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Article

Cheating tiger, tech-savvy dragon : Are Western concerns about "unfair trade" and "Made in China 2025" justified? = Tigre tricheur, dragon de haute technologie?

Cheating tiger, tech-savvy dragon: Are Western concerns about "unfair trade" and "Made in China 2025" justified?

K. Buysse
D. Essers *

We are open traders, but we cannot afford to be naïve. Not all of our trade partners want to play by the same rules that we do – we must not be taken advantage of and must protect the EU, its competitiveness and its workers against unfair trading practices.

Jean-Claude Juncker,
speech at the launch of report on EU trade defence, 28 March 2019

Introduction

China's accession to the World Trade Organisation (WTO) in 2001 was hailed as a milestone at the time, bringing benefits to all. The EU and US expected this would not just induce China to import more of their goods and services, but encourage it to further open up its immense domestic market to foreign investors, and eventually to converge towards a market economy and democracy. After all, this had been the earlier experience with Japan, South Korea and Eastern Europe. But now, almost two decades later, many Western observers regard the outcome of this process as disappointing. It is felt that China has not fully lived up to its commitments under WTO membership, while the hoped-for political liberalisation has not materialised. Instead, China is now actively promoting an alternative model of governance, built on the supremacy of state power over individual rights and economic freedoms.

In response, tensions between China and its main trading and investment partners have risen. The US administration has been most vocal, accusing China of, among other things, unfair trade practices, distortionary subsidies, theft of intellectual property, and forced technology transfer[1]. EU policymakers appear to largely share US concerns, even though the language they use to describe the problems with Chinese trade and investment practices is somewhat more diplomatic. In the European Commission's latest EU-China Strategic Outlook, China is designated as a "strategic competitor" that "fails to reciprocate market access and maintain a level playing field" (EC, 2019a).

* The authors are grateful to Paul Butzen for his guidance, to members of the ECB's International Relations Committee (IRC) for helpful comments, and to staff of the IMF's Asia and Pacific Department (APD) for sharing their data.

1 For example, in a notable speech delivered at the Hudson Institute on 4 October 2018, US Vice President Pence declared: "The Chinese Communist Party has… used an arsenal of policies inconsistent with free and fair trade, including tariffs, quotas, currency manipulation, forced technology transfer, intellectual property theft, and industrial subsidies that are handed out like candy to foreign investment. These policies have built Beijing's manufacturing base, at the expense of its competitors – especially the United States of America."

This article draws on several sources of data and recent studies to shed some light on the validity of such oft-cited complaints. In order to better understand the potential threats from China, we start with a description of its approach towards industrial policy and economic modernisation, best captured by the Made in China 2025 initiative. We then look, successively, at China's "unfair" trading practices (Section 2), barriers to foreign direct investment (FDI) in China (Section 3), the role of state-owned enterprises (Section 4), forced technology transfer (Section 5), Chinese outward FDI into the EU (Section 6), and industrial espionage and cybertheft (Section 7). Finally, we analyse how the listed concerns are addressed in the EU's current strategy towards China (Section 8).

1. Made in China 2025

In May 2015, the Chinese government launched Made in China 2025 (hereafter abbreviated as MIC 2025), a comprehensive, forward-looking masterplan for economic and industrial modernisation. MIC 2025 is the first phase of President Xi Jinping's long-term ambition to re-establish China as one of the world's top manufacturing powerhouses and a technological leader by 2049, the 100th anniversary of the founding of the People's Republic of China. Its intermediate objective is to enhance the innovative capabilities of the country's manufacturing industry and to move China up the value chain by 2025.

MIC 2025 takes its inspiration from Germany's "Industry 4.0" and the Asian economic development model. In contrast with China's previous industrial policy plans, which were more focused, MIC 2025 is a comprehensive strategy targeting entire manufacturing processes in ten strategic high-tech industries: new generation information technology (IT), high-end numerical control machinery and robots, aerospace and aviation equipment, maritime engineering equipment and high-tech shipping, advanced rail equipment, new-energy and energy-saving vehicles, electric power equipment, agricultural machinery and equipment, new materials, and bio-pharmaceuticals and high-tech medical devices. China wants to raise the domestic value-added content in each of these industries by moving into the more sophisticated parts of the value chain, including research and development (R&D), product design, and branding. This should help secure China's future position as a global industrial power. Four years into the strategy's implementation, it is estimated that over 530 industrial parks have emerged in China (Zenglein and Holzmann, 2019). Many of these parks are active in technologically advanced areas such as big data (21 %), new materials (17 %) and cloud computing (13 %).

MIC 2025 is backed by strong political leadership, generous funding and a focus on innovation policies. The policy plan benefits from high-level involvement of the State Council in its coordination, while the Ministry of Industry and Information Technology (MIIT) takes the lead in implementation. However, the mobilisation of regional governments and private companies is also key to a successful execution of MIC 2025. Local governments roll out pilot projects related to the development of specific MIC 2025-related industries, establish provincial manufacturing innovation centres (in addition to the 40 national ones) and provide fiscal support mechanisms. Private companies have driven many of the current technological advances in areas such as new-energy vehicles, big data, facial recognition and digital payments. These private tech companies know that they need to align their business with national goals. In return, they benefit from a light regulatory framework and a competitive internal market, shielded from external competition in their infant stage (see Box 1 on Huawei). Finally, Chinese state-owned enterprises (SOEs) too play a critical role in the development of strategic industries.

The most important policy instrument is financial support in various forms. Most common are (low-interest) loans from state-owned financial institutions, funding from government-guided investment funds or from ministries' special financial vehicles, and subsidies from (mainly) local governments. The exact amounts provided are unknown but deemed to be important. For example, Huang (2019) estimates that there were over 1,600 government-guided investment funds with total capital of about RMB 4 trillion (4.5 % of GDP) at the end of 2018. The largest central government-owned financial vehicle, China Reform Holding (which invests in innovative SOEs), has capital of around 0.1 % of GDP (EU Chamber of Commerce in China, 2017).

An overriding objective of MIC 2025 is to strengthen the innovation system, borrowing from best practices abroad and investing heavily in domestic R&D, with the ultimate aim of replacing China's dependence on foreign technology imports with indigenous innovations, and creating Chinese companies that can compete domestically as well as globally (ISDP, 2018; Wübbeke *et al.*, 2016). The current dependence on foreign core components in many innovative products is considered a bottleneck as well as a source of vulnerability, especially in view of the tense relationship with the US. This dependence is most evident in the fields of new materials, semiconductors, and advanced machinery and machine tools. At the same time, China has become an important location for the R&D activities of foreign companies in some emerging industries. For example, several carmakers (BMW, Volkswagen, PSA) have set up R&D facilities for electric vehicles in China.

China has already demonstrated its ability to quickly move up the global value chain, most strikingly so in the electronics sector (Buysse *et al.*, 2018). In a recent sectoral analysis, the European Commission's Joint Research Centre finds that China is rapidly gaining competitiveness in the fields of nuclear energy, new-energy vehicles, wind power and photovoltaic technologies, artificial intelligence, and in some areas of advanced manufacturing technologies and robotics (EC JRC, 2019). In most other areas, however, China's industrial production base is still lagging that of major advanced economies.

Wary of the international backlash against its ambitious masterplan, Chinese officials no longer refer to MIC 2025 in public speeches. However, this seems to be mere window-dressing, as many provincial government plans and sectoral plans, such as Internet Plus or the New Generation Artificial Intelligence Development Plan, continue to refer to it. Moreover, MIC 2025 itself was largely an elaboration of previous plans guiding Chinese industrial policy[1].

2. China's "unfair" trading practices

A comparison of average most-favoured nation (MFN)[2] tariff levels shows that, across all sectors, China still applies significantly higher tariff rates on European imports than does the EU on Chinese imports. This difference persists despite a gradual decrease in Chinese tariffs over time. To be sure, the application of higher tariff rates does not violate China's WTO commitments *per se*, given that the rates remain below the bounds to which China subscribed at WTO accession, and is indeed to be expected in view of China's still much lower level of economic development compared to the EU28. Yet, a simple cross-sectional regression of average MFN tariff rates (applied in the manufacturing sector) on (log) GDP per capita indicates that although China is no clear outlier, its import tariffs continue to be higher than one would predict based on overall development levels.

More so than tariff levels, non-tariff barriers and other behind-border policy measures have taken centre stage in recent deliberations about China's "unfair" trade. Of the 341 disputes initiated at the WTO between 2002 and May 2019, 43 were aimed at China (Chart 2), making it the third most targeted country[3]. The majority of these were filed by the US (23); the EU comes in second place, with nine cases. Looking further into the 43 WTO disputes opened against China, we find that about half of them concerned the challenging of Chinese import restrictions (including anti-dumping measures that China imposed on its Western imports) and export restrictions (mostly of rare earths and other raw materials mined in China). More recently, claims of distortionary government subsidies and taxes, market access restrictions, insufficient protection of intellectual property rights, and forced technology transfer have also featured among the cases brought against China (Chart 3)[4].

1 Chen (2019) shows that the term "MIC 2025" also virtually disappeared from Chinese official media (People's Daily and Xinhua) from May 2018 onward. However, references to "indigenous innovation" and "core technology", phrases often associated with MIC 2025, continued and later increased significantly in Chinese media.

2 MFN tariffs are the tariffs that countries impose on the imports from other WTO members with whom they have not concluded preferential trade agreements.

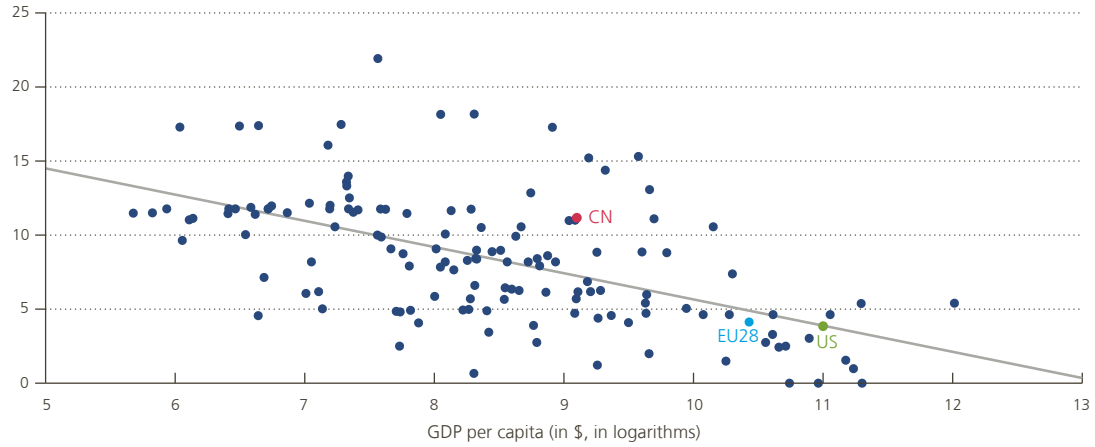
3 Over this period, the EU and especially the US have more often been targeted in WTO trade disputes than China (in 51 and 98 cases, respectively). Indeed, the 2018 peak in initiated trade disputes (Chart 2) can be ascribed to the challenging of the Trump administration's trade measures by the US's main trading partners (19 out of 39 cases in that year).

4 The Table in the appendix provides more details on the subject of the complaint, the current status and the outcome of each of the nine WTO disputes initiated by the EU against China.

Chart 1

Average tariff rates (on manufactured goods) vs income[1,2]

(2016 or latest available year, %)



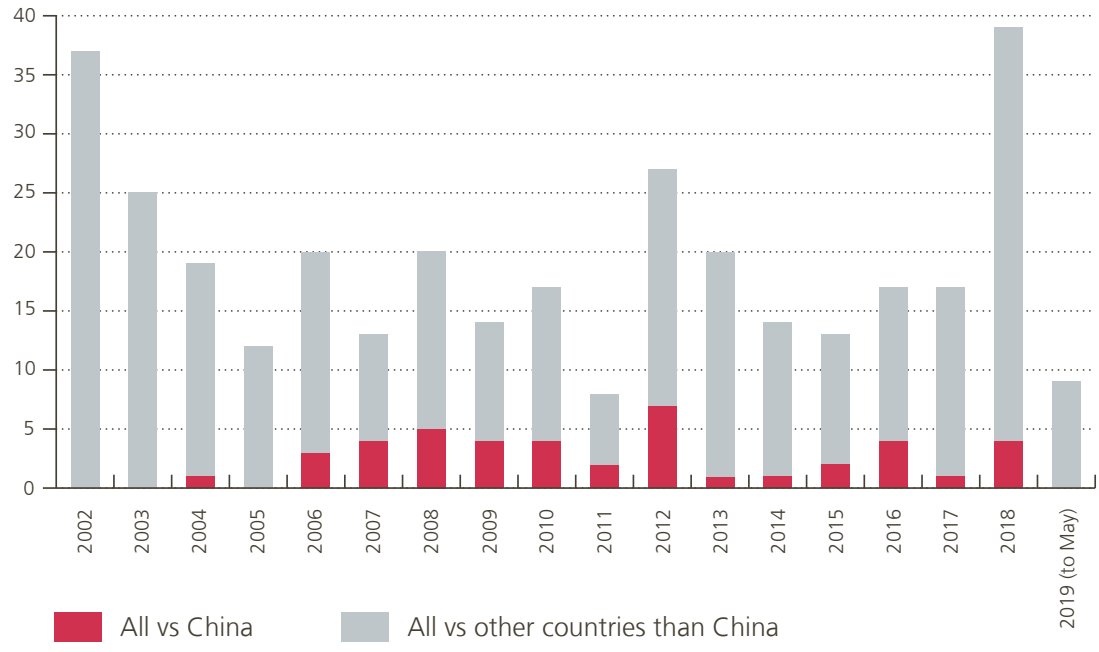
Source: World Bank WDI.

1 Sample consists of 140 countries plus the EU28.

2 Unweighted average of MFN rates on manufactured goods, i.e. commodities classified in SITC revision 3, sections 5-8 excluding division 68.

Chart 2

Number of WTO disputes initiated[1]



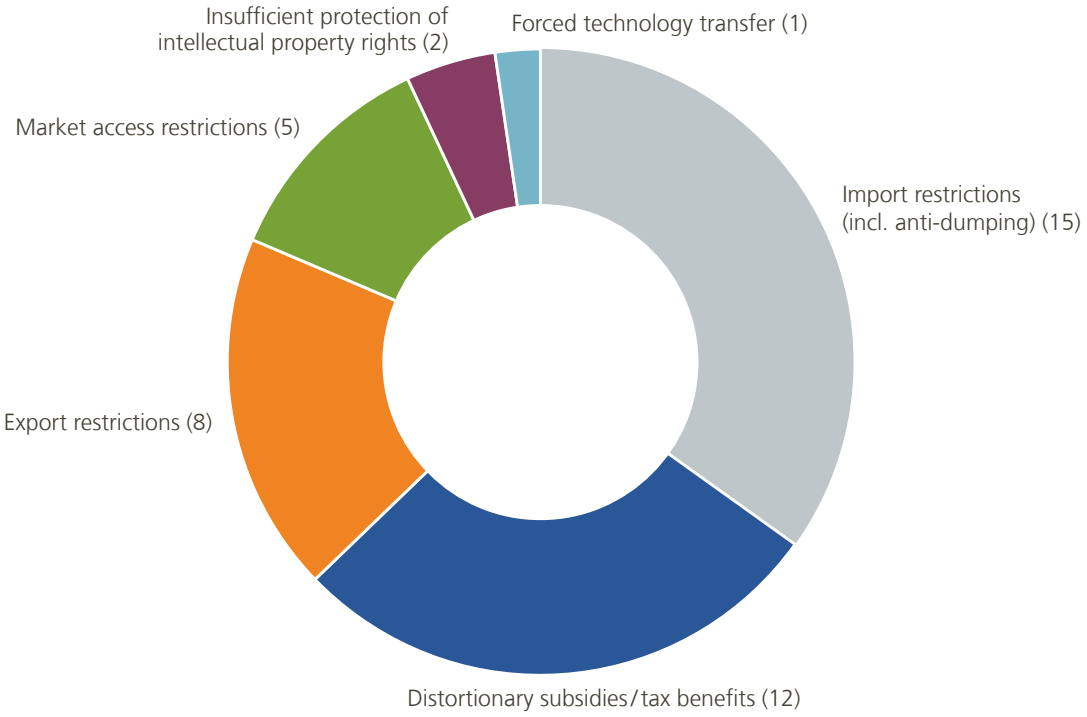
Source: WTO.

1 Number of requests for consultations. Where several WTO members made a joint request in a single document (with one identification number), this is counted as one dispute.

Chart 3

Number of WTO disputes initiated against China[1], by type of complaint[2]

(cumulative over 2002-19)



Sources: WTO, EC.

1 Number of requests for consultations in parentheses. Where several WTO members made a joint request in a single document (with one identification number), this is counted as one dispute.

2 For EU examples of these types of complaints, see appendix.

The large majority of WTO disputes have ultimately resulted in rulings favouring the EU and the US, and in the roll-back of the discriminatory measures in question by the Chinese government (see appendix; Schott and Jung, 2019). Arguably, China has been a better trading partner inside the WTO than it would have been outside (Blustein, 2019). This is not to say that the workings of the WTO and its system for dispute settlement cannot be improved. Dispute procedures against China have often been frustratingly slow, in part due to China's frequent use of the possibility to appeal against preliminary panel rulings. Moreover, several WTO agreements are ill-suited to dealing with major distortions in China's self-proclaimed "socialist market economy" system, which may explain why China has not been challenged more often by means of WTO disputes. We will return to this when we discuss WTO reform – actively pursued by the EU – as a possible way forward (Section 8.1).

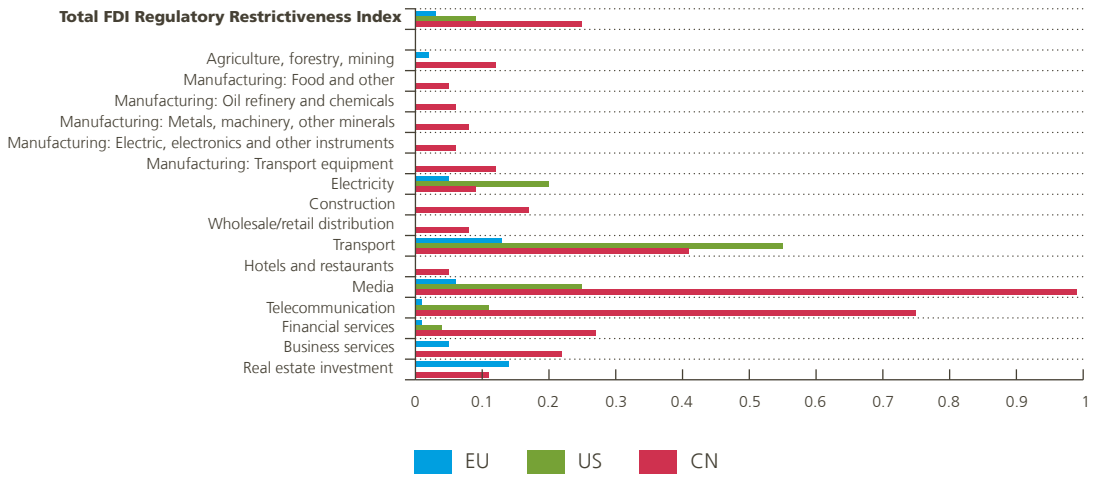
3. Barriers to FDI in China

On the investment front too, Chinese firms enjoy easier FDI access to the EU and US than vice versa. According to the OECD's composite index, Chinese FDI regulations are much more restrictive than those of the EU or the US in almost all sectors, and particularly in media and telecommunications (Chart 4). This is largely because of statutory limits to foreign equity, typically obliging foreign investors to enter into a joint venture with a Chinese partner. Despite a gradual improvement over time in China's overall score, the country is still ranked as the third most FDI-restrictive (behind Indonesia and Russia) in the sample of 50-plus countries for which the OECD index is available.

Chart 4

FDI Regulatory Restrictiveness Index[1], 2018

(0 = no restrictions, 1 = no access)



Source: OECD.

1 The index measures the restrictiveness of a country's FDI rules by scoring four main types of restrictions on FDI: (1) foreign equity limitations, (2) screening or approval mechanisms, (3) restrictions on the employment of foreigners as key personnel, and (4) operational restrictions.

Some further opening of the Chinese economy to foreign firms can be expected in the near future. China's new Foreign Investment Law, adopted in March 2019 and planned to come into effect in 2020, will replace the current approval system (based on three lists of prohibited, restricted and encouraged sectors) with a registration system for all foreign investors, except those in restricted industries defined through a "negative" list (Hanemann and Huotari, 2018). The negative list includes sectors of high strategic importance, such as cloud computing (related to MIC 2025), rare earths and mining. Since 2018, the number of sectors on the list has been reduced twice, to 40 currently. Most strikingly, the automotive sector and the financial sector are set to be removed from the list (by 2021). However, it can be argued that the recent abolition of the joint venture requirement in some sectors has merely been used as a bargaining chip in negotiations focused on improving reciprocity (Zenglein and Holzmann, 2019). For example, the automotive sector is no longer considered strategically important by China, as it believes that domestic car manufacturers can withstand foreign competition.

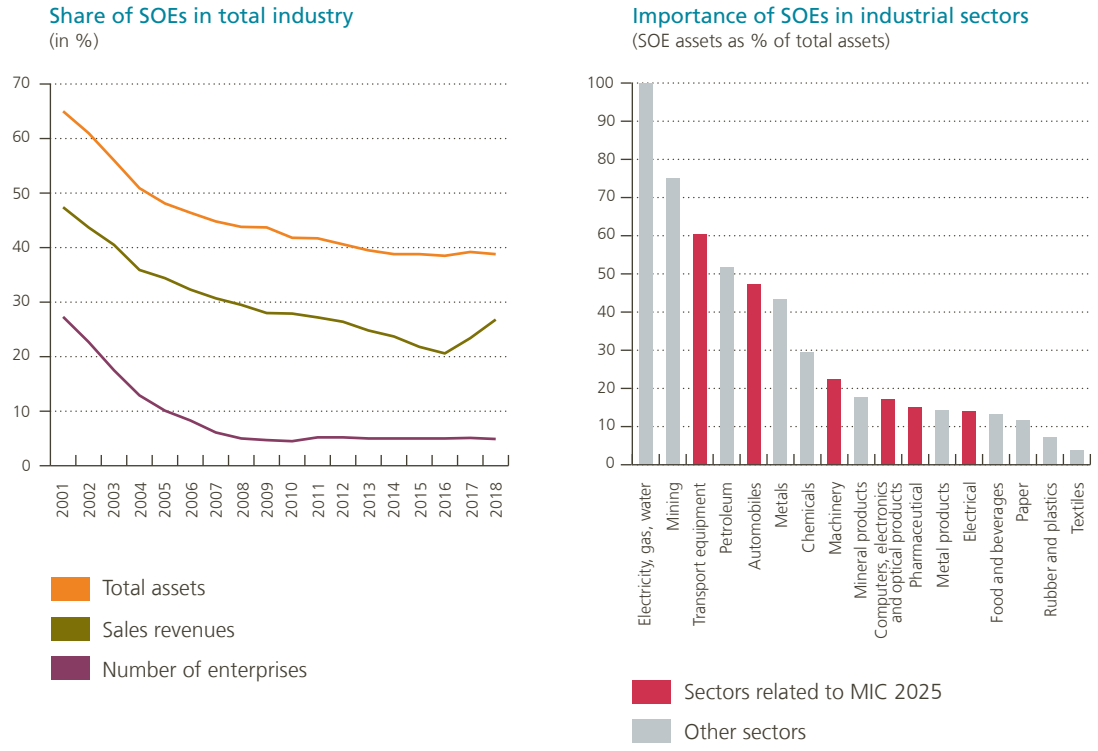
Surveys conducted by the European and US Chambers of Commerce in China add further insights into the obstacles that Western firms face when doing business in China, conditional on gaining a foothold in the market in the first place. A large proportion of surveyed firms confirm that local Chinese companies, and especially Chinese SOEs, hold advantages in areas such as market access, government support, licensing, public procurement, and compliance with domestic regulations (EU Chamber of Commerce in China, 2018, 2019; AmCham China, 2019). The new Foreign Investment Law includes provisions for the equal treatment of foreign and domestic firms when applying for licences and participating in government procurement. If implemented properly, this law could effectively contribute toward a more level playing field between domestic and foreign firms operating in China. That said, it remains a second-best option to the privatisation of commercially viable Chinese SOEs, which is currently not on the cards.

4. Role of state-owned enterprises

The footprint of the state in China remains large and pervasive, even after three decades of reform. Stellar private sector growth and privatisation have caused the weight of SOEs[1] in the Chinese economy to diminish. Yet even if they are now modest in number, SOEs still control nearly 40 % of total industrial assets, implying that they are capital-intensive (Chart 5). Large Chinese SOEs, such as Sinopec, China National Petroleum, State Grid, SAIC Motor and China Mobile, are found high on the Fortune Global 500 list of the world's biggest companies by revenue. The recent uptick in the SOEs' share in industrial sales revenue reflects the weak performance of private enterprises, which have been disproportionally hit by the Chinese government's clampdown on shadow banking and other efforts to de-risk the financial sector.

Chart 5

Importance of SOEs in Chinese industry



Source: CEIC.

SOEs play a key role in several sectors deemed "strategic" by the Chinese government, for a variety of reasons. Some sectors are clearly politically significant: power generation and distribution of electricity, gas and water, petroleum, and mining. Similarly, the telecom sector and the media are also fully controlled by the government. Other sectors are considered pillars of China's economic and technological development: transport equipment (aviation, shipbuilding and high-speed railways), automotive, machinery, IT and electronics – and are closely

1 In this article we use a broad definition of SOEs, which includes both state-owned and state-holding enterprises, according to the classification used in Chinese statistics. These statistics define state-owned enterprises as economic entities where all assets are owned by the state. Following successive reforms, many of them are limited liability or joint stock companies and fall under the supervision of the State-Owned Assets Supervision and Administration Commission (SASAC), whereas some remain under the auspices of their founding ministry. This structure exists at the level of both central and local government. State-holding enterprises are defined as a sub-classification of enterprises with mixed ownership, referring to enterprises where the percentage of state assets (or state shares) is larger than any other single shareholder of the same enterprise.

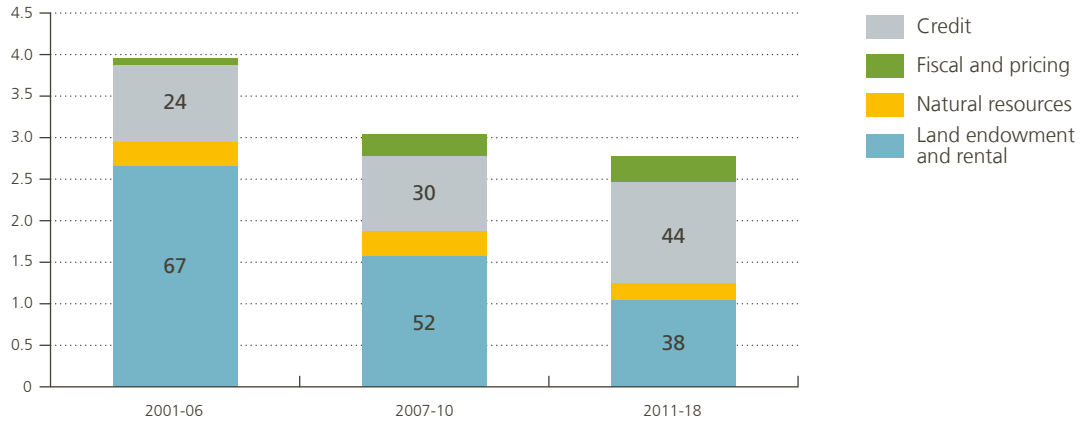
linked to MIC 2025. The Chinese government can steer the economy through its ownership of the "Big 5" commercial banks and the China Development Bank, its sovereign wealth fund, and stakes in many government-guided investment funds.

In theory, the presence of SOEs in a market economy is not necessarily a barrier to "competitive neutrality", whereby all enterprises are treated on equal footing regardless of their form of ownership. In practice, however, it is felt that Chinese SOEs' connections to the political hierarchy constitute a source of preferential treatment in several areas (loans, subsidies and tax exemptions, government contracts, licenses, access to land, etc.), rigging competition in their favour. In addition, generous and cheap government funding can facilitate the overseas investment of these firms (see Section 6). Difficulties in data collection and measurement mean that the evidence is scarce, but the few available studies corroborate the view that SOEs benefit from significant support. Lardy (2019) finds that the majority of bank loans continue to flow to SOEs, despite their lower profitability and weaker balance sheets compared to private enterprises. Banks are more inclined to lend to SOEs as they are perceived as less risky and shielded from defaults. Harrison *et al.* (2019) find that between 1998 and 2013 SOEs were systematically favoured by low-interest loans, larger loan volumes, a higher probability of receiving subsidies as well as larger amounts of subsidies. According to IMF (2019) estimates, which should be considered a lower bound, implicit support to SOEs between 2011 and 2018 amounted to almost 3 % of GDP annually, a decline from previous periods which can be attributed to reduced benefits from land endowment and rental (Chart 6). Subsidised credits are now the most important form of implicit support to SOEs, amounting to about 1.3 % of GDP.

Chart 6

Total implicit support to Chinese SOEs

(% of GDP, numbers in the bars refer to % share in total implicit support)



Sources: IMF (2019), Lam and Schipke (2017).

In China, however, market distortions are not only due to pervasive state ownership. Some characteristics of privately owned firms produce similar effects. Many of the latter were partially privatised during the reforms of the late 1990s and early 2000s but still retain close connections to the Chinese government. Tracking down the history of the firms covered in their sample, Harrison *et al.* (2019) show that "privatised" SOEs occupy an intermediate position in their access to subsidised credit and outright subsidies, between SOEs and private firms that were never state-owned. Another common mechanism through which state capture of privately-owned firms occurs is the presence of politically connected CEOs or staff members (Milhaupt and Zheng, 2015), with CEOs being members of the Chinese Communist Party (CCP) or even of the national/provincial People's Congress. This is the case in well-known companies such as Huawei, Lenovo Holdings, Alibaba, and Zhejiang

Geely Holdings. In the same vein, surveys conducted by Chinese agencies[1] show that private firms directly owned by Party members and those related to the political elite obtained significantly more bank loans than others (García-Herrero and Xu, 2017). In sum, the grip of the state on corporate decision-making in China is not limited to SOEs.

5. Forced technology transfer

Technology transfer by multinational enterprises is widely regarded as a key source of knowledge creation and economic growth, not least in China. Joint ventures of local Chinese companies with foreign (often Western) firms have been shown to lead to increased sales, productivity and patenting, with positive externalities for the Chinese partner and firms operating in the same industry (Jiang *et al.*, 2018). Van Reenen and Yueh (2012) estimate that international joint ventures, through the embedded technology transfer and other learning effects, may have added as much as one percentage point per annum to Chinese growth over the last three decades.

As pointed out by Andrenelli *et al.* (2019), there is a wide spectrum of government policies supporting international technology transfer, ranging from the legitimate facilitation and promotion of incoming (and outgoing) FDI, up to coercive, non-market-conforming practices, such as mandatory transfers of sensitive proprietary information or source codes from (prospective) foreign investors, and obligations to store company data locally. Between those extremes lies a grey zone of interventions that could be – but are not necessarily – problematic, including, for example, requirements for foreign companies to employ local inputs and/or personnel, or to form joint ventures with local firms. In practice, the line between what constitutes a voluntary, mutually agreed upon or at least "reasonable" technology transfer (enabling cross-border diffusion of knowledge that benefits wider innovation) and what classifies as "forced" technology transfer (mostly distorting competition) may be blurred.

Yet Western companies and policymakers *have* indeed voiced serious concerns about China's international technology transfer policies. Based on in-depth interviews with foreign firms operating in China, Prud'Homme *et al.* (2018) identify three categories of policies that are considered most worrying: policies that precondition market access on meeting technology transfer requirements; biases against foreign firms in the enforcement of intellectual property rights; and other strict requirements, such as provisions regulating the licensing of technology imports and exports. Survey results from the EU Chamber of Commerce in China (2018) indicate that almost 20% of European companies feel pressured into technology transfer in exchange for market access. In technology-intensive sectors such as aerospace and aviation, civil engineering, and the automotive sector the share of European firms reporting such involuntary technology transfer is even higher (Chart 7). AmCham Shanghai (2018) has found similar survey evidence for US firms.

More details on the exact Chinese international technology transfer policies and legal instruments that are criticised can be found in the June 2018 and (revised) December 2018 requests for consultations that the EU filed with the WTO (see Section 2 and appendix)[2]. First of all, EU authorities highlight that the Chinese Joint Venture Law requires that the technology and equipment brought into a joint venture by the foreign partner are sufficiently advanced and adapted to China's needs. Moreover, the accompanying Joint Venture Regulation demands that details about the transferred technology are submitted to the Chinese authorities for examination in order to obtain the necessary approval of the joint venture. These legal requirements are deemed to violate the commitments China made upon its WTO accession. The EU also takes issue with regulations that exist in some specific sectors. For example, under the New Energy Vehicle Regulation foreign carmakers wanting to access the Chinese market for electric vehicles need to master certain technologies that Chinese authorities are interested

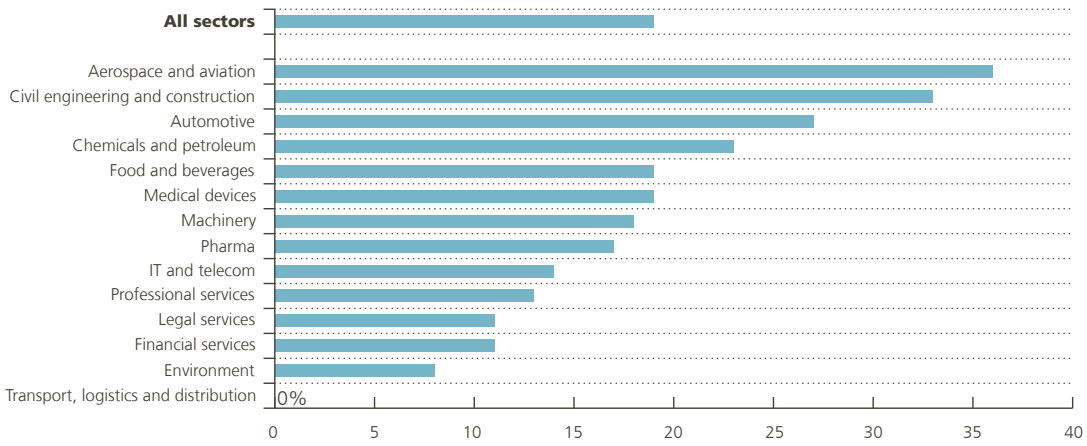
1 The surveys were conducted through face-to-face interviews in 1995, 2000, 2005 and 2010 by a CCP Central Committee department, the United Front Work Department, and two ministry-level central government agencies.

2 Dissatisfaction with forced technology transfer also lies at the heart of the Section 301 investigation that the US launched in August 2017 (see USTR, 2018).

Chart 7

EU firms that feel compelled to transfer technology in exchange for market access

(% of surveyed firms, N = 532)



Source: EU Chamber of Commerce in China (2018).

in, and are obliged to locate relevant parts of their production process and R&D activities in China. Another important set of rules are the Regulations on the Administration of the Import and Export of Technologies (TIER). TIER stipulates that contracts concluded between foreign and local companies cannot contain clauses that restrict the local party from improving the technology transferred by the foreign partner, or from using the improved technology. Furthermore, if the use of an imported technology gives rise to intellectual property infringements, the associated liabilities are to be borne by the (foreign) supplier of the technology. Such stipulations do not apply to Chinese firms involved in domestic technology transactions.

The new Foreign Investment Law that China adopted in March 2019 (see Section 3) includes provisions protecting the intellectual property rights of foreign investors and banning forced technology transfer, most likely as a response to continued criticism and the trade measures imposed by the Trump administration[1]. However, as some of these provisions are deemed to leave room for interpretation (Hornby, 2019), it remains to be seen how the Foreign Investment Law will be implemented in practice when it takes effect in 2020.

6. Chinese outward FDI into the EU

Chinese outbound FDI into the EU is a relatively new phenomenon, starting in earnest around the time of the global financial crisis and peaking in 2016. Chinese ownership has grown rapidly from a very low base, but still represents only a minor share of foreign-owned assets in the EU. According to European Commission estimates, investors from China (including Hong Kong and Macao) held only 3 % of total assets acquired by non-EU investors in EU companies at the end of 2016, compared with 61.5 % owned by US residents (EC, 2019b).

Chinese companies have several motivations for investing in the EU: asset diversification, hiding profits from the Chinese authorities, longer-term market access, industrial upgrading and technology acquisition. The latter motivation has raised concerns because of the perceived link with the government-driven MIC 2025,

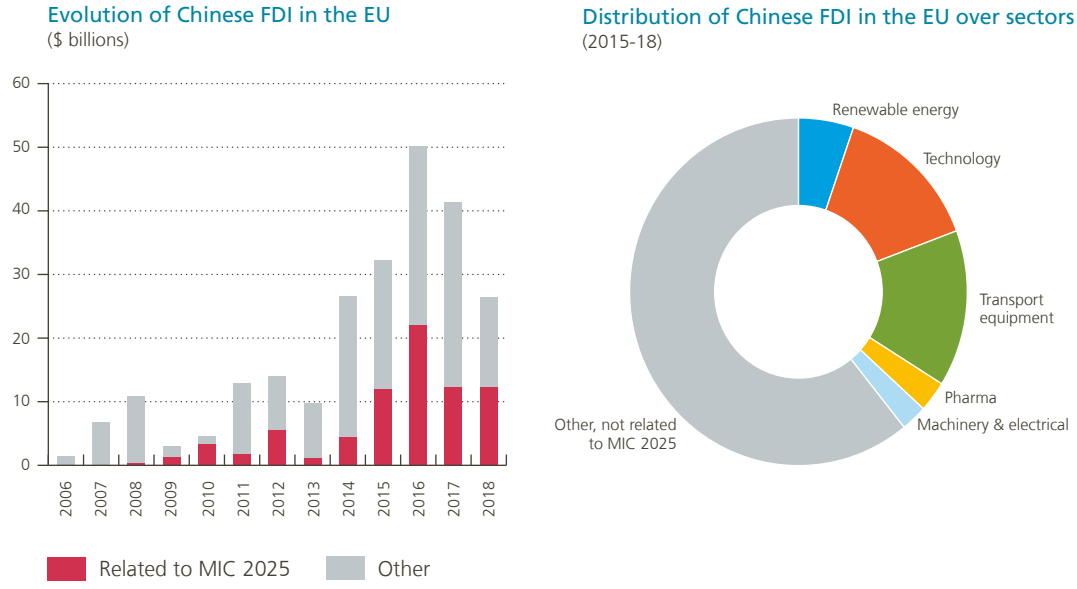
1 In addition, some of the most contentious articles in these laws and regulations have recently been weakened or abolished, in the wake of the US-China trade conflict (Prud'homme, 2019).

which "encourages" Chinese firms to acquire foreign high-tech assets. A growing backlash against Chinese FDI in the US has also pushed China to divert its efforts towards the EU in recent years. The Chinese counterparty in many merger and acquisition (M&A) deals is often an SOE, the sovereign wealth fund (China Investment Cooperation) or the State Administration of Foreign Exchange (SAFE). Moreover, as noted before, successful private firms are often well connected to the CCP or backed by the government in other ways. Because of this, some fear that strategic assets or valuable new technologies could fall into the hands of the Chinese government. On the positive side, European firms may benefit from the additional capital provided by Chinese investors (which may be unavailable locally on similar terms) and/or obtain market access in China by this means.

To check the validity of widespread concerns about Chinese outward FDI, we use the China Global Investment Tracker, a publicly available transaction-level database[1] of Chinese M&A and greenfield investments abroad, compiled by the American Enterprise Institute and the Heritage Foundation on the basis of newspaper articles and other public sources. As well as information on the identity of the Chinese investor and non-Chinese investee, the total transaction value and the Chinese percentage stake, the database includes a broad classification of takeover activities into 14 main sectors and a number of subsectors. We have ourselves constructed a variable indicating whether the acquired firm pertains to one of the strategic sectors targeted by MIC 2025, i.e. the following (sub)sectors identified in the dataset: (1) renewable energy, (2) technology, (3) transport equipment, (4) pharma, or (5) (industrial and construction) machinery.

Chart 8

Chinese FDI in the EU



Source: Own calculations based on China Global Investment Tracker of American Enterprise Institute and Heritage Foundation.

We have found evidence that the recent surge of Chinese FDI into the EU is indeed partly the result of acquisitions in sectors related to MIC 2025. It is hardly a coincidence that the surge in FDI in those sectors occurred in 2015, the year in which MIC 2025 was officially launched (Chart 8). According to our calculations, nearly 40 % of Chinese FDI in the 2015-18 period can be attributed to the strategic sectors promoted in MIC 2025, mostly

1 The database includes only deals with a minimum value of $ 100 million. We have excluded from our calculations two deals involving very large sums but representing only minority stakes: the 10 % stake taken by Geely Auto in Daimler in 2018, and the 5 % stake taken in HSBC by Ping An in 2017. We use December 2018 as the cut-off date. The raw data can be downloaded from http://www.aei.org/china-global-investment-tracker.

transport equipment (the automobile sector in particular) and technology. Zenglein and Holzmann (2019), using a different database and their own classification, find an even higher share of 58 %. Other research demonstrates that government policy plans such as the Belt and Road Initiative and MIC 2025 had a considerable impact on the investment patterns of Chinese SOEs in terms of their regional and industry focus, but did not significantly affected private firms' investment behaviour (Fuest *et al.*, 2019). Other attractive sectors to Chinese investors, unrelated to MIC 2025, are entertainment (including football clubs), real estate and hospitality, finance, and strategic infrastructure (utilities, port and airport logistics, traditional energy). Strategic infrastructure was a popular target for Chinese SOEs in financially distressed EU member states that wanted to raise revenues from privatisation.

Germany is the second-largest recipient of Chinese FDI in the EU (after the UK, where such FDI concerned mostly "flats, finance and football"), and it has seen the strongest inflow of technology-driven takeovers from China. Most of the German firms acquired by Chinese investors are at the cutting edge of wind power, engineering or computer technology. The takeover of the high-tech robotics firm and national champion Kuka by the Chinese company Midea in the summer of 2016 served as a wake-up call for the German authorities. Later that year, the attempted takeover by Fujian Grand Chip Investment Fund of Aixtron, a highly specialist German chip producer and supplier for the semiconductor industry, was blocked by the German government. This decision reportedly followed US concerns about the resulting strengthening of China's competitive edge in semiconductors (Larres, 2016). Scrutiny of Chinese takeover bids in Germany has been tightened markedly since 2016.

Belgium has so far attracted only a limited number of sizeable Chinese investments, and none of them seem to be related to MIC 2025[1]. The offer of the Chinese State Grid in 2016 to take a 14 % stake in the high-voltage network administrator Eandis was rejected after a leaked memo from the Belgian State Security Service raising questions about the deal. Similar offers by State Grid have also been blocked in Germany, but were accepted in Portugal, Greece and Italy.

Greater scrutiny by European authorities, especially in sensitive sectors (see Section 8.2), as well as a tighter Chinese stance on capital outflows and failed deals due to liquidity problems experienced by some highly indebted Chinese buyers, explain the observed decline in Chinese FDI into the EU in 2017 and 2018 (Chart 8; Molnar *et al.*, 2019). The worsening economic relations between China and the US, together with the almost vanished current account surplus in China, suggest that the tighter screening practices and capital controls will remain in place for the foreseeable future. Hence, a return to the outward M&A bonanza of 2016 seems unlikely.

7. Industrial espionage and cybertheft

The least benign channel of appropriating much-needed technological know-how is through industrial espionage and cybertheft. Although little hard data exists, there are strong indications that China has been involved in such practices. Drawing on a number of high-level cases of cyberattacks, a recent report by the Office of the US Trade Representative (USTR, 2018) concludes that China conducts and supports unauthorised intrusion into, and theft from, the computer networks of US companies to access their sensitive commercial information and trade secrets. Although it is difficult to provide irrefutable evidence of direct Chinese government involvement in these criminal activities, proven personal connections with government institutions and public universities point in that direction. For example, in one high-profile indictment, Yanjun Xu, an employee from China's Ministry of State Security, was identified as the mastermind behind the theft of sensitive information related to the design and technology of propellers used in aircraft engines from GE (General Electric) Aviation. In another case, the German auto manufacturer Daimler was the target of cyberattacks originating from China, and the IP addresses of the hackers' computers could be linked to Tsinghua University, "China's MIT". Infiltration, often through complex corporate

1 Examples include investments in the logistics sector (e.g., the establishment of a service and distribution park in the port of Zeebrugge by the Shanghai Lingang group) and the financial sector (the acquisition of Bank Nagelmackers and insurance company Fidea by Anbang).

structures, is another popular method to steal trade secrets, as illustrated by the case of Micron, a US-based company specialised in dynamic random access memory (DRAM) technology. Former employees of Micron's Taiwan subsidiary are believed to have passed on Micron's confidential and proprietary information on DRAM technology (via UMC, another Taiwan-based microchip manufacturer) to Fujian Jinhua, a Chinese SOE start-up created specifically to help meet China's DRAM production goals.

The Belgian State Security Service, charged with the protection of Belgium's scientific and economic potential, also believes that China is actively involved in industrial espionage and cybertheft. It has issued repeated warnings that Belgian companies are poorly protected against these risks (Bové and Van De Velden, 2017).

BOX 1

Huawei

Huawei is probably the best-known example of a Chinese "national champion". Starting out in the late 1980s as an importer of telephone switches from Hong Kong, the company has rapidly grown into one of the largest telecom equipment companies globally. Huawei is poised to become a key player in fifth-generation (5G) mobile telephony, given the portfolio of standard essential patents for 5G it currently owns, the number of technical contributions to 5G standards it makes, and the personnel and other resources it devotes to 5G standard-setting meetings (see IPlytics, 2019). Commentators tend to ascribe Huawei's spectacular rise to a broad mix of Chinese industrial policies, involving the initial protection of the Chinese telecom market from foreign competition, access to large government contracts, and other forms of state backing (including cheap credit, according to some), followed by an aggressive internationalisation strategy and massive R&D spending (Ahrens, 2013; Johnson and Groll, 2019).

Citing national security and foreign policy concerns, the US Department of Commerce announced in May 2019 that it would put Huawei and 68 affiliated entities on its so-called "Entity List", which implies that US companies (or non-US companies making products with a minimum share of US-origin content) would need to obtain a licence in order to export their goods and services, or to transfer technology to Huawei. Together with President Trump's executive order declaring a national emergency over threats to the US telecom sector, this blacklisting would effectively cut off Huawei from its US suppliers, on which it heavily relies for semiconductors and other components used in its products. Earlier in 2018, US Congress had already passed a law largely banning US government and government contractors from employing equipment produced by Huawei or ZTE, another Chinese telecom giant. In August 2019, a set of temporary exemptions on the ban of exports and technology transfer to Huawei was extended by another three months.

A key worry of authorities in the US and several other countries is that Huawei could sell compromised products allowing the Chinese government to spy on domestic companies. Officially, Huawei is a private company owned by its employees, but recent research finds that the overarching holding company is controlled by a trade union committee on which no information is publicly available and which could well be intimately linked to the state (Balding and Clarke, 2019). Moreover, some Chinese laws state that, on demand, Chinese individuals and organisations are obliged to assist the government in its intelligence work. Both Chinese government officials and Huawei staff have denied that such laws apply to Huawei's overseas business (Yang, 2019). Extensive security reviews of Huawei's network equipment

have so far not produced any (public) evidence of "backdoors" purposely designed for espionage (even though technical glitches leading to security risks have been found). Nevertheless, in addition to the US, Japan, Australia and New Zealand too have issued broad bans on Huawei's 5G technology. In Germany and France, security standards for suppliers of 5G network equipment were also strengthened, although without explicitly singling out Huawei.

Belgian telecom companies Proximus and Orange have relied on Huawei for their network base stations for over ten years (whereas Telenet has purchased mostly from ZTE) (Bové *et al.*, 2018). In 2013 Huawei acquired Caliopa, a spin-off from the University of Ghent and the Leuven-based Inter-University Microelectronics Centre (IMEC) to form Huawei Technologies Research & Development Belgium, which conducts research in the fields of optical telecom components and cellular transceivers. The company is currently the only Belgian-based company on the US Department of Commerce's Entity List. The Centre for Cyber Security Belgium (CCB), which falls directly under the authority of the Belgian Prime Minister, stated in April 2019 that it had not yet found evidence that would justify speaking out against Huawei, but also pledged to continue its monitoring (Vanhecke, 2019).

8. EU strategy towards China: A way forward?

A first-best strategy to address existing worries about China's industrial prowess and quest for technological leadership is arguably for the EU to take a proactive stance in strengthening its own industrial base and innovative capacity. The need for an ambitious, coordinated industrial policy is indeed recognised by the European Commission, as exemplified by the renewed EU industrial policy strategy published in September 2017, but perhaps does not occupy the central role it deserves in EU discussions on how to deal with China[1,2]. Since the benefits of a proactive industrial policy will only be reaped in the longer run, it is important to also react more directly to the various concerns Western policymakers and companies have about China's trade and investment practices. The remainder of this section zooms in on the EU's attempts to amend international trade and investment rules.

8.1 WTO reform

One of the main tactics pursued by the EU is that of contributing to the reform of the WTO. The European starting position is that a multilateral trading system based on clear rules, with the WTO at its centre, is necessary to guarantee reasonably free and fair trade. At the same time, it is increasingly acknowledged that the current system is malfunctioning and particularly ill-equipped to deal with the problems posed by China, a country whose self-proclaimed "socialist market economy" system is *sui generis* and has evolved in ways that were largely unanticipated by the negotiators of WTO treaty law (Wu, 2016; Mavroidis and Sapir, 2019). More so than explicit rule-breaking, it is China's unique and opaque economic structure, leading to practices that fall outside the remit of the WTO's current rules and founding principles, that poses the biggest challenge (Blustein, 2019).

1 For example, the latest EU-China Strategic Outlook (EC, 2019, p. 8) does acknowledge that "the EU should foster industrial cross-border cooperation, with strong European players, around strategic value chains that are key to EU industrial competitiveness and strategic autonomy", but refrains from including concrete interventions to that end among the ten action points it proposes.

2 An in-depth discussion of how EU industrial policy should be organised to effectively stand up to China falls outside the scope of this paper.

For this and other reasons, the EU believes WTO modernisation is urgently needed and has already made several proposals in that respect, usually in consultation with like-minded WTO member states[1].

A key sticking point is the long-standing practice in the WTO that members may self-declare as a "developing country" in order to benefit from special and differential treatment, including longer transition periods towards full implementation of some WTO agreements. Currently, no less than two-thirds of the WTO membership self-identify as "developing countries", including China and other major trading nations (Hong Kong (!), South Korea (!), Mexico, etc.). This situation tends to lead to weaker ambitions in multilateral trade negotiations and seems to conflict with the WTO core principles of reciprocity and non-discrimination (Ornelas, 2016). The EU has advocated moving from the crude "developed-developing" distinction to a more granular, case-by-case differentiation that is needs-based, evidence-based and time-limited.

Next, the EU wishes to see a thorough update of the existing WTO rulebook, and in particular a sharpening and extension of the present, rather minimal rules in the areas of SOEs, government subsidies and (forced) technology transfer, which appear to be at the root of the current trade tensions between the US and China[2]. In addition, it sees possibilities to enhance the procedures for establishing additional rules at the WTO. In areas where multilateral consensus is unattainable for the moment, the EU proposes to pursue a plurilateral approach, whereby (changing) coalitions of willing WTO members negotiate agreements (open for other members to join at a later stage).

Another problem is that China and several other WTO members often do not comply with their notification obligations under various agreements, such as reporting on new subsidies. The resulting lack of transparency undermines proper monitoring and enforcement. One suggestion by the EU is to impose "sanctions" for wilful and repeated non-compliance with notification duties, including limiting certain rights related to participation in WTO proceedings, such as chairing WTO bodies, and increased naming and shaming of non-compliant members in various WTO reports and fora. Moreover, the WTO could adopt a general rebuttable presumption according to which all non-notified subsidies would be assumed to harm the interests of other WTO members. It would then be up to the subsidising member to disprove this presumption. However, one needs to remain realistic. Even with full transparency, enforcing WTO commitments will undoubtedly remain difficult, especially when this concerns actions a country takes in its domestic market. As pointed out by Mavroidis and Sapir (2019), whereas WTO members such as the EU and US can always prevent foreign products from entering their markets by putting up anti-dumping, anti-subsidy or safeguard tariffs, they cannot simply force "fair" access to a foreign market protected by discriminatory behind-border measures.

Finally, the EU's short-term priority with regards to WTO reform is to resolve the current crisis surrounding the WTO's Appellate Body, the standing body composed of seven jury members to which countries turn when they want to appeal against a preliminary panel ruling in a WTO dispute settlement procedure. Several countries, and the US in particular, have expressed complaints about the Appellate Body. Most importantly, this body is accused of judicial "overreach", i.e. the creation of its own new rules, unchecked by WTO members, and a tendency to also address issues going beyond the panel reports it was designed to review for legal errors. These concerns are exacerbated by the often ambiguous and (increasingly) incomplete WTO rulebook, and by the tradition of transposing the interpretations given by the Appellate Body to subsequent dispute cases handled by panels (a practice that has no legal basis in the dispute settlement rules) (Payosova *et al.*, 2018a). The US has also challenged a number of procedural matters, such as the overstay of Appellate Body jury members whose four-year term has expired and their quasi-automatic reappointment, as well as the frequent exceeding of the 90-day deadline for appeal proceedings. To show their discontent, US (Obama and Trump) administrations have been blocking Appellate Body appointments for the past few years. For this reason, only three of the full complement

1 For a more detailed overview of the ideas for WTO reform floated by the European Commission, some of which are currently under discussion at the WTO's General Council, we refer to its September 2018 concept paper (EC, 2018a).

2 For example, the WTO Agreement on Subsidies and Countervailing Measures (SCM) does not even mention the term "state-owned enterprise", largely because the SCM agreement was crafted in 1994, before China's WTO accession. China's Protocol of Accession does contain more explicit provisions on SOEs, but is still marked by important omissions and is underenforced (Mavroidis and Sapir, 2019).

of seven jury members remain at the time of writing, which is the absolute minimum required to hear an appeal. If this situation persists, the Appellate Body will effectively shut down by December 2019, when another two jury members will have completed their terms. This risks undermining the whole WTO dispute settlement system, since any party to the dispute could block the adoption of a WTO panel decision by simply demanding an appeal than cannot be fulfilled.

The EU has attempted to break the deadlock with a set of proposals, including a stricter delineation of the Appellate Body's mandate, an expansion of the body's resources, longer-term (non-renewable) appointments of jury members, and the organisation of regular exchanges between the body and WTO members to discuss systemic issues or trends in jurisprudence. Payosova *et al.* (2018a, 2018b) argue that these proposals offer at best only a partial answer to US and others' concerns, and that what is crucially needed is a channel through which the Appellate Body could defer issues of legal uncertainty to WTO committees for further discussion and negotiation among WTO members. This would establish a much-desired link between the WTO's dispute settlement function and its role as a negotiating forum.

In any case, since the proposed changes to global trade rules and mechanisms will take time and may not (fully) materialise, the EU also needs quicker solutions. That is why, in December 2017 and May 2018, the EU revamped its set of trade defence instruments (anti-dumping, anti-subsidy and safeguard measures) aimed at protecting European companies against mispriced imports. These reforms, which constitute the first major overhaul since 1995, should reduce investigation time, improve the methodology for calculating appropriate import duties, increase transparency and predictability, provide additional support to small and medium-sized enterprises, and allow trade unions to be involved in the preparation of investigations. According to the Commission's own estimates, the instruments in place at the end of 2018 protected about 320,000 direct industrial jobs from unfair competition (EC, 2018b).

8.2 Investment screening

The EU has also taken several initiatives related to regulating foreign investments, typically not singling out China, but clearly with the problems around Chinese investment practices in mind. The most concrete of these is the common framework for the screening of FDI into the EU, which entered into force in April 2019 and will fully apply by October 2020[1]. The common framework recognises the benefits FDI generally brings and therefore focuses solely on FDI (not portfolio investment) that could negatively affect security or public order. This is to be interpreted rather broadly, however, with the legislation suggesting that EU member states and the Commission monitor potential impacts on "critical" inputs, infrastructure and technologies, including in the fields of energy, food security, transport, utilities, communication, media, defence, data processing and storage, aerospace, artificial intelligence and robotics, semiconductors, and nano- and biotechnology. One thus observes a significant overlap with the sectors targeted by MIC 2025. The framework legislation also suggests paying special attention to investors directly or indirectly controlled by foreign governments and to investments forming part of "state-led outward projects or programmes". As such, based on transaction-level data for 2018, Hanemann *et al.* (2019) estimate that, theoretically, about 83 % of Chinese M&A deals done in the EU could be subject to screening under the common framework. Of course, this does not mean that all these transactions would necessarily be reviewed in practice, or that all reviews would result in a blocking of investment.

The common EU screening framework first of all creates a platform for the exchange of information among member states and between member states and the Commission. The member state in which the investment takes place has to provide information on request (e.g. on the identity of the investor and the target company, the value of the deal, and the origins of the funding) in case other member states or the Commission raise concerns, and make notification of any FDI undergoing screening. The member state can in turn request the

1 For the full text of the regulation establishing the common framework, see EU (2019).

opinion of others. The Commission may issue opinions of its own when it believes an investment is likely to affect security or public order in more than one member state, or if cross-border projects or programmes of special EU interest (think Galileo, Horizon 2020, etc.) are threatened. Furthermore, the framework imposes some constraints on member states' existing or prospective national-level investment screening mechanisms: among other requirements, national mechanisms should have transparent rules and procedures, cannot discriminate among foreign investors, and need to include the possibility of recourse by investors against screening decisions. The framework does not, however, oblige member states without a national investment screening mechanism to establish one. And importantly, individual member states retain the final say on whether or not to screen and/or eventually block an investment on their territories[1].

At the time the common framework was introduced, 14 out of 28 EU member states had a formal national investment screening mechanism in place, and three more were actively considering it (Hanemann *et al.*, 2019)[2]. Whereas these national mechanisms tend to be heterogenous in scope and design (see Grieger, 2017; Wehrlé and Pohl, 2016), the EU framework is likely to lead to some convergence. Indeed, discussions in the two-year run-up to the framework have already spurred several member states to set up new FDI screening regimes or update their existing ones. At present, Belgium has no such screening mechanism[3]. Nonetheless, under the EU framework the Belgian authorities are expected to respond to FDI-related questions from other EU member states and the Commission, to submit to the Commission an annual report summarising inward FDI activity, and to set up a national focal point for FDI matters. In Belgium, investment promotion and monitoring are now primarily a regional affair, with separate agencies for Brussels, Flanders and Wallonia (Renard, 2017).

In addition to the common framework for FDI screening, the Commission has reworked earlier proposals for an international (public) procurement instrument, which could be adopted by end 2019. This instrument would enable the Commission to investigate cases of alleged discrimination against European companies in foreign procurement markets, to organise consultations with third-country authorities, and, as a last resort, impose price penalties on bids by companies hailing from discriminating countries (thereby giving EU and non-targeted countries' bids a competitive advantage). In its EU-China Strategic Outlook, the Commission also vowed to identify, again by end 2019, how to amend EU (competition) law to better address the distortionary effects of foreign SOEs and foreign state-financed companies on the EU internal market. Moreover, it called for a common EU approach to security risks in 5G networks and for a horizontal sanctions regime to counter cyberattacks (EC, 2019a).

In parallel, the EU has been negotiating a Comprehensive Agreement on Investment (CAI) with China since 2013, which would arguably be an elegant way of addressing current reciprocity gaps (Hanemann *et al.*, 2019). The EU's general aim is to replace the existing bilateral investment treaties all member states (except for Ireland) have signed with China, and which vary significantly in scope, by a single, more ambitious EU-China CAI. Ideally, the CAI would regulate issues of market access, investment protection and dispute settlement, as well as labour and environmental standards. As of June 2019, 21 negotiation rounds on various aspects of the CAI had taken place. Given the multitude of outstanding issues and longstanding fundamental differences in EU and Chinese preferences, it is uncertain whether the deadline for concluding the CAI by the end of 2020 will be met.

1 The EU common framework is much less invasive and comprehensive than current US screening practices (and those of most other OECD countries; Hanemann *et al.*, 2019). Fuelled by concerns over growing Chinese stakes in the US economy, the Committee on Foreign Investment in the United States (CFIUS), responsible for assisting the US President in reviewing the national security aspects of incoming investment, saw its mandate expanded and its resources increased under the November 2018 Foreign Investment Risk Review Modernization Act (FIRRMA). Since FIRRMA, CFIUS may investigate a broader set of transactions (including certain real-estate and portfolio investments). Unlike EU member states, CFIUS is now explicitly allowed to discriminate based on the nationality of the foreign investor (after designating some countries as "of special concern") (see Jackson, 2019 for an extensive overview). China's Ministry of Commerce (MOFCOM) and National Development and Reform Commission (NDRC) also operate a mechanism for conducting national security reviews of foreign investments, in addition to China's list of sectors where FDI is prohibited (Wehrlé and Pohl, 2016).

2 Austria, Denmark, Finland, France, Germany, Hungary, Italy, Latvia, Lithuania, Poland, Portugal, Romania, Spain, UK (screening mechanism in place as of June 2019); Czech Republic, Netherlands, Sweden (considering a screening mechanism).

3 Following the Eandis debacle (see Section 6), the Flemish regional government did include a new paragraph (Article III.60) in its governing decree which allows the government to block FDI in the institutions and enterprises under its control if such FDI would go against the strategic interests of the Flemish community, i.e. if the "continuity of vital processes" would be threatened or if strategic/sensitive information could end up in foreign hands. This amendment does not deal with FDI in private companies (Du Bois, 2018).

Conclusion

As suggested by the article's opening quote from outgoing European Commission President Juncker, one should not be naive about China. The country has a very ambitious, long-term perspective on its economic development goals, best captured by the MIC 2025 initiative, which it pursues vigorously in line with its own interests and economic system. In the quest for technological leadership, China is rapidly becoming a key competitor to the US and Europe, adding to international tensions.

As illustrated throughout this article, several of the concerns Western policymakers and companies have voiced about China's trade and investment practices are indeed justified and supported by the available data. On various occasions, WTO rulings have found China guilty of implementing unwarranted import and export restrictions and other discriminatory measures. Also, European and US firms face much more restrictive FDI regulations in China than vice versa. SOEs are still very much present in China's strategic industrial sectors and, together with politically connected "private" firms, continue to benefit from subsidies, low-interest loans and other government support, which distorts competition with other domestic and foreign companies. Some of China's current policies aimed at international technology transfer seem to be problematic too, as they tend to "force" rather than simply "nudge" Western companies into sharing their know-how with Chinese partners. Involvement of Chinese nationals in industrial espionage and cybertheft, even if without the knowledge of the Chinese government, is unacceptable. Meanwhile, Chinese outward FDI into the EU warrants closer monitoring to avoid strategic assets or valuable new technologies from falling into the hands of the Chinese government, at the expense of European companies and consumers. The recently established EU common framework for FDI screening tries to balance the need to exchange information and harmonise the basic ground rules of such monitoring at the national level with individual member states' sovereignty.

In contrast to the confrontational, unilateral approach of the present US administration to trade with China, the EU has chosen the path of multilateralism for now. It has engaged itself in attempting to modernise the WTO rules and bodies that govern the global trading system, so as to incentivise compliance and to make more explicit what the global trading community considers (in)admissible in terms of SOEs, government subsidies and technology transfer. Since China can no longer be considered a developing country, it is reasonable for advanced economies to demand greater reciprocity from China in its trade and investment relationships. On paper at least, China has made some significant concessions recently. Notably, the new Foreign Investment Law promises to open up previously closed sectors, to increase competition between domestic and foreign firms in areas such as government procurement, and to ban forced technology transfer. Implementation will need to be closely monitored.

Of course, the EU's success in reforming the WTO will to a large extent depend on whether its proposals are able to convince other key trading nations. Hence it is of paramount importance to keep the dialogue with both the US and China alive, and to demonstrate how a reformed WTO could benefit all parties. On a more general level also, continued engagement with China is necessary, given that the country represents a market that is simply too large to be ignored, is already embedded in numerous multinational value chains, and is poised to become an indispensable partner in solving global challenges in areas as diverse as cybersecurity and climate change mitigation.

Finally, China's policies should not be seen only in a negative light. Provided it adapts the Chinese strategies to better fit Europe's economic and political system, the EU can certainly learn from China, for example in terms of the development of a clear long-term vision and the expansion of its industrial base and innovative capacity.

Appendix

Overview of WTO disputes initiated by the EU against China

(as of May 2019)

Case number	Short description of complaint	Initiation [1]	End [2]	Status / outcome
DS339; joined by US and Canada	China's imposition of a 25 % **charge on automobile parts** imported from the EU (equal to tariffs on complete vehicles)	30 March 2006	31 August 2009	**Ruling favouring EU**: China removed import charges
DS372; joined by US	Legal and administrative instruments empowering China's state news agency (Xinhua) to **regulate foreign providers of news and financial information**	3 March 2008	4 December 2008	**Settled**: China and EU reached memorandum of understanding
DS395; joined by US, Canada, Mexico and Turkey	Chinese **export restrictions** (duties, quotas, minimum prices, licensing requirements, etc.) on various forms of **raw materials** (incl. bauxite, magnesium, zinc)	23 June 2009	28 January 2013	**Ruling favouring EU**: China removed export restrictions
DS407	Chinese (provisional) **anti-dumping duties on certain iron and steel fasteners** imported from the EU, without sufficient examination/explanation and based on unreasonable methodology	7 May 2010	N/A	**Pending**: China lowered anti-dumping duties; European Commission is still monitoring the situation
DS425	Chinese **anti-dumping duties on X-ray security inspection equipment** imported from the EU, without sufficient examination/explanation	25 July 2011	26 February 2014	**Ruling favouring EU**: China removed anti-dumping duties
DS432; joined by US, Japan and Canada	Chinese export restrictions (duties, quotas, minimum prices, licensing requirements, etc.) on **rare earths, tungsten and molybdenum**	13 March 2012	20 May 2015	**Ruling favouring EU**: China removed export restrictions
DS460; joined by Japan	Chinese **anti-dumping duties on high-performance stainless-steel seamless tubes** imported from the EU, based on unreasonable methodology	13 June 2013	22 August 2016	**Ruling favouring EU**: China removed anti-dumping duties
DS509; joined by US, Canada and Mexico	Chinese **export restrictions** (duties, quotas, etc.) on various forms of raw materials (incl. chromium, cobalt, copper, lead, tin)	19 July 2016	N/A	**Pending**: China did not renew export restrictions in 2017 or 2018; European Commission is still monitoring the situation
DS549; joined by US, Japan and Taiwan	Chinese legal instruments imposing **conditions with respect to joint ventures and technology transfer** on foreign companies that are less favourable than those applicable to Chinese companies	1 June 2018 (revised on 20 December 2018)	N/A	**Pending**: consultations ongoing

Sources: WTO, EC.

1 Date of the request for consultations.

2 Date of implementation of the final ruling (or of mutually agreed settlement). "N/A" signifies the dispute was still pending as of May 2019.

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