

## Understanding the Weakness in Global Trade

By Przemyslaw Wozniak and Malgorzata Galar

### Summary

The post-crisis weakness of global trade, which starkly contrasts with the marked acceleration in the previous two decades, has received considerable attention in the context of the global policy debate. Given the key role of trade in spreading innovation, boosting productivity and ultimately fostering economic growth, a better understanding of trade developments and outlook is crucial for policymakers.

This paper takes stock of existing empirical studies on the determinants of global trade flows with particular attention given the recent slowdown. In line with our estimates, these studies suggest that a large part of the trade weakness can be explained by geographical shifts in GDP and trade shares towards less intensely-trading emerging markets, changes in the composition of demand away from import-intensive investment, and the slowdown of global value chains. Other important factors include structural changes in China, the unwinding of the commodity price boom and a slower pace of multilateral trade liberalisation.

Our findings, in line with recent literature, suggest that the "new normal" is for trade expansion to remain largely in line with output growth, and unlikely to regain its pre-crisis vigour. At the same time, policymakers should ensure that the ongoing recovery is sustained, by resisting protectionism and reinvigorating the trade liberalisation agenda.

**Acknowledgements:** The note benefited from comments by Lourdes Acedo Montoya, Reuben Borg, Luca De Carli, Servaas Deroose, Elena Flores, Lars Nilsson, Dino Pinelli, Alessandra Tucci, Norbert Wunner; and from data analysis by Paloma Cortez Paya and Matteo Novelli.

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## Introduction

The post-crisis weakness of global trade has received considerable attention in the context of the global policy debate. Given the key role of trade in spreading innovation, boosting productivity and ultimately fostering economic growth, this brief looks at trade and growth performance since the 1980s before exploring the various factors behind the post-crisis trade slowdown. More specifically, our analysis suggests that geographical shifts in global activity towards less intensely-trading emerging market economies (EMEs) (Section 2), as well as a host of structural and cyclical factors affecting the propensity to import at the level of individual countries (Sections 3 to 5), best explain latest trade developments. These latter factors include most prominently changes in the composition of demand (away from import-intensive investment), the slowdown of global value chains (GVCs), structural changes in China, the unwinding of the commodity price boom and a slower pace of multilateral trade liberalisation.

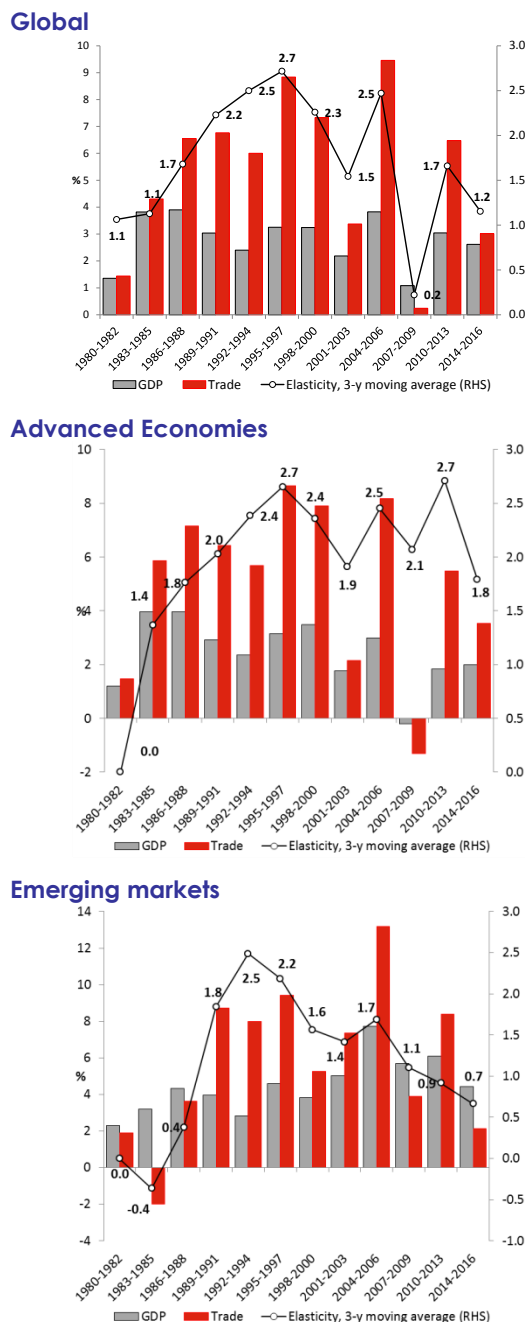
These findings, in line with recent literature, suggest that while part of the slow-down in global trade may have been temporary, a "new normal" is emerging where trade growth is unlikely to regain its pre-crisis vigour. The sharp rebound in trade since mid-2016 bears testimony to the waning effects of temporary drags on growth, thanks in particular to the cyclical firming in investment, while services also hold a big potential for reinvigorating trade. At the same time, the growing weight of less open emerging markets<sup>1</sup> in the global economy will continue to exert downward pressure on trade elasticities. Finally, some of the boosts to trade in the past (fast progress with trade liberalisation, integration of China and Central and East European countries into the world economy, reduction in transport and communication costs) are unlikely to be replicated going forward.

### 1. "As trade goes by": Overview of the evolution of world trade and growth

World trade enjoyed two decades of strong growth from the mid-1980s up until the early-2000s, but slowed visibly since then. Annual trade growth weakened from an average of around 7% per year in

the two decades up to 2007 to only about 3% in the period 2008-2014 to slow further down in 2015/16. Over the same period, trade slowed much more than GDP: the two decades preceding the great financial crisis (GFC) saw trade expand more than twice as fast as GDP on average, but *only* in line with GDP since the crisis started.

Graph 1: Growth in volume of trade\* of goods and services and GDP\*\* and the implied trade elasticity: 3-year averages



Source: IMF World Economic Outlook (October 2017)  
 \*Trade is average of imports and exports  
 \*\*Aggregate GDP is weighted by Purchasing Power Parity (PPP) through this paper to ensure consistency with the EC Economic Forecast.

The elasticity of trade with respect to GDP, referred to as *trade elasticity* throughout this note, is a useful measure of trade strength for a given output growth. Graph 1 presents trade elasticities for the global aggregate, advanced and emerging market economies for the period 1982-2016. It suggests that the decline in trade growth relative to GDP growth started earlier and was much more pronounced in emerging markets than in advanced economies.<sup>2</sup> Moreover, the decline in elasticity started already before the GFC in emerging economies whereas the slowdown was more recent in advanced economies.

Looking at the past forty years for which reliable data exist indicates that the rapid trade growth in the 1990s and most of 2000s may have actually been exceptional. It was boosted by specific policies and events, of which some were clearly one-off and difficult to replicate. These include an unprecedented wave of trade liberalisation – culminating in China's WTO accession in 2001 as well as the 2004 eastern enlargement of the EU – together with technological advances which lowered communication and transportation costs, fuelling the proliferation of global value chains. From this perspective, several authors view the recent trade slowdown rather as a return to normal (OECD, 2015; ECB, 2016) from the previous period of exuberant strength. Consequently trade volumes would be expected to evolve roughly in line with GDP growth in the near term, in the absence of substantive policy or technology changes. The following sections take a closer look at the various factors that have shaped global trade over the past decades.

## 2. Geographical composition changes

Changes in the composition of global activity and trade have often been singled out in the literature to explain the post-crisis weakness in global trade (ECB, 2016). In order to analyse this effect, we express global trade elasticity ( $\sigma$ ) (ratio of global

trade growth to global output growth) as a weighted average of country/regional elasticities ( $\sigma_i$ ).<sup>3</sup>

$$\begin{aligned}\sigma &= \frac{\Delta t}{\Delta y} = \frac{\frac{t_1}{t} \Delta t_1 + \frac{t_2}{t} \Delta t_2 + \dots + \frac{t_n}{t} \Delta t_n}{\Delta y} = \\ &= \underbrace{\frac{t_1 \Delta y_1 \Delta t_1}{t \Delta y \Delta y_1}}_{\text{contribution from country 1}} + \underbrace{\frac{t_2 \Delta y_2 \Delta t_2}{t \Delta y \Delta y_2}}_{\text{contribution from country 2}} + \dots + \underbrace{\frac{t_n \Delta y_n \Delta t_n}{t \Delta y \Delta y_n}}_{\text{contribution from country n}} = \\ &= \sum_{i=1}^n \frac{t_i \Delta y_i}{t \Delta y} \sigma_i\end{aligned}$$

With weights equal to the product of country  $i$ 's shares in total trade -  $\frac{t_i}{t}$ , and a ratio of country  $i$ 's GDP growth to world growth  $\frac{\Delta y_i}{\Delta y}$ .

The above decomposition suggests that the contribution of each country to global trade elasticity depends on three components: (i) each country's own elasticity, (ii) its share in world trade, and (iii) the ratio of its GDP growth to global GDP growth.

Graph 2, which shows these regional/country contributions over three-year periods since the mid-1990s<sup>4</sup>, reveals important patterns of the shifting structure of global trade. The slowdown of global trade elasticity until 2011-2013 chiefly reflects the fading contribution of the EU<sup>5</sup>. Whilst in the latest period (2014-2016), the expansion of intra-EU trade<sup>6</sup> has cushioned dipping contributions elsewhere. In spite of this renewed strength, the contribution from the EU to global trade elasticity remains less than half of what it was in the mid-1990s.

<sup>2</sup> The decline in trade elasticity is robust to the use of GDP weights (market exchange rates vs. PPPs (ECB, 2016; Ollivaud and Schwellnuss, 2015), country, and regional groupings. When market exchange rates are used as GDP weights, the slowdown in trade elasticities is somewhat less pronounced.

<sup>3</sup> Where  $\sigma$  and  $\sigma_i$  are world and regional trade intensities,  $t$  and  $t_i$  world and regional trade and  $y$  and  $y_i$  world and regional output.

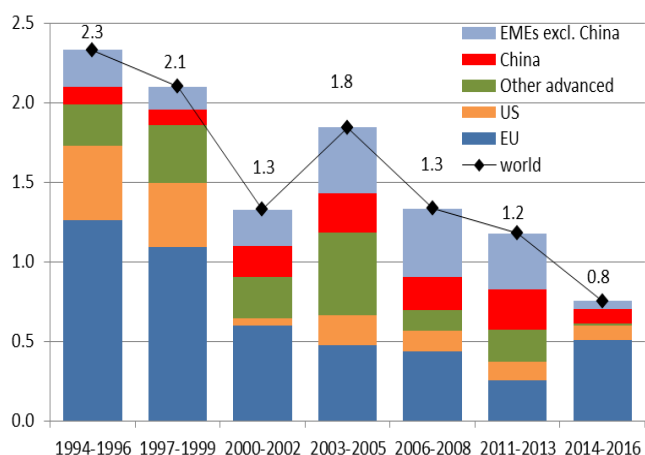
<sup>4</sup> Data from the European Commission AMECO database start in 1994.

<sup>5</sup> Throughout the note EU trade comprises both intra- and extra-EU trade.

<sup>6</sup> Intra-EU trade roughly accounts for 2/3 of EU trade. In the post-crisis period the weakness of intra-EU trade has been a major drag on EU trade, but more recently (since 2014) a gradual firming of activity and domestic demand across the EU member states provided a material boost to EU trade at a time of a considerable weakening of the extra-EU trade.

Weaker contributions from the US and other advanced countries<sup>7</sup> since the early 2000s – and particularly in the most recent period – have also weighed on global trade elasticity. The joint contribution from all non-EU advanced economies in the most recent period (2014-2016) was down a massive sevenfold compared to the mid-1990s. The remainder of this note will attempt to shed more light on the factors behind this slowdown.

**Graph 2: Decomposition of global trade elasticity into regional components, 3-year averages**



Source: European Commission AMECO database (Spring 2017)

At the same time, expanding contributions from China and other emerging markets cushioned the falling contribution from advanced economies in the 2000s. However, contributions from all emerging markets also slowed down after the GFC especially in 2014-2016, bringing the joint EMEs' contribution to less than one-quarter of the pre-crisis value.

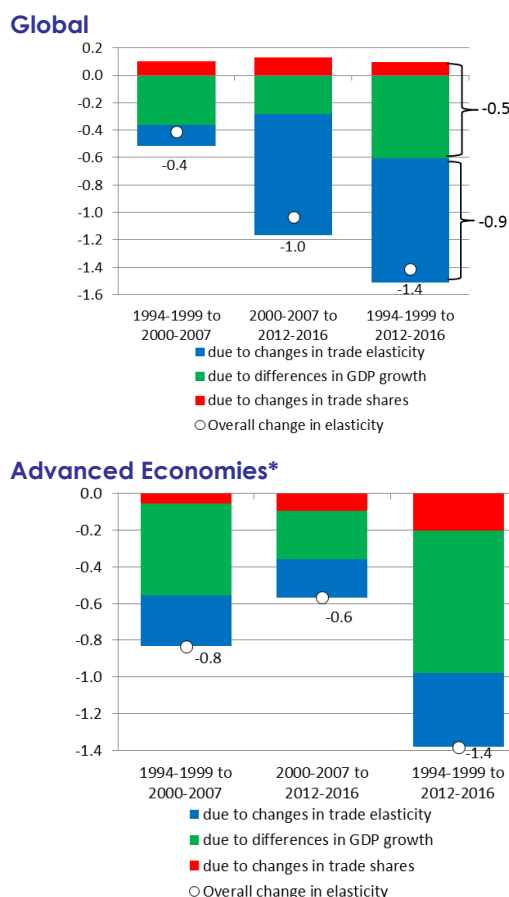
Having in mind that these contributions may reflect changes in elasticities themselves, but also geographical shifts in the structure of global activity and trade, we now formally decompose changes in global trade elasticity into contributions from changes in: (i) individual country/region elasticity, (ii) the evolution of a country/region trade share ( $\frac{t_i}{t}$ ), and (iii) its relative growth performance ( $\frac{\Delta y_i}{\Delta y}$ ).

Following Slopek (2015) and ECB (2016), the change in global elasticity  $\Delta\sigma$  between two periods can be approximated by the sum of three components:

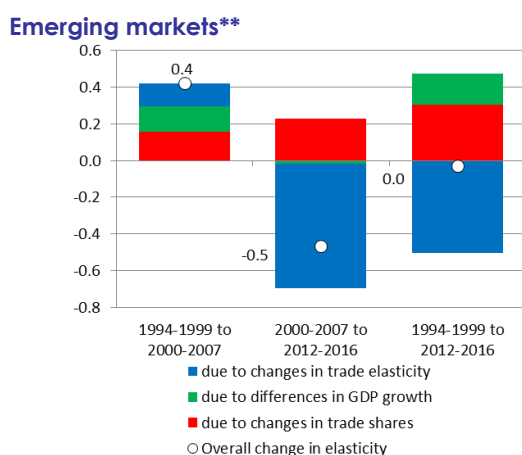
$$\Delta\sigma \approx \underbrace{\sum_{i=1}^n (\bar{t}_i \bar{y}_i) \Delta\sigma_i}_{\text{effect of changes in elasticity}} + \underbrace{\sum_{i=1}^n (\bar{\sigma}_i \bar{y}_i) \Delta t_i}_{\text{effect of changes in trade shares}} + \underbrace{\sum_{i=1}^n (\bar{t}_i \bar{\sigma}_i) \Delta y_i}_{\text{effect of changes in relative growth}}$$

Where  $\bar{\sigma}_i$ ,  $\bar{t}_i$  and  $\bar{y}_i$  are the averages of the respective variables in the two periods under consideration and are used as weights for the changes in each of the three variables.

**Graph 3: Explaining the factors behind the changes in trade elasticity (goods and services)**



<sup>7</sup> In line with the European Commission's AMECO database the advanced economies group includes US, EU, EU candidate countries, EFTA countries, Canada, Japan, Korea, Taiwan, Hong-Kong, Singapore, Australia, New Zealand.



Source: European Commission AMECO database (Spring 2017)

\* EU, US, Candidate countries, Canada, Japan, Korea, Hong Kong, Singapore, Taiwan, Norway, Switzerland, Iceland, Australia, New Zealand

\*\* CIS, MENA, China, emerging Asia excluding China, Latin America, Sub-Saharan Africa.

Graph 3 presents the changes in aggregate trade elasticity (white circles) as well as the contributions from the three abovementioned factors (stacked bars), for the global economy, and separately for advanced and emerging economies. For simplicity the sample is divided into three periods<sup>8</sup>: the boom period 1996-1999, the pre-crisis period 2000-2007, and the post crisis period 2012-2016. Each chart presents in bar (1) the changes in trade elasticity between the boom period and the pre-crisis period, in bar (2) the pre-crisis relative to the post-crisis period and in bar (3) the boom compared to the post-crisis period.

The key conclusion is that the fall of -1.4 in global trade elasticity between the boom and the post-crisis period depicted in bar (3) was largely due to the decline in individual countries' elasticities which contributed as much as -0.9 to the decline (blue bar). However, changes in the geographical composition of global demand also played a major role in weighing on global trade elasticity (-0.5). The prolonged recession in intensely-trading advanced economies subtracted as much as 0.6 (green bar) from global elasticity, while changes in the import shares had a small positive effect (+0.1, red bar).

Looking at the developments in advanced and emerging markets separately, we confirm that the relative slowdown in growth in advanced economies was the key factor weighing on their contribution to global trade elasticity. The contribution of emerging

markets to global trade elasticity remained roughly unchanged in the boom period and the post-crisis period as shown in bar (3). However, this masks important shifts in all factors: a strongly negative impact of the decline in elasticity itself (as shown in Graph 1), fully offset by compositional shifts in activity and trade. The latter is largely due to fast growth and rising trade shares of China (see section 6) and other dynamic Asian economies. This analysis supports earlier findings in the literature (e.g. ECB, 2016).

Given the importance of the change of individual countries'/regions' relative propensity to trade in explaining the decline in global trade elasticity identified in this section, the remainder of the paper zooms into several structural and cyclical factors that may explain this phenomenon.

### 3. Investment weakness

Investment is traditionally considered as the most import-intensive component of GDP. Thus, the sluggish performance of investment in this recovery has been blamed for the weakness in trade.

Following Bussière et al (2013), we calculate the import content for the four major GDP expenditure components (private consumption, government consumption, investment and exports) in a sample covering 43 countries<sup>9</sup> (accounting for some 80% of world trade) over the period 2000-2014. Investment unsurprisingly records the highest average import content over the sample (amounting to some 35%), well above private consumption, exports and lastly government consumption.<sup>10</sup> While import intensity varies significantly across countries and generally declines with the size of the economy, investment turns out to be markedly more import-intensive than other GDP components in all major trading economies.

The weakness of investment post-GFC is therefore bound to have weighed on trade. This is particularly true for most advanced economies where gross domestic investment has gone through a drawn-out soft patch and remained, still in 2016, well below its pre-crisis levels (graph 4). Importantly, it has been

<sup>9</sup> Countries for which input-output tables are available <http://www.wiod.org/database/niots16> covering all EU countries and most non-EU G20 economies.

<sup>10</sup> Taking into account direct and indirect import content.

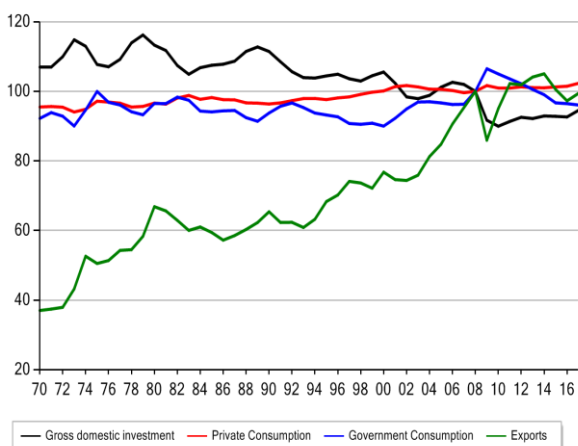
<sup>8</sup> Due to the extremely high volatility during the crisis, the period 2008-2011 is excluded from the analysis.



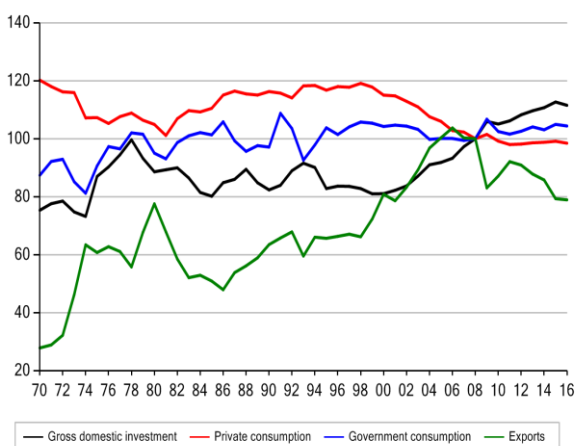
remarkably weak in the EU – the world's largest trading block generating roughly one-third of global trade flows. On a global level, weak investment in advanced economies was somewhat offset by the continued strength in some emerging markets. However, given their considerably lower propensity to import this was not enough to make up for the shortfall in advanced economies. This finding confirms the developments in Graph 3 of the previous section regarding the relative contribution of advanced and emerging economies to the overall declines in trade elasticity.

**Graph 4: Evolution of major GDP components as % of GDP (2008=100)**

**Advanced Economies**



**Emerging Markets**



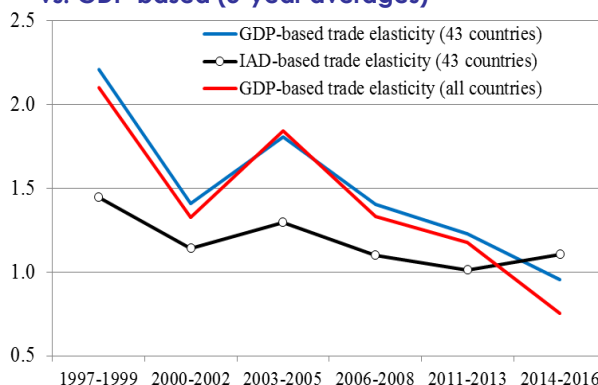
Source: Data Insight

European Union is EU28 fixed composition

The varying import elasticities of different GDP components have led many authors to question the appropriateness of traditional GDP based elasticity indicators. This motivated Bussière et al (2013) to

calculate an 'import-intensity-adjusted demand' (IAD), where demand components are weighted directly by their respective import content. Using this methodology, Bussière et al. (2013) and recently Martinez and Martin (2016) and Auboin and Borino (2017) provide empirical evidence of the importance of demand composition. These authors show that proxying demand with the IAD – instead of GDP - in standard import equations leads to a better model fit, and improves the quality of import forecasts. According to Auboin and Borino (2017), the integration of IAD into the standard global import equation helps predicting around 90% of the post-GFC slowdown in trade, of which IAD alone explains roughly 80% (with the remainder explained by shifts in Global Value Chains (GVC), see section 4).

**Graph 5: Average trade elasticities: IAD-based vs. GDP-based (3-year averages)**



Source: Own calculations based on European Commission Economic Forecasts and input-output tables for 43 countries from the WIOD database (wiod.org)

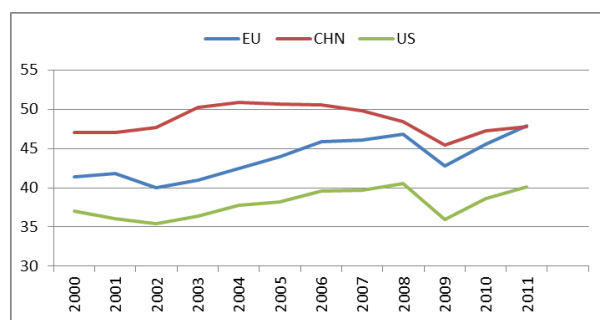
Graph 5 presents the developments of IAD and GDP-based elasticities for the same sample of 43 countries together with the GDP-based elasticity calculated for all countries for comparison. The implied IAD trade elasticities are visibly more stable, fluctuating within a narrow range of 1-1.5 through the period considered. This stands in contrast to GDP-based indicators that are more volatile and exhibit a clear downward trend in response to the recent trade weakness. The relative stability of the IAD-based elasticity provides further evidence that demand composition is a relevant factor to explain the behaviour of trade over the past two decades (including past booms and recent weakness).

## 4. Global value chains

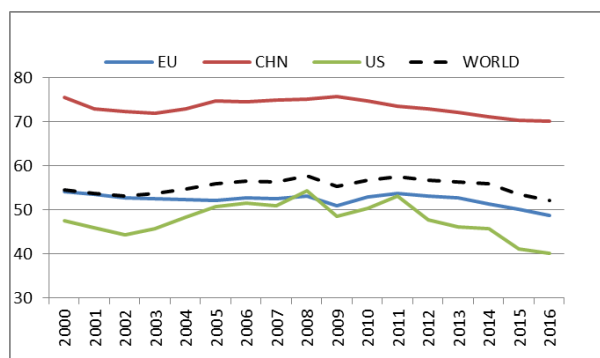
The international fragmentation of production and trade within global value chains which proliferated since the early 1990s is considered one of the most prominent features of the last decades' globalisation period. As such, it has been singled out as an important driver of global trade dynamics, including the post-crisis slowdown. Lower transportation and communication costs combined with open trade and active investment policies supporting FDI flows led to the relocation of an increasing share of domestic production abroad. A race to lower costs by placing labour-intensive parts of production in low-wage locations, the benefits of scale economies and stronger demand for product differentiation intensified outsourcing (Krugman, 1995). Moreover, this outsourcing also changed the nature of trade flows giving prominence to trade in parts and components in detriment of final goods.

Graph 6: GVC participation and the share of intermediate goods in total imports<sup>11</sup>

### A. GVC total participation (forward + backward)



### B. Share of intermediate goods in total imports



Source: Own calculation based on (A) the OECD-WTO TiVA and (B) OECD STAN database

The common measure of a country's engagement in outsourcing is the GVC participation index. It is composed of two elements which reflect the downstream and upstream links in the chain. Individual economies participate in GVCs by importing foreign inputs to produce the goods and services they export (this is the so-called backward GVC participation - or in other words - the 'foreign value added content of exports') and also by exporting domestically produced inputs to partners in charge of downstream production stages (the so-called forward GVC participation). It captures the domestic value added contained in inputs sent to third economies for further processing and export through the value chain.

As shown in graph 6A, the total GVC participation ratios for the EU and the US increased quite substantially up to the financial crisis<sup>12</sup> The economic shock that first hit directly the major advanced economies during the financial crisis, was transmitted through the working of the global value chains to other countries which, albeit not directly affected, were experiencing a significant deterioration in trade performance (Galar, 2015). Given some data limitations of the TiVA database by the OECD and the WTO, we use the share of intermediate goods in total imports as a proxy to analyse the participation in GVCs in most recent years. As illustrated in graph 6B, from 2012 the share of intermediate goods in total imports has been decreasing worldwide (from some 57% to 52% in 2016), which seems to confirm that the lesser participation in global value chains has weighed on the recent weakness in trade sensitivity to GDP.

The outlook for GVC going forward is not clear. On the one hand, there is evidence that GVCs have been maturing and the pace of outsourcing observed in the 1990s will be difficult to repeat in the future. In fact, the major drivers behind that outstanding pace, including the integration into the global economy of fast growing China and other EMEs as well as the unprecedented liberalisation of international trade, seem to be largely exhausted. Growing digitalisation of production could also support the return of some global production and trade back to advanced economies as automation, robotics, computerised manufacturing, artificial intelligence, etc. could reduce the advantages of production in low-labour-cost economies (OECD, 2017). Rising wage costs in

<sup>11</sup> Some variables necessary to calculate the GVC participation ratio are only available up to 2011; the update is ongoing (as of August 2017).

<sup>12</sup> Notably the backward linkage, while the forward participation has remained broadly constant in US and EU.

emerging economies may have also led to a decline in GVCs.<sup>13</sup>

While there is some scope for further expansion still on the back of the development of new technologies and modern services which allow co-ordination of activities across large distances, it is unlikely to fully offset the reversal of offshoring towards advanced economies. All in all, despite the limitations to the analysis on the future of the global value chains, the factors discussed above point at a more moderate pace of future outsourcing dynamics.

## 5. Slower trade liberalisation and increased non-tariff barriers

Slow progress in multilateral trade liberalisation is also considered among possible factors behind the weak global elasticity of trade to GDP. Indeed, relatively little progress has been made in multilateral trade negotiations over the last decade. This contrasts with the significant cut in tariff barriers achieved the 1990s in the follow up of the GATT Uruguay Round and the creation of the WTO, particularly in the case of EMEs. While advanced economies reduced tariffs from 4.6% down to 2.8% in 2005<sup>14</sup>, emerging markets halved them to 10% over the same period. The average applied tariff level<sup>15</sup> has remained rather flat since 2005 (graph 7), which may reflect higher political and social costs attached to further tariff reduction. Given the current deadlock at the WTO forum, trade liberalisation efforts have shifted towards bilateral or regional trade deals.

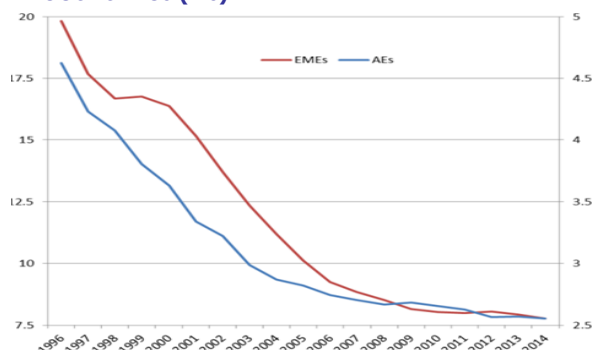
More recently, the introduction of new non-tariff measures is being closely monitored. The WTO secretariat reports that the stock of trade-restrictive measures increased by nearly five times between 2010 and 2016. From a European perspective, the 2016 Trade and Investment Barrier Report confirms that additional barriers to trade which negatively affect European firms have been introduced by G-20 members despite the commitment to resist protectionism.

<sup>13</sup> The average hourly wage in EMEs was around 2% of the US average in 2000, but rose to 9% in 2015 (WEF, 2012 and OECD, 2017).

<sup>14</sup> While an analysis of sectoral trade liberalisation goes beyond the scope of the paper, it should be noted that the average tariff masks existing tariff peaks and zero tariff lines for various sectors.

<sup>15</sup> Based on the World Bank Development Indicators.

Graph 7: Evolution of average applied tariffs in % in advanced (rhs) and emerging market economies (lhs)



Source: World Bank Development Indicators and the ECB (2016)

The actual impact of these measures on trade is not clear. Measures reported by the WTO cover a broad spectrum of non-tariff barriers, such as technical regulations or conformity assessment procedures. From a sectoral perspective, sectors suffering from overcapacity like metals, machinery or chemicals have been affected the most.

All in all, first of all lower dynamics in multilateral trade liberalisation but also the increased number of measures which negatively affected trade in the aftermath of the global crisis could have contributed to the sluggishness in global trade, reinforcing other structural and cyclical forces discussed in this paper.

## 6. Other factors shaping individual countries' elasticity of trade to GDP: the commodity cycle, structural changes in China and services trade

### Commodity cycle

Commodity exporters have been among the country groups where trade slowed down the most in the past couple of years. The bust of the commodity cycle is thus commonly viewed as one of the factors aggravating the recent slowdown in trade volumes.

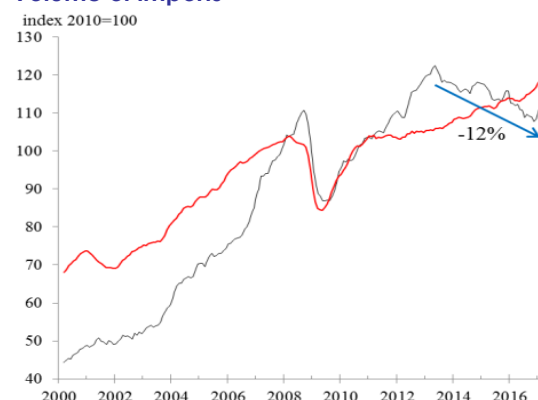
Following a prolonged period of sustained growth in commodity prices that started in 2004 (interrupted only by the GFC in 2008/2009), the commodity boom began to unwind gradually in 2012, with prices taking a deep plunge over 2014 and 2015. This led to a sharp drop in export prices and export



values among major commodity exporters<sup>16</sup> by respectively 44% and 38% peak to trough (graph 8). In some cases the economic impact of lower export revenues has been exacerbated by political and geopolitical unrest (CIS, MENA), and accompanied by capital outflows and currency depreciation, often leading to severe fiscal problems. Faltering investment, which was largely commodity-driven in most of these countries, further depressed the demand for imports.

These developments weighed heavily on domestic demand, slashing import volumes in commodity exporters by more than 10% between 2013 and 2016, and reducing the contribution to global demand from nearly 1 percentage point over 2011-2013 to zero in 2014 and negative in the following years.

### Volume of imports

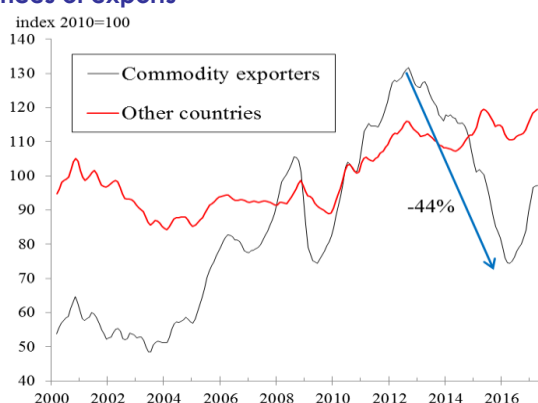


Source: CPB

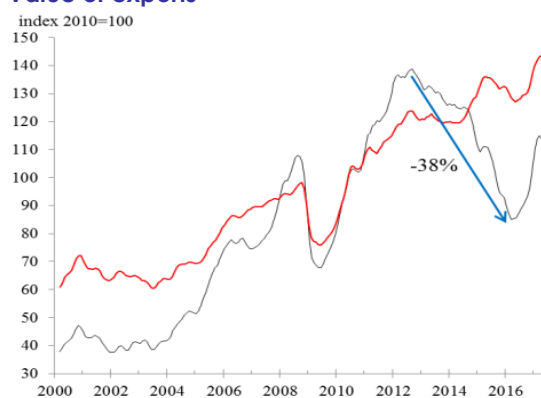
n.b. Commodity exporters group is composed of CIS, MENA, SSA and non-Mexico Latin America

**Graph 8: Dynamics in trade prices, value of exports and volume of imports in the group of commodity exporters and other countries**

#### Prices of exports



#### Value of exports

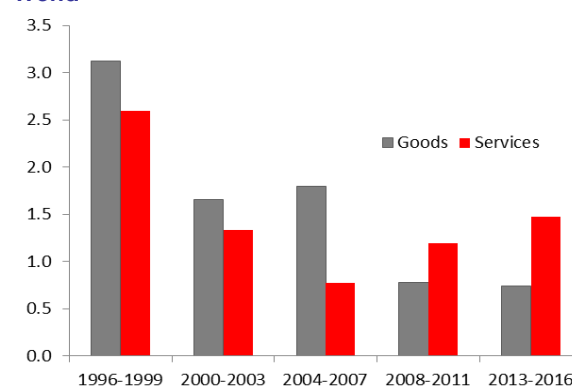


### The role of services

Trade in services expanded rapidly in the 1990s and early 2000s along with merchandise trade, albeit at somewhat more moderate growth rates. The paths of merchandise and services trade growth have been diverging since mid-2000s as services trade gathered speed countering the weakness in merchandise trade. Resulting GDP elasticity of services trade reached 1.5 in 2013-2016, roughly double the goods' elasticity over the same period (graph 9). The rapid expansion of cross-border services trade, particularly in emerging markets, including China, raised their share in global trade from about 15% in early 1980s to 20% at present (government services excluded).

**Graph 9: Elasticity of goods and services trade: period averages (growth in trade volumes over growth in GDP in PPPs)**

#### World



Source: CPB

n.b. Commodity exporters group is composed of CIS, MENA, SSA and non-Mexico Latin America

<sup>16</sup> Due to data limitations, the commodity exporters group is defined as the sum of CIS, MENA, SSA and non-Mexico Latin America

However, measuring services trade is challenging. Therefore, the apparent decline of global trade elasticity may be due to the inadequate accounting of the stronger dynamism in services' trade (e.g. ECB, 2016) and its role in cushioning the overall decline in goods trade. Recent work by the OECD and WTO consider that accounting for the services' value added in the production of goods, the services content of total gross exports is above 50% in most OECD economies what amplifies the measurement challenge.<sup>17</sup>

Going forward, new technologies, coupled with possible further liberalisation, offer new opportunities to unleash services' trade potential and having a positive impact on the global trade elasticity.

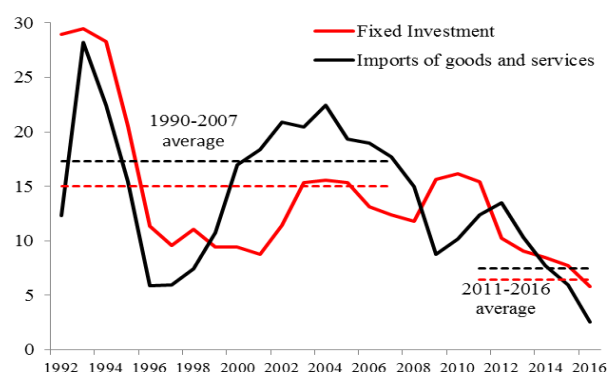
### Structural changes in China

Developments in China have long been considered as one of the key factors shaping global trade flows. First, its progressive integration into the world economy throughout the 1990s followed by its accession to the WTO in 2001 constituted a massive boost to global trade flows via global and regional value chains. On the other hand, the post-crisis process of rebalancing from investment to consumption in China appears to have dragged significantly on its demand for imports and contributed to the recent slowdown in global trade.

Gaulier et al (2016), through simple Granger causality tests between monthly regional CPB indices of industrial production and imports for the period 1991-2016, find that global trade was mainly driven by supply shocks in emerging Asia and China in particular. China's specialisation in labour intensive products drove their prices down in world markets, leading to a decline in relative prices of 'tradables' and rising trade elasticity above 1 in the two decades prior to the crisis. Based on the decomposition of China's export market shares into quantities and prices, they find that since 2008 the country's growth model shifted towards domestic demand and the relative prices of exports increased, which weighed on global trade flows.

<sup>17</sup> See TiVA database and the explanatory notes for more details: <http://www.oecd.org/industry/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm>

**Graph 10: Growth in fixed investment and import volume of goods and services in China, in %, 3y averages**



Source: Data Insight

This result is consistent with the gradual deceleration in Chinese investment dynamics from the average of around 15% during 1990-2007 down to roughly 6% in the post-crisis period (see graph above). This was accompanied by a sharp slowdown in import growth: from some 17% on average during 1990-2007 down to 7% in 2011-2016. A closer look at import dynamics shows that the sharp slowdown over the past few years was largely due to a collapse of demand for typical investment goods: commodities and capital equipment, while most consumption goods and services registering healthy growth rates.

## 7. The outlook for trade

This paper takes stock of existing empirical studies on the determinants of global trade flows with particular attention given to the recent slowdown. In line with our estimates, these studies suggest that the post-crisis trade weakness can be explained partly by geographical shifts in GDP and trade shares towards less intensely-trading emerging markets (section 2), and partly, by the decline in propensity to import at the level of individual countries/regions (sections 3-6). Key factors behind this decline include changes in the composition of demand away from import-intensive investment (section 3), and the slowing pace of global value chains (section 4). Other important factors weighing on countries' trade elasticities are structural changes in China, the unwinding of the commodity price boom and a slower pace of trade liberalisation.

What do these results imply for the trade outlook? To what extent are these factors cyclical and temporary or structural and more permanent? The overwhelming conclusion from the literature is that the "new normal" is for trade expansion to remain largely in line with

output growth, as there is limited scope for new positive impulses that would push trade elasticity again above its long term norm of one. A closer look at prospective developments in all relevant areas, i.e. investment, global value chains or geographical shifts, clearly confirms these conclusions.

Some boost to trade is likely to come from firming investment, as has already been evidenced by the pick-up in trade observed recently. Global investment rebounded in the second half of 2016 largely reflecting the stabilisation of commodity prices, improving momentum in EU, US and China, but also in the most distressed emerging markets such as Brazil and Russia. This has reinvigorated trade in most parts of the world, with the strength through the first half of 2017 offsetting a large part of the 2015/16 weakness. The pick-up in investment was therefore partly cyclical and partly related to commodity prices, with the outlook for a further modest rise in the latter over the medium to long term. However, the upward medium-term trend in investment looks set to be modest<sup>18</sup>, and according to the IMF (2017) will not be enough to bring advanced economies investment-to-GDP ratios to their pre-crisis levels by 2022. Additionally, the expected continued rebalancing in China, and the rather subdued long-term prospects for commodity prices<sup>19</sup> are likely to act as long-term drags on investment in emerging markets. All in all, barring unforeseen upheavals, some strengthening in investment in advanced economies may outweigh the likely moderation in emerging markets, resulting in a modest, but positive effect for global trade over the medium and long term.

The outlook for GVCs is rather unclear and the discussion about the future course of outsourcing remains highly speculative. However, it seems very difficult to get back to the pace of outsourcing observed in the 1990s. This is so because its key drivers back then – i.e. the integration of China and other EMEs (including EU new member states) into the global economy – was accompanied by the unprecedented wave of trade policy liberalisation that appears unlikely to be repeated. Moreover, new technologies and growing digitalisation of

production encourage the return of production closer to where it is consumed, while rising wages in China and other EMEs progressively limit their comparative advantage.

The overall effect of other factors on the outlook is mixed. The structure of the world economy is likely to continue shifting towards emerging markets, generating a continued drag on global trade elasticity. In this respect, further research into the drivers behind the slowdown in elasticity in emerging markets is warranted, also in view of assessing whether they could become more trade intensive as the economies mature and converge towards advanced economies. On the other hand, services hold a big potential for reinvigorating trade, given their resilience during the GFC and enormous possibilities offered by new technologies. While at the same time, the outlook for trade liberalisation is mixed. Inward-looking policies and looming threats of protectionism in some countries co-exist with a reinvigorated trade policy agenda in other parts of the world (e.g. TPP-11, EU-Japan FTA, ongoing EU negotiations with Mercosur and upcoming negotiations with Australia and New Zealand).

All in all, while it is difficult to weigh the relative impact of these scenarios, global trade looks set for some strengthening following several years of extreme weakness, but appears unlikely to fully regain its pre-crisis vigour.

What are the policy implications of these conclusions? Empirical evidence suggests a significant role for international trade in fostering productivity growth and potential output growth. This occurs via both traditional and non-traditional gains-from-trade effects, notably dynamic effects linked with competition and innovation. Thus, it may not be a coincidence that weaker expansion in trade in the post-crisis period also coincides with softer productivity growth. While past trade buoyancy is unlikely to happen in the medium term, policymakers should ensure that the ongoing recovery is sustained, by resisting protectionism and reinvigorating the trade liberalisation agenda. Moreover, given the importance of investment for world trade, policies to boost investment and innovation should be prioritised. Boosting the growth potential over the medium term should be considered together with the objective of ensuring that these benefits are widely shared.

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<sup>18</sup> IMF WEO (October 2017) projects global investment to rise from 25.6% of GDP in 2014-2016 to 26.1% in 2020-2022, particularly in advanced economies.

<sup>19</sup> Due to a broad-based downgrade of world growth prospects but also the emergence of shale gas as a new ample and flexible source of energy.

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