STUDY

Requested by the INTA committee

European Parliament

EU-China trade and investment relations in challenging times

Policy Department for External Relations
Directorate General for External Policies of the Union
PE 603.492 - May 2020

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DIRECTORATE-GENERAL FOR EXTERNAL POLICIES
POLICY DEPARTMENT

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ABSTRACT

This report examines key aspects of the European Union-China economic relationship, including trade, investment and China's key strategic project overseas, the Belt and Road Initiative (BRI). We conclude that China is, and will continue to be, a major trade and investment partner for EU countries. In this context, it seems clear that regardless of the direction of the United States-China relationship, the EU needs to explore options for fruitful co-existence with China.

Trade continues to be the least problematic aspect of the EU-China economic relationship, although challenges need to be dealt with in a number of areas. There is hardly any EU-China trade in services, and the value added of Chinese exports and competition on third markets is increasing. As for investment, although EU companies have built up more foreign direct investment in China than the other way around, Chinese investment in Europe is growing and has focused strongly on technology. This raises the question of whether the EU should fear losing its technological edge, especially when Chinese state-owned companies might distort competition, not only in China, but also overseas through acquisitions.

Finally, we review the significance of the BRI from the European perspective. The BRI offers potential trade gains for Europe by improving physical connectivity with countries along the route to China, but it also poses challenges for the EU. The main challenge is China's increasing soft power, which is being felt in the EU's neighbourhood and even in a growing number of EU countries. A more united approach to managing the EU-China economic relationship is required to improve the bargaining power of EU countries when dealing with China.

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1 Introduction[1]

The European Union is China's largest trading partner. China is the EU's second largest trading partner after the United States, but it is catching up rapidly. The sustained growth of the Chinese economy and its integration into global supply chains have put China on a path to become the world's largest trader and its largest economy, measured at market exchange rates. When measuring by purchasing power parity, it is already the world's largest economy.

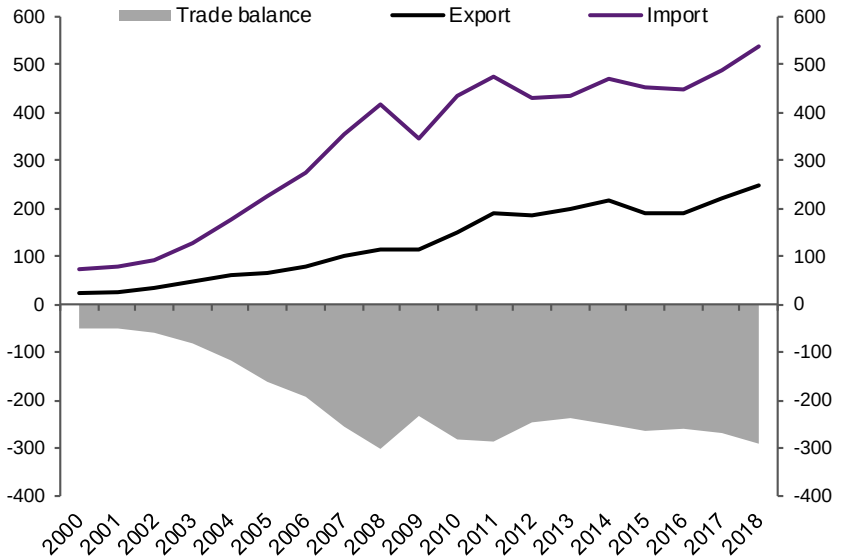
Since 2000, China's real GDP has multiplied almost fivefold, while the EU's grew by 20 % and the United States' by 41 %. Over this period, Chinese growth has averaged 9 % and has consistently stayed above 6 %. At the beginning of the catch-up process, China had a very low level of development. Even today, *per-capita* income in China amounts to only about one quarter of EU *per-capita* income at market exchange rates, and to about four tenths of it when adjusting for purchasing power.

China's exports have grown even faster than the rest of the economy, especially before the global financial crisis, though the rate of growth has slowed in recent years. China's share of world export markets surged from 3 % in 2000 to around 11 % in 2015, and has since stabilised.

Since China joined the World Trade Organisation in December 2001, the EU's goods exports to China have grown on average by more than 10 % a year, and its services exports by more than 15 % a year. This has generated ample benefits for EU producers and consumers. However, as imports from China have also grown rapidly, it has also caused some degree of disruption to EU labour and product markets.

Currently, China is the second largest market after the US for EU exports, but EU exports to China have been outpaced by China's exports to the EU. The EU's trade deficit with China has grown to USD 220 billion.

***Figure 1.1**: EU trade with China (USD billions)*



Source: UNCTAD.

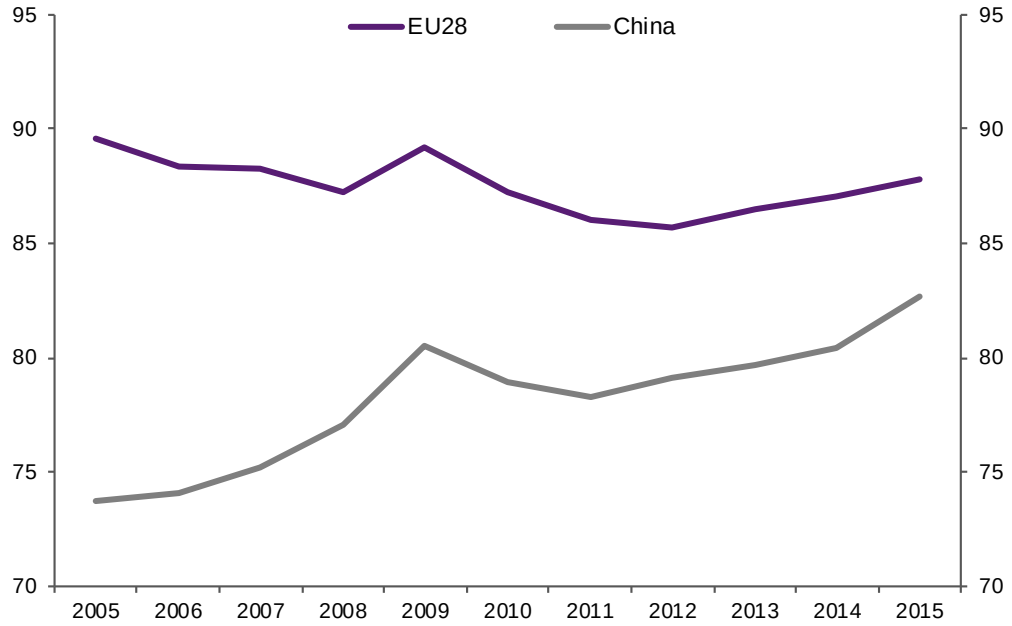
The EU's trade deficit with China is significantly lower than the US trade deficit with China, but it is still important to note that the EU deficit with China is larger than that reported by Eurostat. Comtrade statistics which offer more accurate bilateral balance information between EU member states and China show that the bilateral balances between individual EU countries and China are lower than the Eurostat data suggest.

[1] Authors: García-Herrero (Bruegel), Wolff (Bruegel), and Felbermayr (IfW Kiel).

According to Comtrade, Germany runs a USD 16 billion trade deficit with China, while the Eurostat data show a surplus for Germany.

The difference in terms of value added between EU exports to China (relatively high) and Chinese exports to EU countries (relatively low) was so large that running a bilateral trade deficit in gross terms would overestimate the situation, compared to the actual trade deficit in value added terms. More recently, however, this has been less the case as China has moved up the ladder and the value-added component of exports has increased.

Figure 1.2: Domestic value added in gross exports to world (%)



Source: OECD TiVA.

China has become much more important in the global supply chain. This has multiple implications for the EU-China trade relationship and the global economy more broadly. When it comes to the global economy, the coronavirus outbreak is an important reminder of just how central China has become to global value chains. The shutdown of parts of China, especially Hubei province, has resulted in significant disturbances to global supply chains. The changing nature of China's supply chains and China's ascent of global value chains also affects EU member states' integration with each other in terms of trade in intermediate goods. In fact, while the size of the intra-EU value chain has shrunk (countries are more loosely bound to each other in their exports of intermediate goods), EU member states have become increasingly linked to China for intermediate goods.

When China joined the WTO in December 2001, it benefitted from a reduction in the tariffs faced by its exporters, as other WTO members were required to adopt the most-favoured nation principle for China. Moreover, uncertainty about trade policy declined significantly. The WTO provides members with tools to protect themselves from unfair competition. In 2018, roughly half of the trade-defence instruments used by the EU were applied to China. In particular, anti-dumping measures were widely used and have been shown to effectively dampen trade. Their use increased significantly from the beginning of China's WTO membership until 2006; since then the number of new cases has declined. In 2019, the EU initiated only two anti-dumping cases against China, out of a total of five anti-dumping cases initiated by the EU. China has initiated far fewer cases against the EU, with fewer than two new cases per year since WTO accession. The ratio between EU and Chinese cases also reflects the trade balance between the two economies. Finally, other countries have more frequently used anti-dumping instruments against China than the EU.

In particular, India, the US and Brazil have been among the most frequent users of anti-dumping measures against China. Globally, more than 600 anti-dumping measures are in force against China, with only a fraction coming from the EU. Finally, the EU's anti-dumping measures are particularly important in base metals and the chemicals and pharmaceutical sectors (Felbermayr and Sandkamp, 2020).

In December 2017, the EU adjusted its trade-defence rules, particularly its methodology for calculating dumping margins. This is of particular relevance for the EU's trade policy stance towards China, because the EU has removed the specific provisions governing the calculation of anti-dumping duties for China and other non-market economies. Under the old rules, China was the largest target of EU anti-dumping duties and was also subject to higher duties than Europe's other trading partners. The change in rule *de facto* shifted the burden of proof from Chinese firms to the European Commission. It is now the Commission that must prove export prices are distorted for non-market economy reasons. In cases since 2017, the Commission seems to have consistently argued that prices are distorted. The new methodology has also allowed higher duties to be applied. European anti-dumping legislation reform might not significantly change how China is treated in EU anti-dumping investigations. However, it certainly requires the EU to be more transparent and to carefully explain on a case-by-case basis why Chinese exporters are treated differently from those of other countries.

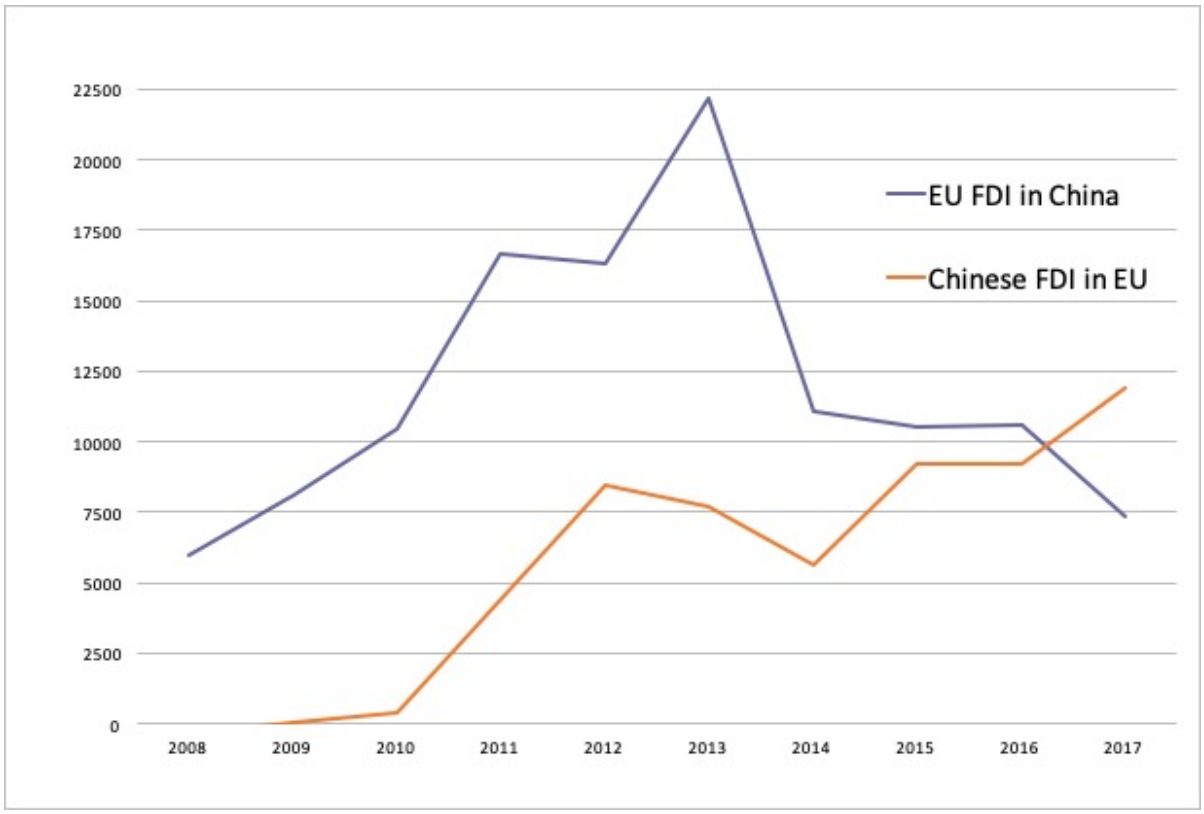
On 14 February 2020, the US-China Economic and Trade Agreement (ETA) entered into force. It may mark a turning point in the Sino-American trade war, which saw US tariffs against China increase from an average of 3.8 % at the beginning of 2018 to 21 % in the summer of 2019 (Bown, 2020). The ETA does not address tariffs at all (ETA, 2020). However, the agreement commits China to increasing its imports from the US. These targets will be difficult to meet, not least because of the growth slow-down resulting from the coronavirus crisis. Chowdhry and Felbermayr (2020) estimated how the envisaged increase in Chinese imports from the US might affect EU exports to China.

In 2021, China would import goods worth USD 193.3 billion from the US under the ETA scenario, compared to USD 130.7 billion under the no-ETA scenario. This would be an increase of 48 %, attributable to the ETA. Mechanically, imports from the EU would decline by USD 10.8 billion (from USD 202 billion to USD 191.2 billion), equal to 5 % of the undistorted benchmark. The EU's manufacturing sector, particularly aircraft and vehicles, would be hit hardest. In addition, the China-US ETA could make it difficult for China to honour its commitments to the EU regarding the protection of Geographical Indications. The EU could, however, benefit from the ETA's provisions reducing restrictions on foreign equity in China and its aim to strengthen intellectual property protection.

Foreign direct investment (FDI) flows between the EU and China are substantial but their stock is underdeveloped compared to the sizes of the two economies (Dadush *et al*, 2019). While FDI has increased as trade between the EU and China has surged, bilateral FDI flows remain small in relation to the size of both economies, and have been relatively volatile.

Nevertheless, from 2008 to 2017, the stock of EU FDI in China grew from EUR 54 billion to EUR 178 billion — an increase of 225 %. Meanwhile, the stock of Chinese FDI in the EU rose nearly tenfold, reaching EUR 59 billion in 2017. The rise of Chinese FDI should be no surprise, given China's emergence as an important economic power with a declining domestic rate of return on capital. Consequently, Chinese FDI has increased in attractiveness and volume.

***Figure 1.3**: Annual China-EU Direct Investment Flows (millions of EUR)*



Source: Eurostat.

European FDI in China has declined in recent years. European players have complained of the many obstacles faced in the Chinese environment, notably poor investor protection, highly uneven and sometimes arbitrary market access (European Union Chamber of Commerce in China 2019). A key concern has been joint venture requirements in many sectors. These have often involved transfers of intellectual property to Chinese counterparts, reducing the attractiveness of investing in Chinese operations.

China's presence in the group of major global investors has also created distinct concerns linked to its state-driven economic model. This model can create an unequal level playing field. Against this backdrop, concluding an EU-China bilateral investment treaty would be an important step to regulate cross-border investment between the two economies. The main obstacles on the EU side are the necessary reciprocity for EU companies operating in China, and ensuring that Chinese companies operating in the EU comply with existing rules and regulations and are not favoured by the Chinese government. This is especially the case for state-owned enterprises (SOEs) but could also apply to private companies (García Herrero and Xu, 2017).

Chinese companies have become major competitors of European companies as they top the Fortune 500 list, together with American companies. Furthermore, many Chinese large companies are state-owned, which poses different challenges than competing with American companies, in terms of differing governance levels and financial support. The fact that Chinese companies now operate in high value added markets — increasingly doing so in European companies' areas of strength — combined with the strong role of the Chinese state, has served to heighten European concerns about Chinese investment in EU markets.

Competition between European and Chinese companies does not only affect the Chinese and EU markets. It is also relevant in third markets.

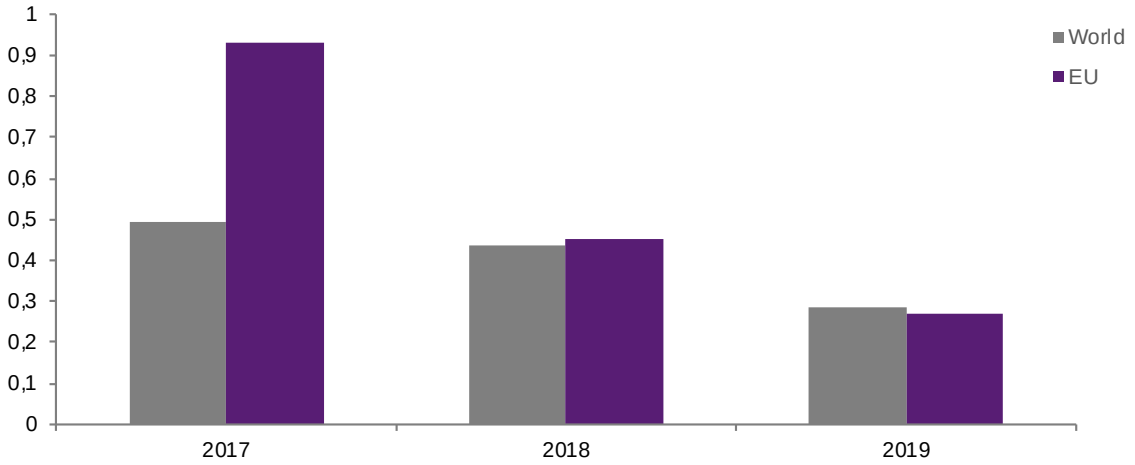
As China has become a key global actor and leading technological power, there is a general understanding in the EU that China could assume greater responsibilities for upholding the rules-based international order, as well as greater reciprocity, non-discrimination, and openness of its system. The paper 'EU-China - A strategic outlook'[2] makes it very clear that these principles should also be applied to the bilateral economic relationship.

With negotiations on a bilateral Comprehensive Investment Agreement (CIA) underway, our study describes and analyses the EU-China bilateral trade and investment relationship and also assesses which measures to ensure competitive neutrality – a concept advanced by the Chinese –should be prioritised to ensure non-discrimination against EU businesses trading with and/or investing in China. The concept of competitive neutrality aims at measuring the degree of preferential treatment of SOEs. We conclude, based on our own measurement, that SOEs are indeed treated in a preferential manner in China, in terms of a lower effective tax rate and lower interest payments for the same amount of debt.

The Belt and Road Initiative (BRI) is crucially important for China, but also for Europe because the landmass part of the project covers Eurasia and includes as many as 13 EU countries plus a good part of the EU's neighbourhood. The BRI originally focused on building transport infrastructure but has transitioned towards building soft power for China. It goes without saying that enhanced connectivity can help China strengthen its trade relationships with neighbouring regions, including with the EU. This should create trade gains for EU countries if **China does** not undermine those gains by creating a free trade area for countries covered by the BRI while excluding the EU, which could even lead to trade diversion away from the EU (García Herrero and Xu, 2016; García Herrero and Xu, 2019).

A key worry about the BRI is that it could lead to debt traps. Public debt levels of BRI countries can be ranked by their (potential) debt to China. Countries including Djibouti (debt to China 69.5 % of GDP), the Kyrgyz Republic (22.6 %), Laos (26.3 %) and Mongolia (27.8 %) are already heavily indebted to China. If all planned BRI projects are realised with the help of additional debt guaranteed by the state, these rates would increase even further: to 154.2 % for Djibouti, 92.3 % for the Kyrgyz Republic, 60.7 % for Laos and 50 % for Mongolia.

***Figure 1.4**: Perception of the BRI by the world and the EU*



Source: GDELT. Note: To evaluate the perception of the BRI, we first calculate the tone of coverage of the BRI in one specified article published in the country and aggregate it with a simple average of the sentiments at the country level. The world sentiment is the simple average of all the sampling countries, and the EU sentiment is a simple average of the sentiments of the 28 member states.

[2] https://ec.europa.eu/commission/sites/beta-political/files/communication-eu-china-a-strategic-outlook.pdf

People in EU countries and elsewhere previously regarded the BRI quite positively, but this view has deteriorated rapidly since the first BRI Summit held in Beijing in 2017 (Figure 1.4). To ease global concerns about the BRI, increasingly considered more favourable for China than for others (hub and spoke model), China has pushed towards a more multilateral mechanism, relying more strongly on the Asian Infrastructure Investment Bank. Nonetheless, the general reaction to China's evolving model is still governed by doubt and, to some extent, by mistrust. China's push to create a forum of 17 central and eastern European countries interacting with China (known as 17 + 1), rather than enhancing the discussion with EU institutions, does not help. This should be an important point of discussion for any high-level economic dialogue with EU institutions.

When exploring how EU-China relations are likely to develop, China's social credit system (SCS), to be launched during 2020, needs a closer look. The SCS is considered by the Chinese government as an essential foundation of a modern 'credit'-based mechanism to monitor and control the market (State Council of China, 2019). But there are good reasons to be deeply concerned about the SCS. Its transparency is likely to be limited, making it difficult to assess possible discrimination against foreign companies. Other major concerns include that privacy might not be respected and the separation of private and business interests might be blurred. Overall, the system could make it harder for EU companies to do business in China. On cybersecurity, China's new cybersecurity rules (implemented at the end of 2019) allow the Ministry of Public Security to access all the information, data and communications stored on networks of foreign companies operating in China, with major consequences for foreign companies operating in China, including European companies.

In summary, it is in the EU's interest to foster a positive relationship with China, with a shared objective of advancing bilateral trade and investment, but also to collaborate on global reform in areas such as climate change or the multilateral system. But the EU cannot be naïve. China's economic system is driven by a highly-invasive state. This creates multiple tensions and complications in the trade and investment relationship. China's state-driven model also makes fair competition for European companies more difficult. This creates concerns about the level playing field, not only on the Chinese and the EU markets but also on third markets where Chinese and European companies compete. Finally, a powerful Communist Party is also a major political concern for Europe. China is therefore rightly considered not only a partner and competitor but also a systemic rival.

The EU's attempt to preserve multilateralism and China's obvious economic importance should serve as a reminder that the pursuit of fruitful and balanced co-existence is the only solution for EU-China economic relations. This means that the EU should have its own China strategy, independent from the US (Leonard *et al*, 2019). In addition, EU countries should be as united as possible on EU-China economic relations so the negotiating power of the EU is not diluted (García Herrero, 2019). And investment relations are now vital for EU-China economic relations. A well-crafted bilateral investment agreement is of paramount importance for a stable and fair relationship.

2 Trade between China and the European Union[3]

2.1 Goods trade between China and Europe: an overview

The most prominent economic characteristic associated with China's rise is the massive amount of trade it does, notably exports of goods to the global market since the 2000s. The success of Chinese exports has had a significant impact on the EU. This impact has become even more significant as China has moved up the technology ladder and has started to offer more advanced goods to the EU, thus competing with EU companies.

Since the normalisation of China-EU diplomatic relations in the 1970s, China has actively strengthened its trade relationship with the EU. There was a massive increase in Chinese trade with EU countries even before China's accession to the World Trade Organisation in 2001. For example, Germany imported goods worth only USD 1.9 billion from China in 1980, but imports rapidly grew to USD 16.9 billion in the twenty subsequent years.

Figure 2.1

Exports to China (USD, bn)

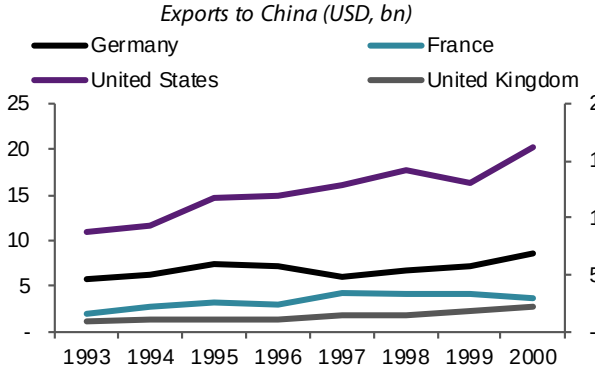
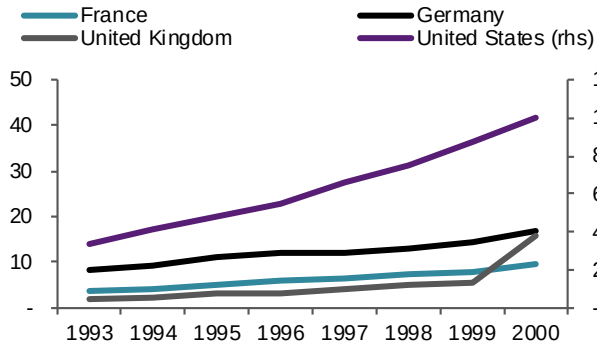


Figure 2.2

Imports from China (USD, bn)



Source: Natixis, UNComtrade

The developments in the 1990s were important, because they showed China's determination to integrate with the global economy in the late twentieth century. Although this period predated China's WTO membership, and there was a debate over whether or not to grant such a status to China, the global economic environment in the 1990s was accommodative. The EU and the US had both already given China the most-favoured nation (MFN) tariff rate, subject to annual approval.

Therefore, what WTO membership really offered China was a more certain international environment. Reduced uncertainty around tariffs made Chinese manufacturing companies more confident, enabling them to extend international cooperation and increase their exporting capacities. Since then, the EU has seen a more significant increase in Chinese goods in its domestic market share. In 2018, total EU trade (exports plus imports) with China made up nearly 15 % of the EU's total extra-EU trade.

[3] Authors: García-Herrero, Xu, and Poitiers (Bruegel).

Figure 2.3

Share of China in EU's extra-EU trade (%)

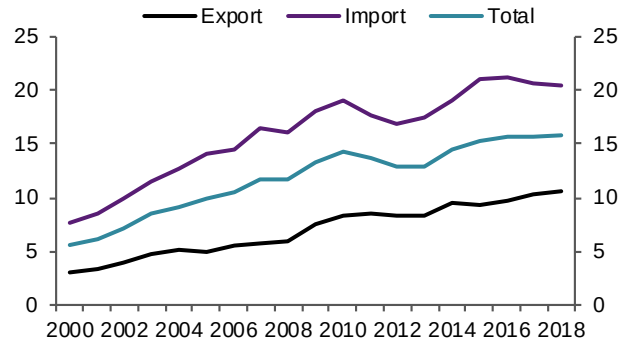
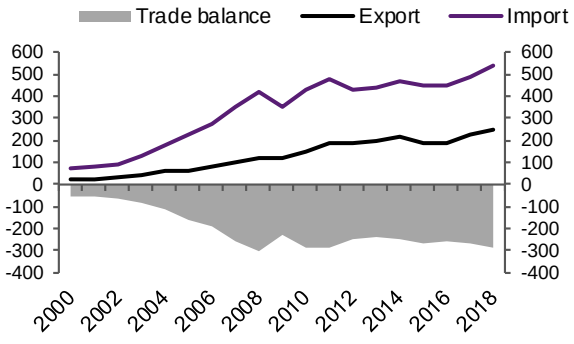


Figure 2.4

EU trade with China (USD bn)



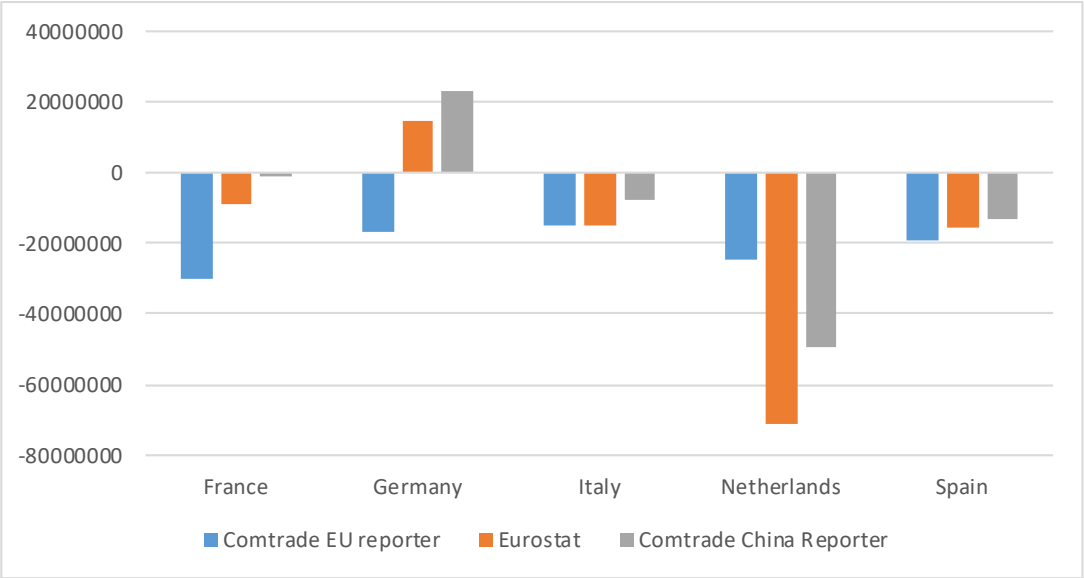
Source: UNCTAD, Natixis

2.2 The EU-China trade imbalance

An important feature of bilateral trade in the post-WTO era has been China's sustained capability to maintain a trade surplus with the EU. From 2000 to 2018, the EU's trade deficit with China increased from USD 49 billion to USD 300 billion, equivalent to roughly 2 % of EU GDP. While most economists disagree about the merits of considering bilateral trade surpluses to be a measure of the benefits of trade, this idea has gained significant political attention with the advent of the US-China trade war.

When looking at Eurostat data to break down the EU trade balance into individual countries, Germany's 20 billion trade surplus with China stands out. However, the accounting practices behind Eurostat's trade in goods data strongly distort the figures on imports from non-EU countries (mostly through the 'Rotterdam effect'). Exports from China to France and Germany are understated in Eurostat data, relative to their true values, by 40 % and 30 % respectively. This leads to a much lower apparent trade deficit for both countries in the Eurostat data than is actually the case. This is the result of prioritising the reporting of movements of goods within the EU single market. Eurostat treats any good that arrives within the EU Single Market as an import into the country of entry, even when goods are destined for another country. This allows to capture the flow of these goods within the Single Market, but distorts bilateral trade flows between EU and non-EU countries.

***Figure 2.5**: Net Exports to China by European country, in 2017, EUR 1000s*



Source: Eurostat and UN Comtrade.

Figure 2.5 shows the effect this had on five major European economies in 2017. It compares the bilateral trade deficits that the national statistical authorities report to UN Comtrade to the data reported by Eurostat and by China. Germany reports a trade deficit with China to Comtrade, but reports a trade surplus to Eurostat. Similarly, France, Italy and Spain report higher net exports to China to Eurostat than to Comtrade, and data reported by China show even higher net exports from these countries to China. The only exception is the Netherlands, which reports much lower net exports to Eurostat than in its national trade data (UN Comtrade).

The difference in the data is an effect of the difference between the country-of-origin principle and the country-of-consignment principle in trade statistics. The country-of-origin principle states that the country from which the good is shipped is classified as the origin of an import. The country-of-consignment principle states that the country from which the good was last sent should be recorded as the origin of an import. It is best practice internationally, and recommended by the United Nations, to use the country-of-origin principle (United Nations, 2011). However, the EU is interested in measuring the actual routes via which goods are shipped within the EU single market[4]. Therefore, it uses country-of-consignment for intra-EU trade, and country-of-origin for extra-EU trade.

Consequently, for example a good that is sent from China to Germany through the Netherlands is accounted for in Dutch statistics as an import from China, while in Germany it is accounted for as an import from the Netherlands[5]. Since many goods cross a third-country border at least once, this means that the Eurostat bilateral trade data for most countries (bar the Netherlands) omits large shares of imports from China. This can be seen in Table 2.1, which presents a breakdown of German imports from China, by country of entry of the goods into the EU single market. Most German imports arrive in Germany directly, but some come via other EU countries, in particular the Netherlands, which accounts for most of the discrepancy between Comtrade and Eurostat statistics (named the 'Rotterdam effect' because of Rotterdam's importance as a point of entry for goods coming into the EU).

[4] For a description and discussion of Eurostat practices, see Eurostat (2014), Eurostat (2017), and Destatis (2019).

[5] In the 'Trade by partner country and NACE Rev. 2 activity' (ext_tec03) data the import into the Netherlands is not represented as an import at all, while Germany reports the export of the Chinese goods as imports from the Netherlands. This makes this dataset highly problematic for any analysis of trade flows. The Netherlands do only present the direct imports, which leads to a vast understatement of total exports from Non-EU countries in this dataset.

***Table 2.1**: Breakdown of Germany's imports from China by country of entry into EU single market, 2017, billion EUR*

	Comtrade	Eurostat
Direct	75.78	72.43
Netherlands	15.64	
Czechia	2.77	
Belgium	1.78	
Poland	1.74	
France	1.01	
Other	4.54	
Total	103.26	72.43

Source: Eurostat and UN Comtrade.

While this treatment of imports is true to the spirit of the single market, it does not reflect the actual trade flows as most of these goods have no value added at the port of entry. Furthermore, this is only done for imports and not for exports, making calculations of net exports using this data highly problematic. It also affects the measured composition of imports, as the distribution of goods imported is not uniform across ports of entry (e.g. some ports specialise in trading commodities). Since data from aggregators such as Comtrade suffers from the varying statistical methodologies of the national data-providing agencies, it would be highly welcome if Eurostat could provide harmonised bilateral trade-flow data using the country-of-origin principle[6]. However since that is not the case, national statistics and Comtrade provide the best data on the bilateral trade balances of EU countries with China. According to national statistics, also Germany has a trade deficit with China of EUR 16.8 billion, and the French trade deficit is EUR 30 billion.

2.3 China's transformation from a world factory and its impact on Europe

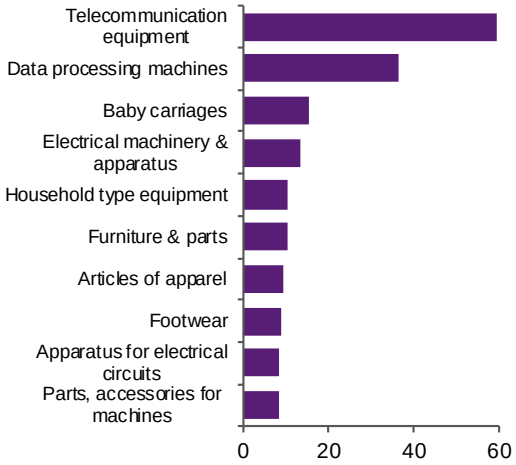
China has come to be seen as a global factory, maintaining its international market share by making full use of its lower labour costs and specialising in labour-intensive industry. However, with economic growth and the increase in Chinese household income, labour costs have risen, reducing China's comparative advantage in offering cheap labour-intensive goods to the world. China's economy is moving towards higher value added fields with higher labour costs.

This transformation can be seen in the recent emergence of several high-profile Chinese companies, including Huawei and Alibaba. By 2018, several key goods had already moved to the top of the list of Chinese exports to the EU. Domestic value added in Chinese exports has also increased significantly in the past decade, while for the EU this indicator has barely moved. This suggests that China has been at least partly successful in its transformation towards higher value-added sectors.

[6] However, as Braml & Felbermayr (2019) show, there are large asymmetries in intra-EU trade data, potentially originating from VAT fraud.

Figure 2.6

Top 10 product EU imports from China in 2018 (EUR bn)

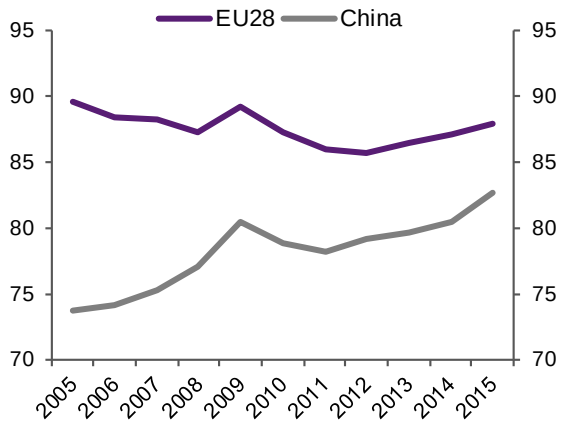


Source: Eurostat, Natixis

N.B. Product classified at SITC-3

Figure 2.7

Domestic value added in gross exports to world (%)



Source: Natixis, OECD Tiva

Moreover, China now plays a greater role in global supply chains. The share of intra-EU trade in total EU exports has decreased, whereas the share of Chinese exports has increased. This issue (analysed in detail by Garcia-Herrero and Nguyen, 2020) is particularly relevant for the EU, which has the most integrated regional value chain in the world. The question is if this remains true today and what the direction of travel is in terms of the role of China in EU trade integration. The answer is that the EU is losing ground in terms of trade integration, which is especially true for intermediate goods, or, in other words, its regional value chain. EU countries are instead becoming generally more integrated with China's value chain. The problem with this development is that such integration with China is increasingly asymmetric. In other words, China imports increasingly fewer intermediate goods from the EU, but it exports increasingly more intermediates to EU countries for their re-export. The EU depends more on Chinese inputs for its exports, while China relies less on EU goods for its exports. This should worry the EU because the EU's share of domestic value-added exports to the world is falling more rapidly than the US's and Asia's shares, and that means declining job opportunities and wealth. Moreover, the EU's closer relationship with China comes with decreasing integration of the EU's own value chain. This appears to be especially the case for the countries that are politically closer to China, such as the EU17+1 group[7].

All in all, China's transformation towards high technology goods has a variable influence on the EU. China's rapid climb up the technology ladder has led more Chinese companies to compete with EU companies. But stronger competition benefits European consumers through cheaper goods, and collaborating with Chinese companies could further improve the efficiency of the European manufacturing sector.

[7] The 17+1 group includes China and the 17 CEE countries (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, North Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia and Slovenia).

2.4 Competition on third markets

The rise of China has seen its capacity to produce a variety of goods increase, posing competitive challenges for the EU in its home market and in global markets outside the EU.

On the Russian market, China and the EU were previously more complements than substitutes, with China focusing on labour-intensive goods while the EU provided capital and skill-intensive goods. However, based on an estimation of the elasticity of substitution on the Russian market and a simulation exercise, Garcia Herrero and Xu (2017) showed that Chinese exports have become increasingly relevant substitutes for EU exports on the Russian market. This means that the recent increase in collaboration between China and Russia could have a negative impact on European exports, weakening European manufacturing companies. Moreover, the increased competition differs by product. Garcia Herrero and Xu (2017) found that electronic machinery, equipment and machinery, and nuclear reactors will be particularly affected.

The same competition pattern is also evident on the Latin American market. Before 2007, China and the EU competed less with each other, partly reflecting the fact that China was mainly exporting low-quality products. However, the elasticity of substitution has increased since 2007, reflecting China's move up the value-added chain. At the sector level, Garcia Herrero, Thibaut and Xu (2018) found that China-EU competition is fiercer in electrical machinery and road vehicles.

This evidence should be a wake-up call to Europe, as Chinese competition's impact widens. To maintain its economic strength, the EU should take Chinese competition seriously at the global level.

2.5 Services trade is small, but an important future battlefield for the EU

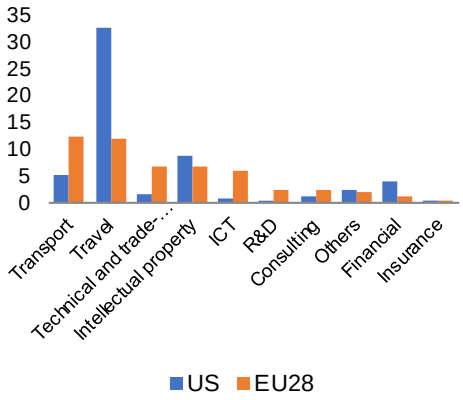
Trade in services has been through massive growth in the EU, with its share in GDP up from 9.6 % in 1991 to 24.9 % in 2018. But China's services trade has developed much more slowly, even though the services sector itself has grown rapidly in terms of both value-added and employment domestically. This leads to a very small amount of China-EU bilateral services trade. Nevertheless, despite the small scale, China is already the third largest services trading partner with the EU, though a far distant third after Switzerland and the US. The EU, meanwhile, is China's largest trading partner for services.

What makes services more important for the EU-China relationship is that, differently from trade in goods, the EU maintains a services surplus with China. In 2017, services offset 9 % of the EU's trade deficit with China. In other words, it is in services that the EU is able to gain a greater surplus from China.

Digging deeper into the surplus, we find that the EU has particularly specialised in travel and technology-related services (Figure 2.8). The former reveals the EU's comparative advantage in attracting tourists from China, but the EU still lags behind the US in this regard (Table 2.2). According to Eurostat, China contributed only 1.7 % of all nights spent in EU countries by non-resident tourists in 2016, far below the share of the Chinese population in the world and signalling the potential for the EU to increase its surplus in this field. If the EU can catch up with the US in terms of Chinese tourism, the EU's trade deficit will be further reduced.

Technology-related services are more interesting. The EU offers more technology-related services than the US to China, suggesting that the EU has been more willing to collaborate on technology with China in recent years (Table 2.3).

Figure 2.8
The US and EU's service exports to China



Source: OECD International trade in service statistics.

Table 2.2
Breakdown of the transport service export to China (2017)

Transport sector (USD billion)	Total	By modes of transport		
		Sea transport	Air transport	Other modes of transport
US to China	5	1	4	0
EU to China	12	8	3	1
in which: France	2	2	0	0
in which: Germany	3	2	1	0
in which: UK	1	/	/	/

Table 2.3
Breakdown of the travel service export to China (2017)

Travel sector (USD billion)	Total	Business	Personal			
		Business	Total	Health - related	Education-related	Other personal travel
US to China	33	/	/	/	14	/
EU to China	12	2	10	0	1	9
in which: France	4	0	4	/	/	/
in which: UK	2	/	/	/	/	/

2.6 The future of the China-EU trade relationship

China is the second most important trading partner for the EU, after the US. As such, attention needs to be paid to EU-Chinese trade relations. While bilateral trade data provided by Eurostat is distorted by the Rotterdam effect, overall the EU and its largest members have large trade deficits with China. The reality is that the EU, and in particular some EU countries (notably Germany), have long benefitted from their trade relationships with China while other EU countries have benefitted less. This is true based on whether the trade balance is positive or negative, and also in terms of the volume of trade and the value-added embedded in EU exports, compared to Chinese exports.

This trend, however, is evolving very rapidly in China's favour, in terms of trade balance and, most importantly, in terms of the value added embedded in Chinese exports to EU countries. In addition, China has become a competitor for EU exports in third markets, including Russia and Latin America, moving from complementarity to a greater degree of substitution as a consequence of China moving up the technology ladder. China has quickly started to offer goods that are traditionally within the EU's sphere of comparative advantage. This should be a wake-up call to Europe in its quest to remain competitive at the global level.

In addition, China has become increasingly central in the global value chain. This is already clearly reflected in the evolution of the intra-European supply chain. In fact, the EU's regional supply chain is shrinking while EU member states' imports of intermediate goods from China are clearly increasing. This, as well as the loss of market share on third markets in terms of exports, poses clear risks to EU exporting countries such as Germany.

3 Europe's trade policy stance towards China[8]

The EU has been an active user of trade policy over the last two decades, in particular with respect to China. This chapter summarises recent developments and is divided into three parts. The first part provides a brief overview of the trade defence instruments (TDI) applied by the EU against China. The second part puts particular focus on the most prominent TDI, namely antidumping (AD) duties. It tracks the use of this instrument by the EU over time and compares its application to that of China's other major trading partners. Finally, the third part of the chapter examines the EU's recent change in AD regulation, assessing how the amendment may influence the way AD duties affect EU imports from China.

3.1 Trade defence instruments

When China joined the WTO in December 2001, it benefitted from a reduction in the tariffs faced by its exporters, as other WTO members were required to adopt the most favoured nation principle for China[9]. More importantly, WTO accession strongly reduced trade policy uncertainty, which probably facilitated trade with China more than tariff cuts themselves (Groppo and Piermartini, 2014).

The WTO provides its members with several tools to protect themselves from unfair competition by trading partners. These are AD measures, anti-subsidy (AS) measures and safeguards (SFG). The first two instruments are designed to counteract unfair trade practices including dumping (export prices below prices charged domestically in the exporting country or – if price data is not available – production costs) and export subsidies. Safeguards are designed to temporarily protect the importer from unforeseen and significant increases in imports. This does not necessarily have to result from unfair competition but can also have structural origins, such as a strong improvement in foreign technology. The idea behind this instrument is to give domestic industry that competes against imports time to adapt.

***Table 3.1**: Use of trade defence instruments by the EU*

Measures	Objective	EU cases in force (2018)	EU cases in force against China (2018)
Antidumping (AD)	Measures against dumping (i.e. when import prices are set below prices or cost in the exporting country)	120	60
Antisubsidy (AS)	Measures to offset subsidies in exporting countries	12	6
Safeguards (SFG)	Emergency measures to temporarily limit imports to protect local industry	1	1

Note: Safeguards are employed *erga omnes*.

Source: WTO (2020), European Commission (2019a, 2019b).

Table 3.1 summarises the use of the three instruments by the EU. With 120 cases in force in 2018 (European Commission, 2019), AD duties are by far the most frequently applied TDI, compared to 12 AS measures and only one SFG. The same is true for China, which in 2018 was the target of half of all EU AD and AS measures in force[10].

The empirical literature is unanimous in showing that AD duties have strong trade-dampening effects. They reduce EU import quantities of targeted products from China by as much as 84 %(Sandkamp, 2020)

[8] Authors: Felbermayr and Sandkamp (IfW Kiel)

[9] The most-favoured nation principle implies that importers may not discriminate between different exporters. This means that the importer must charge the same import tariff for the same product, irrespective of its origin.

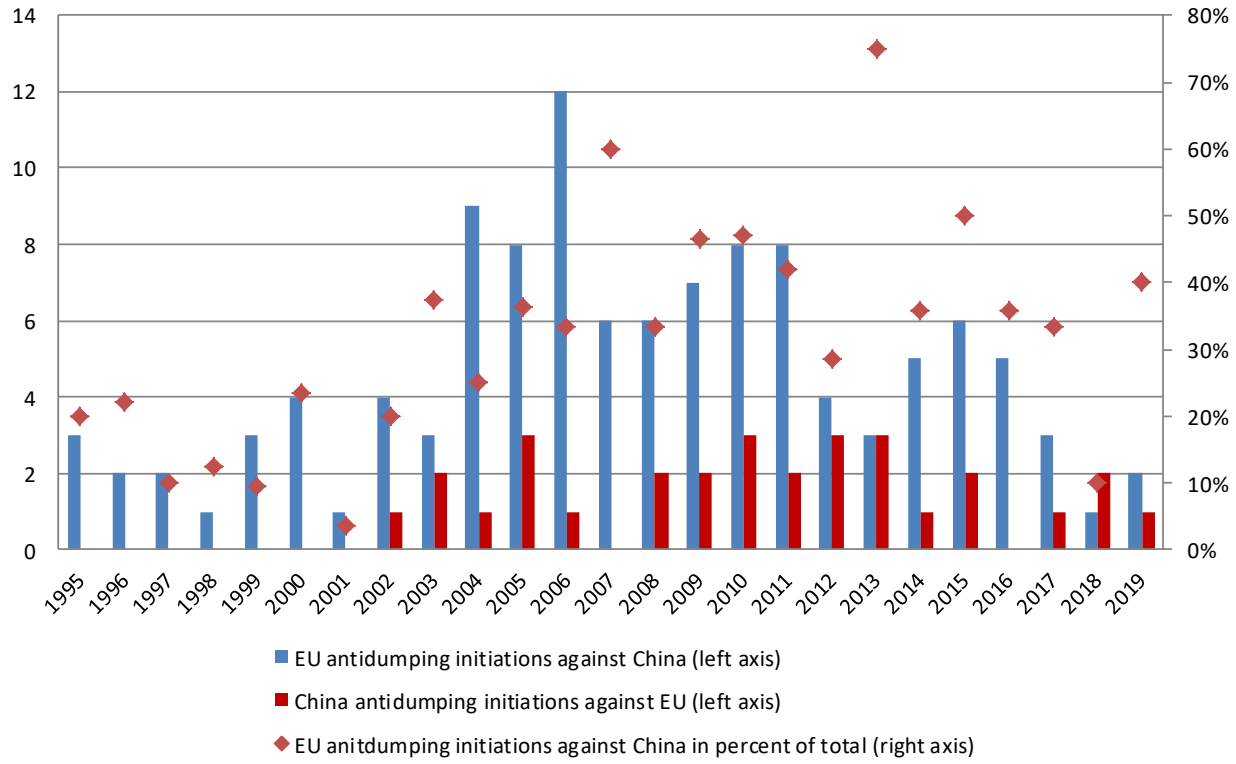
[10] The 60 AD cases against China do not count measures that have been extended to other countries as a response to circumvention.

and lead Chinese exporting firms to exit the European market (Felbermayr and Sandkamp, 2020). For these reasons, the remainder of this chapter focuses on AD duties.

3.2 EU AD duties against China

Figure 3.1 summarises EU AD measures against China over the past 25 years. The number of AD cases initiated against China has increased significantly since the country joined the WTO in 2001. This development peaked in 2006, which saw 12 EU AD cases initiated against China. Since then, the number of new cases initiated has declined from an average of 6.4 per year in the decade from 2001 to 2010 to an average of 4.1 from 2001 to 2019. In 2019, only two new cases were initiated.

***Figure 3.1**: EU AD initiations against China and Chinese AD initiations against the EU*



Source: Data from WTO (2020), own calculations.

This observed decline in the number of AD cases initiated does not, however, indicate a more liberal EU policy stance towards China. Instead, it reflects a decline in overall EU AD activity. The number of total EU AD cases initiated against all countries has roughly halved from an average of 21 per year from 2001 to 2010 to 11 in the years from 2011 to 2019. Relative to this declining trend, the share of EU AD cases initiated against China has even increased. While around 34 % of all EU AD cases launched by the EU targeted China between 2001 and 2010, this share slightly increased to 39 % in the period from 2011 to 2019, reaching 40 % in 2019 (Figure 3.1).

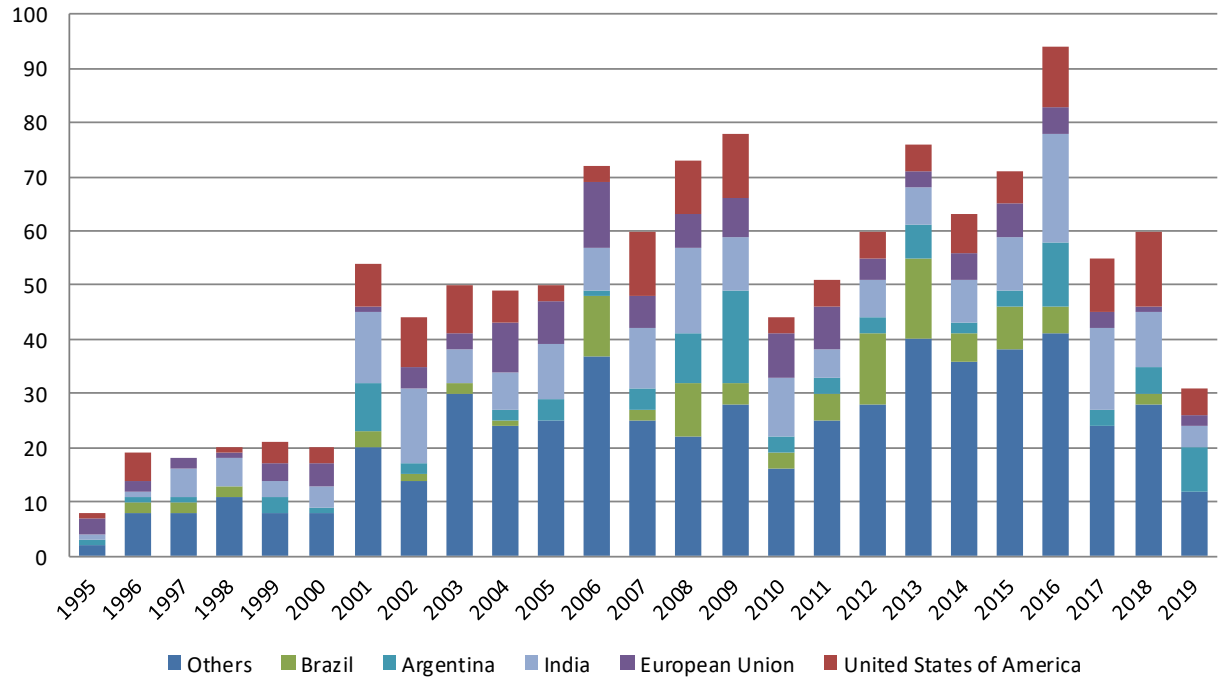
China, meanwhile, has been relatively modest in its use of AD. China first used this instrument against the EU in 2002, one year after China's accession to the WTO. With around 1.7 cases annually between 2002 and 2010 and 1 in 2019, the number of cases started against the EU has remained very stable over time.

The ratio between EU and Chinese cases reflects the trade balance between the two economies. Given that EU imports from China in 2019 were worth about twice as much as Chinese imports from the EU (Eurostat, 2020), it is not surprising to see twice as many EU AD cases started against China, compared to Chinese AD initiations against the EU. More generally, the ratio of bilateral EU-Chinese imports to exports declined

from 2.8 on average between 2002 and 2010 to slightly below 2 between 2011 and 2018. Over the same period, the ratio of initiated EU AD cases to initiated Chinese cases fell from 4.8 to 2.5.

Figure 3.2 compares the number of EU AD cases initiated against China each year with those initiated by other heavy users of AD. The EU has declined in importance relative to other AD-imposing countries. With an average of 9.6 cases initiated against China per year from 2011 to 2019, India is by far the heaviest user, followed by the US (7.6), Brazil (5.9) and Argentina (5). Other countries have gained in relative importance since the 1990s, indicating that the use of AD has spread over the past 20 years.

***Figure 3.2**: Global AD cases initiated against China: Top 5 imposing countries*

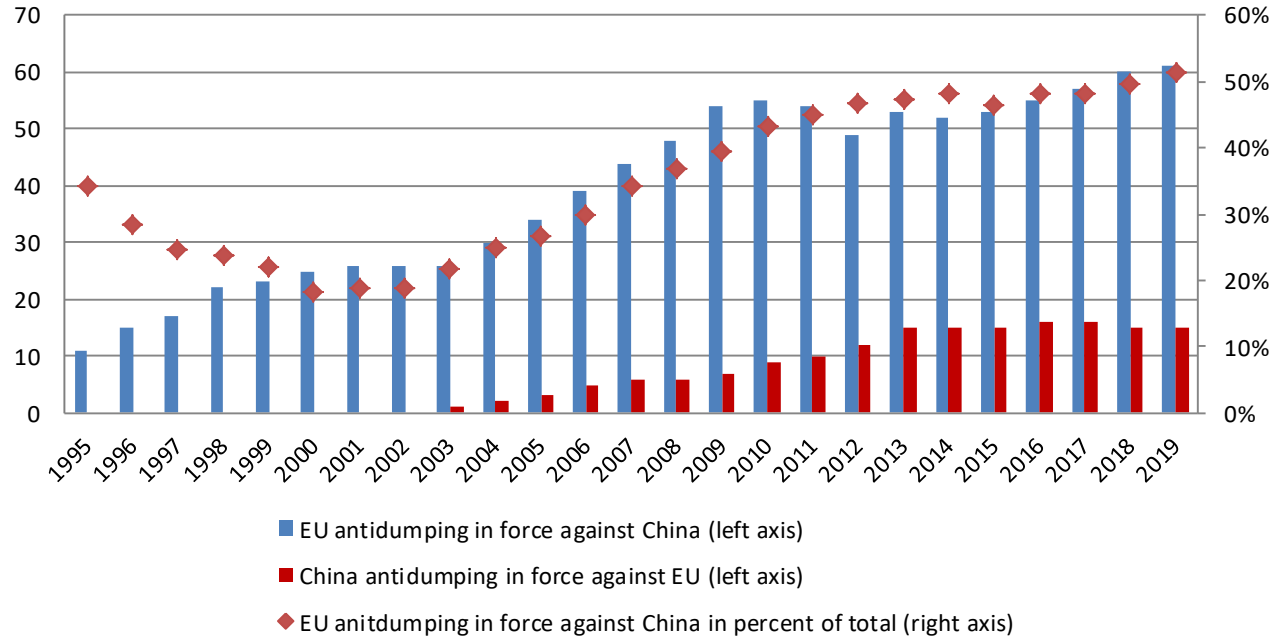


Source: Data from WTO (2020).

3.3 AD duties in force against China

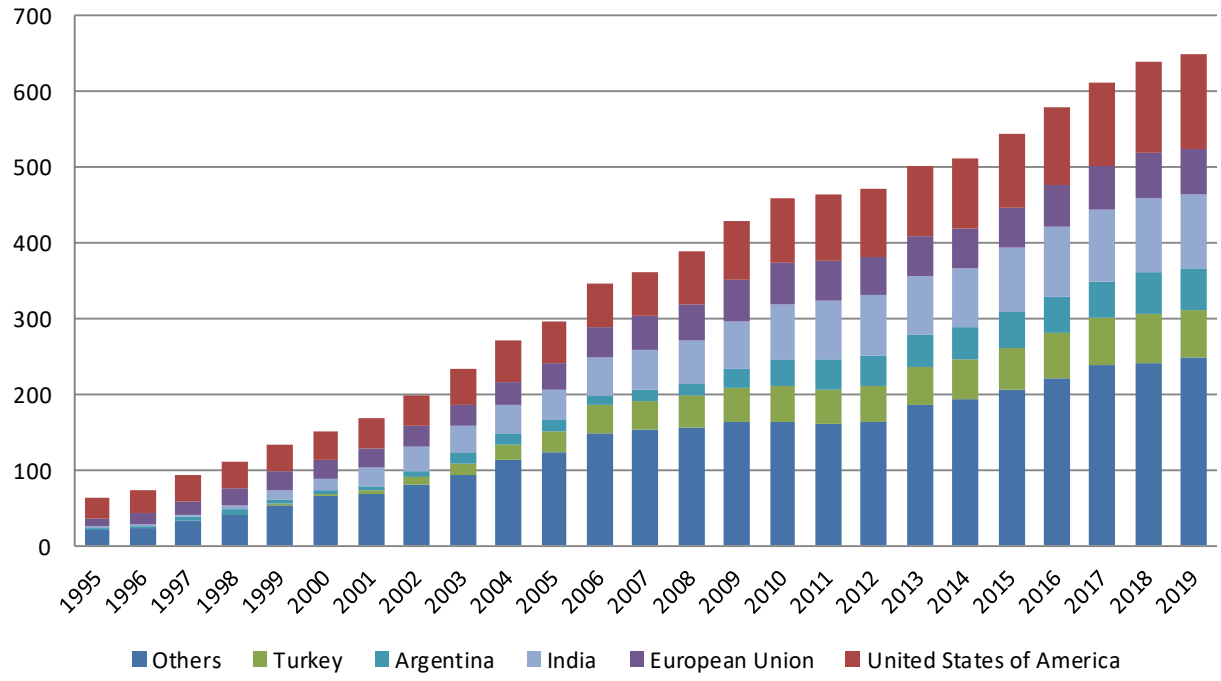
Figure 3.3 shows the number of EU AD measures in force against China. The graph shows an increase in EU AD measures – both absolute and relative to the total of EU AD duties in force against all countries – between 2003 (26 cases) and 2010 (55 cases). This growth has since slowed, with 61 cases being in force in 2019. This represents 51 % of all EU AD duties in force.

***Figure 3.3**: EU AD measures in force against China and Chinese AD measures in force against the EU*



Source: Data from WTO (2020), own calculations.

***Figure 3.4**: Global AD measures in force against China: Top 5 imposing countries*



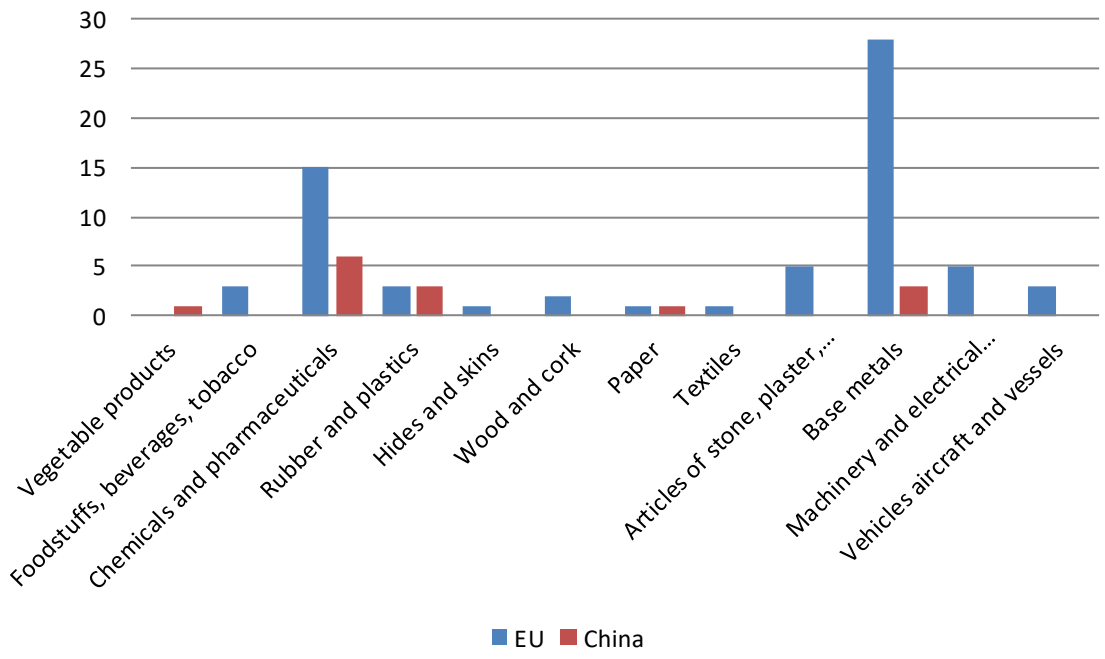
Source: Data from WTO (2020).

Despite the recent decrease in the number of newly-initiated AD measures against China, illustrated in Figure 3.1, the overall level of protection in the EU has remained relatively constant. The same is true for the number of Chinese AD measures in force against the EU (Figure 3.3). After an increase between 2003 (1 case in force) and 2013 (15 cases), AD measures in force have remained relatively stable (15 measures in 2019)[11].

Figure 3.4 compares the number of EU AD measures in force against China with those imposed by the rest of the world. The EU was the third largest user of AD in 2019, behind only the US (124) and India (97). Turkey (63) and Argentina (56) rank fourth and fifth. With 52 measures in force in 2019, Brazil dropped to sixth place. Overall, 638 AD measures were in force against China in 2019, constituting around 33 % of all AD measures in force worldwide in that year. China thus continues to be by far the world largest target for AD duties.

One interesting fact is that India has initiated more cases against China than the US, both in the last decade (97 since 2010; number of cases initiated by the US was 71) and since 1995 (211 Indian cases compared to 157 cases initiated by the US). Nevertheless, the US had more cases in force against China in 2019 (124) than India (97). This indicates potential differences in both the share of investigations that end with a final duty being imposed and the average duration of an AD measure. Looking at the number of cases initiated alone, therefore, does not paint a full picture of the degree of protectionism in a country's trade policy.

***Figure 3.5**: EU AD measures in force against China and Chinese AD measures in force against the EU, by sector in 2019*



Source: Data from WTO (2020).

The use of AD measures varies greatly by economic sector. Figure 3.5 shows that most EU AD measures are imposed in the metals sector (28 cases in force in 2019), followed by the chemical and pharmaceutical sector (15 cases), and machinery and electrical equipment (5 cases)[12]. Chinese AD measures against the EU

[11] Note that Figure 3.1 shows one AD measure initiated in 2002, while Figure 3.3 indicates that no AD duties were in force in that same year. There are two reasons for such discrepancies. First, it takes around a year for an initiated AD case to enter into force. Second, not all AD measures initiated ever enter into force.

[12] The sum of measures by sector does not equal the aggregate reported in Figure 3.3 because cases may involve products from more than one sector.

also focus on chemicals and pharmaceuticals (6 cases in force in 2019) and metals (3 cases), but additionally on rubber and plastics (3 cases).

3.4 The EU's new antidumping methodology

In December 2017, the EU adjusted its trade defence rules, particularly its methodology for calculating dumping margins (European Commission 2017, European Parliament 2017). This is of particular relevance for the EU's trade policy stance towards China, because the EU removed the specific provisions governing the calculations of antidumping duties for China and other non-market economies [13].

A detailed discussion of the difference between market economy status (MES) and non-market economy status (NMES) is beyond the scope of this chapter. Further information on this is available in Felbermayr *et al* (2016, 2017) or Puccio (2015). To summarise briefly: the way dumping margins are calculated depends on whether the EU considers the exporter to have MES or NMES (European Parliament, 2016). For exporters in MES countries, the dumping margin equals the difference between the price charged in the EU (net of transport costs) and the price charged in the domestic market of the exporter (or, if price data is not available, the production cost).

In the case of NMES exporters, it is assumed that domestic prices in the exporting country are not established under free market conditions, meaning prices of intermediate inputs are distorted. Domestic prices in the exporting country therefore do not reflect undistorted production costs. The dumping margin is thus calculated as the difference between the price charged in the EU and 'normal value', which in this case is the undistorted price of the product in a third country with market economy status.

The above procedure typically leads to higher dumping margins and consequently higher duties. Until 2017, China was generally treated as a non-market economy. However, individual firms could apply to be treated as if they were situated in a market economy, if they could prove that market economy conditions prevailed for them.

As a result, China is not only the largest target of EU AD duties but also subject to higher duties than Europe's other trading partners. Felbermayr *et al* (2016) showed that, with an average of 44 %, EU *ad-valorem* duties in force against China in 2014 were larger than those imposed against other countries (38 %). They are, however, much smaller than those imposed by the other heavy users: the US (142 % against China, 84 % against all other countries) and India (80 % and 70 %).

Felbermayr and Sandkamp (2020) showed that average EU duties imposed on Chinese exporting firms with so-called market economy treatment are only half those imposed on firms that must pay the NMES duty. Driven by such differences in average duties, Sandkamp (2020) concluded that EU AD duties imposed on countries with NMES reduce import quantities by almost 85 %, while the trade-destroying effect of duties imposed on countries with MES is only about 68 %. To sum up, EU decisions on whether or not to grant an exporter MES have significantly affected the extent to which AD duties have reduced trade in the past.

The new EU methodology introduced in 2017 has abandoned the concept of non-market economy status so that imports from China are not – by default – treated differently in antidumping investigations compared to imports from countries that were formerly classified as having MES. However, the new methodology has introduced the concept of price and cost distortions. Specifically, Article 1 (1) of regulation 2017/2321 (European Parliament, 2017) reads:

[13] Other countries treated as non-market economies by the EU are Albania, Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Mongolia, North Korea, Tajikistan, Turkmenistan, Uzbekistan and Vietnam (Felbermayr *et al*, 2016).

'In case it is determined […] that it is not appropriate to use domestic prices and costs in the exporting country due to the existence in that country of significant distortions […], the normal value shall be constructed exclusively on the basis of costs of production and sale reflecting undistorted prices or benchmarks.'

***Table 3.2**: Comparison of old and new AD methodologies*

	Old Methodology Regulation (EU) 2016/1036	**New Methodology Regulation (EU) 2017/2321**
MES / NME treatment	Countries treated differently according to MES, China treated as NME by default (analogue prices used to calculate dumping margin)	For all WTO members, domestic prices or costs used to calculate dumping margin by default
Burden of proof	Chinese firms need to prove that they act in a market economy environment to receive MET*	The EU Commission has to prove that 1) 'significant distortions' exist and that they 2) affect price formation mechanisms before being able to apply constructed normal values
Basis of decision-making	No formal reports but decision of NME status or MES taken at country level	Decision on whether distortions exist based on country and / or sector report; if distortions exist, each factor of production is examined individually
Normal value construction	Constructed normal value based on market economy third country ('analogue country')	Constructed normal value based on undistorted international prices, costs or benchmarks, or production costs in representative country (third country chosen based on similar level of economic development)
Mixed normal value	In case of NMEs, constructed normal value based entirely on prices and costs in third country	Only distorted factors of production may be substituted to construct mixed normal value

Source: Table from Felbermayr *et al* (2017). * MET: Market economy treatment.

These distortions are similar to those that have previously characterised NMEs and include (among others) state presence in firms, distorted wages and preferential access to finance for certain companies. In the presence of such distortions, the way antidumping duties are calculated resembles the old NMES methodology[14].

The main difference between the old and the new methodologies is the shift in the burden of proof. Under the old methodology, China was treated as a NME by default and normal value was constructed using third-country prices. Under the new methodology, the European Commission must prove that significant

[14] One difference is that social and environment standards shall be considered in the appropriate choice of a third country when constructing normal value (European Commission, 2019, 2019a).

distortions exist in order to be able to base the construction of normal value on third-country prices. This decision is based on country reports evaluating individual sectors and factors of production. Table 3.2 summarises the main components of the old and the new methodologies.

It remains to be seen how exactly the European Commission will treat Chinese exports in the future. The first country report on China was published in December 2017 (European Commission, 2017a). The document suggests the continued presence of distortions in factors of production such as energy, where *'normal market considerations do not prevail'* (European Commission, 2017a, page 234), and the corporate credit system, which is *'affected by significant distortions'* (European Commission, 2017a, page 261).

Consequently *'overarching control of the government prevents free market forces from prevailing in the steel sector'* (European Commission, 2017a, page 376), '*extensive intervention of the government in the aluminium sector has led to overcapacity'* (European Commission, 2017a, page 398) and company decisions in the chemical sectors are '*no longer genuinely market-driven'* (European Commission, 2017a, page 435). The report therefore suggests that normal value will – in most cases – continue to be determined using third-country prices, leading to higher average AD duties.

In addition to the above adjustment to its AD regulation, the EU has also changed the way injury margins are calculated (European Commission, 2019, 2019a). The injury margin reflects the extent to which the price charged by a foreign exporter to the EU is below the one charged by domestic EU companies. As the aim of EU AD regulation is to protect domestic industry from unfair competition, rather than just to stop foreign firms from exporting to the EU, the AD duty equals either the dumping or the injury margin, whichever is lower ('lesser duty rule', European Parliament, 2016).

In most AD cases investigated by the EU, the injury margin was below the dumping margin, leading to duties lower than they would be if only the dumping margin was used[15]. This is one reason why EU duties imposed against China used to be lower than those imposed by the US (Felbermayr *et al*, 2016). In the revised regulation, the calculation of the injury margin was updated and now includes a minimum profit of 6 %. It should also reflect investment and R&D expenditure. These measures are likely to increase injury margins and hence duties.

3.5 Conclusion

Overall, the EU and China have both been active users of trade policy over the past two decades. Although the EU is a heavier user of AD duties than China in absolute terms, this difference may partly be explained by larger EU imports from China. Nevertheless, China remains by far the most frequent target of EU antidumping investigations and these are concentrated on a few economic sectors. The recent change to European AD legislation might not significantly change the way China is treated in EU AD investigations in practice. However, it certainly requires the EU to be more transparent and to carefully explain on a case-by-case basis why Chinese exporters are treated differently from other countries.

[15] The dumping margin is calculated as the difference between the export price and the 'fair' price. The injury margin is the margin adequate to remove the injury to EU industry. It is calculated by comparing an exporting producer's export price with the non-injurious price charged by EU industry. The latter consists of the EU industry's cost of production plus a reasonable profit margin.

4 China-European Union Investment[16]

4.1 China-EU direct investment: Moving towards balanced flows

Growth opportunities in China and the sheer size of its population, and thus its potential market, attract European foreign direct investment (FDI). European companies have entered the Chinese market in various ways depending on the sector and company. In most cases investment has been either greenfield (without acquisition of local companies) or in the form of joint ventures. Previously, most European FDI into China focused on China's manufacturing sector, with the aim of using China as a platform for re-exports and to obtain efficiency gains from China's low-wage – but still relatively productive – labour force. China's rapidly improved infrastructure and transportation – especially port efficiency – have made China an increasingly appealing destination for European companies. This is even more the case since China joined the World Trade Organisation (WTO) in 2001. As soon as 2005, exports from China contributed by foreign-owned companies reached nearly 60%, outweighing the share contributed by the contentious state-owned enterprises (only 20%).

Although China's lower *per-capita* income, and thus Chinese household purchasing power, continued to increase rapidly, however, European Union companies have only recently become increasingly interested in producing in China for the local market. The EU has always shown a greater interest than the US in investing in China, which might be explained by the EU's greater role in global value chains than the US. The EU's accumulated FDI inflow into China was USD 7.17 billion in 2017, three times greater than US accumulated FDI (Figure 4.1).

Figure 4.1
FDI inflow to Mainland China
by source country (USD, bn)

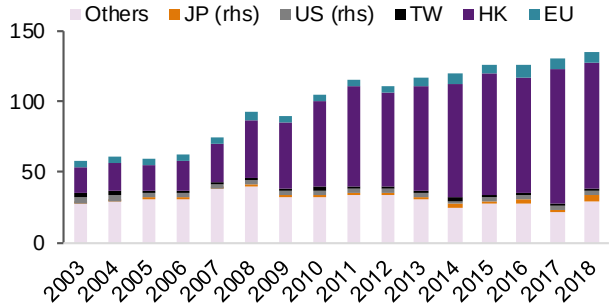
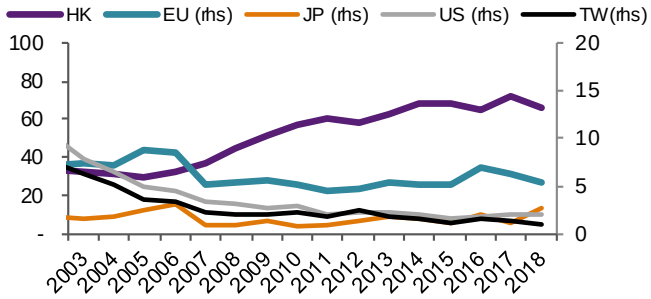


Figure 4.2
FDI inflow into Mainland China
by source country (%)



Source: WIND, Natixis

Yet, there have been concerns, especially in the media, as to whether the seemingly one-way capital flow, characteristic of the ambitious European companies entering the Chinese market, is gradually fading. The most notable example of a retreat from China is Carrefour's sale of its operations in China to Suning, a Chinese local retailer, in 2019. It also echoes the decline of EUFDI into China from USD 8.8 billion in 2016 to USD 7.2 billion in 2018. The reduction in EU FDI into China looks all the more worrying given China's still rapidly growing economy and the sheer size of its market.

However, the situation may not be as bad as it looks on the surface. First, total FDI into China has continued to increase. Most of the decline in EU and US direct investment has been offset by the rise of FDI into mainland China from Hong Kong. As an investment hub, Hong Kong has always played a major role in channelling capital flows into and out of China (Figure 4.2). Two possible explanations come to mind for recent growth in Hong Kong FDI. First, foreign investors are redirecting more of their FDI into Hong Kong as a conduit to the mainland. Second, Chinese investment re-enters the mainland through Hong Kong

[16] Authors: García-Herrero (Bruegel), Xu (Bruegel), Sandkamp (IfW Kiel).

(so called 'round-tripping') for tax or other reasons. Because of the uncertain global environment in the past few years and stringent capital controls, more and more multinational corporations now move their investments through offshore centres, with Hong Kong a natural choice for entry into China. Direct investment into Hong Kong originating from the EU increased from EUR 1.4 billion in 2011 to EUR 19.8 billion in 2017. Second, compared to other world regions, the EU's share of FDI into China has been largely stable. This shows that EU companies remain interested in the Chinese market, notwithstanding that more of them might be rerouting their investments via Hong Kong. Finally, the fact that the return on assets is decreasing very rapidly in China is another powerful reason why European companies are no longer as interested in the Chinese market.

Moving beyond the scale of EU FDI into China to its components, it is important to note that most of the EU's investment into China concentrates on the manufacturing sector. A much smaller chunk is devoted to China's services sector. From 2010 to 2017, nearly half of the EU's direct investment into China went to manufacturing, according to EU official statistics (Eurostat, Figure 4.3). Within manufacturing, the lion's share of investment has gone to motor vehicles (Figure 4.4). The situation for services is different. EU FDI into services in China is less than half of the global average and is practically non-existent in real estate, an otherwise highly relevant sector for China. (Figures 4.5 and 4.6). The EU's relatively small presence in the services sector poses additional challenges for European companies as China continues to rebalance its economy away from manufacturing towards consumption and services.

Figure 4.3:
Sectoral distribution of the inward FDI for China (%)

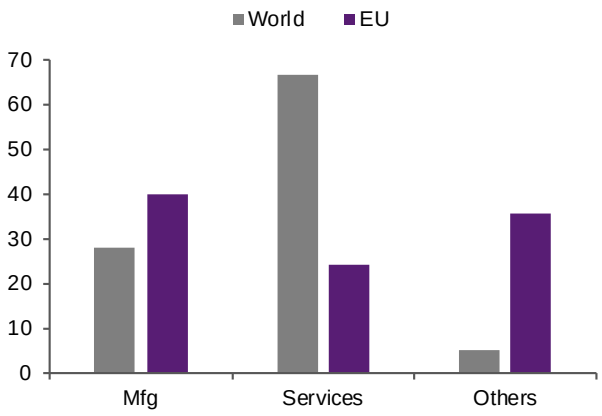
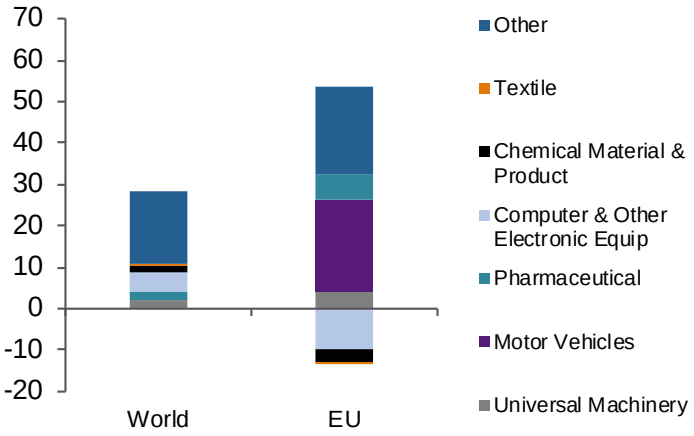
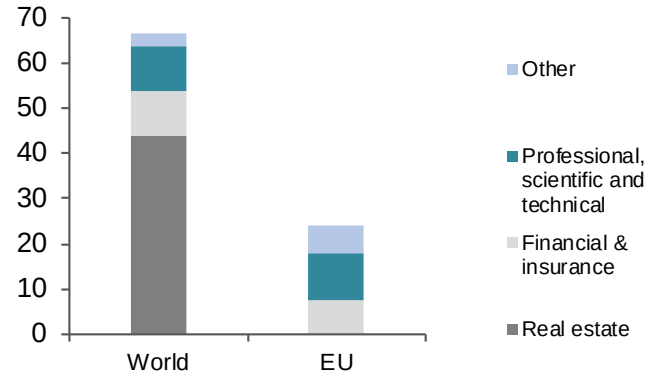


Figure 4.4:
Breakdown of manufacturing sector (%)



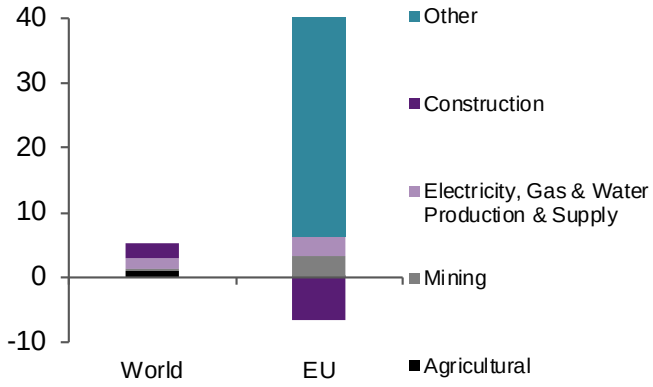
Source: Natixis, CEIC, Eurostat

Figure 4.5:
Breakdown of service sector (%)



Source: Natixis, CEIC, Eurostat

Figure 4.6:
Breakdown of other sectors (%)



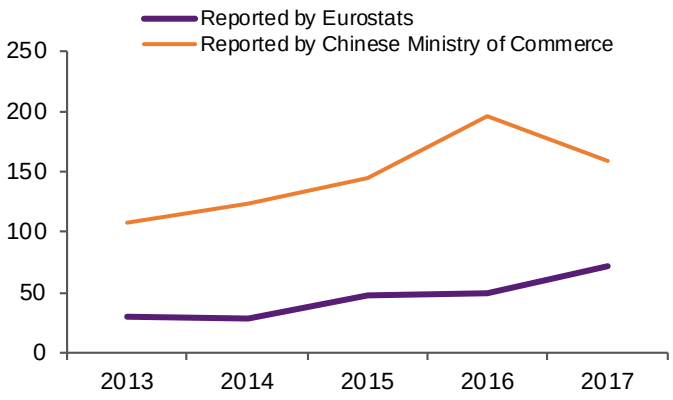
Source: Natixis, CEIC, Eurostat

One important factor when discussing EU FDI into China is the increasingly negative mood of European companies operating on the Chinese market. There are a number of reasons for this trend. First, there is a lack of equal treatment relative to state-owned enterprises in most sectors (see chapter 9). In this respect, the European Union Chamber of Commerce, in its 2018 China position paper, raised 14 key concerns, including access to licenses, complex and lengthy administrative procedures, intellectual property protection, lack of transparency and unclear regulation (European Union Chamber of Commerce, 2018).

In addition, the Chinese market has become increasingly competitive, given the growing size of domestic players. Some of these firms tend to have a dominant position in their markets and, in some cases, have grown enough to become global players, thanks to a wave of acquisitions of foreign companies. According to China's Ministry of Commerce, China's outward FDI increased from USD 21 billion in 2006 to USD 158 billion in 2017. Approximately 20 % of this investment goes to the EU and the UK, once offshore centres, including Hong Kong, the Cayman Islands and the British Virgin Islands, are excluded as destinations. Though the absolute values reported by the EU (Eurostat) are much lower than those in the Chinese statistics[17], the trend of rapid growth is nonetheless glaring (Figures 4.7 and 4.8).

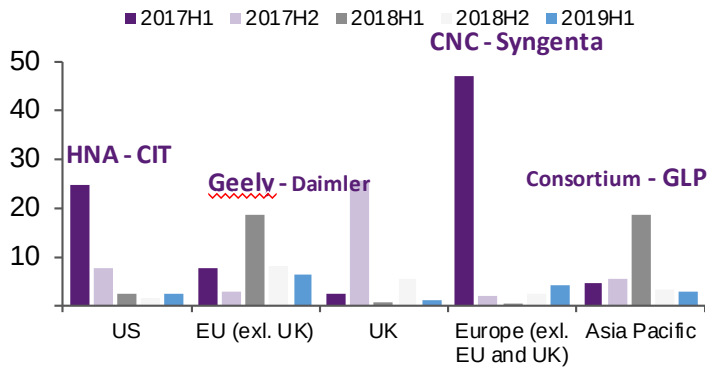
[17] The statistical discrepancy shows that calculation of direct investment is difficult because of incomplete reporting and the rerouting of investment.

Figure 4.7:
China's direct investment in the EU
(USD bn)



Source: Natixis, Eurostat

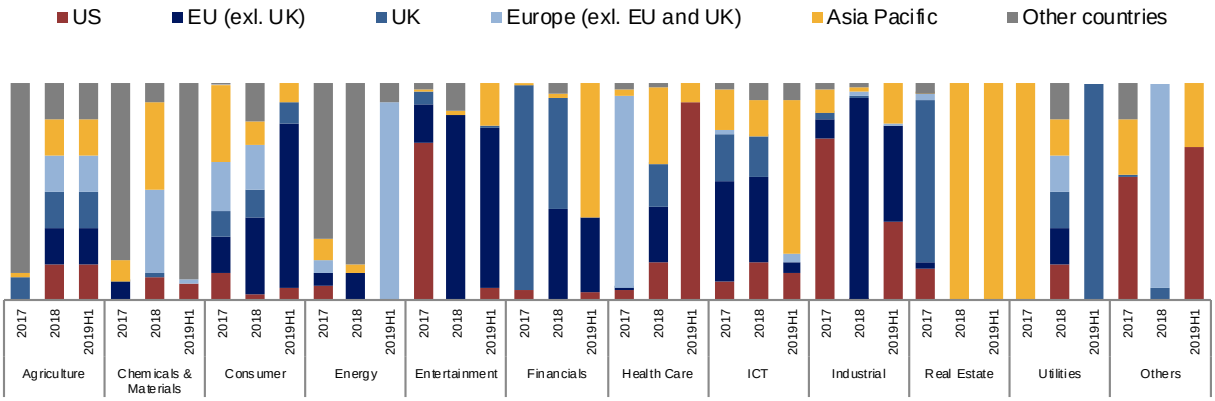
Figure 4.8:
Destination of the overseas completed M&A
Deal value: 2017H1 to 2019H1 (USD bn)



Source: Mergermarket, AEI, Natixis

The rapid – and massive – wave of acquisition of foreign companies by China has become increasingly concerning for EU countries because Chinese companies are becoming major competitors, not only on the Chinese market, but globally. This is especially the case in Europe, where China's focus of acquisitions has switched from trophy investment in hospitality and commercial real estate to technology. Since 2017, a large chunk of Chinese corporates' acquisitions in the EU have been in the industrial and ICT sectors (Figure 9).

Figure 4.9:
Regional and sectoral distribution of China's overseas M&As
By deal value



Source: Natixis

There are a number of reasons for the wave of acquisitions by Chinese companies. First, the Chinese economy has been slowing for years and the trend is expected to continue as China ages and the urbanisation process comes to an end. Furthermore, return on assets in the Chinese market continues to decline to levels comparable to the developed world, if not lower (around 1 % according to IMF estimates in 2017). Another important incentive for Chinese companies to acquire overseas companies is the government push to upgrade China's industry on the basis of plans such as *Made in China 2025*.

Government funds have been put at companies' disposal enabling them to upgrade key sectors, such as the semiconductor industry, through acquisitions of companies abroad (Garcia Herrero and Ng, 2019).

All in all, although the backdrop of increasing Chinese investment in the EU might appear concerning for European policy makers as it targets high technology sectors (such as ICT), China-EU FDI has become more balanced, which is also the case for US-Europe FDI. However, the EU's investment in China is more broad-based, in terms of sector coverage, than China's investment in the EU. This is less the case for the EU-US investment relationship. The challenge brought by Chinese investment in the EU is complicated by China's economic model, which remains centred on public ownership and active government participation in the production of goods and services. The barriers are even greater for the services sector.

4.2 What to take from the EU-China bilateral investment agreement negotiations?

The EU and China began negotiating a bilateral investment agreement (BIT) in November 2013, following the steps taken by the Obama administration to negotiate a BIT between the US and China. However, the US negotiations came to a sudden halt with the beginning of President Trump's term. Since then, the EU-China negotiations have continued. There are good reasons for both parties to engage in such negotiations. For the EU, investment is an EU-level competence since the Lisbon Treaty, but BITs with China have so far been concluded at national level by all EU countries but one. For China, the bulk of outward FDI into the EU is large enough for the Chinese authorities to be eager to seek better protection. This is all the more so as the EU remains more open to Chinese acquisitions than any other developed region (including the US, Japan and Korea). The US-China trade war adds another layer of complication. It has not only brought about short-term trade tensions but has also embodied persistent strategic competition. That makes strengthened cooperation with China a practical choice for the EU, notwithstanding that the US is clearly watching Europe and making it increasingly costly for Europe to move away from its historical anchor. However, given China's growth momentum and sheer size of its market, in the medium term opportunities for the EU should be greater in China than in than the US, based on the very important assumption that China truly opens up to foreign competition. In other words, were China to grant true market access to foreign companies, the benefits for Europe of remaining neutral between the US and China may skyrocket.

Notwithstanding the interests of both sides, the path towards the conclusion of an EU-China BIT remains difficult. The EU and China defined the scope of the agreement in early 2016. In summer 2018, China submitted a negotiation offer. However, according to the European Commission, this offer essentially consisted of international commitments the country had already entered into, for example under the WTO's General Agreement on Trade in Services. Up to the 26th round of negotiations in January 2020, no major progress seems to have been made. Still, the pressure for a positive outcome is very high and the two parties have agreed to conclude the negotiations by the end of 2020, with a view to the agreement being signed at the EU-China summit in Leipzig in September 2020.

A number of thorny issues for both sides make the agreement difficult. In the past, BITs negotiated by EU countries focused primarily on investment protection and dispute settlement, but this issue is still to be agreed as part of the scope of the EU-wide BIT with China. The EU has proposed an investment court system in line with the EU's more recent trade and investment agreements, such as the trade agreement with Canada and investment agreements with Singapore and Vietnam. Another option would be the investor-state dispute settlement system (ISDS) which seems to be favoured internationally. But this would need to be revised so that governments (either China or EU governments) do not fall prey to companies suing them without clear justification. Furthermore, in the Chinese case, the very close links between corporations and the Chinese government (especially when operating abroad) could make ISDS a double-edged sword for the EU, as the Chinese government can also use it to sue European companies. In addition, the

implementation of the ISDS might be difficult in China, where experience with investor-state arbitration is rather limited and there is a very low probability that the Chinese government will enforce foreign court decisions (US-China Economic and Security Review Commission, 2016). It is hard to tell to what extent China will comprise on this issue, which remains open.

Beyond this pending issue, the main obstacle appears to be market access, which is restricted for EU investors in China. To successfully address the EU's concerns, improving market access would involve much more than opening up certain sectors in China to foreign competition. Equal treatment in that market must also be included, as set out in the European Commission's position on China (European Commission, 2019b), which challenges China's state-led economic model. Furthermore, the concerns the EU and its members have about the role of SOEs go beyond China's market, encompassing the European single market and global competition (see chapter 9).

5 The EU's China trade policy in the broader context[18]

The EU-China trade and investment relationship depends on a plethora of factors, several of which are outside the EU's direct control. This chapter discusses three Chinese policies and their effect on China's relationship with Europe. Specifically, the chapter looks into the recent US-China trade deal and its consequences for the EU, the effects of China's BRI on the debt levels of involved countries and potential repercussions for the EU, and the relationship between China and Russia.

5.1 The US-China trade deal

On 14 February 2020, the US-China Economic and Trade Agreement (ETA) entered into force, potentially marking a turning point in the Sino-American trade war which saw US tariffs against China increase from an average of 3.8 % at the beginning of 2018 to 21 % in the summer of 2019 (Bown, 2020). Over the same period, Chinese tariffs against the US rose from an average of 8.3 % to 21 %. This subsection investigates to what extent the ETA might have repercussions for the EU's trade relationship with China.

Most notably, the ETA does not discuss tariffs at all (ETA, 2020). However, the agreement commits China to increase its imports from the US. Chapter 6 of the ETA lists specific targets for 18 types of goods and five types of services for which China must increase its imports from the US by specific quantities. Overall, the ETA commits China to increase its imports of US goods and services in 2020 (relative to 2017) by almost USD 77 billion. In 2021, the increase will be about USD 123 billion[19].

For goods only, the planned increase amounts to USD 63.9 billion and USD 98.2 billion in 2020 and 2021 respectively. This would constitute an increase of 67 % (103 %) in 2020 (2021) relative to 2017[20]. Most of the increase is planned to take place in the manufacturing sector (USD 32.9 billion in 2020 and USD 44.8 billion in 2021), followed by energy (USD 18.5 billion in 2020 and USD 33.9 billion in 2021) and agriculture (USD 12.5 billion in 2020 and USD 19.5 billion in 2021).

Bown (2020) argued that the required increase in Chinese imports is unrealistically high and that, for this reason, the ETA is unlikely to deliver. Moreover, with the coronavirus leading to a growth slow-down in China, achieving the targets will be even more difficult.

In addition, Bown (2020) warned that the ETA could expose other Chinese trade partners to severe trade shocks. Chowdhry and Felbermayr (2020) estimated how the envisaged increase in Chinese imports from the US might affect EU exports to China. Assuming that total Chinese imports grow at the rate of GDP, the

[18] Authors: Felbermayr, Sandkamp (IfW Kiel)
[19] Recently, China's Finance Ministry announced that tariffs imposed in September 2018 on 1 717 US goods - including soybeans and crude oil – are to be halved by February 14th 2020 (Chowdhry and Felbermayr, 2020b). This suggests that at least parts of the increased imports are to be achieved through reductions in tariffs.
[20] Trade data is taken from CEPII's BACI dataset, available via http://www.cepii.fr/CEPII/en/bdd_modele/presentation.asp?id=37

increase in imports from the US must imply significant import diversion, i.e. a fall in Chinese imports from third countries. This was calculated by first predicting trade flows in 2021 (in the absence of a trade war and the ETA). For this, the authors relied on a gravity model which uses IMF GDP forecasts (IMF, 2020). In the model, Chinese imports grow approximately at the same rate as its nominal GDP, plus the GDP of the trade partner, minus world GDP.

In a second step, Chowdhry and Felbermayr (2020) calculated Chinese imports under the ETA. Predicted imports from the US are simply the sum of current imports (as of 2017) and the agreed changes, as stated in the ETA. Since total imports are assumed to be the same as in the scenario with no trade war, a growth in imports from the US implies lower import volumes from other countries compared to the no-trade-war scenario. The difference between estimated total imports and imports from the US constitutes total imports from other countries under the ETA. The total is allocated to other exporting countries under the assumption that all countries' exports to China of a particular product decline by the same proportion.

***Table 5.1**: Chinese imports in 2017 and 2021, in USD billions*

	2017				2021 *without ETA*				2021 *with ETA*				2021 Change in Chinese Imports	
	US	EU	RoW	World	US	EU	RoW	World	US	EU	RoW	World	EU (bn. USD)	EU %
AGRICULTURE	21.3	14.0	84.7	120.1	29.3	18.3	112.8	160.4	40.8	17.6	102.0	160.4	0.7	4%
Cereals	1.6	0.1	5.3	7.0	2.1	0.2	7.0	9.3	3.0	0.1	6.2	9.3	0.0	12%
Cotton	1.0	0.0	1.1	2.1	1.3	0.0	1.5	2.9	1.9	0.0	1.0	2.9	0.0	35%
Meat	0.6	2.5	6.2	9.2	0.8	3.2	8.3	12.3	1.1	3.1	8.1	12.3	0.1	3%
Oilseeds	12.4	0.0	24.2	36.6	17.1	0.0	31.8	48.9	23.8	0.0	25.1	48.9	0.0	21%
Other agricultural commodities	4.6	10.8	41.6	57.0	6.3	14.1	55.8	76.2	8.7	13.6	53.9	76.2	0.5	4%
Seafood	1.3	0.6	6.3	8.2	1.7	0.8	8.3	10.9	2.4	0.8	7.7	10.9	0.1	7%
MANUFACTURING	66.8	137.2	458.5	662.5	91.8	178.7	614.8	885.3	111.6	169.4	604.3	885.3	9.3	5%
Aircraft (orders and deliveries)	13.4	10.0	0.8	24.2	18.3	13.0	0.9	32.3	22.3	9.3	0.7	32.3	3.7	28%
Electrical equipment and machinery	6.3	21.9	96.6	124.8	8.6	28.5	129.7	166.8	10.5	28.2	128.1	166.8	0.3	1%
industrial machinery	15.0	41.2	86.8	143.1	20.6	53.7	116.8	191.2	25.1	52.3	113.8	191.2	1.4	3%
Iron and steel	0.7	3.3	17.9	22.0	1.0	4.3	24.1	29.4	1.2	4.3	23.9	29.4	0.0	1%
Optical and medical instruments	4.1	5.1	7.3	16.5	5.6	6.7	9.8	22.1	6.8	6.2	9.1	22.1	0.5	7%
Other manufactured goods	13.0	18.1	234.6	265.7	17.8	23.6	313.7	355.0	21.7	23.3	310.1	355.0	0.3	1%
Pharmaceutical products	3.4	11.3	5.1	19.8	4.6	14.7	7.1	26.5	5.7	14.0	6.8	26.5	0.7	5%
Vehicles	11.0	26.2	9.2	46.5	15.2	34.2	12.8	62.1	18.5	31.8	11.9	62.1	2.4	7%
ENERGY	7.0	3.9	179.7	190.6	9.6	5.0	240.0	254.7	40.9	4.4	209.3	254.7	0.6	12%
Coal	0.4	0.0	16.7	17.1	0.6	0.0	22.2	22.8	2.3	0.0	20.5	22.8	0.0	8%
Crude oil	4.1	3.6	139.9	147.6	5.6	4.7	187.0	197.3	23.9	4.3	169.1	197.3	0.5	10%
LNG	0.5	0.1	13.8	14.3	0.6	0.1	18.4	19.2	2.7	0.1	16.3	19.2	0.0	11%
Refined prods	2.0	0.1	9.4	11.5	2.8	0.2	12.4	15.4	11.9	0.0	3.4	15.4	0.1	72%
TOTAL	95.1	155.1	722.9	973.1	130.7	202.0	967.7	1300.4	193.3	191.2	915.6	1300.4	10.8	5%

Source: Chowdhry and Felbermayr (2020).

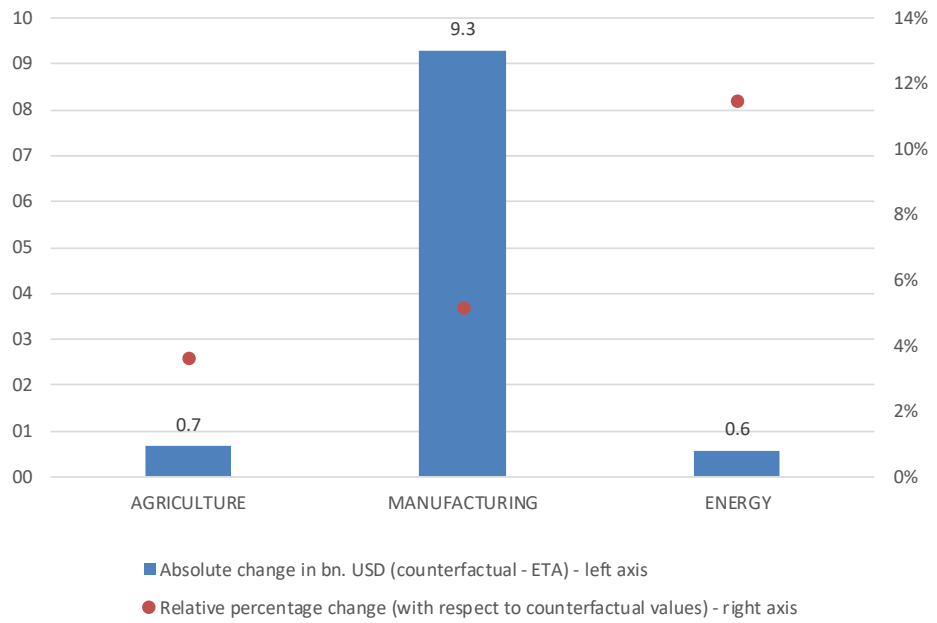
Table 5.1 shows Chinese imports from the US, the EU and the rest of the world in 2017, and projections in the two scenarios 'no ETA in 2021' and 'with ETA in 2021'. It can be seen that China would import goods worth USD 193.3 billion from the US under the ETA scenario, compared to USD 130.7 billion under the no-ETA scenario. Imports from the US would therefore rise by USD 62.6 billion, relative to the no-ETA scenario. This would be an increase of 48 %. Imports from the EU would decline by USD 10.8 billion (from USD 202 billion to USD 191.2 billion), equal to 5 % of the undistorted benchmark. Imports from the rest of the world would fall by USD 51.8 billion.

Figure 5.1 shows the trade effects by sector for the EU. In absolute terms, manufacturing in the EU would be hit hardest, with an estimated loss of USD 9.3 billion (-5 % relative to the undistorted benchmark). Even though the fall in exports in energy would be much smaller in dollar terms (-USD 0.6 billion), the loss of 12 % relative to the undistorted benchmark is much more severe. Chinese agricultural imports from the EU can be expected to fall by USD 0.7 billion (4 % relative to the benchmark).

Figure 5.2 shows effects for individual products. EU aircraft exports would fall by USD 3.7 billion, or 28 % relative to the benchmark scenario. They would be followed by vehicles (-USD 2.4 billion or 7 %) and industrial machinery (-USD 1.4 billion or 3 %). Germany – Europe's largest economy – would be likely to

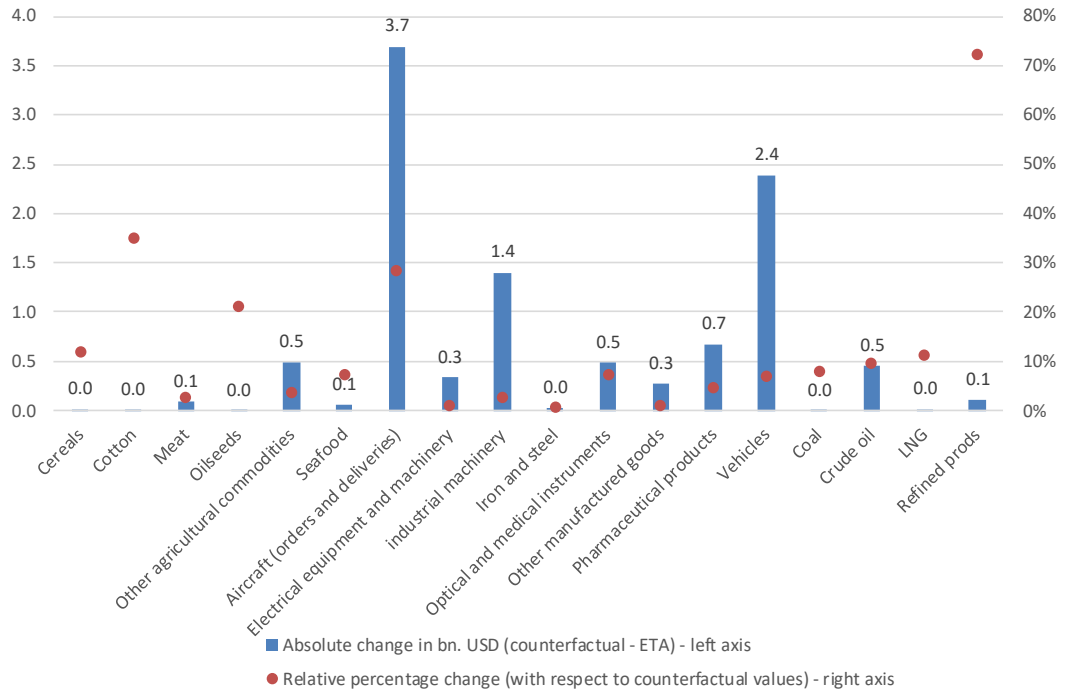
lose USD 4.4 billion worth of exports. Chinese imports in services from the US, which are not included in the above analysis, would also be expected to increase.

***Figure 5.1**: Decrease in Chinese imports from the EU in 2021 relative to benchmark, by sector*



Source: Data from Chowdhry and Felbermayr (2020).

***Figure 5.2**: Decrease in Chinese imports from the EU in 2021 relative to benchmark, by product*



Source: Data from Chowdhry and Felbermayr (2020).

Beyond import diversion, the US-China trade agreement might have further knock-on effects on Sino-European relations. Chapters 1 and 2 of the ETA are designed to strengthen intellectual property protection (particularly in the pharmaceutical sector) and to prohibit forced technology transfer. Their implementation requires reforms that could also benefit the EU (Chowdhry and Felbermayr, 2020).

Specifically, Chapter 1 of the ETA covers intellectual property. In Section F, it contains provisions on Geographical Indications (GIs). It specifies that *'China shall ensure that any measures taken in connection with pending or future requests from any other trading partner for recognition or protection of a geographical indication pursuant to an international agreement do not undermine market access for U.S. exports to China of goods and services using trademarks and generic terms'*. This is clearly directed towards the EU, which concluded a landmark GI agreement with China in November 2019. The China-US ETA could make it difficult for China to honour its commitments to the EU when US products exported to China do not satisfy the GI agreement and would have to be denied access to the Chinese market.

In Chapter 4 of the agreement, China commits itself to eliminating foreign equity restrictions and to permitting US-owned services suppliers to participate in several areas of the financial sector. As with Chapters 1 and 2, it is possible that these changes will apply to more countries than just the US. Chapter 5 focuses on exchange rate manipulation and could lead to greater transparency in China's regulatory environment, which would also benefit third parties including the EU (Chowdhry and Felbermayr, 2020).

Finally, the agreement might affect EU trade relations with China and with all other countries through its repercussions for the WTO. The ETA specifies bilateral outcomes in trade. This is likely to violate Article 1 of the GATT (General Agreement on Tariffs and Trade), which commits WTO members to engage in non-discriminatory trade policy (Chowdhry and Felbermayr, 2020). Given that the US continues to block appointments to the WTO's Appellate Body, there is no clear path for the organisation and its member states to deal with such potential violations. The deal might therefore continue to weaken the WTO and the global trade order it represents. Meanwhile, the EU, China and 15 other WTO member states are considering developing an alternative dispute settlement forum (Chowdhry and Felbermayr, 2020b). Even if it is not fully effective without the inclusion of the US, such cooperation might bring the EU and China closer together.

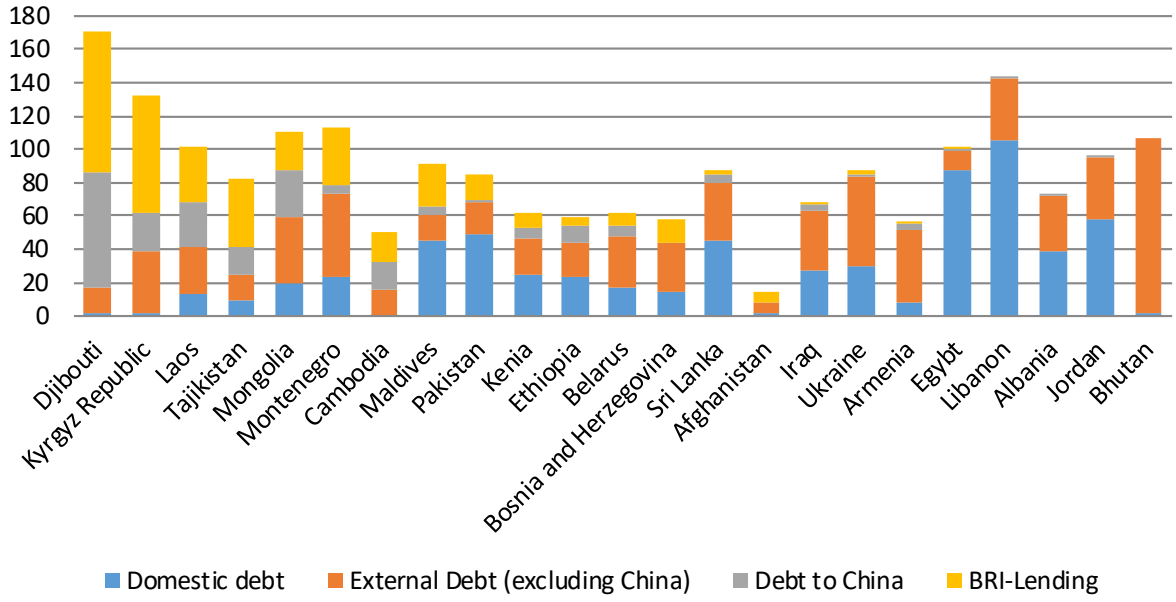
5.2 Implications of the Belt and Road Initiative

Many developing countries are highly indebted to China (Hurley *et al*, 2018). The level of debt can be expected to increase further as countries borrow from Chinese creditors to carry out construction projects related to the BRI.

This debt trap could lead to economic and political dependence on China, potentially resulting in the transfer of ownership rights in infrastructure (Felbermayr *et al*, 2019; Hurley *et al*, 2018). Such a development could be problematic for European companies if it leads to Chinese companies in affected countries receiving preferential treatment, particularly in relation to the use of railways or ports.

Figure 5.3 shows public debt levels of BRI countries with significant levels of external debt (as identified by Hurley *et al*, 2018), ranked by their (potential) debt to China. The figure shows that countries including Djibouti (debt to China 69.5 % of GDP), the Kyrgyz Republic (22.6 %), Laos (26.3 %) and Mongolia (27.8 %) are already heavily indebted to China. If all planned BRI projects are carried out with the help of additional debt guaranteed by the state, these rates would increase even further, amounting to 154.2 % for Djibouti, 92.3 % for the Kyrgyz Republic, 60.7 % for Laos and 50 %.

***Figure 5.3**: Public debt in BRI countries 2016, in % of GDP*



Source: Data from Felbermayr *et al*, (2019) and Hurley *et al* (2018).

The EU might, however, also significantly benefit from the BRI. The initiative and its likely effects on trade between the EU and China are discussed in detail in chapters 7 and 8. However, the BRI is also likely to significantly increase EU trade with other countries, in particular those in Central Asia. Felbermayr *et al* (2019) noted that several countries in the area might become attractive for EU companies, as markets and as suppliers of raw materials. The EU could thus consider negotiating trade and investment agreements with those countries to secure preferential access for European companies and to reduce the high degree of uncertainty associated with these economies (Felbermayr *et al*, 2019).

5.3 China and Russia

Since 2014, in response to Russia's annexation of the Crimean Peninsula and the downing of MH17, the EU has imposed sanctions on Russia, and Russia has retorted with counter-measures. As a consequence, trade between Russia and the EU has fallen quite sharply: see the descriptive evidence collected by Fritz *et al* (2017) and the econometric evaluations of Crozet and Hinz (2020) or Miromanova (2020). Those papers also documented some evidence of trade diversion: Russia was able to divert some of its exports and imports away from the EU to other countries, most notably — but certainly not exclusively — to China. This has accelerated the reorientation of the Russian economy towards China, which was gaining market share anyway because of its increasing economic weight.

The rise of China as an economic and political power in general, and its engagement in Central Asia in particular, pose a challenge to Sino-Russian relations. However, as noted by Felbermayr *et al* (2019), in the current situation, both countries benefit from a stable bilateral relationship. China needs Russian cooperation because parts of the BRI's economic belt (predominantly in the form of railways) go either directly through Russia or former Soviet states that are members of a customs union with Russia (the Eurasian Economic Union). Moreover, China benefits from access to Russia's vast natural resources.

Russia, in return, benefits from good economic relations with China as a counterbalance to its geopolitical problems with western countries. China enables Russia to more easily withstand sanctions by keeping its markets open, albeit probably in return for discounted prices on raw materials. As things stand, even a removal of EU sanctions against Russia would not change Russia's economic pivot towards China.

However, despite those facts and trends Russia and China continue to be strategic rivals, for example in Central Asia. This might make it more difficult for European firms to access these countries as potential suppliers of commodities such as oil and gas, or, potentially more important in the future, rare metals, which are likely to be directed towards China going forward.

Strategically, the rapprochement of China and Russia reduces the EU's options in its Eastern neighbourhood. By making the EU's sanctions regime less effective, it undermines the prospect of t normalising the EU's relationship with Russia.

5.4 Conclusion

Beyond bilateral trade and investment policy, Sino-European relations are indirectly shaped by the two economies' relations with third parties. The US-China Economic and Trade Agreement will most likely impact EU exports to China through import diversion. In addition, it could affect the way China conducts trade and investment policy with respect to the US and all its trading partners. Several components of the ETA, such as improved transparency in China's regulatory and financial system, might be beneficial to the EU. Others, in particular the potential to undermine the WTO, could be harmful.

Similarly, China's growing influence over Central Asian economies and its relationship with Russia could affect the way these countries – and China itself – treat the EU. The economic effects could be positive if improved infrastructure following BRI projects increases EU trade with Central Asian economies. But the effects could be negative if these economies focus entirely on China as their exclusive trading partner. It is therefore of paramount importance that the EU continuously observes China's (and other countries') actions, in order to assess their impact on Europe's economy and society and to respond accordingly.

6 The EU's and China's positions on WTO reform: is there scope for common initiatives?[21]

The EU and China communicated their WTO reform proposals in September 2018 and May 2019 respectively. China's proposals were circulated among WTO members (WTO, 2019) while the European Commission published its proposals as a concept paper, in response to an invitation from the European Council, in order to stimulate discussion with like-minded partners on the functioning of the WTO in crucial areas (*European Commission, 2018*). In December 2018, China's Ministry of Commerce published an additional position paper on three basic principles and five suggestions for WTO reform (Ministry of Commerce China, 2018).

The EU and China both acknowledged that the rules-based multilateral trading system was facing its deepest crisis since its inception. They claimed to remain strong defenders of this system and all their proposals were targeted to ensuring its continuation. Given their systemic differences (China as a socialist market economy and the EU as a community of market-based democracies), their reform proposals focus on widely different areas.

[21] Authors: Felbermayr and Langhammer (IfW Kiel).

6.1 China's position on WTO reform

In principle, China:

- Opposes reforms which would introduce new concepts or terminologies into the system proposed by a few member states in the context of new issues like e-commerce, digital trade, and FDI-based forced technology transfer,
- Proposes targeted reforms to restrain unilateral measures with respect to the national security exception and the blockade of the working of the Appellate Body of the Dispute Settlement Mechanism,
- Insists on maintaining all privileges that developing countries (and China itself) enjoy in the trading system under the Special and Differential Treatment principle (SDT), including postponing liberalisation and receiving more favourable treatment in accessing developed countries' markets than developed countries enjoy,
- Attacks alleged over-subsidisation of agricultural products in developed countries and, a key issue for China, the application of the 'surrogate country' principle[22] in anti-dumping investigations against countries labelled non-market economies by countries launching such investigations,
- Argues strongly in favour of respecting different development models of WTO members, which in China's view should include lenient treatment of industrial subsidies and state-owned enterprises (SOEs), if both are institutionally anchored in the respective countries as instruments for catching-up with developed countries.

In detail, China

- Suggests more discipline on fishery subsidies granted by developed countries, and
- Proposes a number of suggestions to improve rule-making, transparency, compliance with notification obligations, the quality of WTO subsidiary bodies such as the various committees on specific issues (for instance, on regional integration, on development and trade, or on the least developed countries).

6.2 The EU's position on WTO reform

The EU pursues modernisation of the WTO under three headings: rulemaking, regular work and transparency, and dispute settlement.

With respect to rulemaking, the EU proposes

- Opening negotiations on individual issues relevant for interested member states under WTO auspices, as part of a process which eventually can lead to plurilateral or even multilateral agreements,
- Clarification of the role of SOEs as public bodies, a brake on trade-distorting industrial subsidies and tightened discipline in terms of notifying subsidies,
- A reconciliation of targets including development promotion, enhancing sustainability and protecting intellectual property rights — with border-free trade leading to more consistency in rulemaking.

[22] When China acceded to the WTO in 2001, the status of 'non-market economy' (NME) was imposed on the country because its market was controlled by its government. In an antidumping investigation involving a NME country, the importing country is empowered to use the price of a third country ('surrogate country') to show the comparable price in calculating the normal value. See Chapter 3 of this report for a more detailed discussion.

The EU's proposals to work on transparency concentrate on improving notification compliance, the strengthening of the trade policy review mechanism, the streamlining of responses to complaints from member states about market access, and giving teeth to sanctions if member states wilfully and repeatedly fail to comply with their commitments. Furthermore, a monitoring process is suggested once new issues are brought up by member states.

Concerning the US blockade of the Appellate Body (AB), the EU proposes an all-encompassing discussion process involving all WTO members. This would lead to a redefinition of the tasks of the AB relative to the Dispute Settlement Body (DSB) in the context of the US complaints about the past activities of the AB[23]. This discussion should lead to the modification of articles in the Dispute Settlement Understanding as the main agreement in the WTO on settling disputes.

In the meantime, the EU has agreed with 16 other WTO members, including China, on the establishment of an *ad-hoc* appeal body. Trade Commissioner Phil Hogan said on 24 January 2020 that 'the multiparty appeal arbitration arrangement will guarantee that participating members continue to have access to a binding, impartial and high-quality dispute settlement system among them' (Hogan, 2020). The deal was accepted by ministers from Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, European Union, Guatemala, Republic of Korea, Mexico, New Zealand, Norway, Panama, Singapore, Switzerland and Uruguay, plus the EU countries. China's decision to join is crucial since it is one of the countries with the greatest number of open disputes.

However, the agreement remains *ad hoc* and leaves out major players, including the US, Japan and India. Discussions between the EU and China on a truly multilateral solution will have to continue and will have to move beyond the acute crisis of the Appellate Body. Discussions will most likely continue to reflect the dividing lines characteristic of recent years: while China's proposals are more general and therefore very much open to interpretation (e.g. on what constitutes 'fair competition'), the EU proposals are technically detailed, resting on legal grounds and judicial expertise.

6.3 Options for common initiatives

Common EU/China initiatives to stimulate WTO reform appear promising, provided they are not guided by the aim of forming a coalition against the US. Inevitably, such a coalition would trigger a blockade by the US and its allies. The Chinese proposals suggest that the Chinese government favours this approach, since most of its proposals are implicitly (without naming the US) critical of US proposals that seek to delegitimise Chinese trade practices. Nor would it be helpful for the EU to focus its proposals for common initiatives on bilateral issues that are controversial for the EU and China, such as the issue of trade-distorting subsidies for SOEs and the trade impact of forced technology transfer from foreign investors in China to local companies in joint ventures. Such issues should be dealt with in the bilateral negotiations on an investment agreement and on anti-dumping investigations.

Instead, the EU and China should identify issues that could form the basis of common initiatives, on which they could encourage a large number of other members to cooperate in reform proposals, thus creating a critical mass of reform momentum.

[23] The US argue that the AB has failed to comply with WTO rules by altering WTO Members' rights and obligations through erroneous interpretations of WTO agreements. In doing so, the AB allegedly has harmed US business interests.

The EU and China are advised to focus on the following four issues:

First, the EU and China could work to reform 'aggregate measures of support' in agriculture. The European Commission is moving towards reforming agriculture support from trade distorting price support to less trade distorting income support. Furthermore, it pleads for more national sovereignty for support measures, and for furthering the targets of CO2-emission reduction and more sustainability. China complains about 'over-subsidisation' of agriculture in developed economies, including the EU. The US wants to reduce barriers to market access in EU agricultural markets. Moreover, many agricultural net exporters, formerly called the Cairns Group (including countries like Australia, New Zealand, Brazil and Argentina), support a sharpening of the rules allowed for restricting trade in agriculture.

Second, on the special and differential treatment (SDT) issue, with its more geopolitically oriented approach, the European Commission envisages helping African countries in particular, and least-developed countries in general, to better integrate into global production chains (the Everything but Arms Initiative). In this area, there is scope for agreement with China, which could agree to concentrate SDT on those countries definitely in need of support, least-developed countries and countries with special handicaps (island countries, countries vulnerable to environmental threats, land-locked countries). More advanced developing countries could gradually phase out of tariff-based SDT and instead be given more focused support, such as in litigation in relation to dispute settlement, and in e-commerce. Such an approach could merge with the trade facilitation objective of the WTO and could find much support among WTO member states.

Third, trade remedies rules or trade-defence measures are of interest to both partners. The European Commission has announced a more robust approach in terms of implementing trade-defence measures, meaning it will act bilaterally against allegedly unfair trading practices of partner countries. China argues against discriminatory practices of partner countries in subsidies, countervailing duties and anti-dumping measures. Because of global supply chains, many WTO members would be indirectly affected by greater use of trade-defence measures. Thus, there is an urgent need to at least plurilateralise reforms, with the objective of reconciling trade-defence measures with WTO principles of horizontal (MFN-principle) and vertical (national treatment principle) non-discrimination.

Fourth, China and the EU both face the issue of how to deal with shoring up CO2-pricing schemes in a global context of less-than-universal carbon pricing. The EU is discussing a possible carbon border adjustment mechanism in order to make decarbonisation policies politically feasible, economically efficient and environmentally effective. China, in principle, has also been moving towards more comprehensive carbon pricing and should be interested in sharpening the related body of rules in Article XX of the GATT.

7 A dynamic perspective of the Belt and Road Initiative[24]

The Belt and Road Initiative (BRI) was first proposed by China's President Xi Jinping during state visits to Kazakhstan and Indonesia in 2013. Officially, it was initiated with the publication of the first key document, 'Vision and Actions on Jointly Building the Silk Road Economic Belt and 21st-Century Maritime Silk Road,' in 2015 (NDRC *et al*, 2015). Of all the BRI projects, the generally high-cost, large-scale infrastructure projects along the 'Silk Road Economic Belt' and the 'Maritime Silk Road', which set out to improve connections between Asia and Europe, have attracted most attention.

China officially emphasised that the BRI aims at fostering international prosperity in general, and that of the countries involved in particular. Additionally, it aims to promote regional economic integration and social interaction among the countries involved, thus contributing to world peace. In order to achieve

[24] Authors: García-Herrero (Bruegel), Xu (Bruegel), Liu (IfW Kiel), and Sandkamp (IfW Kiel).

these goals, China seeks increased cooperation with the BRI countries, particularly in five core areas: political communication, infrastructure connection, trade relations, circulation of currencies (primarily the renminbi) and financial resources, and mutual social understanding. In this way, China strives to promote multi-level cooperation with the BRI countries, covering political, technical, economic and social aspects (NDRC *et al*, 2015; Felbermayr *et al*, 2019).

7.1 Recent development I: Increasing numbers of countries involved in the BRI

Within two years of the publication of the Action Plan in 2015, 74 countries and international organisations had officially declared their support for the BRI by signing related bilateral and/or multilateral cooperation agreements with China (Yidaiyilu, 2017). The group of BRI members has since grown further, reaching 151 members (122 countries and 29 international organisations) by the end of 2018, and 168 members (138 countries and 30 international organisations) in early 2020 (Yidaiyilu, 2019; 2020). Thus, about 70 % of all the world's countries have officially declared their support for the BRI. Seventeen EU countries are also included in the group of BRI members, eleven of which are from central and Eastern Europe (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia). The central and eastern EU countries joined the BRI at a relatively early stage under China's 16+1 Initiative. The 16+1 Initiative aims at primarily promoting business and investment cooperation between China and the initiative member countries in central and eastern Europe. China particularly seeks to strengthen and institutionalise its cooperation and partnership with the 11 central and eastern EU BRI countries, and with five Western Balkan EU candidate countries (Albania, Bosnia and Herzegovina, Northern Macedonia, Montenegro and Serbia). Other EU countries have taken a more reserved attitude towards the BRI. Only more recently have six additional EU countries decided to be more intensively and officially involved in the BRI (Greece, Italy, Luxembourg, Austria, Portugal and Cyprus). The changing attitude in favour of more cooperation with China is particularly noticeable for Greece which also officially joined China's 16+1 Initiative in 2019, which thus became a 17+1 Initiative.

The intensive cooperation between China and EU countries (and potential EU members) in central and eastern Europe, under the 16+1 initiative, has raised some concerns in the EU. China's growing influence over these countries could jeopardise the EU's ability to act in a politically united way in relation to China (Felbermayr *et al*, 2019). Meanwhile, the EU's influence over institutional development in the five Western Balkan EU candidates could be weakened and the reform process in these countries damaged (Grieger, 2018). With more EU countries joining the BRI officially, such concerns will intensify.

7.2 Recent development II: More construction activities and continuing investment by China in BRI countries

Many BRI countries belong to the less-developed group. China's engagement in construction projects and investment in these countries, bringing know-how and technologies in addition to financial resources, could thus help them catch-up with more developed nations.

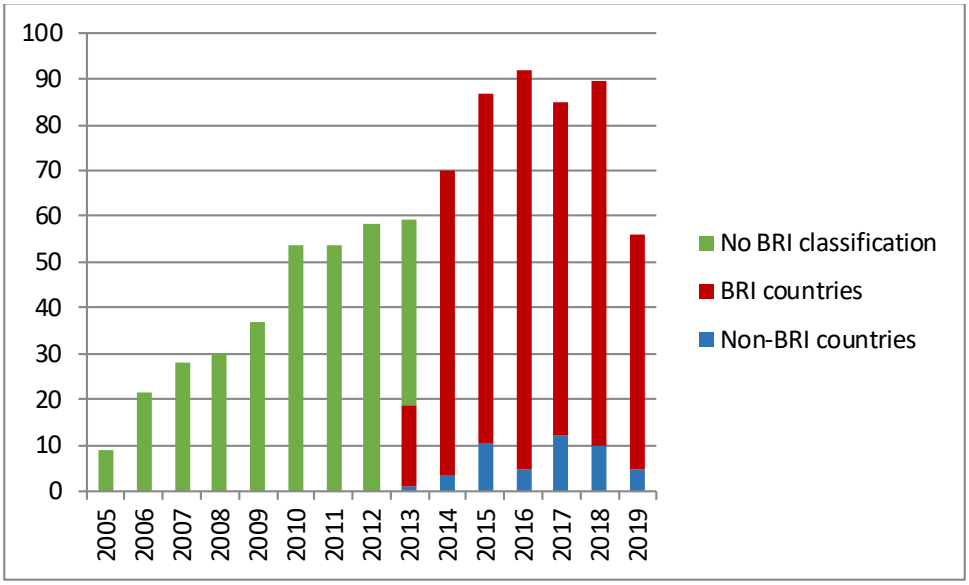
Between 2013 and 2019, Chinese companies signed contracts worth around USD 451 billion with the BRI countries to carry out joint construction projects (American Enterprise Institute and Heritage Foundation, 2020). BRI countries have been the predominant destinations for Chinese construction activities abroad, right since the informal start of the BRI after Xi's proposal during his state visits in Kazakhstan and Indonesia in September and October 2013, respectively. The share of BRI countries in the volume of China's construction contracts abroad during the last three months of 2013 was already as high as 94 %. This share increased slightly to 95 % in 2014. Between 2015 and 2019 the shares were slightly lower but the average share over this period was still higher than 90 %. Such high shares strongly indicate China's interest in long-

term cooperation in construction projects in the BRI countries to help improve local infrastructure[25]. The total volume of China's construction contracts in BRI countries in 2019 was, however, reduced to its lowest annual value since 2014 (USD 51 billion).

In contrast, BRI countries have not been dominant destinations for Chinese investment. Only in 2014 and 2019 did more than 50 % of Chinese investment abroad go to BRI countries. In total, China invested about USD 279 billion in the BRI countries between 2013 and 2019, mainly in sectors including energy, metals, transportation and real estate (American Enterprise Institute and Heritage Foundation, 2020).

China's particularly strong engagement in joint construction activities in BRI countries and its (less dominant) role as investor, can be expected to assist these countries in terms of their economic and societal development.

***Figure 7.1**: China's construction contracts abroad (USD billions)*

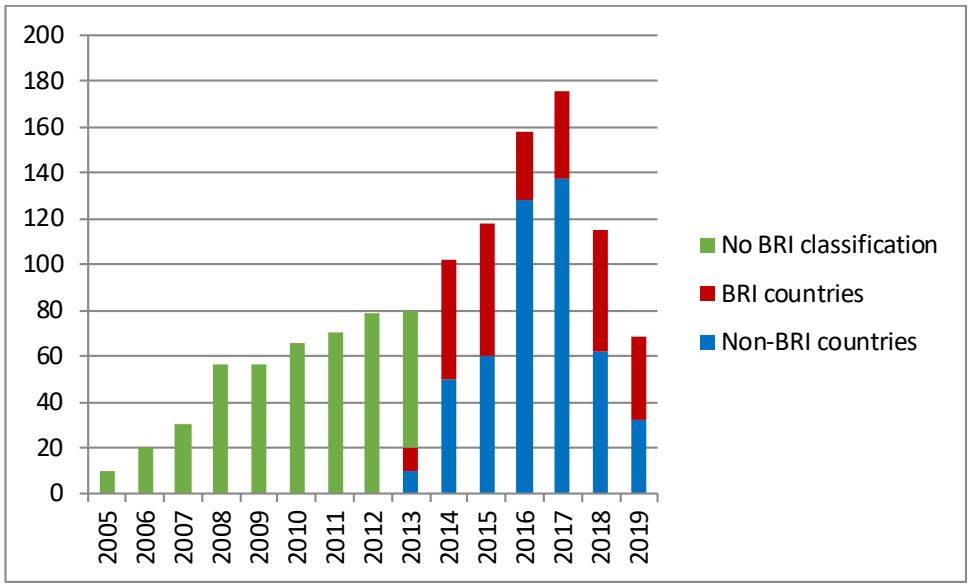


Note: BRI classification in the data set started in Oct. 2013.

Source: China Global Investment Tracker Database from American Enterprise Institute and Heritage Foundation.

[25] It is worth noting that the number of BRI countries where China engaged in construction activities in each year between 2014 and 2019 did not increase continuously like the number of BRI countries did during the same period. China engaged in construction activities in 54 countries in 2014. The number increased to 61 countries in 2015 but decreased to about 57 and 58 countries in the three following years, respectively. In 2019, China was involved in construction activities in 51 countries 'only'. Thus the high shares of BRI countries in the volume of China's construction contracts were not just an artefact of the increasing number of BRI countries in general.

***Figure 7.2**: China's outward investments (USD billions)*



Note: BRI classification in the data set started in Oct. 2013.

Source: China Global Investment Tracker Database from American Enterprise Institute and Heritage Foundation.

7.3 Recent development III: China's intensifying FTA engagement with BRI countries

In recent years, China strengthened its efforts to negotiate and conclude free trade agreements (FTAs) with BRI countries. China currently has FTAs with 16 countries/regions, ten of which are involved in the BRI: ASEAN (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam), Chile, Costa Rica, Georgia, the Maldives, New Zealand, Pakistan, Peru, Singapore and South Korea. The BRI countries also represent a large proportion of the countries with which China is currently negotiating or considering further FTAs (MOFCOM, 2020).

While core BRI projects to improve infrastructure accessibility and quality can certainly help promote international trade and investment relations between China and the BRI countries, China's increasing engagement in negotiating and concluding FTAs builds an advantageous foundation to improve the development of the institutional framework for trade and investment in all countries involved, and thus to facilitate trade and investment among these countries. The economic benefits of such agreements are expected to further increase, if FTAs can be signed between China and more (BRI) countries, to further improve the economic and business institutional environment in all countries involved (Felbermayr *et al*, 2019).

7.4 Recent development IV: The widening policy focus of BRI

Over time, the thematic and policy focus of the BRI has evolved, with additional concrete projects in progress and/or in development, going far beyond physical large-scale infrastructure projects along the 'Silk Road Economic Belt' and the 'Maritime Silk Road'. This shows China's ability to react politically to the emerging economic challenges facing China and the world. One relevant key project is China's engagement with BRI countries to build a Digital Silk Road.

In light of the ongoing fourth industrial revolution and the challenges related to industrial restructuring, China in 2015 introduced a new industrial policy, '*Made in China 2025*', which aims to make China a global leader in key technologies by 2025 and a technological superpower by 2045. One of the initiative's ten priority areas is modern information/digital technologies, related to, for example, big data, artificial intelligence, robotics and smart manufacturing. Digital technologies were later also explicitly integrated

into China's BRI strategy. The proposed goal is to build a 'Digital Silk Road'. This would not encompass infrastructure, but would rather involve cooperation between China and other BRI countries to develop and implement modern information/digital technologies that would support innovation-based development in the countries involved (Yidaiyilu Working Group, 2019). According to Merics (2019), China invested more than USD 17 billion in BRI projects related to the Digital Silk Road between 2013 and 2019.

Digital trade (e-commerce) and trade in digital goods between China and the countries involved are increasingly strongly promoted. This is reflected in, for example, the increasing export of Chinese surveillance technologies to BRI countries in Central Asia (Yidaiyilu Working Group, 2019; The Diplomat, 2019). These technologies play an important role in the establishment of China's Social Credit System (SCS, see chapter 10). Thus, there are increasing concerns, particularly among democratic countries and human rights observers worldwide, about whether the export of such goods is a sign of BRI countries' willingness to build comparable systems and to intensify governmental economic and societal control in these countries (Merics, 2019).

7.5 Recent development V: The changing perception of the BRI in the EU

Given China's increasing influence and the importance of infrastructure for sustainable economic growth, the BRI, from its initial announcement, has attracted the attention of EU countries. To some extent, the BRI supplements existing official development assistance schemes provided by institutions including the World Bank and the Asian Development Bank, which bring funding to infrastructure projects in less-developed countries. While the effect is always somewhat controversial, most of these existing foreign aid plans have been generally positively perceived in the past, especially taking into consideration that the global organisations apply higher standards to the selection of projects than the local authorities in developing economies.

The BRI stands out in this regard. It was perceived quite positively at first, but in recent times has come to be viewed much more negatively. There are several reasons for international concern, starting with the BRI's hub-and-spoke nature, which is quite different from the usual multilateral approach of development assistance developed by the West. Such a perception did not change much even after the establishment of the Asian Infrastructure Investment Bank (AIIB), which was aimed at attracting global players, including the EU member states, to participate in the BRI projects and increase the multilateral nature of the initiative.

The other reason for international concern about the BRI is China's economic model of state capitalism and the need for China to find new markets for its excess capacity. Excess capacity is a natural consequence of China's model, which is based on over-investment to keep growth going, and is strengthened by the government's industrialisation and infant-industry support. Also, without market principles, the recipient countries run the risk of engaging in too many projects, which is likely to be unprofitable in the long run, casting doubts on the sustainability of BRI projects. There has already been some argument over debt traps related to some BRI projects, such as the failure of Sri Lanka to make repayments against loans given by China to construct Hambantota Port, and the subsequent 99-year lease given to China in place of payment[26]. The situation has been exacerbated by most BRI projects being long-term and carrying large uncertainty, which intrinsically bears high risk.

In addition, because of the unilateral nature of the BRI and the lack of global collaboration, most of the projects fall short of, for example, Organisation for Economic Co-operation and Development transparency standards. Although China has made an effort to establish a multilateral institution – the AIIB – it has not fully addressed external concerns. The situation has become more complicated because of China's growth

[26] See the report from Financial Times, 'China signs 99-year lease on Sri Lanka's Hambantota port', https://www.ft.com/content/e150ef0c-de37-11e7-a8a4-0a1e63a52f9c.

model, with a strong government role and weak domestic institutional development. The lack of trust in the BRI poses challenges.

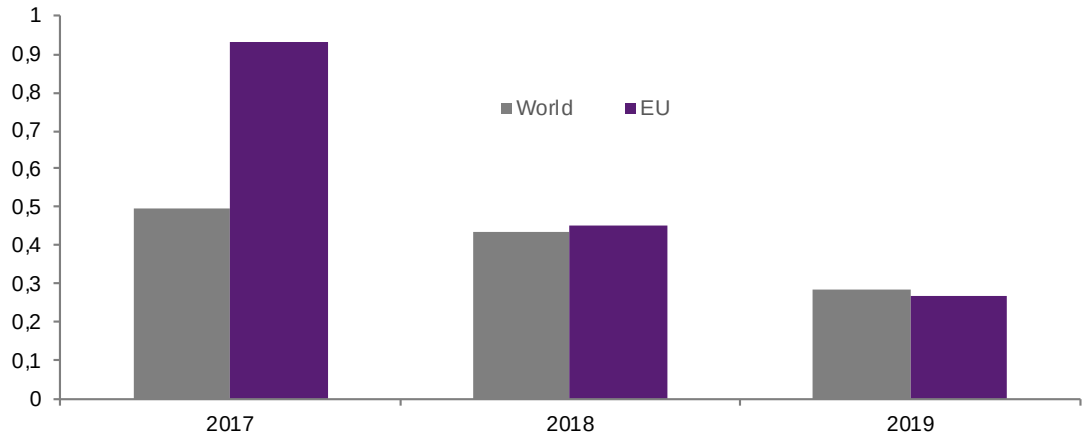
Quantification of the EU's perception of the BRI

Against that backdrop, it is unsurprising that, after initial enthusiasm, the EU has become increasingly sceptical of the BRI. Based on the Global Database of Events, Language, and Tone (GDELT), a big-data platform covering international and local media from 132 countries in more than 100 languages, Garcia-Herrero and Xu (2019) quantified how the BRI was viewed across the world from 2017 to 2019.

The analysis showed that, in general, the BRI is generally positively received. All regions, except South Asia, viewed the BRI positively (Garcia-Herrero and Xu, 2019). However, the sentiment began to become less positive after 2017, and the more negative trend was particularly strong for the EU. Furthermore, there is no significant difference in perceptions of the BRI in countries officially involved in the BRI and those that are not. As such, while the BRI is an important strategy to build China's soft power and extend China's influence globally, it has not gained full global recognition.

EU countries seem to be more positive about the BRI than non-EU European countries, although the latter group consists of more direct BRI recipients, including Ukraine, Belarus and Bosnia-Herzegovina. More specifically, the Netherlands, Portugal and Bulgaria are the EU's most positive countries towards the BRI. As the largest EU economy to have joined the BRI, Italy has a more positive than average perception of the BRI. On the other hand, opinions about the BRI in Belgium, Ireland and France are more negative.

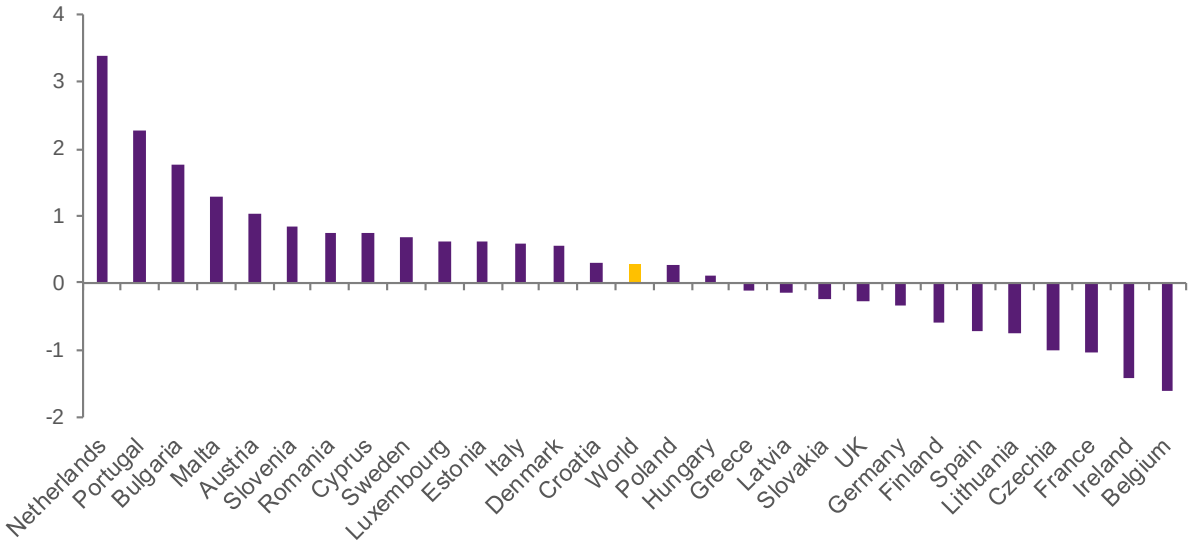
***Figure 7.3**: Perceptions of the BRI, global and EU averages*



Source: GDELT, Natixis.

Note: To evaluate the perception of the BRI, we first calculated the tone of coverage of the BRI in one specified article published in the country and aggregate it with a simple average of the sentiments at the country level. The world sentiment is the simple average of all the sampling countries, and the EU sentiment is a simple average of the sentiments of the then-28 member states.

***Figure 7.4**: Perception of the BRI in EU countries (2019)*



Source: Gdelt, Natixis.

Garcia-Herrero and Xu (2019) showed that the idea of trade with China seems to have a negative influence on perceptions of the BRI in EU countries. The more frequently trade is mentioned in the media, the more negative a perception of the BRI a country tends to have. Of course, as the BRI becomes more influential, recipient countries' perceptions of the BRI are likely to be closely linked to their overall perceptions of China. Garcia-Herrero and Xu (2019) found that from 2017 to 2019, there was a clear trend in perceptions of both the BRI and China becoming more negative, though the BRI is more positively perceived than China itself. This is not so surprising given that, in most cases, the BRI offers significant resources for infrastructure projects in other countries. This shows why the BRI remains an important communication vehicle for China as it expands its influence globally.

8 How much will the BRI boost EU trade?[27]

8.1 Why the BRI matters for the EU, and in particular, for EU trade

The huge investments in infrastructure which China has promoted through the Belt and Road Initiative (BRI) have the potential to ease bottlenecks in cross-border transportation. Among the many benefits of improved connectivity, easier trade stands out. The idea that improved transport infrastructure should foster trade is a very intuitive one. However, it is less certain that such benefits can be shared by all countries and, more specifically, which countries will win/lose the most, depending on their proximity to or distance from the improved infrastructure, among other considerations. In a working paper published by Bruegel[28], we addressed this question by assessing empirically how the BRI, through a substantial reduction in transportation costs, would foster trade.

[27] The chapter includes two independent sub-chapters on the effect of Belt and Road Initiative on international trade. The first (8.1) is by Alicia Garcia Herrero and Jianwei Xu (Bruegel), discussing the spill-over effect of BRI on the EU's trade. The second (8.2) is by Wan-Hsin Liu and Alexander Sandkamp (IfW Kiel), highlighting the effect on EU-China trade. The results of both suggest that the reduction in transport time and trade cost brought about by the BRI is crucial for the EU from a trade perspective.

[28] For more details see Garcia-Herrero and Xu (2016), 'China's Belt and Road Initiative: Can Europe Expect Trade Gains?', https://bruegel.org/wp-content/uploads/2016/09/WP-05-2016.pdf

In the next subsection, we will summarise several scenarios analysed in the paper. Our results showed that a reduction in transportation costs can indeed increase international trade. A 10 % reduction in rail, air and maritime costs would increase trade by 2 %, 5.5 % and 1.1 % respectively (scenario I to III, below).

While the BRI is currently centred on building infrastructure, it could evolve in other ways. One obvious objective would be to dismantle trade barriers. Chinese authorities have started considering free trade agreements (FTA) with the BRI countries. Because many EU countries are not directly included in the initiative, and it is not possible for China to strike an FTA with all EU countries, the chance for the EU to benefit from a comprehensive FTA is slim. Garcia-Herrero and Xu (2016) analysed this scenario by focusing on the impact on EU trade of a China-centred free trade bloc covering BRI countries. As one could imagine, a scenario in which the BRI focuses on trade barriers is less appealing in terms of trade benefits than one in which only transport infrastructure is built. In fact, the EU would no longer benefit from BRI infrastructure financed by China, and would be excluded from a very large free trade area just beyond its borders.

A third scenario in which transport infrastructure is improved and an FTA is agreed between BRI countries would be relatively neutral for the EU as a whole, although there would be winners and losers within the EU.

The analysis has special policy implications for the EU. China has been pushing for EU involvement in the BRI since 2013. We believe it is in the EU's interest to actively take part in the initiative and push for more cooperation on transportation and infrastructure. This makes sense because the EU is at the other end of the road from China and there are clear gains to be had. In summary, the BRI is very good news for Europe in trade terms under the current set up, in which the EU benefits from the infrastructure without a financial cost attached to it, because it has so far been financed by China and other BRI countries.

8.1.1 Scenario I: Simulating the impact on EU trade of a reduction in transportation costs through the BRI

From a regional perspective, the EU is a winner from the BRI, with trade rising by more than 6 %. Trade in the Asian region is also positively affected by the reduction in transportation costs, with trade increasing by 3 %. In fact, Asian countries are found to be neither the main winners nor losers. This is probably explained by the estimated reduction in maritime transportation costs being quite moderate. However, the cost of railway transportation is halved, generating large gains in terms of rail transit to Europe – in particular for landlocked countries. The rest of the world suffers from the deviation of trade towards the BRI area, but only with a very slight reduction in trade (0.04 %). Overall, our results point to the BRI being a win-win in terms of trade creation, as the gains in the EU and Asia clearly outweigh the losses in the rest of the world.

8.1.2 Scenario II: Simulating the impact on EU trade of an FTA covering the BRI countries

If China established a free trade zone in the BRI area with zero tariffs, the EU, which would be the biggest winner from the reduction in transportation costs, would instead lose out slightly. This result is intuitive, because we assume that EU members are left out of this trade deal and that no bilateral EU-China trade agreement is signed. The rationale for this negative impact is that EU trade with China and other BRI countries would be substituted to some extent by enhanced integration among the BRI countries. This is true even for countries within the EU which are formally included in the BRI, such as Hungary and Poland, because they will not be able to enter any BRI FTA without the rest of the EU joining. The Asian region would thus become the biggest winner from the BRI, followed by non-EU European countries, which would also benefit from the elimination of trade tariffs. The biggest winners would be Middle Eastern and Central and East Asian countries, who would see their trade increasing by more than 15 %. This would be a major

improvement compared to the trade gains of 3 %, theoretically arising from a reduction in transportation costs, previously estimated for this group of economies.

8.1.3 Scenario III: Simulating trade gains for both transportation improvement and FTA

Lastly, we considered a combined package including both transportation improvement and the establishment of an FTA within the BRI region. Most Asian countries would now be big winners since they would benefit from both the reduction in transportation costs and the elimination of tariffs. Some EU countries would also benefit quite significantly but less than Asian countries. This would be especially the case for some landlocked countries, including Slovenia and Hungary. Germany would benefit slightly more than France or Spain. This is actually very intuitive because these EU countries would benefit from the transportation cost reduction but not from the FTA, which they would not be part of. Also, as in the previous two scenarios, there are always some slight losses for countries far from the BRI. The biggest loser would be Japan, while the impact on the USA and Canada would be close to zero.

8.1.4 Conclusion

All in all, the BRI will clearly be important for global trade and for the trade of EU member states. In principle, the BRI should help foster trade between the EU and the rest of the world and, in particular, between the EU and the countries located between China and the EU. The reason is the reduction in transportation costs, thanks to the improvement in infrastructure, in particular transport infrastructure within the BRI area. However, the more China pushes for FTAs within this region, excluding the EU, the smaller the potential trade gains the EU will see from the BRI. In certain scenarios, such gains may even disappear.

8.2 The trade effects of BRI-related investment in transport infrastructure

The previous subsection investigated how the BRI may affect overall European trade, both through its impact on transport infrastructure as well as through the creation of FTAs. This subsection focuses on potential effects of the BRI on bilateral trade between China and the European Union. It builds on work by de Soyres *et al* (2018), who estimated relative changes in transport time and trade costs between different regions. Following the procedure applied by Felbermayr *et al* (2019), these estimates can be combined with trade elasticities to infer the potential change in bilateral trade, in relative and in absolute terms. Based on these calculations, EU exports to and imports from China may be expected to increase by EUR 26.4 billion and EUR 52.7 billion, respectively.

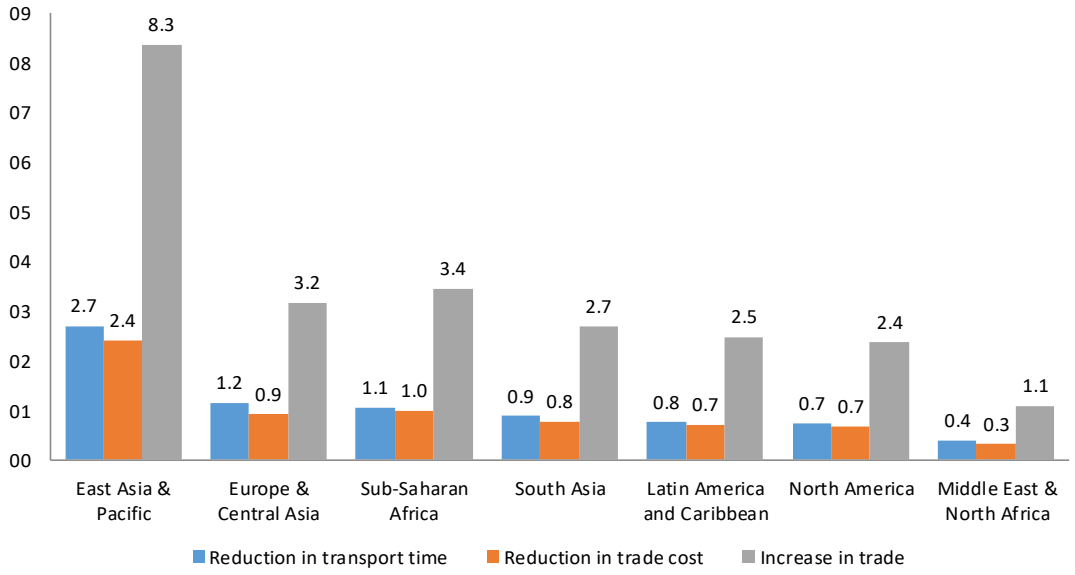
8.2.1 Estimating changes in transport time, trade costs and trade

De Soyres *et al* (2018) used information on 47 economic sectors and 1000 cities in 191 countries to calculate the change in transport times and trade costs resulting from BRI-related infrastructure projects. Based on assumptions about average speeds of different modes of transport (50 km/h for trains and 25 km/h for ships), they calculated current transport times between all city pairs. Delays at borders and for loading and unloading were also taken into account. De Soyres *et al* (2018) then conducted the same calculation, taking into account new and improved railways following BRI-related investment. The authors assumed an average speed of 75 km/h for trains on the new and improved railways.

Figure 8.1 shows the resulting average reductions in transportation time between Europe and seven different regions following the improvement in infrastructure. With a reduction in transport time of 2.7 %, the largest effects can be expected for European trade with countries situated in East Asia and the Pacific (including China). As the new Silk Road will, however, also improve transport links with many countries situated between Western Europe and China, transport time can also be expected to fall for routes within Europe and Central Asia (1.2 %). New railways connecting ports in Tanzania and Kenya with their hinterlands might improve trade with sub-Saharan African countries (1.1 % fall in transport time).

The change in transport time can be used to estimate the change in trade costs. De Soyres *et al* (2018) did so by relying on Hummels and Schaur (2013), who provided estimates for the *ad-valorem* value of a shipment day for different sectors. This value of time is typically greater for goods with high unit values and for perishable goods. Thus, the change in trade costs is greater for such products. De Soyres *et al* (2018) took into account differences in the structure of trade between different regions. Figure 8.1 also shows the resulting reductions in trade costs. The trade cost savings are slightly smaller than the transport time savings because trade costs capture not only transport costs but also trade barriers such as tariffs. Overall, the reductions in trade costs are, however, closely linked to the reductions in transport time.

***Figure 8.1**: Expected BRI trade effects for the EU, in %*



Source: Felbermayr *et al* (2019), based on data from de Soyres *et al* (2018)

In order to derive the potential change in trade values, Felbermayr *et al* (2019) multiplied the change in trade cost by the trade elasticity. The latter is a measure of how much trade changes following a one percent change in trade costs, and has been frequently econometrically estimated. We use an elasticity of 3.471 as provided by Felbermayr *et al* (2018). Figure 8.1 also shows the resulting increase in trade. The new and improved infrastructure could increase EU trade with China and other East Asian countries by around 8.3 %. Intra-European trade and trade with Central Asia could increase by 3.2 %, and trade with sub-Saharan Africa and South Asia could increase by 3.4 % and 2.7 % respectively.

8.2.2 Trade effects by economic sector

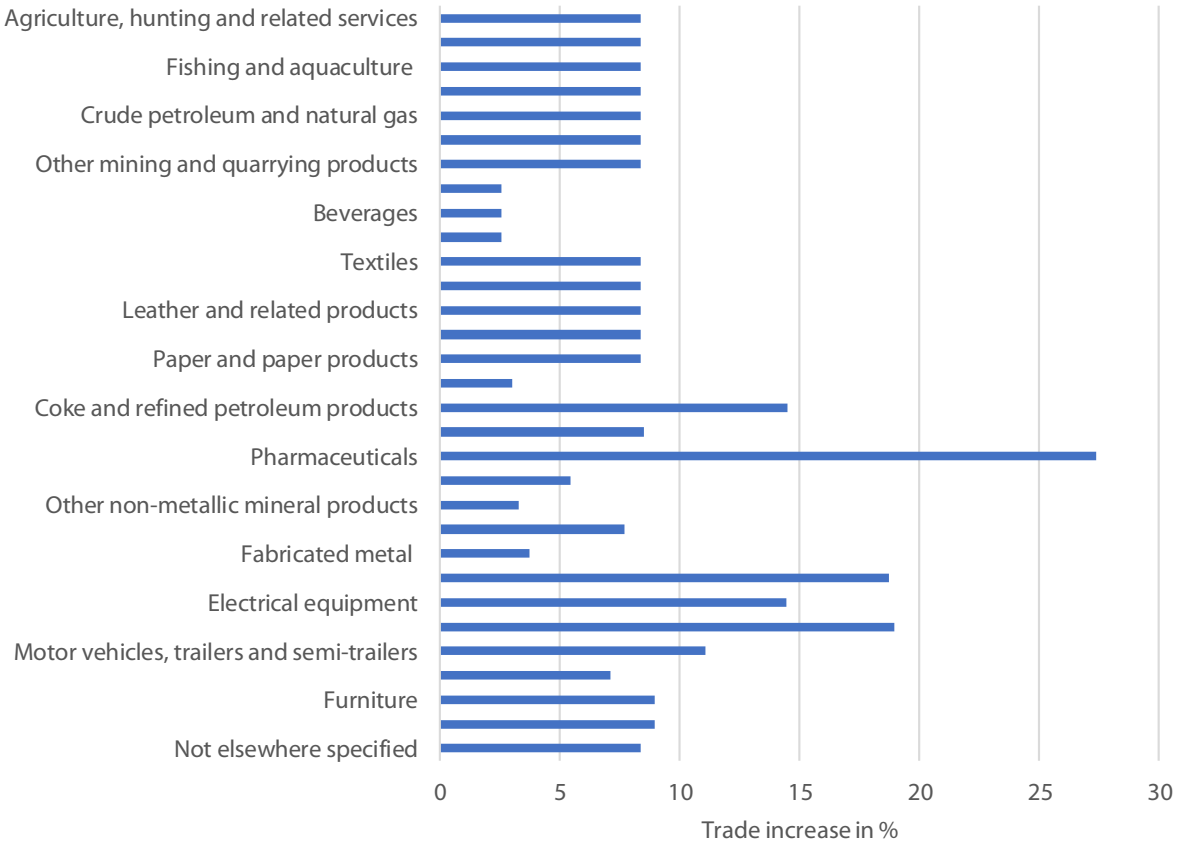
The above estimates do not, however, take into account the specific structure of EU-China trade. The trade effects of the BRI are likely to vary considerably across industries because different sectors tend to react differently to changes in trade costs. For trade between the EU and China, we therefore calculated potential changes in trade by sector. Sectoral changes can then be aggregated to provide a more reliable estimate of the overall change in trade.

We multiplied the anticipated change in trade costs with China (-2.4 %) by sector-specific elasticities, which are provided by Felbermayr *et al* (2018). Figure 8.2 shows the resulting changes in trade flows. EU trade with China in pharmaceutical products will benefit most, with trade increasing by up to 27 %. This is followed by machinery and equipment, and computer, electronic and electrical products (both increasing by about 19 %).

The information on relative changes in trade volumes can be used to calculate the potential absolute change in EU-China trade (in EUR) by economic sector. In line with Felbermayr *et al* (2019), we did this by

multiplying the export (import) value of each sector in 2018 with the sector-specific relative change in trade provided in Figure 8.2. The largest gains in terms of EU exports to China can be expected in machinery and equipment (EUR 6.8 billion), motor vehicles (EUR 4 billion) and computers and electronics (EUR 3.9 billion).

***Figure 8.2**: Increase in EU-China trade by sector*



Source: Own calculations based on data from Felbermayr *et al* (2018) and de Soyres *et al* (2019).

Overall, EU exports to China could grow by around EUR 26.4 billion following BRI related improvements in infrastructure[29]. Relative to a total export value of EUR 211.3 billion in 2018, this would be an increase of 12.5 %. This figure is larger than the average of 8.3 % for East Asia in section 8.2.1 because it takes into account the relative importance of individual sectors in EU-China trade. As Figure 8.2 shows, sectors such as machinery, and computers and electronics, are more sensitive to changes in trade costs than others. Since these sectors also account for most EU exports to China, taking into account the relative importance of these sectors increases the weighted average change in exports.

[29] Absolute changes in trade are calculated based on existing trade values in 2018. If the BRI leads to new products being traded, this would further increase the estimated changes in trade values.

***Table 8.1**: Potential increase in EU-China trade by sector, in EUR millions*

Sector	Exports		Imports	
	Value (2018)	Change	Value (2018)	Change
Agriculture, hunting and related services	948	79	1,813	151
Forestry, logging and related services	524	44	14	1
Fishing and aquaculture	153	13	17	1
Coal and lignite	0	0	20	2
Crude petroleum and natural gas	4,160	347	0	0
Metal ores	1,505	126	110	9
Other mining and quarrying products	754	63	594	50
Food products	7,961	204	5,100	131
Beverages	2,072	53	53	1
Tobacco products	17	0	9	0
Textiles	1,677	140	10,557	881
Wearing apparel	1,869	156	27,940	2,332
Leather and related products	1,733	145	15,028	1,254
Wood and cork	1,046	87	2,715	227
Paper and paper products	2,719	227	2,400	200
Printing and recording services	6	0	13	0
Coke and refined petroleum products	1,146	166	498	72
Chemicals and chemical products	14,798	1,257	15,790	1,341
Pharmaceuticals	10,815	2,963	5,408	1,482
Rubber and plastics products	4,109	223	13,189	716
Other non-metallic mineral products	1,524	50	6,097	200
Basic metals	11,079	850	7,790	598
Fabricated metal	4,861	180	18,875	700
Computer, electronic and optical products	20,686	3,870	136,075	25,461
Electrical equipment	15,198	2,193	45,919	6,627
Machinery and equipment n.e.c.	35,933	6,804	32,004	6,060
Motor vehicles, trailers and semi-trailers	35,851	3,976	7,023	779
Other transport equipment	14,508	1,028	6,870	487
Furniture	1,200	108	9,357	839
Other manufactured goods	4,000	359	20,975	1,880
NES	8,462	706	2,910	243
Total	211,310	26,417	395,166	52,727

Source: Eurostat (2020), own calculations.

Similarly, EU imports can be expected to increase significantly in some sectors: computers and electronics (EUR 25.5 billion increase), electrical equipment (EUR 6.6 billion) and machinery (EUR 6 billion). Total imports could increase by EUR 52.7 billion or 13.3 %. The absolute difference between changes in exports and imports is mainly down to the fact that the EU's imports from China (EUR 395.2 billion in 2018) were almost twice as large as its exports (Table 8.1). In addition, the sectors that respond most to a change in trade costs play a greater role for the EU's imports than for its exports. For example, 31.9 % of all EU exports to China in 2018 from the three sectors with the greatest elasticity (pharmaceuticals, computers and machinery). For Chinese exports to the EU, this share amounted to 43.9 %.

8.2.3 Conclusion

Overall, BRI-related infrastructure projects can be expected to reduce transportation time and trade costs, and consequently should increase trade for all countries involved. European trade with China is likely to benefit most (by about 8 % to 13 %). Specifically, EU exports to China could increase by as much as EUR 26.4 billion, while imports could even increase by up to EUR 52.7 billion. However, the BRI is likely to impact European trade with many countries, primarily those situated along the New Silk Road. It could lead

to the development of new export markets – in particular with landlocked countries - for European firms, while improving access to intermediates and consumption goods. Overall, EU trade may therefore be expected to increase by about 6 % (Section 8.1).

Nevertheless, the unbalanced growth of exports relative to imports could continue to increase the EU's trade deficit with China, potentially further igniting existing political tensions. In addition, the new infrastructure needs to be flanked by appropriate trade policy, such as free trade agreements, to ensure that new trade is being created rather than diverted away from Europe.

9 State-owned enterprises and the EU-China bilateral investment treaty[30]

9.1 Towards a China-EU bilateral investment agreement

Though EU-China trade has strongly increased in the last few decades, bilateral investment has remained moderate. Chinese outward foreign direct investment (FDI) into the EU has only recently started to rise substantially and there is increasing uncertainty about whether this can continue. European FDI into China has remained stagnant, reflecting, among other things, increasingly difficult conditions for European companies on the Chinese market.

Since the adoption of the Lisbon Treaty in 2009, the EU has had the competency to negotiate and conclude bilateral investment treaties (BITs) with third countries. The existing bilateral agreements of member states are to be gradually replaced. This is an occasion to modernise and improve the existing arrangements.

This is particularly relevant in the EU–China context. Both economies have agreed to pursue a bilateral investment treaty that would better protect investment, increase market access and address key challenges related to the regulatory environment, including transparency, licensing and authorisation. Although most of these issues are covered by the existing bilateral agreements, an EU-level BIT with China provides a new opportunity to further reduce barriers to investment and boost bilateral FDI. Moreover, not all EU countries have BITs with China. The new agreement also offers significant benefits to China, given the rapid increase in Chinese investment in European Union countries in the last few years. Furthermore, a successful EU-China BIT could pave the way for a free trade agreement (FTA).

The twenty-sixth round of EU-China BIT negotiations was completed in January 2020 in Brussels. On a number of issues, however, there was no clear convergence between the two negotiating parties. A key point of difference appears to be market access. Market access for EU investors in China is restricted. China is one of the most restrictive countries in terms of market access for foreign investors, according to an index compiled by the OECD[31]. Beyond market access, EU authorities are concerned about potential discrimination against EU investors operating in China, including explicit or implicit preferential subsidies for certain enterprises. Such discrimination could also be a factor supporting Chinese companies to operate in Europe.

While market access is a more general problem, potential discrimination by means of implicit or explicit subsidies is linked to the role played by Chinese state-owned enterprises (SOEs). The EU argues that, at least partly, SOEs face more favourable market conditions than their private peers because of the explicit or implicit government support they receive, and this undermines market efficiency. In addition, there is also disagreement over how to settle disputes between investors, in particular those that involve SOEs.

[30] Authors: García-Herrero (Bruegel), Xu (Bruegel), and Felbermayr (IfW Kiel).
[31] FDI Regulatory Restrictiveness Index, https://www.oecd.org/investment/fdiindex.htm.

These concerns raise not just the spectre of discrimination against European firms operating on the Chinese market, but also for Chinese outward investment in Europe, because a substantial part of it (most of it until very recently) originates from SOEs.

As such, understanding the behaviour of Chinese SOEs, including how they differ from their European counterparts, is crucial for any further negotiations on the EU-China BIT.

9.2 What is special about SOEs? A comparison between the EU and China

In general, the most convincing justification for the existence of SOEs is achieving social objectives and/or correcting for market failures. As such, most SOEs do not need to pursue a profit-maximisation objective, and are often strictly regulated and controlled by governments. In China, SOEs have much wider scope. They originate from the planned-economy era when they dominated all sectors (either SOEs or collectively-owned companies). Most Chinese SOEs, even now, are not mandated to correct for market failures. Very often, their mission is to promote more general government objectives in fields including industrial planning, economic development or foreign affairs.

Chinese SOEs differ from other firms in the following ways [32].

9.2.1 Chinese SOEs are bigger, more pervasive and more dominant than their EU counterparts

Although China began its path of market reform and opening-up in the 1980s, it was only in the 1990s that reforms started to have an impact on SOEs – a movement that took place under the slogan 'Grasping the large, letting go of the small'. As a result, the number of SOEs declined more rapidly than SOEs' share of employees. Another important consequence was that a good part of the private firms existing in China today were SOEs until the late 1990s, meaning their current owners often still have connections, directly or indirectly, with the Chinese government.

Since the late-1990s reforms, the Chinese government has pursued a number of initiatives to reform SOEs, but the logic has switched from privatisation to improving efficiency, while maintaining the role of the state in the production of goods and services. The ultimate objective of the ongoing reform has shifted to creating corporate giants that can compete globally. These giants remain state-controlled, especially in strategic sectors. Nearly 70 % of the Chinese firms in the *Forbes Global 2000* list of the world's largest public companies are SOEs. However, in terms of the share of SOEs in the market value of its largest companies, China ranks third globally after Qatar and the United Arab Emirates.

State-owned enterprises in the EU are of a very different nature. They are generally smaller than Chinese SOEs. They are typically found in sectors affected by potential market failures and externalities, such as utilities.

Though relatively large, Chinese SOEs tend to perform worse than their private peers. Another important characteristic of Chinese SOEs is their industry coverage. Chinese SOEs seem to be much more engaged in manufacturing than European SOEs. This is not so surprising if we consider that the manufacturing sector is larger in China, but this is not the whole story. The figures also highlight the Chinese government's industrial policy to develop manufacturing, a long-time key strategic sector.

9.2.2 Chinese SOEs operate in a special environment

Chinese SOEs are generally larger and more pervasive than their global peers, but are also less profitable than private companies. This phenomenon has its roots in the special corporate governance of SOEs.

[32] The following empirical observations draw from Garcia Herrero and Xu (2017).

The appointment of SOEs' managers is still political, at least to some extent. Before 1992, SOEs' managers were government officials. After China's market economy reforms, selection of SOE leaders was changed to a combination of official recommendation and market recruitment. Nevertheless, given that most SOE executives still retain administrative ranks, prospects for promotion in SOEs are significantly influenced by political decisions.

A second reason for the relatively low profitability of Chinese SOEs is their compliance with non-economic administrative orders. This is very hard to quantify but can be illustrated by a number of examples. A well-known issue is the treatment of overcapacity in SOEs. Allowing producers to go bankrupt is often not an option for the government as it fears adverse social consequences, for example, through increased unemployment. Therefore, many steel companies have had no choice but to become unprofitable 'zombie enterprises'. Such non-economic orders can come from local, as well as central, government. A good example is the government's political objective to reduce the population density in Beijing and Shanghai[33]. To do this, the Beijing government requires some SOEs in Beijing's urban region to move to suburban areas, regardless of the potentially negative impacts on profits and employees.

However, it is also because of SOEs' connections to the political hierarchy that they have access to benefits from the government, including cheaper and easier access to financing than is available to private enterprises. Other sources of preferential treatment for SOEs seem to raise even greater levels of concern, according to an OECD survey (OECD, 2012).

9.2.3 Chinese SOEs may not pass on advantages to global consumers

One could make a case that Chinese SOEs might not encourage competition but could still be good for global consumers because they drive prices down, even in tradable sectors such as manufacturing. More specifically, given the intrinsic advantages SOEs have, coupled with their relatively lower profitability and managerial efficiency, the key question is whether such undue advantages can enable SOEs to set lower-than-equilibrium prices, which could possibly undercut competitors. Even if Chinese SOEs are capable of setting prices lower than their marginal costs because of subsidies (i.e. conduct dumping policies), and they therefore damage the competitive position of European firms, the final impact on the EU's welfare is ambiguous, because consumers can benefit from lower prices and increased product variety.

It is not possible to state general results on the aggregate welfare effects of foreign subsidies (Sykes, 2015). However, in many instances, welfare results depend on the possibility of market entry in the producing country. If market access is limited, firms might not pass on subsidies to consumer prices. The problem is that market access is indeed an issue in China, even for private Chinese companies. There is little empirical evidence about this, but generally, Chinese firms seem to adjust their pricing policies very little to trade policy (Felbermayr and Sandkamp, 2020). This is an important argument that casts doubt on the hypothesis that consumer welfare may go up as a consequence of subsidies received by Chinese SOEs.

9.2.4 It is not appropriate to solely focus on SOEs when looking at market dominance and its consequences

Chinese private firms, including many in the manufacturing sector, were partially privatised in the late 1990s and early 2000s, but still retain strong connections to the Chinese government. More specifically, 5 % of Chinese private firms are under the direct control of Communist Party of China (CPC) members (Milhaupt and Zheng, 2015). Even non-party entrepreneurs are likely to pursue political contacts and sometimes recruit CPC members or people with relationships with government, in order to improve their chances of accessing scarce resources. A striking example is that more than 150 Chinese billionaires belong to a group of lawmakers in the National People's Congress, China's top legislature, or to the Chinese

[33] 'China's radical plans to limit the population of Beijing and Shanghai', The Guardian, 2018, March. https://www.theguardian.com/cities/2018/mar/19/plan-big-city-disease-populations-fall-beijing-shanghai.

People's Political Consultative Conference, the leading political advisory board. More generally, Milhaupt and Zheng (2015) identified striking similarities between SOEs and some special private companies, leading them to argue that '*drawing a stark distinction between SOEs and privately owned firms (POEs) misperceives the reality of China's institutional environment*'. In the same vein, Li *et al* (2008) showed that private firms directly owned by CPC members, and those related to political elites, obtained significantly more bank loans than others.

9.3 European concerns about Chinese SOEs: The crucial role of market access

The increasing economic relevance of China's SOEs, and their eagerness to acquire foreign assets, has come as a shock for many European companies. Some examples of recent European acquisitions by Chinese companies are Pirelli by ChemChina and Louvre Hotels by Shanghai Jin Jiang.

While Chinese companies expand abroad, EU companies seem to have increasing difficulty accessing China's market. In this context, China has introduced a massive plan to support its own manufacturing industry, the *Made in China 2025* initiative. The ultimate goal of this initiative is to further enhance China's competitiveness in ten critical sectors, including new energy and rail transport equipment. Because targets have been set for the amount of local content, it seems clear that this plan will make it even more difficult for foreign investors to access China's market. According to a 2019 business confidence survey, 40 % of European firms see increased discrimination against foreign companies, compared to Chinese companies, under *Made in China 2025* (European Union Chamber of Commerce in China, 2019a).

The EU is also taking steps to revive its industrial sector but within a very different framework, which aims to preserve competition and avoid distortions (Veugelers, 2013). China's rising SOEs and the support they receive undoubtedly challenge the EU's spirit of competition and even its industrial policy. As such, correcting the apparently undue advantages that Chinese SOEs enjoy is an obvious policy target for the EU in the ongoing BIT negotiations with China.

From a practical point of view, however, targeting SOEs in the BIT negotiation might not be the best strategy for the EU. As we have noted, in China, the boundaries between private firms and SOEs are blurred. If the EU were to set particularly rigorous rules for Chinese SOEs, it could leave more room for politically-connected Chinese private firms to gain government support for mergers and acquisitions in the European market. Also, it is hard to argue that all Chinese SOEs behave in the same way.

On this basis, the EU should not impose specific conditions on SOEs within the EU-China BIT, but should rather push for general policies that apply to both SOEs and private companies. In other words, instead of focusing on ownership, the EU should look into the state-centred institutional framework in which firms operate in China, and how that might give them an advantage over European companies. The most important advantage Chinese companies enjoy is the difficulties their foreign competitors face in accessing the Chinese market. Therefore, liberalising market access is the most urgent step to be taken in order to create a level playing field so that European firms can compete with Chinese SOEs. This relates to the second aspect of the EU-China BIT: European investment in China.

9.4 SOEs and competitive neutrality

As part of the negotiation of the EU-China BIT, the EU should continue to pursue reciprocity in terms of corporate governance and, more generally, market access. Many concerns about the behaviour of SOEs are rooted in their complex corporate structures, which result in limited disclosure of their financial information. Beyond the EU's bilateral negotiations with China, there are other – multilateral – venues through which to pursue more market-driven corporate governance for Chinese SOEs. The most obvious route would be for China to become a member of the OECD or, at least, to comply voluntarily with global corporate governance principles. Such measures would be in the EU's interests and in the interests of

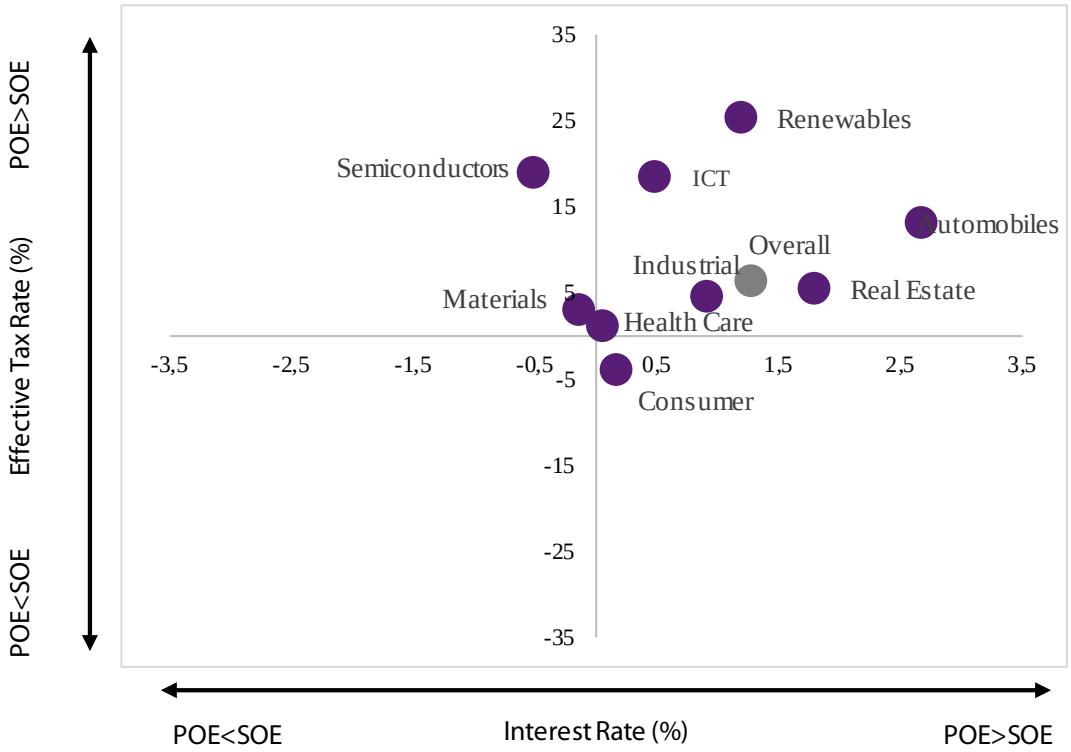
China, which has repeatedly declared its determination to continue with economic liberalisation. Pressure from the EU can encourage Chinese authorities to support further liberalisation.

The OECD has formalised the concept of competitive neutrality (OECD, 2012), or state-owned and private businesses competing on a level playing field. China has shown interest in applying the concept to China to maintain market competitiveness. This, if implemented, will help EU companies compete fairly with Chinese SOEs, thereby easing EU concerns.

Garcia-Herrero and Ng (2020) quantified the degree (or the lack of) competitive neutrality among Chinese firms, focusing on ownership differences. They investigated two potential ways in which SOEs can be favoured by government policies: fiscal (lower effective tax base) and monetary (lower interest payments per unit of debt). They found that SOEs tend to have lower overall effective tax rates than private firms for most of the sectors reviewed. The consumer sector, with relatively high private ownership, was the only outlier. One of the underlying reasons could be the continuous push by the Chinese government for a consumption-based economy, which needs the support of private firms in this sector.

In terms of monetary support, Chinese SOEs have a smaller overall interest burden than private firms. The gap shows the clear divergence between SOEs and private companies in accessing liquidity and the market risk perception. Public firms have a clear advantage in most sectors except semiconductors and, to a lesser extent, materials. The highly competitive and quickly evolving nature of the semiconductor industry probably explains this result. In other words, for highly strategic sectors, private companies may also be supported alongside SOEs. However, access to government funding could be a potential issue for EU companies in competing on the Chinese market.

***Figure 9.1**: Divergence of effective tax rate and interest rate for state-owned and private Enterprises in China (Values of POE – SOE)*



9.5 Policy suggestions

The first priority for the EU-China BIT, clearly based on the principle of reciprocity, should be that China's 'negative list' for market access should be narrowed considerably and extended beyond China's special economic zones to the whole Chinese territory. This goal remains distant because China's negative list continues to expand, underpinned by a law that can limit investment for national security – or even economic – reasons. FDI is highly restricted in China outside the special economic zones, with foreign investment permitted in a select few sectors (positive list) and involving requirements to comply with as many as three foreign company laws. A shorter, negative list with broader coverage would significantly lift market access restrictions in the currently prohibited industries for EU companies. Opening up more sectors would be mutually beneficial, as it would help China to liberalise further.

The second issue for the EU-China BIT is market access beyond the treatment of foreign companies. As we have noted, a key advantage for Chinese SOEs is that they have favourable access to certain industries. The Chinese government sometimes even uses anti-monopoly laws to protect the interests of some specific companies – and not only SOEs (Epstein, 2014). Revising the anti-monopoly law and other legal protections that benefit SOEs relative to other corporations is also essential and would be beneficial for China. More generally, EU negotiators would do well to push the concept of competitive neutrality as a way to demonstrate the lack of a level playing field and persuade Chinese authorities to take action.

Third, the EU should build a firewall against potential problems related to Chinese investment in Europe. The two key instruments for this are the EU's competition policy and dispute resolution framework to regulate the operations of Chinese SOEs in the EU. Identifying unfair behaviour by a firm can be easier after a firm reveals its status by operating in the EU market. An appropriate dispute settlement mechanism can protect both European and Chinese companies. Among the different options, an investor-state dispute settlement system (ISDS) seems to be favoured internationally, but would need to be revised so that governments (either China or EU governments) do not fall prey to companies suing them without clear justification. Furthermore, in the Chinese case, the very close links between companies and the Chinese government (especially when operating abroad) could make ISDS a double-edged sword for the EU, because in certain cases China could, for its own purposes, support its enterprises in suing EU governments. In addition, the implementation of the ISDS might be difficult in China. Its experience with investor-state arbitration is rather limited and there is a very low probability that the Chinese government will enforce foreign court decisions (US-China Economic and Security Review Commission, 2016). A revision of the ISDS is thus warranted to balance the interests of the parties in the BIT negotiation.

Fourth, the EU needs to convince China to improve market access and reduce subsidies to domestic firms, making sure that every participant is on an equal footing. To the extent that such reforms are multilateral in nature, this would generate benefits to all economic partners of China, not just the EU. In principle, and confirmed by empirical observation, China has never made regulatory or institutional changes that would violate the most-favoured nation principle; i.e. they tend to benefit all partners. For this reason it would be very sensible for the EU to combine forces with other countries that have similar concerns about Chinese SOEs or market access.

10 Social credit system and cybersecurity[34]

10.1 China's social credit system

When exploring how EU-China relations are likely to develop in the future, China's social credit system (SCS), to be launched during 2020, is undoubtedly worth a closer look. The SCS is considered by the Chinese government as an essential foundation to build a modern 'credit'-based mechanism to monitor and control the market (State Council of China, 2019).

By establishing the SCS, China's intention is to actively promote 'credibility' in governance, business, society and justice. In its official *Plan for Establishing a Social Credit System (2014-2020)* (hereafter the Plan) (State Council of China, 2014), China makes it clear that the SCS will be applied to all individuals, organisations and companies in China, so that the Chinese government and authorities can better monitor and control their 'trustworthy' behaviour and activities at all stages of their (business) lives against the rules and regulations unilaterally defined by China (State of Council, 2019)[35]. Given the scope of the system Chorzempa *et al* (2018) argued that 'if successful, the SCS will fundamentally change the relationship between the state and the economy'.

The SCS is supposed to be a rules-based, comprehensive, and digitally supported credit system with an integrated effective mechanism of interrelated rewards and sanctions to encourage so-called trustworthy behaviour and to penalise non-compliance or so-called distrusted behaviour. China expects the system to be self-reinforcing in the long run. The SCS will not be restricted to promoting financial credibility, which is the focus of many traditional credit systems used in many other, particularly western, economies.

To establish a rule-based SCS, China has announced new or revised laws and has put in place related rules and regulations to define requirements to assess trustworthiness. If the SCS can be operated in a truly rules-based way, the Chinese government and its agencies could theoretically restrict their role to that of rule makers, reducing arbitrary decisions and interventions in the business and economic environment (Meissner, 2017). In principle, such formal institutions could also foster equal treatment for all, Chinese and foreign firms alike, irrespective of their ownership structures[36]. Clear rules and regulations could also help reduce transaction costs (Chorzempa *et al*, 2018) including, for example, the costs of searching for business partners and public officials, and of building and maintaining good relationships with them to ensure business operations in China can run smoothly. This is particularly relevant for foreign firms in China, which have much less knowledge of local governance and language on site.

Despite these potential positive effects, there are concerns about how the rule-based system would be built and operated in practice. The Chinese government will unilaterally develop and define the laws, rules, regulations and requirements. Considering the risk of repression in China and the relatively limited

[34] Author: Wan-Hsin Liu (IfW Kiel)

[35] The SCS with its general framework and its implementation plan is developed to address all economic agents in China, including individuals, firms and organisations. Different groups of economic agents would be faced with (partially) different requirements for the 'trustworthy' behaviour and with (partially) different reward and sanction measures. For example, the requirement for product safety (s. below) would be a requirement rather relevant for firms but not individuals. 'Distrusted' firms can be rejected to participate in government procurement projects, while this sanction measure is less relevant for individuals. In this chapter, we introduce the general framework of the SCS relevant for all and provide firm-specific examples to help better understand the challenges faced by firms under the SCS in China.

[36] For example, the Market Access Negative List (MOFCOM, 2019a) covers Chinese and foreign-owned firms. It states clearly as item no. 130 in the Miscellaneous Section of the Industries with Restrictions that '… *within a specific time period specified by law and/or regulation, access to market or industry will not be granted to or will be limited for highly distrusted market entities and their persons in charge*'.

participation of the Chinese public or even foreign entities in rule-setting processes[37], it is highly uncertain how compatible the Chinese rules would be with the values and norms (including human rights and business norms) accepted widely in Europe/western countries, and with international standards of, for example, labour and environmental protection. In this case, even if all firms operating in China are treated alike, it does not mean that the SCS's norms of so-called trustworthy behaviour will be compatible with the basic values and norms of European companies active in China (or of their stakeholders).

Clarifying the compatibility of China's SCS rules with international norms and standards would already be a challenge. To do so, the relevant rules, regulations and requirements — from a rapidly increasing pool of official documents — need to be identified first before any attempt can be made by individuals, firms and organisations to understand and respond to the requirements[38]. It will generally be more costly for foreign firms than for their Chinese competitors to go through the continuously expanding jungle of documents related to the SCS, to compare the Chinese rules with the values and norms they are used to, and to respond to the requirements, including by potentially adjusting their business models.

It is still possible that certain rules and regulations will apply exclusively to, or will be more binding on, foreign firms, thus putting them at a disadvantage relative to their Chinese competitors. MOFCOM (2019b), for instance, said in 2019 that China will compile a 'List of Unreliable Entities', including 'foreign firms, organisations and individuals which do not obey market rules, deviate from the contract spirit, or boycott or stop supplying Chinese firms for non-business reasons and thus damage Chinese firms' normal rights'. This list is supposed to be ultimately linked to China's SCS.

The Chinese government aims for the SCS to be comprehensive in order to monitor and control the behaviour of all economic agents in China in a wide range of activities and core business areas. The business areas already specified by the Chinese government in the Plan include: production, logistics, finance, tax, pricing, construction, government procurement, invitation to/submission of tender, transportation, E-commerce, statistics, intermediate services, exhibition and advertisement, enterprise credit management system, labour and employment, education and R&D, intellectual property rights, environmental protection and energy saving and internet application and services. To achieve the comprehensiveness targeted by the Chinese government, a large number of national, local and sector/task-specific governmental authorities are involved as (joint) rule-makers[39].

The aim of comprehensiveness implies that basically 'no aspect of a company's business operations remains completely untouched' (EUCCC and Sinolytics, 2019: 20). Since so many authorities are involved, rule-makers have plenty of opportunities in practice to pursue their own economic and political interests when setting rules, making assessments or deciding on rewards and punishments. Considering that individual firms are in a weak position to avoid or even resist the application of the SCS, there are concerns about firms' vulnerability to the political arbitrariness of the Chinese government and its authorities. They are particularly concerned over their business operations, commercial secrets, data privacy and corporate culture and values. These concerns are further fuelled by the fact that some governmental authorities and public officers in ministries, local governments and public bureaus might pursue their own personal economic and political interests while carrying out their tasks (Dai, 2018).

[37] Public consultation on rules and regulations in preparation has become more prevalent in China over time. Given their limited knowledge of local governance and their lack of integration into the relationship network on site, foreign companies are likely to have (even) less influence on public decision making and rule setting than Chinese companies.

[38] According to an investigation of nearly 1 500 Chinese government documents by the European Union Chamber of Commerce in China (EUCCC) and Sinolytics, there were already about 300 requirements made public up to July 2019 that business activities of multinational enterprises operating in China will be assessed against (EUCCC and Sinolytics, 2019).

[39] The implementation of the SCS is officially led by the National Development and Reform Commission (NDRC) and the People's Bank of China (Website of the Chinese Government, 2014).

China has introduced a mechanism of interrelated rewards and sanctions to increase the effectiveness of the SCS (State Council of China, 2016). Over the past years, more progress has been made in specifying the rules and regulations for sanctions than those for rewards[40]. Possible sanctions for firms (and their persons in charge) with non-compliant behaviour range include fines, difficulty in getting government approvals, subsidies or tax rebates, stricter restrictions or even exclusion from government procurement, more frequent and stricter site inspections, mobility restrictions, imprisonment and public shaming (EUCCC and Sinolytics, 2019). In cases of extremely distrustworthy behaviour — as defined by the Chinese government —it is also possible that firms will be forced to exit the Chinese market and their management forced to leave the country.

A distinctive feature of the Chinese SCS's reward-and-sanction mechanism is the interrelated nature of the rewards/sanctions across governmental authorities, the business operations of a firm, a person's daily activities, and across the localities of the economic agents (State Council of China, 2016). The Chinese government combines these different spheres, firstly, via the interdependence of ratings across areas, i.e. negative ratings in one area can lead to negative ratings in other areas. The 'existing ratings (for firms as an example) cover areas ranging from tax, customs authentication and environmental protection via product quality and work safety, to e-commerce and cybersecurity' (EUCCC and Sinolytics, 2019: 20). Firms identified as distrusted and blacklisted firms in one area would receive sanctions not only from the governmental authority responsible for that area but also from other authorities, given Memorandums of Understanding signed by the governmental authorities involved. The sanction imposed could apply beyond the cities/provinces in which the firms are located. Information about distrusted/blacklisted firms can be made publically accessible, which might lead to, for example, downgrading of assessments in other commercial ratings and negative reputations of firms among potential suppliers and customers, resulting in revenue losses of unknown scale. Sanctions might also be imposed on firms if their key managers/owners or business partners, who are also covered by the SCS, receive negative ratings (EUCCC and Sinolytics, 2019). This implies that firms also have to take responsibility for and thus can be sanctioned for the behaviour of their key managers/owners and business partners.

In light of the large scale and, particularly, the broad scope of potential sanctions that might be applied to the so-called distrusted firms, firms will have no choice but to satisfy the requirements and thus to avoid negative ratings if they wish to continue to operate on the Chinese market. This raises concerns about the latitude left to firms under the SCS to make their own business decisions about hiring employees, selecting business partners, allocating resources, restructuring priority business operations, choosing investment targets and protecting business secrets and data privacy. Restrictions on firms are not limited to their business activities and decisions, however. Firms doing business in China are also required to closely take into account and 'respect' China's ideas on some critical political issues (e.g. human rights, including freedom of speech and freedom of religion)[41]. This might lead to severe conflicts with firms' corporate culture/ethics and the norms and values of their stakeholders. In extreme cases, firms could be forced to choose between exiting or partly exiting the Chinese market or adjusting their corporate culture and, at least temporarily, turning their back on the norms and values they usually believe in. There are also concerns about how the firms' adjusted business practices in China will affect their own and their partners' business operations outside China. Their business practices adjusted to the norms and values of the Chinese government might even spread abroad, challenging the business and human rights norms prevalent in Europe.

[40] There will also be a credit restoration mechanism which would not work automatically for firms with negative ratings if they improve their 'distrusted' behaviour. Instead, it requires their active involvement in the restoration processes by submitting official commitment letters, showing the fulfilment of the requirements and eventually participating in credit training. Inspections on site are also highly possible. Still, not all blacklisted firms are allowed to apply for credit restoration (EUCCC and Sinolytics, 2019).
[41] Chorzempa et al (2018) warned, for example that 'the risk of SCS use to repress speech must be taken seriously…'.

China intends to use digital technologies extensively in SCS implementation, including for data collection and processing, calculating the ratings, storage and information sharing and publishing. The Chinese government and its authorities use digital social and/or business platforms to collect information about economic agents' behaviour, for example, in e-commerce. Face recognition technology and video recording are also intensively used for data collection — including on the streets. Moreover, since China aims to establish (in the long run) an SCS that can function in real-time, economic agents might in future be asked to install or integrate into their IT infrastructure certain apps and software to help the Chinese authorities collect information and thus shorten the time lag between firms' decisions, data collection, monitoring, assessment and reactions (EUCCC and Sinolytics, 2019). Against this background, it is obvious that some of the information and data will be collected without the economic agents being adequately informed in advance or asked for their approval. This raises further concerns about how sensitive data and information about individuals, firms and organisations will be treated and transmitted in the system. It will be highly challenging to implement measures protecting sensitive data and information collected from the SCS from data fraud, manipulation, and information misuse — considering the number of governmental authorities and Chinese digital service providers involved.

The Chinese government and its authorities use algorithms to calculate the ratings for economic agents in different areas. These ratings are based on the data and information collected, which is then compared with requirements set by the governmental authorities and the weights assigned to different requirements. Not all requirement weightings have been clearly and transparently defined. The algorithms are not publicly known (see for example Kostka, 2019) and there is no external control over them, leaving scope for manipulation by the Chinese government in favour of individuals and firms in line with its economic and social development priorities or political ideas, and possibly also with personal interests. There are also concerns about the vulnerability of SCS digital infrastructure in general, and of the algorithms in particular, to potential hacking attempts that might aim to manipulate the rating results for economic and/or political interests.

China launched a digital platform in 2015, the National Credit Information Sharing Platform (hereafter Platform), which is responsible for storing and coordinating all data and information related to the credibility of economic agents in China[42]. The Platform stores data and information about individuals and firms covering a wide range of topics, including: industry and commerce, tax, environmental protection, food and medicine, public safety and social insurance for labour. Data and information about the same or related economic agents are linked to each other as far as possible. The data is mainly provided by national/central and provincial governmental authorities involved in the SCS. The governmental authorities are also the main users of the database services provided by the Platform. It regularly informs governmental authorities (and recently, financial institutions and industrial parks) about the credibility information, particularly the lists of economic agents to be rewarded or sanctioned (Science and Technology Daily, 2018). Despite its potentially high operational efficiency in linking data and coping with information asymmetry problems, there are obvious weaknesses embedded in such a central storage and processing platform. The Platform, as a unique central data reservoir, can be an attractive and priority target for hacking attempts for economic and political espionage or sabotage. Since there is no external/public control over the data and information submitted by the governmental authorities to the Platform, and no external/public supervision of the methods and techniques used for storage, processing and transmission of the data, there are concerns about whether sensitive data and information might be collected, processed, saved and used without the knowledge and approval of economic agents. Additionally, it is still highly uncertain how far the Chinese government and its authorities will take their

[42] NDRC plays a leading role in establishing the Platform, supported by the State Information Centre (Website of the Chinese Government, 2018).

responsibility to respect and protect data owners' rights and privacy seriously, while using the data for their (SCS) purposes.

The Chinese government also uses digital technologies to help make information about 'trustworthy' and, in particular, 'distrusted' individuals and firms public. Such information is published online on different publicly accessible platforms, including the central website Credit China[43]. Information and in some cases pictures of economic agents are also shown on mega-screens in public areas. In cooperation with telecommunication companies, governmental authorities can also provide information about 'distrusted' individuals and firms via automatic telephone messages to all individuals or business partners who try to contact those economic agents officially identified as distrusted (Dai, 2018). Such measures are intended to create additional public pressure on 'distrusted' economic agents, thus motivating them to improve their behaviour to comply with their requirements. These measures, however, also pose a significant threat to data and privacy protection. Adopting these measures indicates that the Chinese government does not yet share the ideas and principles of other countries, and the EU in particular, when it comes to protecting private data and sensitive business information. The publication of personal information and even pictures of distrusted persons in public areas, for example, contradicts the principles adopted in the EU General Data Protection Regulation (EU, 2016) and in the Privacy Guidelines proposed by the OECD (2020)[44]. The unilateral initiation of automatic telephone messages by the Chinese government (and the envisaged audio- and message-monitoring) also raises concerns.

10.2 China's attempts to improve cybersecurity

With widening use of digital technologies in China in general and their key role in the SCS in particular, the Chinese government has increasingly signalled its interest in improving cybersecurity in China. It has published or proposed several laws and regulations, including most notably:

- *China's Cybersecurity Law* (2017);
- the call for public opinion on the *Measures Applied to the Credit Information of Highly Distrusted Entities in Internet Information Services* (2019);
- the start of the upgraded *Cybersecurity Protection System* (2019) covering more applications of digital technologies such as cloud computing platforms, big data centres and industrial control systems;
- and *China's Cryptography Law* (2020).

Without doubt, such laws are necessary to build a legal and regulatory framework for cybersecurity in China. These laws and regulations will not be sufficient to significantly improve cybersecurity in China, however. The most critical risk factor here is the Chinese government itself. It is still unclear how it perceives and defines cybersecurity, how serious it is about its intention to increase cybersecurity and, most notably,

[43] The Credit China Website is the official platform for information about policies and the credit records of economic agents (www.creditchina.gov.cn). Firm-level data and information are partially made publically accessible via the National Enterprise Credit Information Publicity Platform (http://www.gsxt.gov.cn/index.html).

[44] It is stated in the newly drafted Measures Applied to the Credit Information of Highly Distrusted Entities in Internet Information Services that basic information about the blacklisted entities, the facts of distrusted behaviour and all related information determined by the government authorities in charge will be published publically, except for information related to national or business secrets, personal privacy, national, public, and economic security and societal stability. If such 'critical' information still needs to be published, certain technical processing of the data is supposed to be carried out (§9 & §10, Cyberspace Administration China, 2019). It is obvious from the drafted Measures and the example of publishing names and pictures in public areas that China defines data privacy differently from the EU and OECD.

how these laws and regulations apply to Chinese authorities which play a key role in data collection, processing, storage, usage and distribution in the SCS and beyond.

A closer look at two of the laws mentioned above provides some information about how uncertain it is whether they will actually help improve cybersecurity in China. First, the Cybersecurity Law states that critical internet equipment and products specific for cybersecurity should receive security seals or pass security tests, following requirements and standards defined by the Chinese government (§23, Standing Committee of the National People's Congress, 2016). The Chinese government and authorities involved jointly publish a catalogue of such equipment and products that are required to apply for security seals or pass security tests before market introduction[45]. Although the law applies to all products irrespective of the ownership structures of their producers, the decisions on the seals and test results are made by Chinese authorities. This gives the Chinese government a certain amount of leeway to determine which products or whose products can receive the security seals or pass the tests and thus can be introduced to the market. Considering the key relevance of the ICT sector for China's manufacturing and status as a high-tech superpower, it may be easier for Chinese products to receive the seals or pass the tests. And since products listed in the catalogue can only be introduced to market with seals or positive test results, economic agents in China will probably end up being induced (or forced) to predominantly use digital products designed and made in China. This would distort market competition in favour of Chinese firms and products.

Using products with security seals or positive test results does not mean, however, that there will be no data leakage risks for users. Economic agents which can afford the additional effort and investment required may still wish to check the reliability of these products, for example to see if the products contain backdoors that enable the collection of user data without the knowledge or approval of users. The fear of data leakage is further intensified by another article in the same law (§37, Standing Committee of the National People's Congress, 2016) that asks the operators of critical information infrastructure to store domestically, i.e. within China, all information about individuals and important data that they collect or produce during their operations.

Second, China's Cryptography Law states that Chinese authorities will create national and sector-specific standards for passwords for commercial purposes[46]. The Chinese government will also make progress in implementing a testing and recognition system for such passwords and will encourage password owners to voluntarily accept the qualification tests (§22 & §25, Standing Committee of the National People's Congress, 2019). This might actually restrict economic entities' freedom to create and use passwords as they wish. It also provokes concern that the Chinese government and its authorities might gain access to passwords and the information protected by these passwords through, for example, the qualification tests led by the Chinese government.

The same law states that foreign firms and their techniques should be treated the same as Chinese firms which engage in business operations related to passwords for commercial purposes, including research and development, production, sales, services and trade (§21, Standing Committee of the National People's Congress, 2019). Despite this commitment to equal treatment, the same article states that foreign firms are encouraged by the Chinese government to engage in cooperation with Chinese firms to develop related techniques for such passwords. Against this background, foreign firms in the sector in question would face additional challenges in protecting their business secrets and critical information, while being 'encouraged' to cooperate with Chinese partners. This example also shows that even though the Chinese government emphasises its willingness to provide equal treatment to all firms, the many new or revised laws and rules on cybersecurity and on the SCS give the Chinese government additional possibilities to

[45] The first catalogue was published in June 2019 (MIIT, 2019).
[46] According to the article §8, such passwords are not exclusive to firms only. Instead, these passwords can be used by citizens, legal entities and organisations to protect information that do not belong to national secrets (Standing Committee of the National People's Congress, 2019).

restrict market access for foreign firms in China and to distort competition with Chinese firms. Moreover, granting equal treatment *per se* does not imply that foreign firms in China would be treated as they are used to being treated in the EU, for example, with reliable legal protection for their property and rights. They would still face the same risks as Chinese firms in terms of frequent and far-reaching government intervention.

10.3 Conclusions and suggestions

The rule-based, comprehensive and digitally-supported SCS with a multi-dimensional mechanism of interrelated rewards and sanctions will be officially launched in China in 2020. It will apply to all economic agents in China, including foreign firms. The SCS might help the Chinese government achieve its goal of strengthening credibility in governance, business, society and justice, as stated in its Plan. But it will pose several critical challenges to economic agents in China. For firms operating in China, the critical challenges will include:

- An increase in transaction costs and resource misallocation risks;
- Restrictions on the freedom to make business decisions in areas including corporate culture, corporate ethics, employment, partnerships, investment, business priorities and data protection;
- Continuing market discrimination, forced cooperation, distorted market competition and even forced market exit;
- Security threats to private data, business information and critical knowledge;
- Conflicts with and challenges to values, standards and business norms held by many western firms and supported by the public in the EU; and
- Restrictions on human rights such as freedom of speech and data privacy.

European firms active in China will not be able to effectively oppose the implementation of the SCS or refuse to participate in the system, without running the risk of suffering substantial business losses – not mentioning potential public shaming for their 'uncooperative attitude' in improving 'trustworthiness' in China. Here, the European Commission can play an important role. It should work with European stakeholders to learn more about the SCS-related challenges faced by European firms investing in China and by European firms trading with Chinese firms. It should support firms by more actively working with China to ensure greater compatibility between the rules, regulations and requirements set by the Chinese government with European or international norms, values and standards on business, data protection and human rights. The European Commission needs to make it clear to the Chinese government that equal treatment provided to all firms will not be enough if the legal rights of European firms and their employees cannot be sufficiently protected under China's SCS. The European Commission should also work with other western countries or the OECD to strengthen their power in negotiations with China. They can also jointly and officially demonstrate their support for the firms (and the employees) in China to adhere to the norms, values, standards and corporate culture/ethics that enjoy majority public support in the EU and OECD countries. All these factors are highly relevant for intensifying trade and investment relations between China and Europe in the long run.

11 Made in China 2025: Where does China stand?[47]

The Chinese economy has been on a decelerating trajectory since 2010. GDP growth slowed from the earlier two-digit rate to only around 6 % in 2019. Such a substantial slowdown is certainly not cyclical, but is structural and, therefore, related to the long-term challenges the Chinese economy faces, including an aging population, advanced urbanisation and high leverage.

The economic trend can be seen in the pattern of China's exports. Over the past four decades, China has flooded the global market with goods made in China. While China's share of global exports has come down from a peak of about 14 % in 2013, to only 12.8 % in 2018, its share of the global market for intermediate goods rose and plateaued at approximately 11 % in 2018. Moreover, the value-added of Chinese exports has continued to grow.

At the same time, rising production costs in China, and more recently the reality of US tariffs, have pushed companies to move part of their production outside China. For example, Samsung recently closed its last smartphone production centre in Huizhou after 30 years of operation during the US-China trade conflict, and relocated their production to Vietnam and India (Huifeng, 2019).

Against this backdrop, the traditional economic growth model that relies on labour-intensive production and low value-added activities seems unable to continue to generate sustainable economic growth. In other words, to enhance its economic potential, China must transition towards a new economy that focuses more on high-technology and high value-added production.

To do this, the Chinese government has set out massive plans to facilitate the transformation process. One of the most famous projects driven by this ambition is *Made in China 2025*. This continues China's long-term strategy to achieve economic goals through targeted state-planning. But this time, the policy has attracted more global attention, as it is being enacted at a crucial time when China has already grown into a prominent global economic power that competes with the US and the EU.

In particular, the *Made in China 2025* strategy sets some targets that do not directly link to the economic growth rate, but more to the strength of China's innovation activities, such as its share of R&D and patents. The strategy is expected to change the international competitive environment. For a long time, Chinese integration into the global economy has been characterised more by complementarity than substitution with Western countries, on the basis of China's offer of low value-added, labour-intensive goods. In western economies, the labour force and capital concentrate on the high-skilled fields. *Made in China 2025* shows China's firm intention to change the status quo and to compete with the EU and the US on their own turf.

The process of upgrading the economy seems an inevitable step for China. It would likely happen even without the announcement of such a massive national strategy, because it is driven by the fundamental need of the Chinese economy for sustainable growth. But the government's stated intention to push forward sent a clear signal to the US and the EU. *Made in China 2025* has raised concerns in the EU about how European companies can compete in the face of the Chinese strategy.

To promote the transition from resource-based growth to quality-based economic growth, *Made in China 2025* focuses on several vital sectors (Table 1). It aims to increase China's capacity in the core sectors, though no specific quantitative target has been set for each sector. Subsequent to the publication in May 2015 of *Made in China 2025*, the Strategic Consulting Committee for the Establishment of a Strong Manufacturing Country, a semi-official organisation, published in October 2015 China Manufacturing 2025 Key Area Technology Roadmap (CM2025 Roadmap). This includes some specific market-share targets for 2020 and 2025, but the measurement of the market shares in some sectors is vague. For example, the self-sufficiency rate for high-end CNC machine tools and basic manufacturing equipment in China's domestic

[47] Authors: García-Herrero, Xu (Bruegel).

market should be at least 80 % by 2025, but it is unclear how the market share is precisely defined – by volume or value-added. It is also unclear how binding the target is on the government. In a meeting between the European Union Chamber in China and China's senior officials from the Ministry of Industry and Information Technology, the latter downplayed the market shares as 'merely representing the views of academics with no real influence on policymaking' (European Union Chamber of Commerce, 2017).

***Table 11.1**: Key sectors in Made in China 2025*

• Next generation IT
• High-end numerical control machinery and robotics
• Aerospace and aviation equipment
• Maritime engineering equipment and high-tech maritime vessel manufacturing
• Advanced rail equipment
• Energy-saving vehicles and NEVs
• Electrical equipment
• Agricultural machinery and equipment
• New materials
• Biopharmaceuticals and high-performance medical devices

China has explicitly set a few criteria to assess the progress of *Made in China 2025*, covering innovation, quality of growth, digitalisation of industry and environmental protection. We focus mainly on the growth-related facets and leave aside the environmental targets (Table 2).

So far, China's performance against the indicators has been better than expected. For example, China expected to raise the number of patents per 100 million renminbi in total corporate revenue to 0.7 by 2020 and 1.1 by 2025. However, the latest figure at the end of 2018 was already 1.07, close to the 2025 objective. China has also made a crucial breakthrough in the digitalisation of industry. Broadband internet penetration was set to reach 82 % by 2025, but the ratio had already moved up to 86.1 % by 2018. As such, it seems that most of the targets in *Made in China 2025* underestimated developments in these fields in China, according to existing data in China. It is unclear if these targets were driven by *Made in China 2025*, or if it originated from the Chinese internal market demand for transformation, as it would have happened anyway even without government intervention.

The only target that China appeared to fail to meet was the industrial value-added ratio. It measures industrial value added after deducting the cost of inputs. The measure has not been reported officially in the latest *China Statistical Yearbook*, so as a proxy we calculated it as the ratio of total industrial value-added to total industrial production value. The measure was expected to rise by 2 percentage points by 2020, according to the *Made in China 2025* strategy, but in fact was unchanged from 2015 to 2018, indicating that the value-added gained from industrial production has not increased, despite the rise in R&D spending and the acceleration of digitalisation. Because of the process of deglobalisation in recent years and the fragmenting of value chains, the steady value-added share is likely a result of the increasing cost of labour inputs, which absorb increases in revenue.

China's labour productivity growth rate also looks better than the government's expectation, which remained at an average rate of 8.1 %. It exceeds both the government planning rate of 7.5 % and the average rate from the previous five years (7.3 %, from 2011 to 2015). Further taking into consideration the rising human capital (e.g., better education and more skilled labour) and slower growth of physical capital, the actual total factor productivity, has shown a continuously decline in recent years in China. Nevertheless, Chinese labour productivity growth rate is still ahead of the major developed economies. The total productivity growth rate in Germany and Japan has even moved into negative territory.

***Table 11.2**: Key economic indicators in Made in China 2025 (excluding environmental targets)*

	2013	2015	2020	2025	Latest figure	
Innovation						
Share of R&D spending of operating revenue (%)	0.88	0.95	1.26	1.68	1.3	Dec-18
Invention patents per CNY 100 million total revenue	0.36	0.44	0.7	1.1	1.07	Dec-18
Quality						
Quality Competitiveness index	83.1	83.5	84.5	85.5	-	-
Increase in industrial value-added ratio	—	—	2 percentage points higher than 2015	4 percentage points higher than 2015	unchanged from 2015	Dec-19
Labour productivity growth (%, annual average in five years)	—	—	7.5 (Average of 2016 to 2020)	6.5 (Average of 2021 to 2025)	8.1	2016-2018 (Average)
Digitisation of industry						
Broadband internet (penetration %)	37	50	70	82	86.1	Dec-18
Use of digital design tools in R&D (penetration %)	52	58	72	84	69.3	Jun-19
Use of numerical control machines in key production processes (penetration %)	27	33	50	64	49.5	Jun-19

Source: State Council's announcement on the *Made in China 2025*.

It is unclear, however, if progress against the *Made in China 2025* indicators has really resulted in better economic performance in China. For example, China established the Integrated Circuit Industry Investment Fund, also known as the 'Big Fund', in 2014, and further expanded it in 2018, to encourage investment in wafer fabrication, chip design and outsourced semiconductor assembly and testing. This is visible government funding which is primarily provided by the Ministry of Finance and state-owned enterprises (SOEs). However, our calculation, using the financial information of the listed companies in both China's onshore and offshore market, reveals that the ICT sector has much lower revenues and return on capital compared with other industries. The only bright spot for the industry is its slower debt accumulation, which results from government support in lowering financial costs. In addition, the profitability of the ICT sector remains low.

The government's priority behind such a push in the key sectors might not be their short-term financial health, but rather fast growth to avoid reliance on the global market. But it is still to be seen whether such a loss in financial terms is beneficial for sustainable growth in the ICT and other sectors.

All in all, China has continued with its industrial policy tradition in pushing *Made in China 2025*, aiming to upgrade its economy. Assessing macro-level performance shows the strategy has succeeded in enhancing innovation and productivity. However, the experience of one key sector, namely ICT, does not yet show sustainable benefits that would enable the momentum to be maintained.

12 Conclusions[48]

In this document, we review the economic relationship between China and the EU and look at its evolving nature. Their relationship cannot be understood in isolation. Both the changing nature of China's economic model as well as the increasingly tough US approach towards China shape the EU-China relationship. In fact, since the arrival of President Xi Jinping to power, Chinas appears to have deviated from the reform path traced by Deng Xiaoping and has pursued a stronger role of the state in the production of goods and services and state planning more generally. The arrival of President Trump to the White House has shifted US relations with China from engagement to confrontation. The US-led trade war against China, which started in early 2018, is the paradigm of the new economic model governing US-China relations.

Within this context, the EU needs to reassess its longer term strategy of engagement with China. Systemic rivalry is, of course, one option but cannot be the only one. China is too big a partner for the EU and systemic rivalry as a starting point can easily lead to deteriorating relations and even outright confrontation. As China's importance is likely to grow, the EU will need to define a nuanced approach to China, setting out conditions for a fruitful co-existence with China while also strengthening instruments to defend EU interests and EU values.

First, there are areas of natural engagement with China, such as climate change and the multilateral trading system. It makes sense to build a constructive dialogue with China on these topics and here we discuss how the WTO collaboration could look like. Second, there are important red lines which the EU cannot cross in its economic relations with China. Within this context, our report looks into the role of the state in Chinese companies active in the EU single market, the Chinese market and third markets. We conclude that it is not enough to focus on the type of ownership of companies. In fact, some private companies could indeed be favoured by the state because they are considered strategic. This difference in economic model creates significant obstacles to a free and unhindered trade and investment relationship. While the EU cannot expect to be able to change China's economic model - US has not been able to do so no despite its recent protectionist measures - it still has an opportunity to engage with the Chinese government, particularly the reformist side, on key economic reforms.

The most obvious space for the EU to help China shape a reform agenda is not only the existing high level economic dialogue (which unfortunately is becoming diluted by the existence of similar dialogues by large member states of the EU, as well as that within the 17+1 framework) but, most importantly the Bilateral Investment Treaty (BIT) which has been under negotiation for the last six and a half years. Within the BIT, the concept of 'competitive neutrality' could be an interesting venue of dialogue in as far as it could help China measure the degree of government support to SOEs (and other strategic companies) to gradually reduce it and move closer to a market economy.

While continued dialogue and negotiations are of course welcome and there is still reasonable hope that China moves in the right direction of reform, the EU should not be naïve. So far, we need to state the obvious, namely that China's economic system is driven by a highly invasive state which creates multiple tensions and complications in its trade and investment relations with the EU. Beyond our bilateral relations, such an invasive state is also creating unfair competition for European companies, not only in the Chinese market but also overseas, given the size of Chinese corporates globally.

[48] Authors: Garcia-Herrero (Bruegel), Wolff (Bruegel), Felbermayr (IfW Kiel).

Regardless of rivalry over economic models, though, the EU's attempt to preserve multilateralism and China's obvious economic importance should remind us all that fruitful and balanced co-existence should be the aim of EU-China economic relations. This means that the EU should have its own strategy regarding China. EU member states should be united when negotiating their economic relationship with China so as not to dilute the negotiating power of the EU. Investment relations are now a key area of EU-China economic relations.

In this report, we have focused on trade and investment relations and have not attempted to define the many other policy instruments that the EU can and should pursue to increase its leverage towards China, and to protect its domestic economy while boosting domestic investment and trade. In Leonard et al (2019), one of the authors of this report discusses in detail the advantages and the pitfalls of such instruments. Leonard et al (2019) also make clear that the relation between the EU and China and the US cannot be seen only in pure economic terms – which makes the definition of a proper EU strategy all the more important but also all the more difficult.

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