The GTA data on trade defence interventions may be underreporting them; according to UNCTAD (2021), there was a significant increase in resort to antidumping, countervailing duties and safeguard measures after 2015, mainly affecting the steel industry, with the US and India the most frequent users of these instruments.

3.4 Subsidy interventions have increased across the world since the GFC; however industrial subsidies in the EU and the US are unlikely to have had a significant impact on trade flows

Subsidies are a growing source of trade tension (Hoekman and Nelson, 2020; Evenett *et al*, 2021). Historically, the primary concern was agricultural subsidies, but more recently concerns about industrial subsidies, which are mostly prohibited under the WTO, have intensified. Even when they are designed to address domestic issues, subsidies often have significant spillover effects on international trade. According to the MAST classification, there are 15 different types of subsidy intervention, of which financial grants, trade finance for exports, state loans and loan guarantees tend to be the most prevalent.

As the pandemic hit in 2020, subsidies designed to mitigate its effect soared worldwide. To avoid the effects of this unique event, we focus on the years 2009 to 2019. Focusing on the large traders, Figure 6 illustrates how – according to GTA – China has increased the number of interventions nearly every year since 2009. Surprisingly, despite its strict rules on state aid, the European Union is also reported in GTA as a large and increasing user of subsidies even before the pandemic, following a decline in the years after the GFC. The US, in contrast, has seen a large decline in subsidy interventions since the GFC, a trend that has persisted, though far less sharply after 2017. The rest of the world saw an increase in the use of subsides until 2017, and a decline thereafter.

Figure 6: Evolution of subsidies



Source: Bruegel based on GTA.

According to GTA, in almost every case, subsidies are targeted at specific industries and firms, so they are *prima facie* WTO-inconsistent. In the case of China, 97 percent of subsidies are categorised as financial grants. According to Allen *et al* (2005), state subsidies are one of the four most important sources of finance for Chinese firms. In China, the primary goal of subsidies is the development of key areas including agriculture, public utilities and high-tech industries (Lee *et al*, 2014).

What to make of the large increase in subsidy interventions since the GFC? What was their effect on trade, and on welfare? Like tariffs, evaluating the effect of subsidies on welfare is technically straightforward, implying a deadweight welfare loss for the country imposing them. However, subsidies, like other NTMs such as SPS and TBT, are often justified by legitimate policy objectives. These can include, for example, promoting green technologies, promoting local production of strategic materials for national security reasons, preventing irreversible business closures during the pandemic or developing new vaccines to fight COVID-19. All these examples reflect externalities, or coordination challenges, which markets may not address adequately. Yet another use of subsidies, and one that is especially controversial because it has a clear protectionist effect, is to support the development of infant industries. Counting subsidy interventions as done by GTA is a useful exercise, but without considering the reasons for intervention, is not sufficient to measure protectionism.

The effect on trade and welfare of subsidy interventions reported in GTA is further clouded by the absence of summary measures of the size of subsidies. For example, in the case of the United States, GTA lists vast numbers of trade-distorting subsidy interventions in the industrial sector and identifies two main sources of non-agricultural subsidies: the Small Business Administration and the US Export-Import Bank. These organisations dispense loans – often very small loans – at preferential interest rates. However, the portfolios and budgets of these agencies are tiny compared to any relevant measure of US economic activity. Examination of their annual reports shows that their portfolios grew only modestly in the years preceding the pandemic, consistent with GTA's reporting of a declining number of subsidy interventions in the US.

China is reported by GTA – and by many other sources – to be the most frequent and heaviest user of industrial subsidies. DiPippo *et al* (2022) attempted, apparently for the first time, to put a number on China's subsidies and to compare them with those of other trading powers. Funded by the US Department of State, the DiPippo *et al* (2022) study estimated that China's industrial subsidies in 2019 amounted to at least $248 billion, including direct subsidies, preferential lending and below-market-price land sales, equal to 1.7 percent of GDP and on a rising trend. As a share of GDP, China's industrial subsidies were three to four times larger than those of France, Germany, Japan and the United States.

Insofar as China's subsidies have increased in recent years, as suggested by both GTA and DiPippo *et al* (2022), and they are in the range estimated by DiPippo *et al* (2022), they could account for some of China's remarkably rapid import substitution.

Closer scrutiny of the many subsidy interventions in the EU reported by GTA suggests that their effect on trade is far less than meets the eye. Consider France, which GTA reports as registering a big increase in harmful interventions even before the pandemic. For example, according to GTA, in 2019 France implemented 79 harmful interventions (compared with around 25 in 2009/2010), of which 55 are classified under subsidies of all types (grants, loans, loan guarantees, etc). Examination of specific subsidies shows that, as in Germany and several other EU members, most subsidy interventions originate in the European Investment Bank (EIB). In the case of France, the EIB was the source of 46 out of 55 subsidies in 2019. Most of the rest are loans or grants issued by French bodies for building of wind farms or, in one instance, for construction of facilities for the Paris Olympics.

Delving deeper into the EIB, which is among the largest supra-national banks, its mission is to support development in the EU and overseas, including through assistance to the EU's less-developed regions; environmental sustainability also features high on its list of stated priorities. The EIB makes many small loans to small companies through intemediaries, In 2019, according to its financial report, the EIB signed finance contracts with French entities amounting to €6.9 billion, compared to €4.9 billion in 2007 (just before the GFC), inflation adjusted. Thus, the total additional EIB support to French entities in 2019 compared to 2007 was €2 billion in real terms.

Of course, the EIB loans do not equate to a subsidy, since they must be paid back with interest. To ensure the bank stays profitable and retains its AAA rating, many special conditions are attached to EIB loans, as is the practice off other supranational banks, such as seniority, co-funding with private banks, etc. If one assumes that the grant element of EIB financing (the difference between the market interest rate and its concessional rate adjusted for special conditions) is 2 percent – a high number during a period of low interest rates – then from 2007 to 2019 the grant element of the EIB's support to French entities increased from about €100 million to €140 million. The grant element of €140 million that the EIB accorded to French entities in 2009 represents about 0.02 percent of France's gross fixed investment in that year, which was about €600 billion. While GTA reports an explosion of subsidies to French entities since 2009, the reality is that the grant element of EIB loans to France increased by the equivalent of a measurement error.

This discussion is meant only to expose the need to quantify the impact of subsidy interventions, not to deny the importance of policing and reducing wasteful and trade-distorting subsidies. Indeed, GTA provides a valuable service by monitoring the spread of subsidies, underscoring that many are incompatible with the WTO, and demonstrating that subsidies are a China problem, but not only a China problem.

3.5 Summary: trade in goods remains quite free, possibly freer than before the GFC

There has been little change since the financial crisis in MFN applied tariffs from low levels. China has become more liberal, while Brazil and India have increased tariffs and show more tariff peaks. Though there has been little change in the MFN tariffs applied by the United States, that nation's customs revenue has doubled as a share of imports mainly because of section 301 tariffs placed on China. Still, US customs revenue as a share of imports remains low. Meanwhile, proliferation of new trade agreements, several of which are major, means that preference margins have increased, so that effectively applied tariffs are now lower than at the time of the GFC and are headed lower still as new trade agreements come into force. Dramatic examples of trade protection, such as the China-US trade war, are quite recent and affect only a small part of world trade, mainly by diverting it rather than reducing it. NTMs may have become more prevalent, but many have a legitimate policy rationale and are non-discriminatory. Numerous instances of new trade-distorting subsidies have been identified since the GFC. However, like NTMs, many subsidies have a legitimate policy rationale especially in the pandemic, and it is not possible to quantify their additional trade-restrictive effect with any precision, not least because of lack of comparable data preceding the GFC. By only counting the number of subsidy interventions, without appropriate quantification, their importance can be overstated.

From this review, one can conclude that the erection of new trade barriers is unlikely to have been a significant cause of the slowdown in goods trade since the GFC. Trade in goods is today quite free, possibly freer than it was before the GFC, even though barriers have increased in the United States (where they remain low overall), and in Brazil and India, to cite important exceptions. It is also true that trade liberalisation has slowed since the GFC compared to the two or three previous decades, so trade liberalisation in goods may have played a lesser role in promoting trade growth since the GFC than in the past. However, this interpretation should be tempered by the fact that tariffs do not have as much room to fall.

4 Other channels of globalisation

The focus on trade, especially on trade in goods which is relatively free, is too narrow a prism through which to assess the progress of globalisation, or, for that matter, its reversal. In other channels of globalisation, services trade and trade in factors of production, barriers remain high, pointing to large missed opportunities. Even then, with one exception, there is little evidence of deglobalisation. The exception is international capital flows, where policy shortcomings and institutional weaknesses have contributed to a wholesale reversal since the GFC.

4.1 Services are highly protected, though no more than before, and continue to globalise because ICT facilitates their tradeability

The globalisation of services – a sector two to six times the size of the goods sector, varying by country, its share rising with income – is progressing. According to the World Bank, the share of services trade in world GDP increased by 1.6 percentage points from 2007 to 2019, from 12 percent to 13.6 percent. The share of services value added that is traded is far higher than it was prior to the GFC. This is because many services that were once essentially domestic activities, including retailing, back-office support, consulting and legal services, have become tradable on business-to-business or business-to-consumer internet platforms. The pandemic gave a further boost to this type of exchange.

But services are an essential driver of development and rising living standards and their trade could grow faster still (see Nayyar *et al*, 2021, for a comprehensive analysis of the development potential of services). Barriers to services trade, on which multilateral trade rules have had very limited effect, are higher than to trade in goods. According to the OECD: *"The trade cost equivalent of services trade barriers largely exceeds the average tariff on traded goods. These barriers have as strong an impact on services exports as on services imports"* (OECD, 2020). As in goods, barriers to services trade are generally higher in developing than advanced countries. Barriers to services trade are especially high in sectors such as air transportation, professional services and commercial banking, each of which are important facilitators of all other forms of international exchange. In broadcasting, where barriers are highest, the OECD estimates that consumers pay a tax equivalent of 40 percent. The China-US trade war, conducted by raising tariffs on goods, did not leave services unscathed. For example, the number

of Chinese students who sought and obtained student visas in the US fell by 50 percent in the first half of 2022[8].

Has trade in services become more restricted in recent years because of protectionist rules and regulations? To answer this question, we use the OECD's Services Trade Restrictiveness Index (STRI) which became available in 2014. It covers 22 services sectors and 50 countries, including non-OECD members including China and India, representing over 80 percent of global trade in services[9]. For each year, sector and country, the STRI indices take the value from 0 to 1. Complete openness to trade and investment gives a score of zero, while being completely closed to foreign services providers yields a score of one[10]. The STRI database records the presence or absence of specific policies by assigning binary values (Benz *et al*, 2020) under five policy areas: restrictions on foreign entry, restrictions on the movement of people, barriers to competition, regulatory transparency, and other.

The STRI has been used in several studies of trade restrictiveness and openness in services (Nordas, 2016; Benz and Jaax, 2019; Benz and Rozensteine, 2021; Ehab and Zaki, 2021), and has been found to correlate significantly and negatively with the amount of services trade and with measures of efficiency after controlling for other influences.

The STRI shows that, overall, there has been little change in restrictions on services trade in recent years. We illustrate this by comparing the average STRI in 2020-2021 and 2015-2016 for seven large traders, and for 10 sectors (grouping of the 22 sectors covered by STRI) across all 50 countries covered.

Nearly all the seven large traders saw little or no change in their STRI, as Table 1 shows. The US saw no change. The exception is China, for which the STRI declined significantly, though from the high level of restrictions it shares with India.

[8] Sha Hua, Karen Hao and Melissa Korn, 'Chinese Student Visas to U.S. Tumble From Prepandemic Levels', *Wall Street Journal*, 11 August 2022, https://www.wsj.com/articles/chinese-student-visas-to-u-s-tumble-from-prepandemic-levels-11660210202.
[9] See https://www.oecd.org/trade/topics/services-trade/.
[10] See https://stats.oecd.org/Index.aspx?DataSetCode=STRI.

Table 1: Services Trade Restrictiveness Index: Average Across all Sectors

Country	Avg 2015-16	Avg 2020-21
Brazil	0.33	0.34
China (People's Republic of)	0.42	0.36
France	0.22	0.21
Germany	0.16	0.17
India	0.44	0.44
Japan	0.16	0.17
United States	0.22	0.22

Source: Bruegel based on OECD. Average values.

Considering the ten-sector grouping for all countries covered (ie 50 countries, not just the seven large traders), we see a higher STRI in five sectors, most notably in computer services, telecoms and in the highly protected accounting and legal sector. We see a lower STRI in three sectors, most notably in logistics, and no change in two others (transport and distribution).

Table 2: Services Trade Restrictiveness Index: Average Across 50 Countries

Category	Avg 2015-16	Avg 2020-21
Accounting and legal	0.352	0.355
Architecture and engineering	0.247	0.244
Commercial banking and insurance	0.231	0.230
Computer	0.215	0.219
Construction	0.223	0.225
Distribution	0.194	0.194
Logistics	0.249	0.245
Motion pictures, broadcasting, sound recording	0.246	0.248
Telecom	0.240	0.244
Transport	0.313	0.313

Source: Bruegel based on OECD. Average values.

4.2 Capital flows provide the clearest example of deglobalisation, but not because of protectionism

If there is evidence of deglobalisation since the GFC, the clearest example of it is found in the sharp decline in international capital flows, both the portfolio kind and of the foreign direct investment kind. According to World Bank data, during the period of rapid globalisation, both types of flows surged, from around 1 percent of world GDP in 1985 to about 6 percent of world GDP in 2008. They have since declined to between 1 percent and 2 percent of world GDP. However, one cannot ascribe declining international capital inflows to protectionism or nationalism.

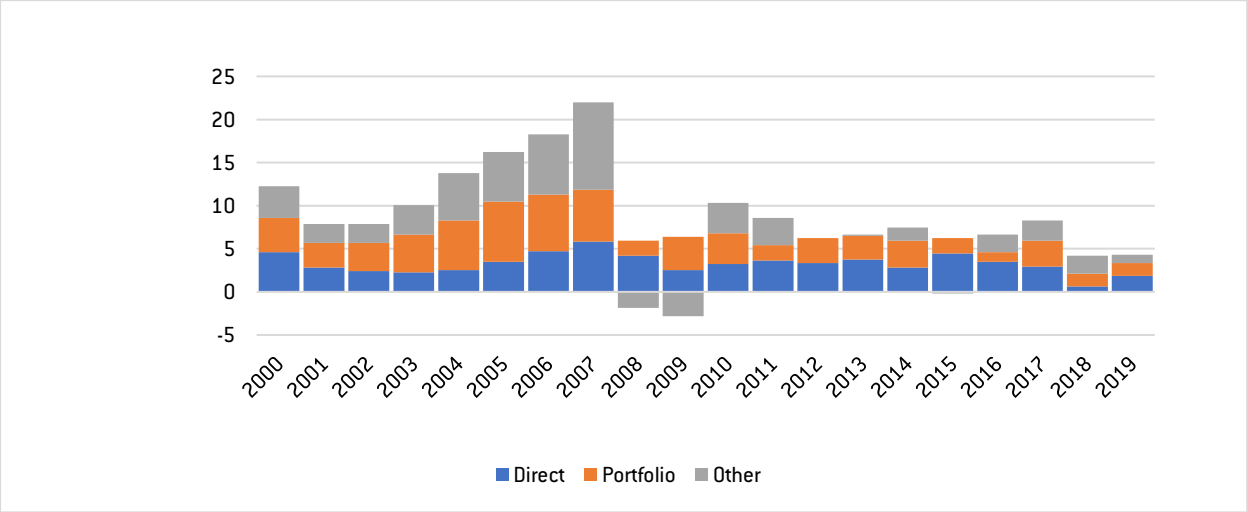
Despite instances that make headlines, such as the cases of Huawei, Dubai Ports and sanctions on Russian oligarchs, countries across the world compete hard to attract foreign direct investment, especially that which establishes links with global value chains, and, even better, is of a greenfield variety. The reduced inflow of FDI into developing countries is particularly concerning. FDI has been found to be the most resilient, know-how-rich and growth-promoting type of capital. According to the World Bank, the inflow of FDI into low- and middle-income countries declined steadily from 3.7 percent of GDP in 2007 to 1.8 percent of GDP in 2020. Developing countries have plenty of labour and need more capital to build infrastructure, to industrialise and to invest in health and education for their young and rapidly growing populations. Studies have found that the national income share of capital is higher in poor than in rich countries, reflecting their shortage of capital, just one indication among many that the return to capital is higher in poor countries (Lucas, 1990).

Countries have a more mixed view of portfolio flows because of their volatility and the risk of sudden stops, concerns which found painful confirmation during the GFC. But most countries also see the benefit of tapping international sources of savings and of attracting risk capital in the form of equity flows; accordingly, those countries monitor their credit ratings and borrowing costs. It is striking that capital flows slowed so much against a background of very low international interest rates. For an explanation, one must look at rising indebtedness in the run-up to, and during, the GFC, macroeconomic imbalances and the persistent growth slowdown that followed the GFC. Increased risk-aversion on the part of investors and of commercial banks (which are more heavily regulated than before the GFC), and systematic efforts by policymakers to deter the excessive risk-taking that led to the crisis – including by borrowing at home in own currency – also contributed to the reversals in capital flows.

The Committee on the Global Financial System (2021) found that capital flows to developing counties held up better following the GFC than in advanced economies, which is perhaps not surprising since

the latter were at the epicentre of the crisis. However, flows to developing countries remained small as a share of their GDP.

Figure 7: Capital flows by type and region, as % of world GDP



Source: Committee on the Global Financial System (2021).

The picture varies, with China and some developing countries (or recently graduated countries) in Asia and Eastern Europe able to attract significant private capital flows, while many others in Africa, Latin America and the Middle East/North Africa failed to do so. Emerging Asia, boosted by China, stands out as the developing region that saw increased capital flows after the GFC, but only from 0.4 percent of GDP to 0.8 percent of GDP.

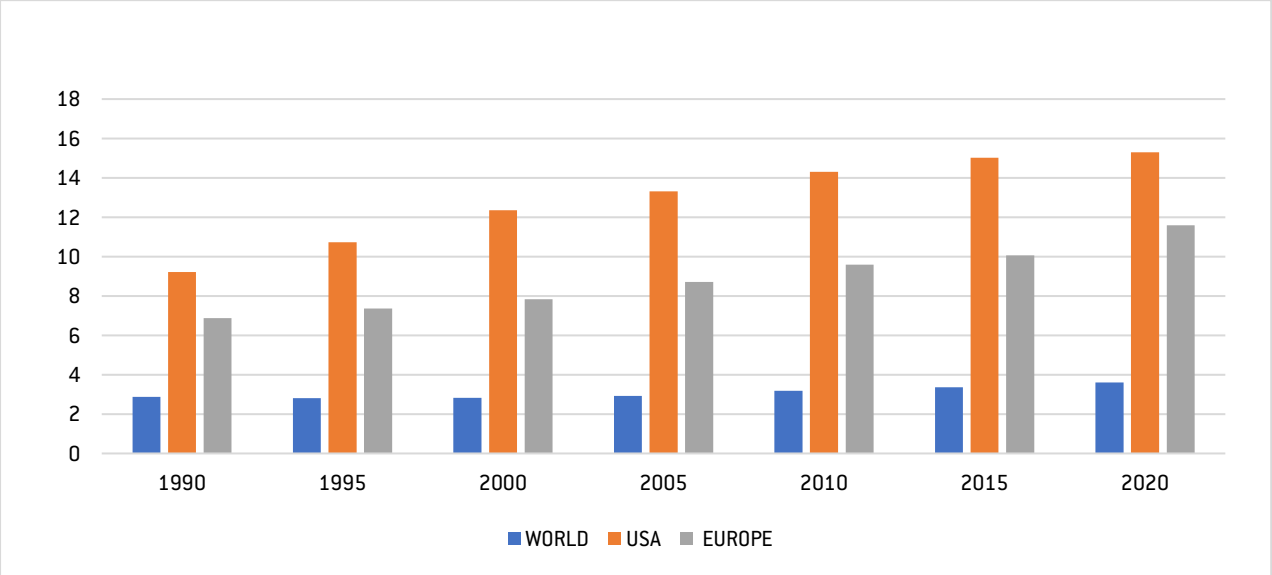
Unfortunately, the pandemic forced a large increase in government borrowing and destabilised economies across the world in various ways, further setting back the prospect for normalisation of macroeconomic conditions and for accelerating reforms that would once again encourage capital to flow freely.

4.3 Migration is the most impeded channel of globalisation, but is not stopping

Globalisation meets the greatest political resistance and confronts most policy impediments in migration. Migration restrictions have become tighter around the world as countries reacted to the labour dislocation caused by the GFC and large waves of refugee inflows. Even so, the international movement of people for the purpose of settlement, as measured by migrant stock as a share of the population, continued to increase following the GFC. In many instances the demand for both unskilled and skilled foreign labour remains high, and migrants will go to great lengths to find ways around the

restrictions, whether legally or otherwise – especially when motivated by risks to their security or the inability to find adequate employment at home.

Figure 8: Stock of migrants as percentage of population

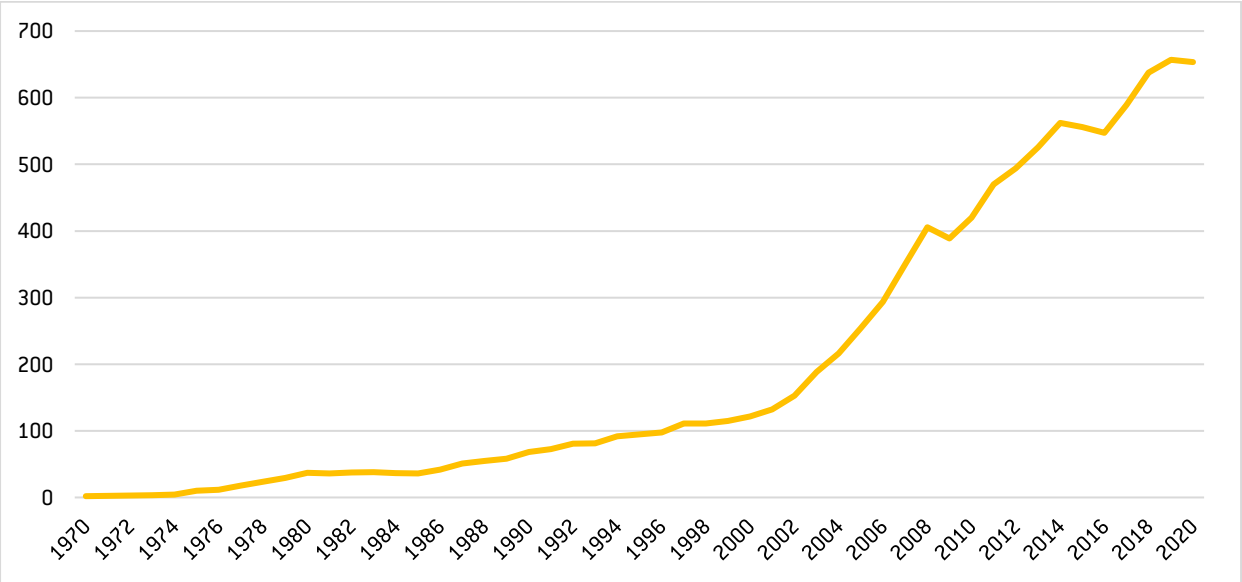


Source: United Nations.

Intense and persistent migration pressures, notwithstanding the growth slowdown, reflect the fact that real *per-capita* incomes, which are strongly correlated with real wages, are, on average, three to five times higher in developed countries than their developing neighbours. The income gap is far greater in the poorest countries, some of which are embroiled in civil conflicts.

Reflecting the big differences in wages, modelling of the effects of increased migration on global efficiency shows that they are positive and very large. Even relatively small increases in migrant stocks can be shown (World Bank, 2006) to generate greater efficiency gains than all remaining trade liberalisation. Migration is a powerful force behind poverty reduction since most of its benefits accrue to the migrants themselves and to the relatives they send remittances to. Remittances, another indication of globalisation, have grown rapidly in recent years (Figure 9). Many of the gains of migration accrue to natives because migration frees natives to engage in higher value-added activities and expands the economy.

Figure 9: personal remittances, received (current US$)



Source: World Development Indicators.

That said, governments can be expected to continue to resist large waves of migration. Poor countries want to retain their people, especially the highly skilled, who are scarce. Even rich countries that welcome migration want to moderate or pace the inflow of migrants to avoid a political backlash.

4.4 Technology transfer is probably occurring more easily than before

Numerous studies have identified total factor productivity as a more important driver of economic growth than the increase in the capital stock or of labour, underscoring the importance of technology as a driver of efficiency. Illustrating the opportunity created by innovation, most American large companies attribute stock market valuations mainly to intangibles (Steinberg, 2019). The spread of technology from advanced to developing countries is especially likely to create efficiency gains because of the latter's backwardness. Indeed, the ability of developing countries to absorb technology rapidly is essential for the catching-up process.

Technologies are protected temporarily by patents. Some technologies are bought and sold through licensing or franchising agreements. Other technologies are entirely proprietary; they would be priced prohibitively if at all. However, nearly all technology is copied, or transferred sooner or later and is eventually found in the public domain. Technology spreads and crosses borders in numerous ways: imports of advanced machinery, copying competitors and joint-venture partners, reverse engineering, hiring experts or study abroad. All these channels of technology transfer depend on trade or foreign

investment or on other aspects of globalisation. Consequently, barriers in the way of globalisation have the consequence, often unintended, of impeding the transfer of technology.

Overly strict protection of intellectual property can impede technology transfer. The last decade has seen many initiatives to tighten rules on intellectual property (IP), including the increased inclusion of IP protection chapters in regional trade agreements, improved IP protection in China, the ability of big firms to file for international patents from their home base and export controls on grounds of national security.

However, due to the spread of the internet, there is reason to believe that technology transfer is easier today than it was before the GFC. According to World Bank data, the share of the world's population that uses the internet trebled from 2007 to 2020, from 20 percent to 60 percent. Works of science and technology, consumer and business applications, and software programs in enormous numbers have become globally available on the internet.

Technologies deemed sensitive because they affect national security represent an important exception to this statement. Countries have long controlled exports of dual-use technologies that have military and civilian applications. However, with increased geopolitical tensions and fear of terrorism, rules are increasingly being applied more stringently and more broadly to include reliance on imports in strategic sectors including semiconductors and telecommunications, inward investment and, potentially, even outward investment.

5 Conclusion: drivers of globalisation and implications for policy

The simplest explanation for globalisation is arbitrage in the market for goods and services and for factors of production, capital, labour and technology (Dadush, 2017). Prices of products and factors differ across countries, reflecting diverse endowments and differences in tastes and technology. Globalisation occurs as goods, services and factors flow in the direction of higher prices anywhere in the world. The globalisation process is a powerful promoter of efficiency, and to achieve its full potential it requires arbitrage in all markets, not just in goods and services, but also in labour, capital and technology.

The interpretation of globalisation as arbitrage has important implications not adequately reflected in academic debates, and even less in the opinion pages of newspapers. First, globalisation is a spontaneous phenomenon, the result of consumers and firms making economically rational choices when they are free to do so. Unless all arbitrage has been done or is impeded in some way,

globalisation persists. Second, contrary to the commonly held assumption, there is no necessary link between globalisation and the size of the economy: one can, in theory, have a growing world economy without globalisation because international price differences have been arbitraged away. Third, persistent globalisation, which extends over decades, is only likely to occur if economic structures, technologies and policies evolve in a manner that creates new price gaps and therefore opportunities for arbitrage. Given the possible evolution of the forces that affect globalisation, and the complexity of their interaction, there is no reason to expect that globalisation will proceed at a steady pace, or, more concretely, that trade will grow at twice the rate of GDP, as happened prior to the GFC.

This framing of globalisation sheds some light on the policy challenges it brings. Globalisation is not in wholesale retreat because impediments to trade in goods have not increased. The data in this paper shows that world trade in goods has slowed sharply but it is keeping pace with world GDP. Services are becoming more tradable because of advances in ICT and are more traded internationally. Migrants, though increasingly impeded, represent a rising share of the population in the EU and the US as huge wage gaps remain. Technology is likely flowing across borders more freely and rapidly because of the spread of the internet. A major exception is the flow of capital, which has retreated since the GFC, mainly reflecting macro-financial vulnerabilities and policies designed to mitigate them. The deglobalisation of capital flows is an issue of particular concern to developing countries, since that is where capital is most needed and the risk-adjusted return is potentially highest.

On trade in goods, the biggest challenge is to ensure that there is no backtracking, underscoring the importance of re-establishing a working dispute settlement system at the WTO. Of all developments since the GFC, the disabling of WTO dispute settlement and the persistence of the China-US trade war represent the biggest source of trade policy uncertainty, which the literature has shown to be a significant factor in depressing trade and trade-related investments (Limao *et al*, 2022; Constatinescu *et al*, 2018). Tighter disciplines on trade-distorting subsidies are badly needed, especially since this issue is at the core of the China-US trade dispute. The recent conclusion of major regional agreements suggests that the need for more trade liberalisation is understood and that the trade-reform momentum is not spent.

Policymakers should be concerned about the many opportunities offered by globalisation which are not presently captured:

- Although services trade has grown rapidly, it remains severely hampered by restrictions, perhaps even more so than before the GFC. Changes in domestic regulations that make it possible for

transport services, and for trade in financial and infrastructure services to flow more freely, are especially important for all other forms of trade.

- Many advanced countries suffer from labour shortages and a declining and aging labour force. They need more liberal immigration policies that are more specifically targeted to address their labour needs. In many instances, this points to increased legal immigration of the less skilled, not just the highly educated.
- Some intellectual property needs to be guarded to encourage innovation in the private sector, or for national security reasons. But an equally important goal is to ensure that information and established techniques flow more freely across borders. Advanced countries have a vital interest in poorer countries, over 80 percent of the world population, absorbing technology and boosting their productivity and purchasing power. The result will be bigger markets for advanced-country exports, wider choice and lower costs for their consumers, and for firms requiring imported parts and components. There are many ways that advanced countries can facilitate technology transfer to developing countries, from welcoming more foreign students to increasing technical assistance. Meanwhile, to absorb and adopt technology more rapidly, developing countries need to improve their investment climate, invest in digital infrastructure and encourage education in STEM disciplines.
- Such reforms will also help developing countries attract large amounts of foreign direct investment, as they did before the GFC, and deploy it more effectively. Sounder macro-economic and exchange-rate policies, and tighter macro-prudential regulations, can improve the capacity of the private and public sectors to attract long-term debt finance sustainably, making it less liable to suddenly reverse as happened during the GFC. Reforms at the country level are more likely to succeed if they are supported by international financial institutions and arrangements among central banks capable of providing adequate liquidity in the event of capital flow reversals.

The momentum behind globalisation is far from spent. Despite rising nationalism, international tensions and rising trade policy uncertainty, protectionism has, so far, not prevailed over the powerful technological and market forces driving globalisation. Protectionism is not a major reason for the trade slowdown since the financial crisis, and trade in goods remains relatively free. Accordingly, the biggest policy impediments that remain in the path of globalization lie not in goods but elsewhere, especially in services and in movement of people. International capital flows are not impeded mainly by protectionism but by macroeconomic and institutional weaknesses.

However, there is no room for complacency. As shown by the political and macroeconomic disruption caused by the Russia-Ukraine war, it is quite possible that the resurgence of nationalism and of geopolitical tensions of recent years will become severe enough to cause a widespread retreat from open trade and foreign investment, and that far greater obstacles will be placed in the way of technology transfer[11]. In the twentieth century, globalisation was interrupted for long spells by two world wars and a depression, and – for many – by a cold war. Globalisation eventually resumed, even faster than before, but the economic loss of entire generations was never recovered.

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Appendix

Table 1: Change in trade/GDP ratio of non-oil exporting countries

Country	Annual Change of Trade/GDP ratio from 05-07 to 17-19 (in %)	Annual Change of Trade/GDP ratio from 85-87 to 05-07 (in %)	Country Share in World Trade 2019 (in %)
Ireland	6.6	2.4	2.1
Luxembourg	5.5	5.2	0.5
Cyprus	3.2	0.6	0.1
Malta	2.9	5.1	0.1
Netherlands	2.5	1.2	2.9
Poland	2.5	2.2	1.3
Greece	2	0.6	0.3
Mexico	1.9	1.4	2
Rwanda	1.8	0.2	0
Seychelles	1.7	5.9	0
Portugal	1.5	0.4	0.4
Belgium	1.4	1.7	1.8
Bulgaria	1.4	1.4	0.2
Central African Republic	1.3	-0.6	0
Hong Kong SAR, China	1.2	7.5	2.6
Switzerland	1.2	0.9	1.8
Morocco	1.1	1	0.2
Turkiye	1.1	0.8	1
Germany	1	1.6	6.9
Iceland	1	0.1	0
Denmark	0.9	1.5	0.8
Nicaragua	0.9	2.6	0
Spain	0.9	0.9	1.9
Austria	0.8	1.6	1
France	0.7	0.6	3.6

Gambia, The	0.7	-2.7	0
United Kingdom	0.7	0.1	3.7
Cabo Verde	0.6	0.8	0
Comoros	0.6	0	0
Italy	0.6	0.7	2.5
Japan	0.5	0.5	3.7
Korea, Rep.	0.5	0.6	2.6
Mongolia	0.4	0.7	0
Senegal	0.4	0.5	0
Tunisia	0.4	1.3	0.1
Mali	0.3	0.3	0
Madagascar	0.2	1.9	0
Nepal	0.2	0.6	0
Albania	0.1	2.1	0
Brazil	0.1	0.4	1.1
El Salvador	0.1	1.2	0
Niger	0.1	-0.5	0
South Africa	0.1	0.3	0.4
Sweden	0.1	1.3	1
United States	0	0.5	11.5
World	0	1.1	100
Finland	-0.2	1.4	0.4
India	-0.3	1.6	2.3
Peru	-0.3	0.8	0.2
Ghana	-0.4	2	0.1
Bangladesh	-0.5	1	0.2
Belize	-0.5	1.3	0
Pakistan	-0.5	0	0.2
Uganda	-0.5	0.8	0
Namibia	-0.7	-0.3	0
Jamaica	-0.8	-0.3	0
Philippines	-0.8	2.2	0.5
Argentina	-0.9	1.2	0.3

Dominican Republic	-0.9	0.4	0.1
Bahamas, The	-1	-1.8	0
Uruguay	-1	0.7	0.1
Burundi	-1.1	0.2	0
Fiji	-1.1	1.5	0
Chad	-1.2	2	0
Chile	-1.4	1.1	0.3
Macao SAR, China	-1.4	-3.5	0.1
Thailand	-1.4	4.1	1.2
Sri Lanka	-1.6	0.5	0.1
Guatemala	-1.8	1.8	0.1
Costa Rica	-1.9	1.2	0.1
Kenya	-2	0.2	0.1
China	-2.2	2.1	10.5
Mauritius	-2.4	0.3	0
Togo	-2.5	-0.6	0
Honduras	-2.8	4.1	0.1
Jordan	-4.7	2.4	0.1
Malaysia	-5.9	4.6	0.9
Singapore	-7.7	5.3	2.5

Table 2: Change in trade/GDP ratio of oil exporting countries

Country	Annual Change of Trade/GDP ratio from 05-07 to 17-19 (in%)	Annual Change of Trade/GDP ratio from 85-87 to 05-07 (in%)	Country Share in World Trade 2019 (in %)
Australia	0.2	0.4	1.3
Colombia	-0.1	0.5	0.2
Canada	-0.2	0.8	2.3
Norway	-0.2	0.1	0.6
Russian Federation	-0.4	1.6	1.7
Cameroon	-0.6	-0.1	0
Gabon	-0.9	-0.7	0
Paraguay	-0.9	0.9	0.1
Ecuador	-1.2	1.2	0.1
Bolivia	-1.3	1.4	0
Cote d'Ivoire	-1.3	-0.4	0.1
Algeria	-1.4	1.6	0.2
Egypt, Arab Rep.	-1.5	1.2	0.3
Indonesia	-1.5	0.7	0.9
Saudi Arabia	-2.1	1.2	1
Sudan	-2.9	1	0

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