

European Cross-Border Networks, Transatlantic Trade and EU Global Relations

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Introduction

The aim of this paper is to analyze trade and production interrelationships that characterize European countries' positions in international trade and in European-transatlantic relations in particular.

As is by now well known, international trade has over the past decades gained enormously from reduced transport and logistic costs, as well as from fallen trade and entry barriers at the global and especially the regional level (see NAFTA, EU Single Market and Association Agreements etc.). These developments have led to a strong increase in cross-border production integration, giving rise to a large literature on 'international production networks' (IPNs) (see Baldwin and Robert-Nicoud, 2010; Baldwin, 2011). The trade literature has moved on from the development of 'new trade theory' in the 1980s (see Krugman, 1979, Helpman, 1981) in which the gains from trade were based on economies of scale and 'horizontal product differentiation' to one where gains could be obtained from 'vertical differentiation' and specialization (see e.g. Hummels et al, 1996). Countries could exploit their comparative advantages in terms of differentiated technological and factor endowment positions (just as in the classical Ricardian and Heckscher-Ohlin trade theories), but this time at the level of 'production stages' (or 'tasks') of individual processes rather than fully integrated industries (Grossman and Rossi-Hansberg, 2008). Furthermore, the importance of the link between foreign investment and international trade and of intra-firm trade was recognized as shaping patterns of international production integration (see e.g. Markusen, 2002; Markusen and Venables, 1998).

In addition, while past empirical analysis focused on goods trade, more recent analysis has highlighted the importance of trade in services and in 'producer services' in particular (see e.g. Francois et al, 2015). Services are becoming more 'tradable' in their own right and producer services are seen to play an important role as facilitators of, and being complementary to, goods trade.

In the following we make use of more recent advances in data collection and in methodology to analyze international trade and production integration. In particular we use an international database that allows us to calculate direct and indirect contributions of a country's industries

to regional and global export activity. The focus of this paper is thus to analyze differentiated trade patterns of different European economies, look at their place in intra-European and global production networks and evaluate their relative trade linkages to the United States and other global regions. We cover both manufacturing as well as services, direct and indirect linkages to export activity, both within a country as well as regionally and internationally. In line with recent developments, we calculate trade in terms of ‘value added’ rather than ‘gross exports’ (see below and e.g. Stehrer, 2012; Foster-McGregor N. and R. Stehrer, 2013).

Database and Methodology

Our analysis is based on the use of the WIOD (World Input-Output Database) database that has been constructed in collaboration among a number of research institutes (for details see Dietzenbacher et al, 2013; Timmer et al, 2014). The most recent update includes data up to 2014 (see www.wiod.org/database/wiots16).

The indicator we mostly use in the analysis is the so-called VAX (i.e. ‘value added exports’) indicator, which refers to direct and indirect contributions of an economy to the value added embodied in exports. Furthermore, as we want to emphasize cross-border linkages in this paper, we shall not only account for direct and indirect contributions of a country’s own exports but also for linkages with other economies’ exporting activities.

To give an example, we shall identify the contribution of Germany to value added exports, first by identifying the contributions by German industries – directly and indirectly - to Germany’s own exports, i.e. taking account of input-output linkages within a country, and second by identifying the indirect contributions of German industries supplying inputs (intermediate inputs, capital goods, parts and components) to other countries’ exports. Many of these contributions will be made via cross-border production networks with other European countries that then exported again to European and other destinations. Through this approach we get a full picture of ‘value added’ contribution of a country to regional and global exports.

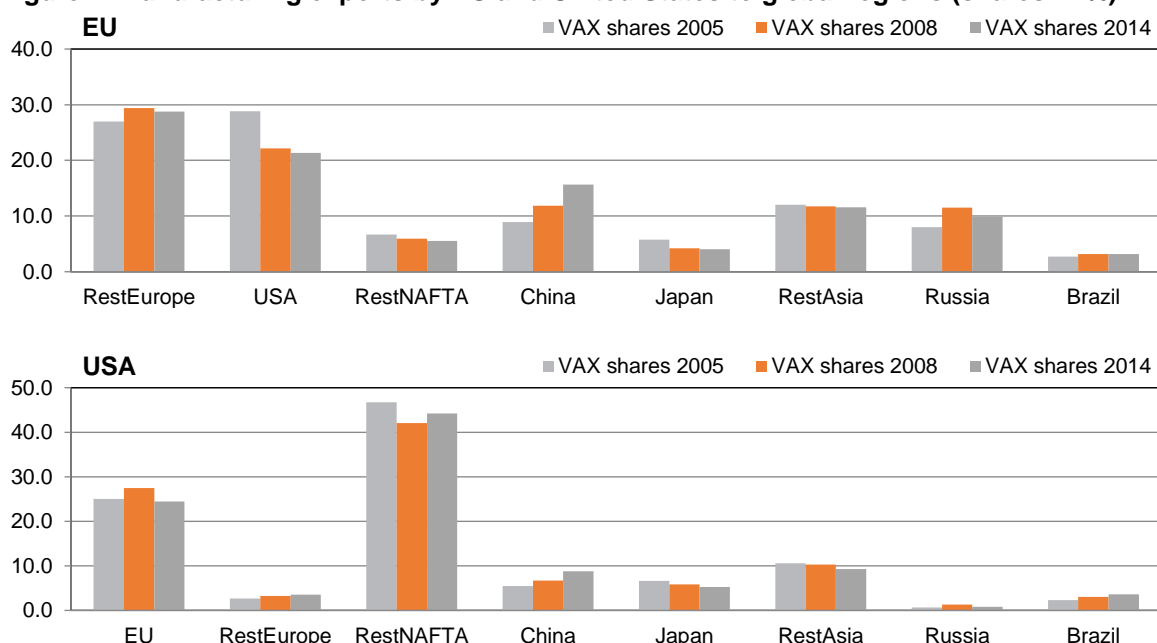
The WIOD database, which compiles a World Input-Output Table (WIOT) that links trade flows with national input-output tables of countries that account for 93% of global trade, allows us to calculate a country’s ‘value added’ contribution to global exporting activity. We call this contribution, which can be disaggregated by individual industries (we shall look at manufacturing and a group of service industries), the VAX indicator. Thus, when we examine the contribution of e.g. German manufacturing industry to the value added of exporting activity of the EU, we first deduct the imported inputs from the gross exports of that industry in German exports to arrive at the ‘value added’ measure of Germany’s direct exports. But we then also include in VAX the contribution Germany’s manufacturing exports as inputs to the exporting activity of other EU countries. These countries’ exports, in turn, contribute as input suppliers to other countries’ exports, and so on. Input-output techniques are thus used to keep track of multi-layered global production interdependencies through trade flows and input-output relationships, so that a country’s (and individual industries’) contributions to exporting activity can be neatly identified (for details see Stehrer, 2012).

Patterns of Transatlantic Trade and Intra-European Trade Contributions

In the following we examine ‘value added exports’ (VAX) of different European countries and of the EU as a whole to different regions of the world, in order to evaluate the relative importance of North Atlantic trade when compared to trade with other global regions. We thus distinguish VAX exports of European countries to the United States, the rest of NAFTA, China, Japan, the rest of Asia, Russia, Brazil, trade within the EU itself and with countries in Europe outside the EU (apart from Russia), which we call (non-EU) *Rest of Europe*. When we speak in the following of ‘*Wider Europe*’ we include EU and (non-EU) Rest of Europe. We look similarly at VAX of the United States to these different global regions.

Let us focus first on the relevance of transatlantic trade between the EU as a whole and the United States, compared to trade of these two units with other global regions. As regards the latter we distinguish ‘*regionalist trade*,’ i.e. trade with other European countries (we distinguish between Russia and Rest of Europe – see above) in the case of the EU, and Rest of NAFTA in the case of the United States. Figures 1 and 2 show this, respectively, for manufacturing and business and financial services (BFS).¹

Figure 1. Manufacturing exports by EU and United States to global regions (shares in %)



Definition: excl. CY, MT, LU .Source: WIOD, own calculations.

Taking *manufacturing* trade relationships first (Figure 1), it is interesting to see that ‘regionalist’ trade is extremely important to both the EU and the United States. In the case of the EU, direct and indirect (VAX) exports to (non-EU) Rest of Europe exceed those to the United States. Similarly, U.S. direct and indirect export linkages to Rest of NAFTA exceeds by far export linkages to the EU.

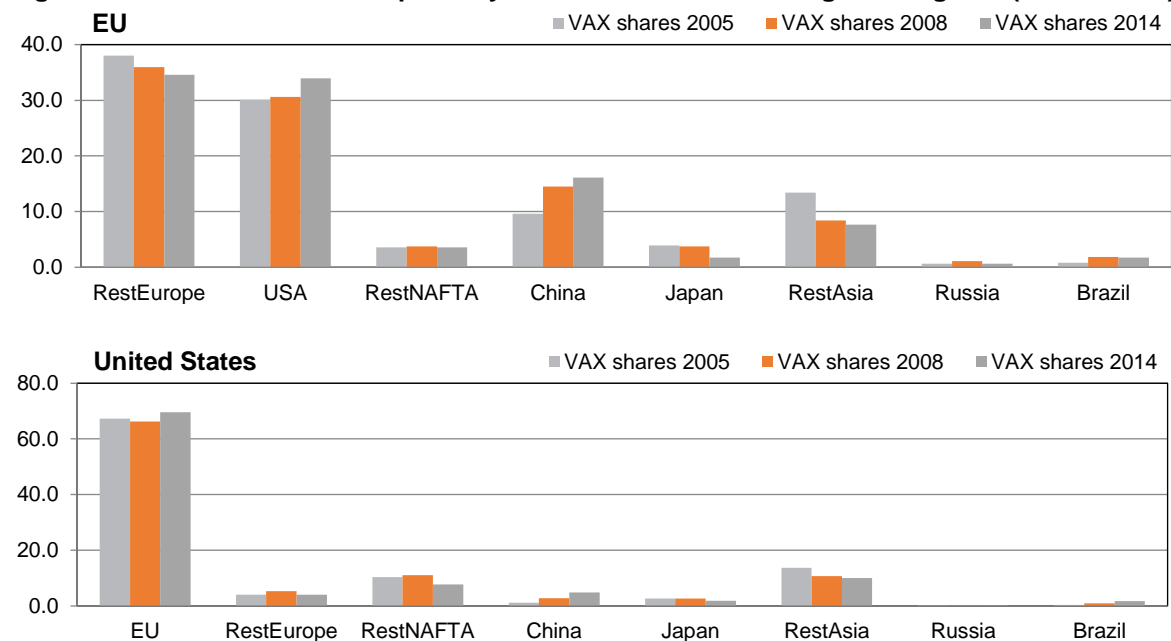
When it comes to export linkages to other global regions, the growth of export linkages to China is strong for both the United States and the EU. If we take China, Japan and Rest of Asia

¹ ‘Business and financial services’ (BFS) in our analysis includes 3 NACE groups (NACE refers to Eurostat’s industrial classification): J Information and Communication; K Finance and Insurance; and M Professional, Scientific and Technical Activities.

together, in 2014 EU export linkages to these Asian regions together exceeded export linkages from the EU to the United States and just about match the relevance of direct and indirect export linkages from the United States to the EU. On a per-country basis, however, EU export linkages to the United States still exceed those to any individual Asian country.

If we move to (direct and indirect) export linkages in *business and financial services* (BFS), the situation is somewhat different (Figure 2). When it comes to BFS, the export linkages between the United States and the EU are overwhelming. BFS exports from the United States to the EU are by far more important than BFS export linkages to any other global region, be it Rest of NAFTA or Asia. In the EU's case, the situation is somewhat different, as business and financial services export linkages to the United States are on an equal footing with those to the Rest of Europe. EU export linkages to China, Japan and Rest of Asia together have become as important for the EU as those to the United States alone, but again on a per-country basis the United States has the deepest linkages with regard to EU exports.

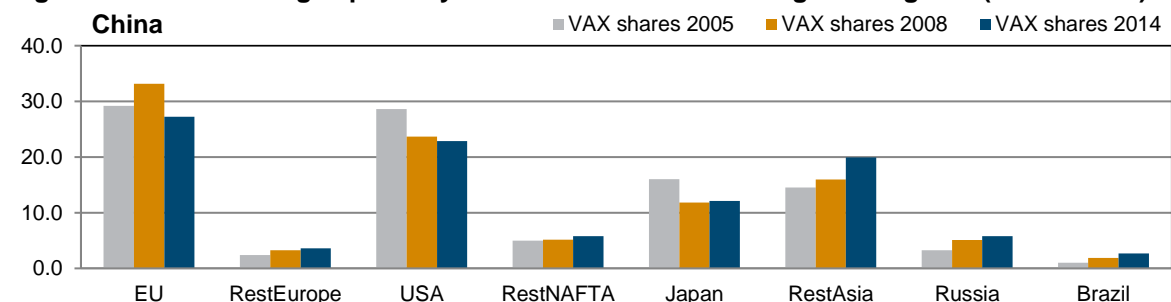
Figure 2. Business services exports by EU and United States to global regions (shares in %)

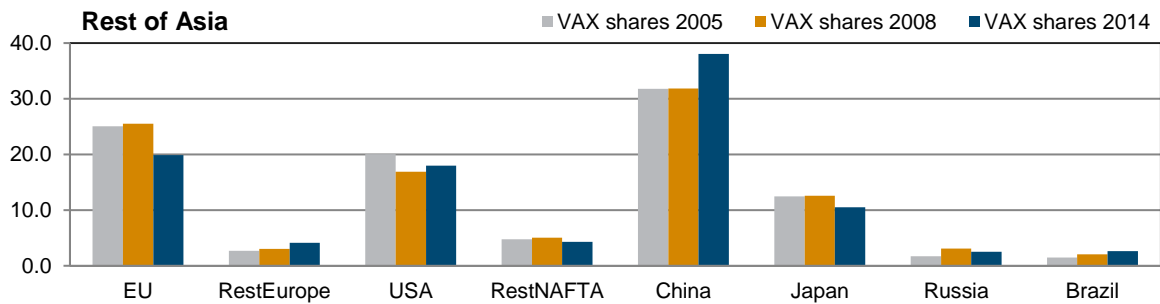


Definition: excl. CY, MT, LU .Source: WIOD, own calculations.

For comparative purposes, Figures 3 and 4 portray the trade linkages (as reflected in VAX) of China and other Asian economies to the same global regions as discussed above for the EU and the United States.

Figure 3. Manufacturing exports by China and Rest of Asia to global regions (shares in %)



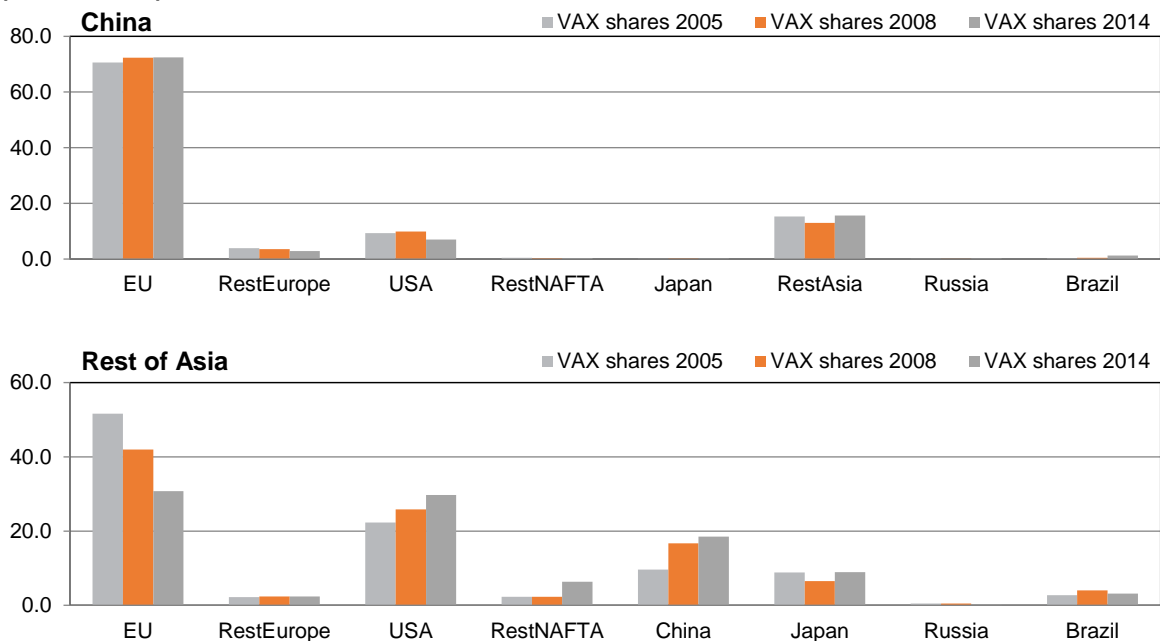


Definition: excl. CY, MT, LU .Source: WIOD, own calculations.

Figure 3 reveals that Chinese manufacturing exports to the EU, the United States and Japan have fallen since 2005 and those to the Rest of Asia, and also to Russia and Brazil, have been growing, although for the latter two from a low base. It also shows that (non-EU) Rest of Europe remains relatively insignificant in terms of Chinese manufacturing exports, whereas the EU remains by far the most important manufacturing exporter for (non-EU) Rest of Europe.

Figure 3 also shows how since 2005 exports from the Rest of Asia to the EU, the United States and Japan have also fallen and those to China have expanded, so that exports to the EU and the United States together now are on a roughly equal footing with exports to China.

Figure 4. Business and financial services exports by China and Rest of Asia to global regions (shares in %)



Definition: excl. CY, MT, LU .Source: WIOD, own calculations.

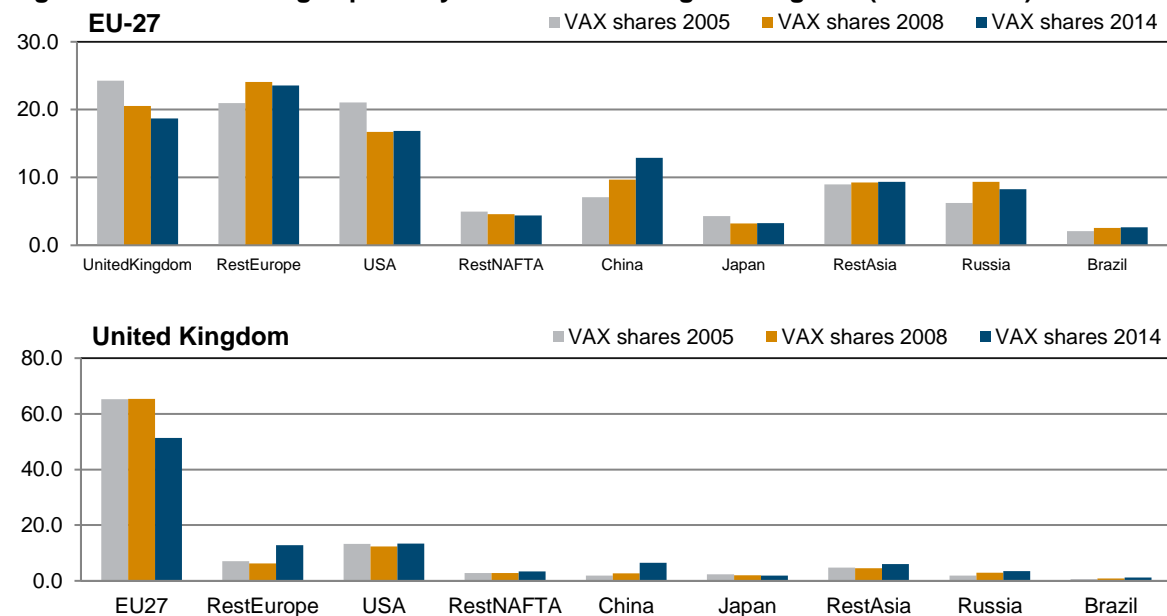
When it comes to business and financial services, however, the picture looks substantially different. Figure 4 reveals that China exports more business and financial services to the EU than to the entire rest of the world, and that this concentration has been growing. Exports of business and financial services from the Rest of Asia to the EU, in contrast, has been falling markedly, while rising to China and to the United States and its NAFTA partners.

The United Kingdom and the EU-27

Given the prospect of the United Kingdom (UK) leaving the EU, it is useful to review export linkages of the EU-27 (i.e. the EU without the UK) and the UK separately.

Looking first at manufacturing (Figure 5), we can see that VAX shares to the UK by the EU-27 were about 18% in 2014, somewhat higher than VAX shares to the United States (16-17%), and that shares to (non-EU) Rest of Europe have become even more important.

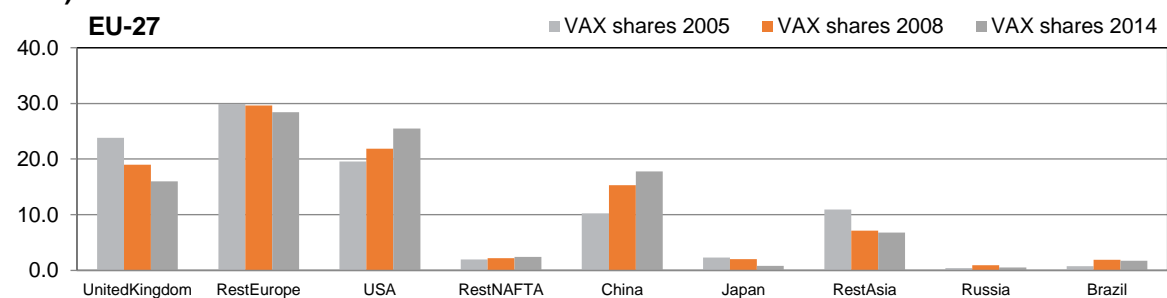
Figure 5. Manufacturing exports by EU-27 and UK to global regions (shares in %)

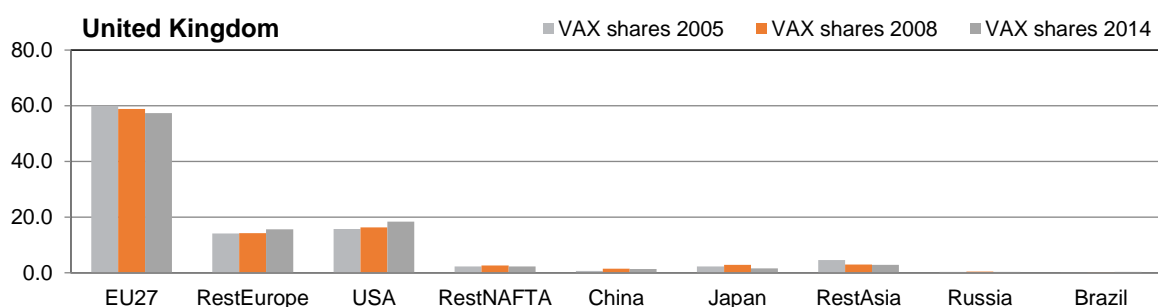


Definition: excl. CY, MT, LU .Source: WIOD, own calculations.

For the UK, VAX shares of manufacturing industries to the EU-27 were over 60% in 2005 and 2008, but declined to about 50% in 2014, while VAX shares of UK manufacturing industries to (non-EU) Rest of Europe have grown to rival those to the United States, which hover around 10%. Direct and indirect linkages to other non-European and non-U.S. regions, as far as manufacturing VAX is concerned, are rather marginal for the UK.

Figure 6. Business and financial services exports by EU-27 and UK to global regions (shares in %)





Definition: excl. CY, MT, LU .Source: WIOD, own calculations.

The picture is not that different for the UK as far as business and financial services (BFS) industries' exports are concerned (Figure 6). The share of VAX exports by the UK directed – directly and indirectly – to EU-27 markets amounted to just below 60%, while that to the United States was just below 20%. Shares of UK BFS exports to (non-EU) Rest of Europe have grown about as much as UK BFS exports to the EU-27 have declined. Again, other non-European destinations are rather marginal.

For the EU-27, VAX exports to the United Kingdom are less important than VAX exports to the United States (16% as compared to about 25%, both in 2014) and declined between 2005 and 2014, whereas those to the United States (and China) increased. We should keep in mind that VAX calculations show as much the indirect value-added contributions of BFS industries as the direct ones, thus the BFS contributions supplied as inputs to manufacturing exports are just as much accounted for as the direct exports by BFS industries to the different export destinations.

One further point underscores the special relevance of BFS industries for the UK. This clearly emerges when one compares the ratios of VAX exports of BFS industries to VAX exports of manufacturing between Germany and the United Kingdom (see Tables 1 and 2). We can see here clearly the very heavy dependence on exports of BFS service industries for the UK. For Germany, VAX exports of BFS industries, compared to those of manufacturing, amount to only 18% to the United States and 11% towards the Wider European² market in 2014, while these percentages are 131% and 109% respectively for the United Kingdom.

Table 1. Germany: Value Added Exports of Business and Financial Services relative to those of Manufacturing (in %).

	2005	2008	2014
Brazil	3.44	6.04	7.81
China	7.56	13.99	18.32
Japan	4.27	6.64	3.51
RestAsia	13.75	9.45	8.48
RestNAFTA	3.99	6.95	9.71
Russia	0.34	0.55	0.33
USA	11.48	16.66	18.42
WiderEurope	10.63	10.78	11.29

² Remember that 'Wider Europe' includes EU and (non-EU) Rest of Europe except for Russia, which is separately identified.

Table 2. United Kingdom: Value Added Exports of Business and Financial Services relative to those of Manufacturing (in %).

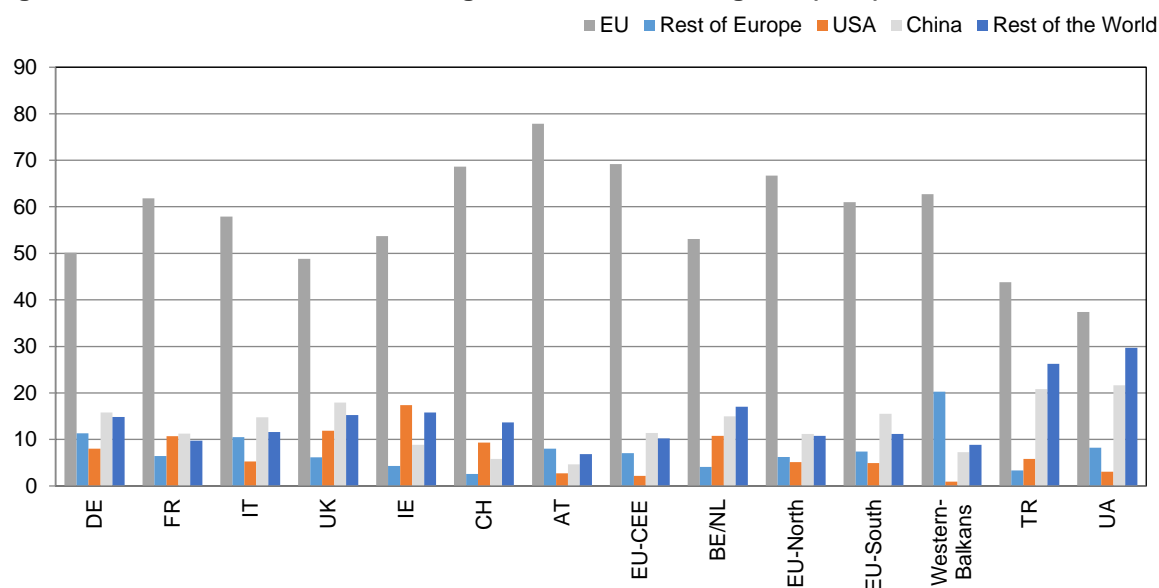
	2005	2008	2014
Brazil	13.64	22.45	29.59
China	21.26	39.65	19.69
Japan	58.65	105.20	79.03
RestAsia	59.40	49.79	45.36
RestNAFTA	49.22	72.29	65.01
Russia	11.02	11.28	7.72
USA	73.39	99.64	131.23
WiderEurope	63.70	77.27	108.61

The Exposure of Individual Countries to Transatlantic Trade:

In this section we take a more detailed look at the positions of different European economies in relation to trade linkages with the United States and other global regions. We focus again on trade linkages in manufacturing and in business and financial services (BFS):

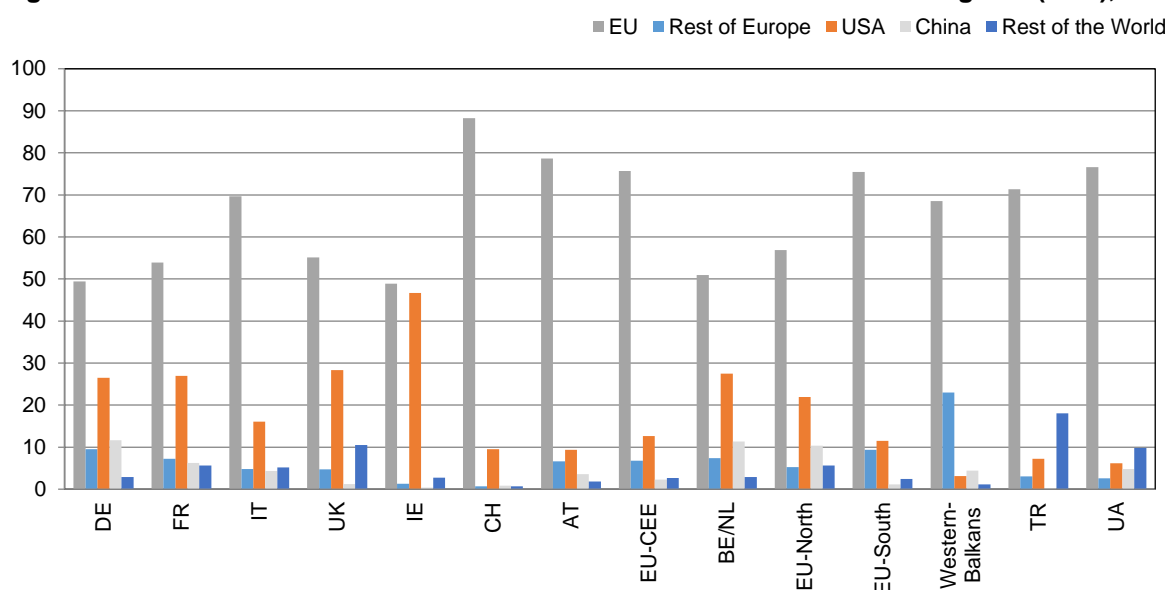
We start with an overview in Figures 7 and 8, of the extent to which a country's VAX are directed towards EU, (non-EU) Rest of Europe, the United States, and Rest of World markets.

Figure 7. Orientation of Manufacturing VAX to Different Regions (in %), 2014



Definition: excl. CY, MT, LU . Source: WIOD, own calculations.

Figure 8. Orientation of Business and Financial Services VAX to different regions (in %), 2014



Definition: excl. CY, MT, LU. Source: WIOD, own calculations.

Figure 7 shows the regional orientation of value added exports (VAX) by manufacturing and Figure 8 shows that orientation by BFS industries of different European countries and regions.

For European exporters, EU markets are still overwhelmingly important. The direct and indirect contributions of manufacturing to VAX embodied in exports to EU markets still amounts to 50% and above in most European countries. Particularly high are the VAX figures for Austria (AT), Switzerland (CH) and newer Central and Eastern European EU member states (EU-CEE), each with well over 60%. The figure hovers around 50% for Germany and the UK, and below that for Turkey and Ukraine.

It is interesting to note that by 2014 the VAX of manufacturing by most European economies to China exceeded that to the United States; the exceptions were Ireland and Switzerland.

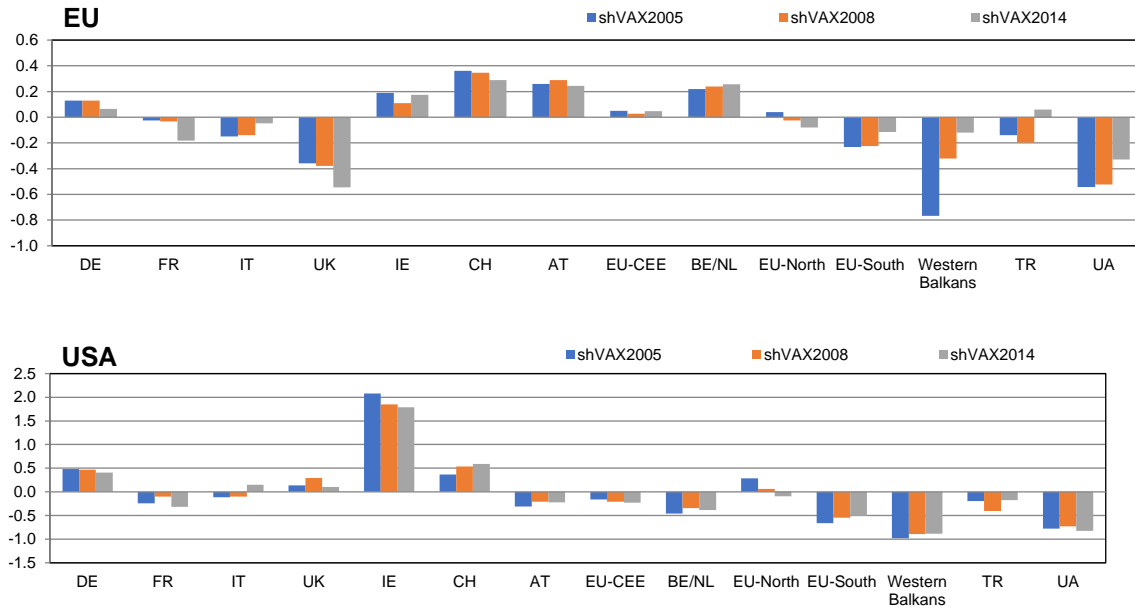
For business and financial services industries (Figure 8), the picture is different: here VAX of most European countries to the United States still far exceeds that of VAX not only to China, but to China and the rest of the world combined.

For non-EU European countries in the Western Balkans, China accounts for a relatively greater share of business and financial services VAX, although minor compared to the overwhelming importance of the EU. For Turkey and Ukraine, the United States and the rest of the world are more significant than China.

Let us examine in more detail the orientation of countries in terms of their value-added exports towards different global regions. In order to show the differentiation across countries in this respect, we shall set the country's shares in overall European VAX in relation to the country's shares in overall European GDP. In Figures 9-12 we thus show again a country's VAX orientation towards different markets. However, in order to take account of a country's economic size, we divide the country's VAX shares by the country's share in overall European

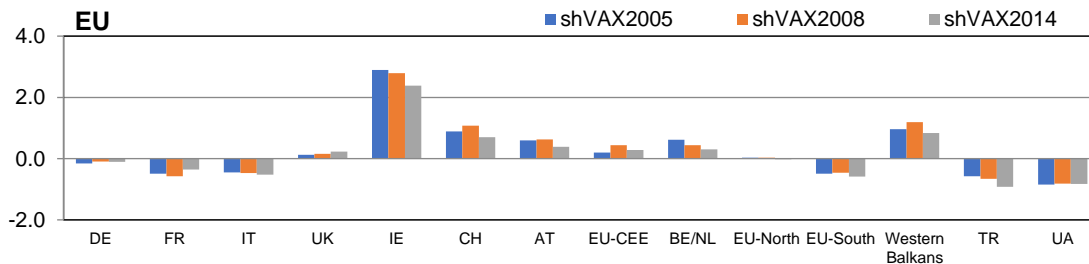
GDP.³ This yields an indicator of a country's VAX contribution to European exports normalized by the country's GDP share, which can be interpreted as a country being relatively 'over' or 'under'-represented in Europe's overall exports as a whole (see Map 1) or towards particular regions. Figures 9-12 depict four different regions: the EU, the United States, China and Rest of Asia (excluding Japan and China).

Figure 9. Manufacturing - VAX/GDP Ratios: 2005, 2008, 2014
Exports by Regions

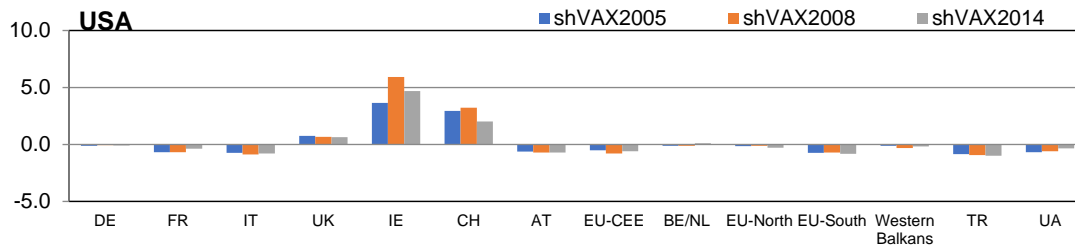


Definition: excl. CY, MT, LU . Source: WIOD, own calculations.

Figure 10. Business and financial services - VAX/GDP Ratios: 2005, 2008, 2014
Exports by Regions



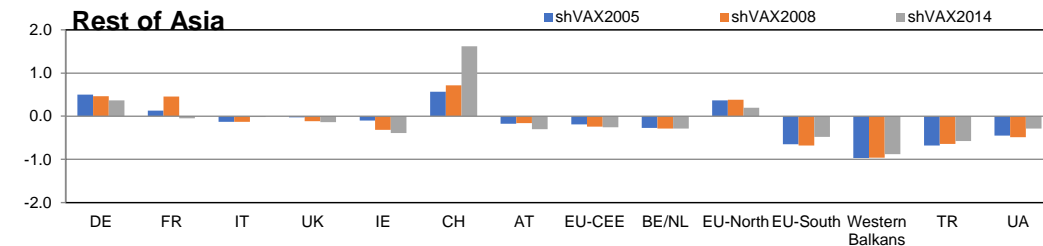
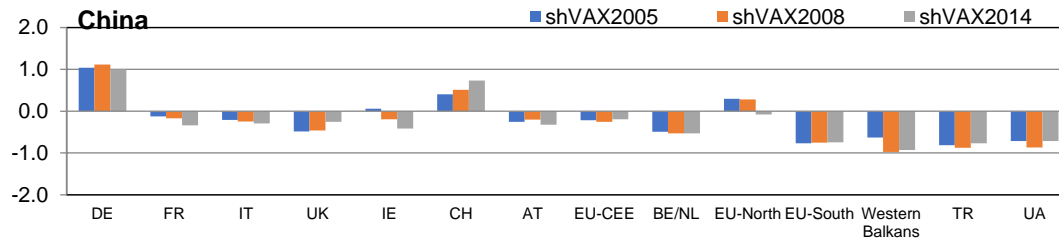
³ We then deduct 1.0 from that ratio [(i.e. share in European VAX)/(share in European GDP) – 1], so that a value of e.g. 0.5 can be interpreted to mean that a country's share in European VAX exceeds its share in Europe's GDP by 50%. -0.5 means that a country's share in European VAX is 50% below the European average compared to that country's share of European GDP.



Definition: excl. CY, MT, LU .Source: WIOD, own calculations.

Figure 11. Manufacturing - VAX/GDP ratios: 2005, 2008, 2014

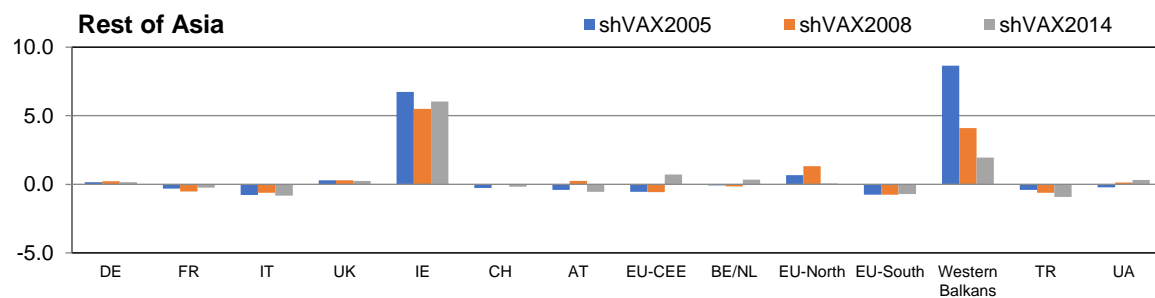
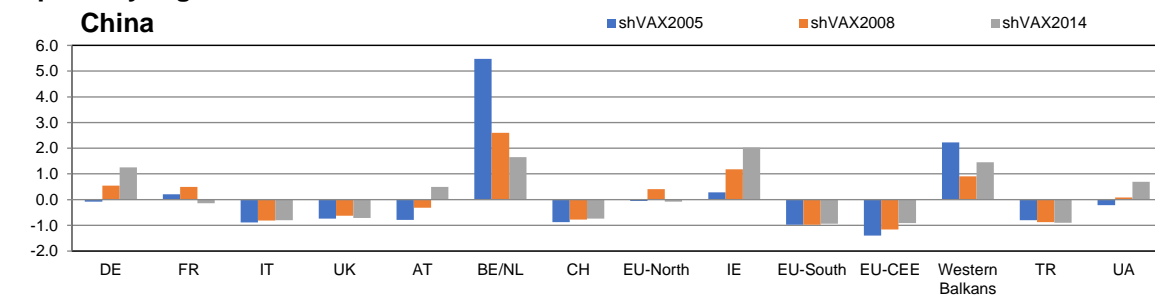
Exports by regions



Definition: excl. CY, MT, LU .Source: WIOD, own calculations.

Figure 12. Business and financial services - VAX/GDP ratios: 2005, 2008, 2014

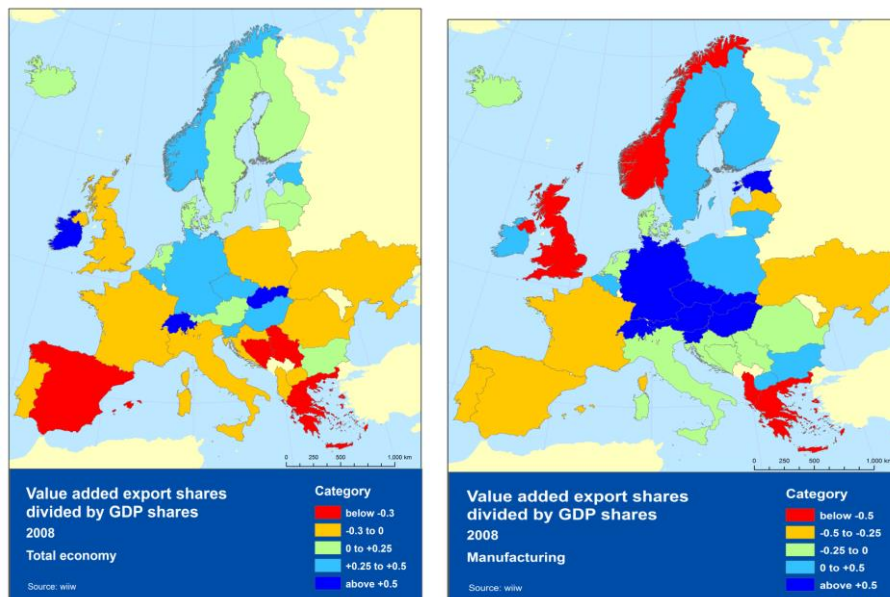
Exports by regions



Definition: excl. CY, MT, LU . Source: WIOD, own calculations.

Map 1 depicts the different European countries' shares in overall value-added exports relative to GDP shares (left map) and of manufacturing alone (right map). What is clearly visible is a strong concentration of Europe's manufacturing export capacities in what we can call a 'Central European Manufacturing Core' (see also Stehrer and Stoellinger, 2015). Members of that core include Germany, Switzerland, Austria and newer EU member states from Central and Eastern Europe (EU-CEE). These countries each show shares of manufacturing VAX exceeding significantly their shares of European GDP.

Map 1. Value Added Exports Divided by GDP Shares: Overall and Manufacturing Only



What is also interesting is that this *Central European Manufacturing Core* remains visible on the left-hand map when one looks at shares in overall export activity. A strong presence in manufacturing VAX is also reflected in strength in overall exports and, vice versa, a weakness in manufacturing exporting activity - for quite a few Southern European economies, for instance - also corresponds to weakness in overall exports. There are some exceptions to this: Norway, because of its oil and gas industry; and the UK, that somewhat compensates for its weakness in manufacturing with its strength in business and financial services.

Let us now point out some of the main interesting features contained in Figures 9-12.

Figure 9 reveals that when it comes to manufacturing VAX shares, Germany, Ireland and Switzerland are 'overrepresented' compared to the European average both with respect to exports to the United States as well as in EU markets. As regards their relative positions in EU markets, also the Belgium/Netherlands (Be/Ne) and the other members of the 'Central European Manufacturing Core' feature prominently, and in exports to the US, the UK (and in 2014 also Italy) has a slight above-average representation in European VAX shares.

As regards business and financial services (Figure 10), Ireland, Switzerland and the UK make above-average contributions to European VAX exports both to EU as well as to U.S. markets. This becomes even more pronounced when one considers only the U.S. market. In the EU markets, given that BFS VAX measures the direct and indirect contributions of business and financial services to exporting (i.e. also as inputs to goods exports), this shows up in also the Central European Manufacturing Core, as well as Belgium/Netherlands, having an above average share in European BFS value added exports.

For comparison, we also show the ‘over-/under-representation’ of different European countries in VAX exports to China and the Rest of Asia (i.e. Asia excluding China and Japan) in Figures 11 and 12. We see here the extraordinarily strong positions of Germany and Switzerland in European manufacturing VAX to China and the Rest of Asia, and also a relatively strong position of the EU-North (particularly Sweden and Finland).⁴

Interestingly, the United Kingdom does not show an above average representation in European business and financial services VAX to China, while Germany does. Remember that this is likely to be again due to indirect German business and financial services supplies to manufacturing exports, whereas the weakness of UK manufacturing is also reflected in its below-average contribution to overall VAX of European business and financial services industries to China. The UK contribution is, however, above average to the rest of Asia (as it is, much more strongly, for Ireland).

The Importance of Intra-Firm Trade for EU-U.S. Trade Linkages

In this section, we refer to a recent study by the Vienna Institute for International Economic Studies (see Stehrer et al, 2016) that examined the extent to which intra-firm trade flows account for overall trade between the EU and the United States.

Table 3. Bilateral EU-U.S. Trade Relations, Including Intra-Firm Trade (\$ millions), 2005-2013

year	EU total goods imports from US	EU parent imports from its affiliate in the US	US affiliate in the EU imports from US parent	share of intra-firm trade in EU imports	EU total goods exports to US	EU parent exports to its affiliate in the US	US affiliate in the EU exports to US parent	share of intra-firm trade in EU exports
	(1)	(2)	(3)	[(2)+(3)] / (1)	(4)	(5)	(6)	[(5) + (6)] / (4)
2005	216,785	37,227	38,563	0.35	309,220	119,296	53,596	0.56
2006	248,193	43,788	41,476	0.34	338,783	134,658	55,639	0.56
2007	275,277	50,285	47,764	0.36	357,463	134,863	62,059	0.55
2008	305,989	58,061	50,041	0.35	367,107	138,059	59,437	0.54
2009	252,294	54,677	43,786	0.39	286,761	116,974	53,423	0.59
2010	264,074	62,683	45,955	0.41	324,279	139,950	57,996	0.61
2011	293,212	78,370	51,666	0.44	367,139	154,956	62,254	0.59
2012	302,010	81,809	45,946	0.42	380,457	165,559	59,960	0.59
2013	302,131	92,149			388,486	188,482		

Note: EU is EU-25 for 2005-2006; EU-27 for 2007-2012; EU-28 for 2008. Country level trade flows based on goods trade reported by EU member states (both exports and imports).

Source: Data for Multinational Enterprises of the U.S. Bureau of Economic Analysis (BEA) together with the OECD’s bilateral STAN and its database on Activities of Multinational Firms (AMNE database), as well as wiiw-calculations. For details regarding the methodology to estimate intra-firm trade flows from the EU’s side, for which the database is scanner than for the United States, see Stehrer et al., 2016, pp. 83-88.

From an EU perspective, both EU parent companies importing goods from affiliates located in the United States on the import side, and U.S.-controlled affiliates located in the EU importing from their parent company, are contributing to intra-firm imports. Similarly, EU parent companies exporting to their affiliates located in the United States, and U.S.- controlled

⁴ The detailed country information regarding these ratios, upon which this statement relies, can be obtained upon request.

affiliates located in the EU exporting to their parent company, are part of EU exports to the United States.⁵

What emerges from Table 3 is that intra-firm trade is of fundamental importance. It accounted for 59% of EU exports to the United States and for 42% of EU imports from the United States in 2012. Taken together, intra-firm flows were thus responsible for more than half (52%) of total trade between the EU and the United States in 2012.

In addition, whereas EU parent companies export substantially more to their foreign affiliates than they import from them (see columns 2 and 5), the opposite pattern is found for U.S. multinationals. The EU pattern corresponds more to a pattern of market-seeking FDI activities with foreign affiliates still sourcing a significant amount of parts, components and other inputs from their parent company. Closer analysis of U.S. multinationals indicates that the intra-firm trade pattern is strongly dominated by U.S. affiliates located in Ireland (see Stehrer et al, 2016, p.87).

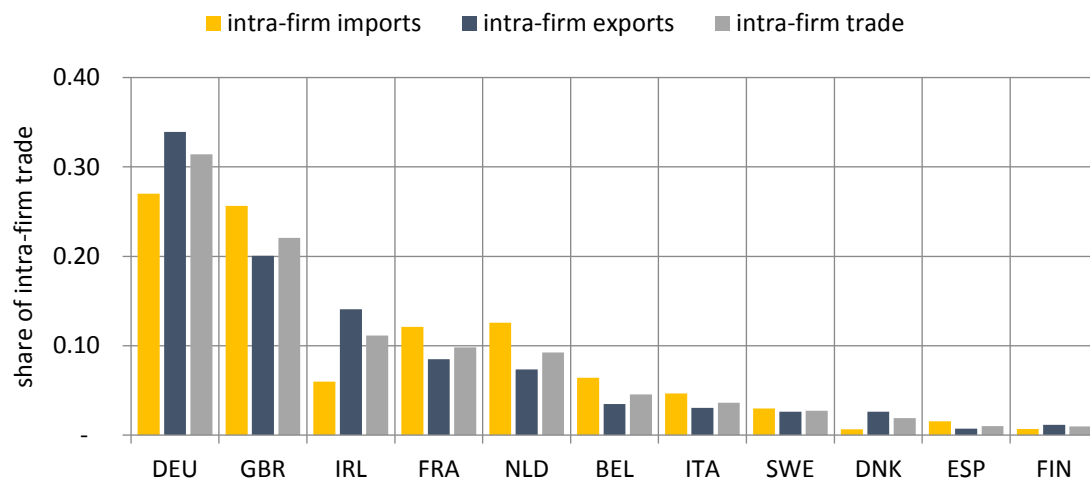
Another conclusion that emerges from Table 3 is that the EU has higher FDI engagement in the United States than vice versa. This gives rise to higher trade values within EU multinationals than within their U.S. counterparts. In 2012, for example, bilateral intra-trade flows by EU-controlled multinationals amounted to almost \$250 billion (column 2 plus column 5), while bilateral intra-trade flows by U.S.-controlled multinationals stood at \$106 billion.

Furthermore, the intra-firm merchandise trade surplus of the EU vis-à-vis the United States reached \$98 billion in 2012 – an amount that exceeds the country-level trade balances of the two trading partners. Hence, the EU's trade balance in arm's length trade (i.e. trade excluding intra-MNE trade) with the United States is actually negative. Put differently, without the activities of multinationals and resulting intra-firm trade generated by those activities, the EU would be running a trade deficit with the United States, at least according to available intra-firm trade data.

Figure 13 presents information on the shares of individual EU countries regarding intra-firm trade with the United States. We can see the rather important positions that Germany, the United Kingdom and Ireland occupy in this respect.

⁵ The text in the next two paragraphs is largely taken from Stehrer et al., (2016), p.87.

Figure 13. Share of Member States in EU-wide Intra-firm Trade with the United States, 2012



Note: "EU parent imports from its affiliate in the US" for Denmark and Italy: 2011 values; "EU parent exports to its affiliate in the US" for Spain: 2011 values; for Italy 2010 values. Country level trade flows based on goods trade reported by EU member states (both exports and imports).

Source: OECD AMNE database, OECD bilateral STAN, wiiw-calculations.

Drawing Conclusions for Trade Policy Arrangements

This paper has focused on manufacturing and a group of activities that we count as important ancillary services to facilitate international trade (communications, business and financial, and technical services, or NACE groups J, K and M).

We examined relative strengths and weaknesses of European countries regarding their (direct and indirect) export performance along the following dimensions:

- Anchorage in trade and production networks within the Wider European economy
- Differential orientation towards the U.S. market vs. other global regions
- Whether countries are contributing above- or below-average in exporting to various markets (EU, U.S., China, other Asian markets) than their respective GDP weight in the European economy would suggest.

All the above issues were examined by looking at 'value added exports' (VAX) both for manufacturing as well as an important group of market and producer-oriented services (NACE categories J, K and M).

Finally, we also examined the relevance of intra-firm trade in EU-U.S. trade relationships.

The following are the most striking results that would be relevant for future trade negotiations.

First there is a very strong presence of Germany and the 'Central European Manufacturing Core' in overall European manufacturing production and export activity, both inside the EU and also in transatlantic but also in Europe-Asia trade.

Second, as is expected, the data show the strong dependence of the United Kingdom on the direct and indirect contributions of business and financial services exports. However, since overall goods exports dominate overall European exports and thus perform a 'carrier function'

also for the contribution of business and financial services to overall export performance, the UK loses out somewhat in this respect, for example in its contribution to European VAX trade with China.

Third, the 'regionalist' part of trade relationships (i.e. intra-European trade and trade within NAFTA) is dominant in manufacturing both for the United States and for European economies. For the EU this also extends to business and financial services trade, while for the United States the orientation of business and financial services exports towards the EU far outstrips any other markets.

Fourth, direct and indirect export linkages of EU manufacturing towards Asian economies as a whole now significantly exceed those to the United States, although on a per-country basis the United States remains the single most important country for EU manufacturing exports. For the United States, direct and indirect export linkages to the EU and towards Asian economies are roughly even.

Fifth, the direct and indirect trade orientation of the EU-27 and the UK towards each other weakened between 2005 and 2014, but still remains very strong: over 50% of UK manufacturing and business and financial services value-added exports depend on EU markets, and about 18% of EU VAX are oriented towards the UK.

Finally, intra-firm trade accounts for over 50% of U.S.-EU merchandise trade. That trade shows a strong surplus on the side of the EU and, furthermore, EU subsidiaries source a much higher share of inputs from parent companies than is the case for U.S. companies.

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