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Jürgen Matthes

China's Market Distortions and the Impact of the Covid-19 Crisis

ABSTRACT

Subsidization in China is pervasive at numerous levels of government and appears to be an inherent element of Chinese state capitalism. Despite a severe lack of transparency, the available information seems to suggest that the extent of Chinese subsidies is extraordinarily large. Moreover, the resulting overcapacities could lead to considerable and increasing distortions on the world market in certain sectors. An initial assessment of the potential effects of the Covid-19 crisis on China's industrial policy model does not suggest a major change in subsidization policy. This constellation bodes ill for the future of the multilateral trading system.

Until a few years ago, China was primarily a large and growing market and a low-cost production location for European firms. In the meantime, however, Chinese companies have become serious competitors. This is confirmed by various surveys of German and European firms (GTAI 2018; AHK 2019; European Chamber 2019). If the increasing competitive pressures from China were to be based on fair conditions, it would primarily be the task of European companies and economic policymakers to meet this challenge. In fact, to some extent China derives normal competitive edges from cost advantages and economies of scale as well as from investing heavily in education and research. But beyond this, the Chinese state also employs problematic measures that seriously distort competition: subsidies, forced technology transfer, and unequal market access conditions. In particular, the Chinese government provides extensive direct and indirect subsidies for industrial policy purposes.

However, the related empirical evidence is scarce because the state-capitalist system is complex and intransparent. Against this background, this article provides an overview of several available relevant studies that shed light on subsidy-induced competitive distortions by China.

Regarding the rapidly increasing competitive pressure from Chinese companies, the

question arises as to how much of their competitiveness is based on explicit and implicit distortions of competition. To the extent that this is the case to a considerable extent, it can be expected that the spill overs of Chinese subsidies to the world market will become ever greater due to China's enormous and continuously increasing economic size, signified by the large and rapid increase of China's global export market share. In addition, China is catching up rapidly in terms of technology — also as a result of forced technology transfer (European Commission 2018a and 2018b; USTR 2018). With its “Made in China 2025” strategy, which is supported by massive state aid, China also intends to catch up further in innovative capacity, particularly in sectors in which many European companies have their specialization advantages (Wübbecke et al. 2016; Zenglein and Holzmann 2019). The combination of these developments and ambitions, if relevant and successful, has the potential to jeopardize the prosperity of the established industrialized countries in the medium term (Samuelson 2004; Matthes 2007) and to overstretch their structural adaptability (Autor et al. 2013; Dauth et al. 2014).

This should be a relevant concern of policy makers, unless China constructively engages in multilateral cooperation and agrees to a sufficient reduction of competitive distortions domestically or at least through a reform of the relevant WTO rules. So far, however, despite strong pressure from the EU, the US and other industrialized countries, the Chinese government has refused to make any relevant concessions in this regard.

The question arises whether the coronavirus crisis will fundamentally change this situation. Does the crisis make it more likely that China will be prepared to make sufficient concessions, or will the opposite be the case? Various aspects play a role: the development of multilateral cooperation, the depth of the crisis in China and globally, the development of the financial power of the Chinese state, and possible changes in global value chains at China's expense. In this paper, relevant factors of the Covid-19 crisis impact, their direction of influence and their interdependence will be considered. First, however, a detailed overview of the numerous and multifaceted distortions of competition in China is given. After the consideration of the Covid-19 crisis impact, gaps in the WTO rules on industrial subsidies and proposed reform approaches are addressed.



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THE ROLE OF STATE-OWNED ENTERPRISES

Chinese state-owned enterprises (SOEs) play an important role in China's economy and in the pursuit of industrial policy goals (European Commission 2017; WTO 2018a). For example, SOEs account for more than half of the revenues of listed companies in China.¹ Until the early 2000s there was a tendency in China to reduce the importance of SOEs and to give more weight to market economy principles. But after that, and especially under Xi Jinping, the promotion of SOEs became more relevant again. Lardy (2019) points out that it increased particularly sharply between 2013 and 2016, when the share of lending to non-financial SOEs rose from about one-third to over 80% of total lending. He also provides further evidence that their overall economic importance continued to grow. Another cause for concern is that the Chinese government is allowing ever-larger mega SOEs to be created through mergers, in some cases with the aim of creating national or global champions (BusinessEurope 2020). According to the Forbes Global 2000 list, the share of SOEs among the Chinese firms in this list of the 2000 world's largest public companies amounts to nearly 70% (EP 2020).

State ownership of SOEs is not problematic per se. However, SOEs receive various subsidies. Garcia Herrero and Ng (2020), quoted in EP (2020), show that SOEs are privileged by the government relative to privately owned Chinese enterprises in terms of effective tax rates and interest burdens. Moreover, SOEs are also used by the Chinese government to achieve its industrial policy goals and to grant subsidies to other parts of the economy. Particularly problematic are cases of severe market distortions when large subsidies allow SOEs not to behave in an entrepreneurial and profit-oriented manner, to offer their products at prices that do not cover costs, or to remain in the market even if they lack profitability or are de facto insolvent.

SUBSIDIZED ACCESS TO PRODUCTION FACTORS

China's distorting subsidy practice reaches deeply and broadly into the economy as it also includes below-market prices of important production factors. This artificially increases the price competitiveness of Chinese companies that use these subsidized inputs, to the detriment of their competitors (Think!Desk 2015; European Commission 2017).

- **Access to labor:** labor costs for low-skilled workers tend to be below market conditions, thus creating a significant cost advantage. The reasons

for this are the low bargaining power of the employees, as there are no free trade unions and no right to strike. Moreover, migrant workers, whose labor rights are even lower and who often receive very low wages and social benefits, account for more than one third of all employees (European Commission 2017). Despite some improvements, this problem remains in principle.

- **Access to capital:** measures that distort competition include generous financing of companies that enjoy state favor by several means comprising financing volumes above market levels and interest rates below market levels, because of a lack of adequate consideration of default probabilities in risk premiums. State banks play an important role in this practice. Equity injections, generous guarantees or loss compensation by state institutions are also sometimes used.
- **Access to real estate for commercial use:** land is largely state-owned and used for industrial policy purposes. Real estate prices for industrial settlements are generally low as, regional authorities compete for manufacturing firms. Especially companies from strategic sectors that are important in terms of industrial policy receive preferential conditions. In case of forced relocations for environmental reasons, when competition between locations tends to be particularly intense, inexpensive access to land is granted as compensation.
- **Energy prices** are also controlled by the state and are kept artificially low, especially for strategic industries and national champions. As part of the competition for industrial settlements, large discounts are granted at the local level, and in some cases access to electricity is completely free of charge. In high-tech zones, this support sometimes extends, in a similar form, also to all resident companies (Think!Desk 2015). It is true that the Chinese government relies on higher electricity prices to foster environmental protection and sometimes also to induce industrial capacity reductions. However, this applies only to a limited extent to strategic sectors and SOEs in energy-intensive industries.
- Regarding important **raw materials**, the Chinese government also provides favorable access conditions in favor of domestic companies and at the expense of other foreign firms. China is a central supplier of certain raw materials. However, export rules for important raw materials tend to be restrictive in order to allow Chinese companies to benefit from lower raw material prices than their foreign competitors. This strategy also aims at pushing the next stages of the value chain into the country. Moreover, China uses its strong market position (e.g., in rare earths) sometimes in political conflicts by threatening export bans or restrictions.

¹ For this and other information on the relevance of state-owned companies, including sources, see BusinessEurope (2020). The International Monetary Fund (2019) provides further evidence of the importance of Chinese SOEs.

SUBSIDIES FOR INPUTS IN UPSTREAM PARTS OF VALUE CHAINS

Price distortions are also relevant in China for important inputs in the production of many manufactured goods. Direct and indirect sectoral subsidies tend to be the higher the more upstream in the value chain a sector is producing. This applies particularly to iron and steel, and non-ferrous metals such as aluminum. These industries are dominated in China by a few large SOEs which are heavily subsidized. A detailed evaluation of the subsidies received was carried out in the aluminum industry (OECD 2019a) and the non-ferrous metals industry (Think!Desk 2017). In both cases an international sample of companies, that is broadly representative for the world market, was selected for an in-depth analysis.

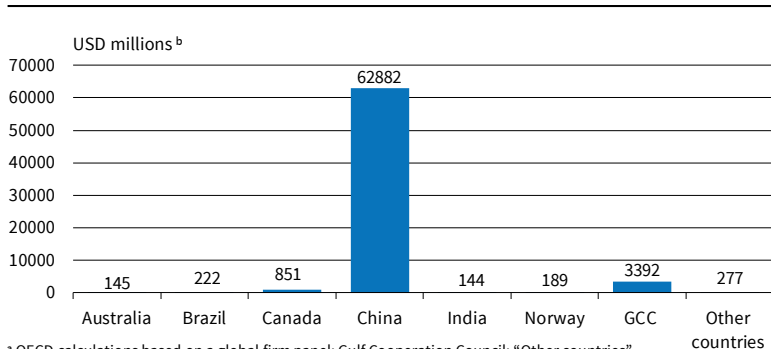
With a sample of 17 companies worldwide, the OECD (2019a) covers about two thirds of global **aluminum sector** production and half of the melting capacity. Nine companies from China are included in the sample, which roughly corresponds to China's share of almost 60% of global aluminum production, that has increased very strongly over time in China. Of the total global financial and non-financial subsidies recorded in the sample for the period 2013 to 2017, around two-thirds are granted by the Chinese state alone (Figure 1), with a focus on financial subsidies. Chinese subsidies are concentrated on very few companies (predominantly SOEs) and are mainly allocated to aluminum production and less to the downstream stages of the aluminum value chain. The latter are, however, subsidized indirectly in this way because they use the highly subsidized aluminum as a key input. The cumulative subsidy volume in the period from 2013 to 2017 is particularly large in relation to the size of Chinese companies. For five of the Chinese companies under review the cumulated amount is roughly equivalent to the total revenues of 2016, while for another three companies the share is between one-third and over half. By contrast, companies from industrialized countries are subsidized to a much lesser extent in this sector relative to their size.

THINK!DESK (2017) analyzes a sample of 65 companies in the **non-ferrous metals industry** and arrives at qualitatively similar results. While it only focuses on China and not on the global market, the authors also analyze numerous subsidy categories, with a focus on direct financial subsidies that affect the company's income in the year of payment. Again, there is strong concentration on very few companies. Almost two thirds of the subsidies from 2011 to the first half of 2016 are accounted for by four large Chinese SOEs alone, which are apparently supposed to act as national champions. The top ten recipients of direct financial subsidies also consist solely of SOEs, some of them at local level. In 2015, these payments, cumulated across all the companies considered, accounted for 53% of their total after-tax profits. As in the aluminum sector, the relevance of these subsidies appears to be, on average, of considerable importance from a company perspective. In some cases, the authors consider that losses might have been offset with the subsidies received. Between 2011 and 2014, direct financial subsidies increased by around 50%. Only in 2015 was there a minimal decrease in Chinese currency, but not in euros.

The OECD (2018) analyzes the role of SOEs in the **steel sector** in a worldwide dimension but does not examine the allocation of subsidies. However, the authors point out that SOEs in the steel sector tend to suffer from profitability problems and are often heavily indebted, which is likely to point to relevant subsidization, especially in developing and emerging countries. China is not reported separately but results for the aggregate of East Asia can be broadly applied to China, since China's share of East Asia's crude steel capacity is well over 90% (OECD 2019b). In fact, SOEs in East Asia account for more than half of all companies, with only a good 10% of the companies being clearly identified as private (the rest not being clearly attributable). By contrast, SOEs play no role in the EU. Thus, the state influence—and the probable relevance of subsidies—differs substantially between the EU and China. No direct consequences of such market distortions for the steel market are analyzed. However, the immense increase in steel production in China is unlikely to be independent of this approach. According to the OECD's (2019b) regular estimates, China has increased its share of nominal crude steelmaking capacity very sharply since the turn of the millennium—from around one-seventh in 2000 to around half (Figure 2).

In addition, the OECD (2019c) has also examined another important (highly innovative) **semiconductor sector**. While this sector is not located at the beginning of the value chain, the picture of market distortions is similar, with particularly high subsidies relative to company size in China. The OECD has defined a global sample of companies with a certain representativeness for the industry. The 21 companies selected, which include Intel and Infineon as well as

Figure 1
Subsidies in the Aluminum Sector, 2013–2017



^a OECD calculations based on a global firm panel; Gulf Cooperation Council; ^{*}Other countries" include New Zealand, Russia, Spain, and the US.

^b Total government support.
Source: OECD (2019a).

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four Chinese companies, cover more than two-thirds of global revenues in the semiconductor industry. From 2014 to 2018, more than 50 billion US dollars in government funding were awarded to these companies. While Chinese companies do not account for the bulk of the absolute subsidies due to their relatively small size, for two of the Chinese companies the subsidies amounted to more than 30% of annual consolidated revenues. This percentage is by far larger than for firms from other countries. It is striking that the bulk of state funding in China did not flow via direct state subsidies, especially for research activities as is the case with most other companies, but indirectly via subsidized financing through SOEs.

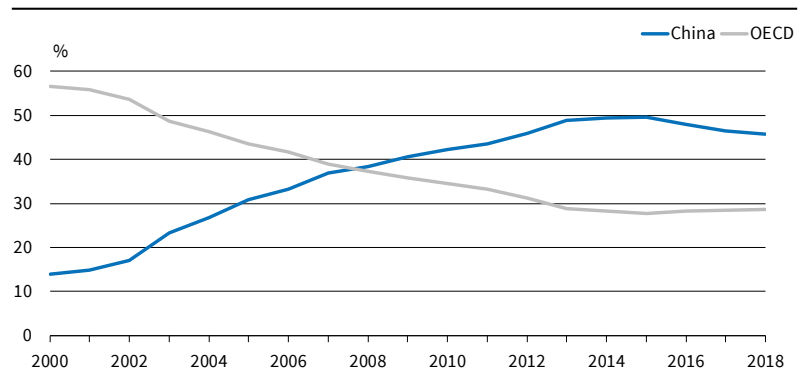
CHRONIC OVERCAPACITIES AND RESULTING GLOBAL MARKET DISTORTIONS

China's industrial policy and extensive subsidies lead to large overcapacities in some sectors, resulting in considerable distortions of competition on the world market. This applies, for example, to the above-mentioned metal products such as steel and various non-ferrous metals, as the studies of the OECD (2019a) and THINK!DESK (2017) clearly demonstrate.

However, China's industrial strategy also leads to similar competitive distortions in newer product fields. This applies, for example, to the solar panel industry (Bertelsmann Foundation et al. 2019). While Germany focused on promoting the *demand* for solar panels from 2009 onward, so that supply capacities could be geared to serve the resulting demand, large Chinese subsidies were targeted mostly toward the supply side. This approach created considerable overcapacities with which Chinese companies then entered the global market. While this approach involved major and costly inefficiencies in China, in the end, Chinese firms were able to increase their share of global solar energy capacity from 1% in 2009 to around 33% in 2017, also at the expense of European suppliers. In 2018, the eight largest manufacturers in the solar industry were based in China.

These examples highlight chronic allocative inefficiencies in China that increasingly tend to spill over into the global market. Chinese companies and especially SOEs can apparently build up capacities despite insufficient demand (and thus profitability) for the goods produced. Chronic overcapacities tend to occur because the industrial policy goals of the central government are often implemented very ambitiously by many local administrations without sufficient central coordination. This inherent and fundamental problem is exacerbated by the fact that overcapacities are not sufficiently reduced when profitability problems occur. Instead, production capacities tend to be upheld by ongoing subsidies (sometimes despite high corporate indebtedness) and by the lack of a strict insolvency law, which prevents necessary market exits.

Figure 2
China's Relevance in the Global Steel Market



^a Share of global nominal crude steelmaking capacity.
Source: OECD (2019b).

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When Chinese overcapacities spill over into the world market, the sheer economic size of China means that this will likely result in a significant global oversupply. Global product prices tend to come under pressure due to oversupply and because Chinese companies are often pushing their products into the global market at prices significantly lower than those of their competitors (OECD 2019b). This reduces the profit margins of competing European companies and can cause severe consequences in terms of global allocation efficiency. While more productive companies in Europe that comply with high environmental and social standards may have to reduce capacity or even stop production altogether due to the competitive distortions, less efficient Chinese SOEs may survive and continue to grow.

This danger is also relevant regarding third-country markets, where Chinese overcapacities can also lead to displacement effects. It becomes even more relevant, as China increasingly supports Chinese firms globally by using export credit support programs that allow firms to offer very favorable financing conditions for their customers (Dawar 2020; BusinessEurope 2020).

Looking at the near future, Chinese market distortions and the threat of overcapacities cause concerns of relevance:

- The MIC25 strategy and the massive support it provides could create similar overcapacities in sectors where European firms have specialization advantages. This applies, for example, to robotics, battery production, and electric cars (Bertelsmann Foundation et al. 2019).
- The example of the solar panel industry could bode ill for potential innovative climate abatement technologies that will be developed in Europe in the future. The Green Deal of the EU relies on the presumption that the induced structural change will not endanger the well-being of Europeans because “old and dirty” production will be replaced by “new and green” production capacities. This assumption would prove problematic

if China also used the same aggressive industrial policy strategy—as in the case of solar panels—for new green technologies.

IMPACT OF THE COVID-19 CRISIS

The coronavirus crisis is having a broad impact on economic activities and might, in the medium term, lead to significant changes in economic allocations and policy decisions. In this context, the question arises whether the crisis will render the depicted Chinese market distortions relevant.

Currently, it would be premature to attempt a definite answer. However, several factors can be identified that could influence the preparedness of China to significantly reduce subsidies or to agree to relevant reforms of WTO rules. Figure 3 provides a structured overview of several relevant factors. Nevertheless, the following evaluation remains speculative at this stage. Three different strands of arguments could become relevant.

First, different factors could influence China's general preparedness for more **multilateral cooperation**. On the one hand, it could be negatively affected by a rising distrust of other countries vis-à-vis China, e.g., due to China's opacity in dealing with the corona virus health crisis or due to its misinformation campaign. Related criticism of China and possible additional reactions could lead to growing resentment to global cooperation in China. The same effect is likely if the US-China trade dispute escalates further. However, China's will to cooperate might be influenced positively by a feeling of global interdependence commonly shared in many countries and by the related experience of mutual support to mitigate the effects of the coronavirus health crisis (e.g., by providing masks and other medical support). The overall effect on China's inclination to cooperate is unclear, but more likely to have a negative tendency, as the former two aspects appear to outweigh the third factor to some extent.

Second, the Covid-19 crisis made many countries, including some European countries, realize how dependent they are on supplies from other countries, particularly from China, which is viewed by some as the “factory of the world”. This perception could lead to a **reorganization of global value chains** and to more diversification among supplier countries from the point of view of the purchasing countries. This trend could lead to a relocation of modern and innovative economic activity away from China. Such relocation effects would reduce economic activity in the medium term and deal a blow to China's intention to increase its innovative production capacities. Therefore, the need for government support (particularly for innovative activities) would increase in the medium term.

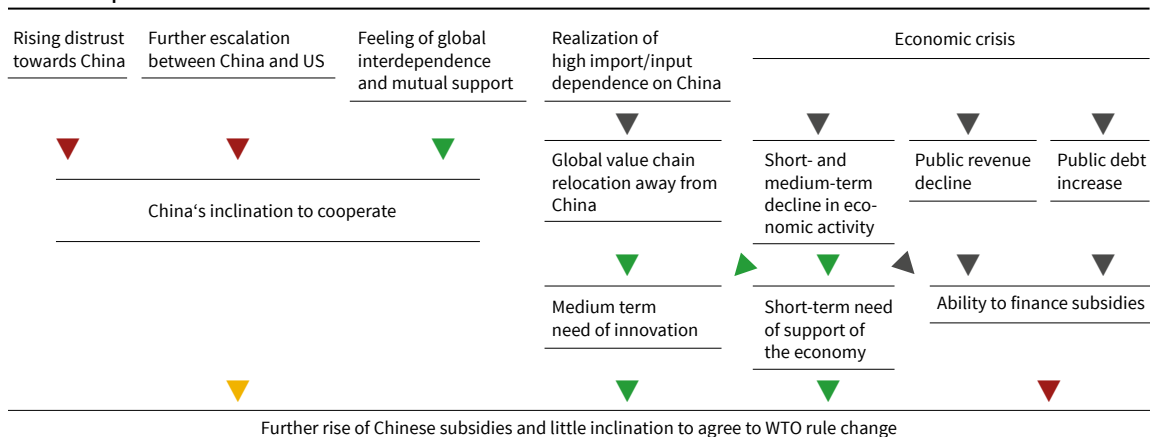
Third, the **economic crisis** reduces economic activity in the short term and potentially also in the medium term. Moreover, the crisis also leads to lower public revenues and higher public spending; both factors tend to increase government debts. These effects increase the perceived necessity for government support of the economy in the short and medium term. However, the ability to finance higher subsidies would be negatively affected by lower public revenues in the short term and by higher public debts in the medium term.

Overall, the corona virus crisis might not change much in these respects, as it appears difficult to draw definite conclusions concerning the balance of the portrayed positive and negative effects of the crisis on Chinese subsidies and on China's inclination to agree to more binding WTO reforms.

TRADE POLICY: DEFICIENCIES OF THE WTO RULES AND RECOMMENDATIONS FOR REFORMS

In fact, many concrete proposals for reforms of WTO rules regarding subsidies and market distortions do exist. They are based on the fact that the existing relevant WTO rules (the Agreement on Subsidies and

Figure 3
Possible Impact of the Covid-19 Crisis on Chinese Market Distortions



Note: Arrow colors imply grey= “leads to”, green = “has positive impacts on”, red = “has negative impacts on”, and orange = “has unclear impacts with negative tendency on”. Source: Author's own compilation. © ifo Institute

Countervailing Measures – ASCM) lack sufficient disciplines in important respects. For example, many countries, particularly developing countries, including China, do not adequately notify their subsidies with the WTO as is foreseen in the (non-sanctionable) WTO rules (USTR 2019; WTO 2018b). Moreover, the definition of prohibited and actionable industrial subsidies in the WTO’s rules framework is rather restrictive and does not cover important kinds of subsidies relevant in practice and especially in China (European Commission 2018b). This pertains particularly to the use of SOEs in China’s industrial policy strategy (European Commission 2017; WTO 2018a; Bown 2018).

The EU and other industrialized countries have vainly attempted to induce China to cooperate on reforms of the ASCM for several years (WTO 2015). Recently, a Trilateral Meeting of the EU, the US, and Japan has brought more momentum to these initiatives. Based on one of several proposals introduced by the Trilateral Meeting over time, in 2018 several countries introduced a concrete reform proposal to increase the incentives to adhere to the notification duties in the WTO by applying a “naming and shaming” strategy (WTO 2018c). More far-reaching, the Trilateral Meeting has proposed reforms to broaden the definition of prohibited and actionable industrial subsidies, including also stricter disciplines on SOEs (Joint Statement 2020). Accordingly, for example, the following subsidies should be unconditionally prohibited in the future: unlimited guarantees, certain direct forgiveness of debt, subsidies to an insolvent or ailing enterprise in the absence of a credible restructuring plan. However, despite such increasing pressures, China continues to refuse negotiations about a reform of the ASCM. Due to the WTO’s consensus principle, China’s resistance renders a meaningful reform of relevant WTO rules elusive, so that the multilateral route as the first best option for reforms appears barred for the time being.

Therefore, unilateral and bilateral avenues must be used in order to better discipline the competitive distortions of China’s state capitalism.

- The US has chosen an aggressive route by waging an open trade war with China. However, the resulting Phase-1-deal of January 2020 between the US and China does not deal with subsidy-related distortions of competition (Schott 2020).
- The EU continues to negotiate with China, e.g., in the framework of a bilateral Comprehensive Investment Agreement (CIA), however without sufficient progress. Therefore, it is also time for the EU to play its cards with more determination. In this respect, the European Commission’s (2019a) new China strategy is a first positive step.

However, more reform incentives and pressure appear to be necessary to induce China to a more coopera-

tive strategy. To this aim, the EU should close ranks with the US even more on issues of common interest such as industrial subsidies and forced technology transfers. In addition, the EU should also unilaterally apply a more robust trade policy stance in order to broaden the protection of EU firms against unfair competition from China. To be clear, such steps, if correctly applied, would not qualify as protectionism but as attempts to level an unlevel playing field (at least to some extent).

Examples of a more robust trade policy stance should include more WTO disputes against Chinese market distortions. Moreover, the EU should expand its toolbox of defense instruments by introducing the International Procurement Instrument (IPI) (European Commission 2016 and 2019a) and by tackling competitive distortions from Chinese firms active in the Single Market, as recently proposed with a non-discriminatory approach by a far-reaching White Paper of the European Commission (2020).

Furthermore, a more active use of existing trade defense instruments (TDIs) is commendable. This is possible within the WTO framework that the EU used to interpret relatively restrictively in the past to champion open markets (BusinessEurope 2020; Bertelsmann Foundation et al. 2019, Matthes 2019 and 2020). As a matter of fact, the EU has used TDIs to a declining extent over time and to a much smaller degree and with lower tariffs as the United States (EP 2019 and 2020). This is particularly true for countervailing (anti-subsidy) measures. One likely reason is that the administratively tedious TDI procedures in the EU tend to overburden firms (particularly SMEs). Firms could also suffer from a coordination problem because the initiation of a TDI procedure induces positive external effects for other competing European companies (Matthes 2020).

Thus, the European Commission could initiate more TDI procedures (ex officio). Moreover, TDI procedures should be streamlined as far as possible within the WTO framework, particularly for SMEs that also need more capacity building supported by the Commission and by business organizations. The EU should also consider making better use of the leeway the WTO framework provides, as far as it pertains to the Union interest test and the TDI tariff levels by further reducing the use of the lesser-duty rule (Matthes 2020). The use of countervailing measures and of counter notification of subsidies at the WTO should be increased based on the insights from a relatively new database on subsidies investigated by EU (European Commission 2019b). In summary, and different from some instances in the past, TDIs should be employed before European firms get into serious trouble due to competitive distortions by China, as was the case with solar panels. This requires better monitoring of markets by Commission and business organizations.

CONCLUSION

Subsidization in China is pervasive at numerous levels of government and appears to be an inherent element of Chinese state capitalism. However, despite initial attempts to shed more light on the subject, there is still a severe lack of transparency regarding the diversity of subsidies and their scale. The available information, however, suggests that the extent of Chinese subsidies is extraordinarily widespread and that the resulting overcapacities tend to lead to considerable and increasing distortions on the world market (European Commission 2017). Multiple efforts of the international community to induce China to change its approach have hardly led to any substantial progress. This is not very likely to change in the future, as the state capitalist model has proved remarkably successful for China. Along the same lines, an initial assessment of the potential effects of the corona virus crisis on the Chinese industrial policy model does not suggest a major change in Chinese market distortions. This constellation bodes ill for the future of the multilateral trading system.

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