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# EU Concerns About Chinese Subsidies: What the Evidence Suggests

China uses subsidies extensively to take a leading role in the global markets of green-tech products such as battery electric vehicles and wind turbines. Against the background of the current EU investigations into Chinese subsidies in these sectors, this article takes a careful look at the Chinese subsidy system and provides new data on direct government subsidies to leading Chinese producers of electric cars and wind turbines. Extensive government support has allowed Chinese companies to scale up rapidly, to dominate the Chinese market and to expand into foreign markets. The article concludes that the EU should use its strong bargaining power due to the single market to induce the Chinese government to abandon the most harmful subsidies.

Green technologies are increasingly at the centre of international trade and technology policy. The Chinese government has recognised the future importance of such technologies early on and is particularly active in supporting these industries. China has become a world leader in photovoltaics and battery cell production and is trying to do the same in electric vehicles and wind power. Subsidies are a key instrument in the Chinese government's strategy to support the development of these industries.

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The massive subsidisation of Chinese companies has led to fierce criticism in the West, however.

The European Commission accuses the Chinese government of distorting competition with subsidies for electric cars and has launched an official anti-subsidy investigation into electric cars in China in October 2023. The anti-subsidy investigation has been intended to confirm the Commission's allegations that manufacturers of battery electric vehicles (BEV) in China benefit from countervailable – i.e. specific and advantageous to the receiving companies – subsidies that are causing or threatening to cause economic damage to BEV manufacturers in the EU and justify the introduction of countervailing duties (European Commission, 2023, 2024c). Similar discussions have been held regarding subsidies to Chinese producers of wind turbines: in April 2024, EU Commissioner Margrethe Vestager (2024) announced the start of an investigation into Chinese wind turbines under the EU's foreign subsidies regulation.

These allegations must be taken seriously. The data situation is currently highly unsatisfactory and the requirements for legally secure interventions, namely the imposition of countervailing duties on Chinese imports by the European Commission, are high. And even if the legal requirements for the imposition of such duties were met, there is still the question of whether such duties would be in the long-term interests of the EU.

Against this background, the article assembles data on overall industrial subsidies in China from different sources and provides some new data based on the analysis

of the Chinese government's latest reviews of purchase subsidies for new energy vehicles and the annual reports of the most important Chinese companies in the electric car and wind energy sectors. Based on the empirical findings, arguments for and against EU interventions are discussed.

### Quantification of overall Chinese industrial subsidies

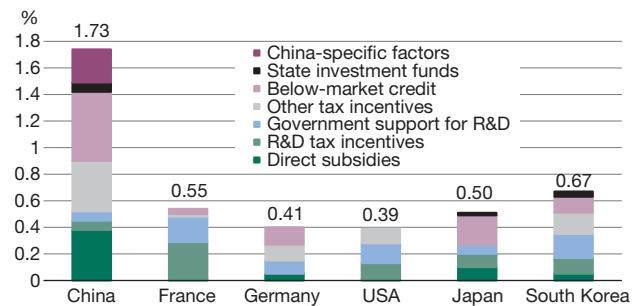
Chinese industries receive considerable public support in the form of direct and indirect subsidies, and there can be little doubt that overall industrial subsidies in China are significantly higher than those in the EU or in the countries of the OECD, more generally.

A recent study by the Center for Strategic and International Studies (CSIS) quantifies overall industrial policy spending by the Chinese government, comparing it to other major economies (DiPippo et al., 2022). The study considers government support provided to industry in the form of direct subsidies, government support for R&D, R&D tax incentives, other tax incentives, below-market credit to state-owned enterprises (SOEs), support through state investment funds (government guidance funds, GGF), and "China-specific factors", which include, most notably, below-market land sales.<sup>1</sup> Estimates for some of these types of support are lower bounds as some elements are not quantifiable.

For China, the study estimates public support for industry to add up to at least €221.3 billion, or 1.73% of GDP in 2019, even when taking a conservative approach and considering only quantifiable factors (DiPippo et al., 2022). This is far higher than estimated support in the other leading economies in the sample, both in absolute terms and in relation to GDP (see Figure 1). Relative to GDP, public support is about three times higher in China than in France (0.55%) and about four times higher than in Germany (0.41%) or the United States (0.39%).<sup>2</sup>

As for the relative importance of the different instruments in China, three instruments stand out: below-market credit to SOEs with 0.52% of GDP, and direct subsidies and other tax incentives with 0.38% of GDP each. R&D tax incentives and government support for

**Figure 1**  
**Industrial support spending in China and key OECD countries in relation to GDP, 2019**



Note: China-specific factors include, most notably, below-market land sales.

Source: DiPippo et al. (2022); authors' own illustration.

R&D are relatively low in China, with 0.07% of GDP each. With this, the structure of Chinese subsidies differs strongly from that in the US and France, where R&D tax incentives and government support for R&D are the largest support elements. For Germany, the support structure is somewhat closer to that of China. As in China, below-market credits and other tax incentives are the largest support elements in Germany. Direct subsidies are much less important in Germany than in China, whereas government support for R&D is relatively more important in Germany.

The OECD (2021, 2023) provides another quantification of China's overall industrial subsidies using publicly available firm-level information for 306 of the world's largest manufacturing firms (almost a quarter of firms in the sample are from China; about a fifth from the EU).<sup>3</sup> The study covers the years 2005-2019 and focuses on four key instruments of policy support: tax concession, government grants, below-market borrowing and below-market equity.

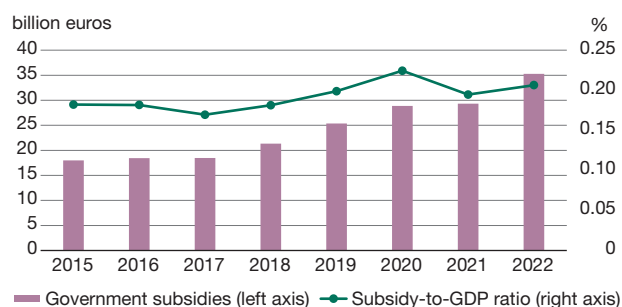
In line with the CSIS study (DiPippo et al., 2022), the OECD (2021, 2023) finds that China offers its large industrial firms disproportionately more support – both overall and in each of the four instruments considered – than other countries covered in the analysis. The industrial firms from China covered in the sample received government support equivalent to about 4.5% of their revenues. By

1 Direct subsidies and tax incentives include only support for SOEs and listed private firms, but not that for non-listed private firms. Support in the form of below-market credits covers only support for SOEs, not private firms. For details on the definition and measurement of the different support instruments, see DiPippo et al. (2022).

2 In absolute terms, the US comes second, with an estimated government support equaling about €75 billion (US \$84 billion), which is about one-third of China's support spending. In Germany and France government support amounts to €14.3 billion and €13.3 billion, respectively, broadly one-sixteenth of the level of support in China.

3 For most sectors included in the sample, the companies covered account for at least two-thirds of global sales or capacity (OECD, 2021, p. 27).

**Figure 2**  
**Direct subsidies to listed companies in China, 2015-2022**



Sources: Bruegel (2024), National Bureau of Statistics of China (2023) and Deutsche Bundesbank (2024); authors' own currency conversion, calculation of ratios and illustration.

far the largest part of this support comes in the form of below-market borrowing.<sup>4</sup>

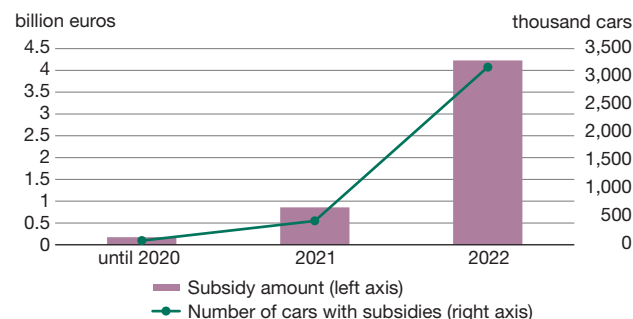
These results suggest that through tax concessions, government grants and below-market borrowing alone, large industrial companies in China may receive almost nine times more government support (relative to company sales) than comparable companies in the OECD. And this does not include support in the form of below-market equity, or through subsidised input prices, preferential treatment in public procurement or other forms of support that are even harder to quantify and to compare internationally.

The results of the two studies of CSIS and OECD just described relate to the years 2019 and 2005-2019 respectively. More recent quantifications of Chinese subsidies are available for selected instruments or sectors only. The China Economic Database (Bruegel, 2024) provides data for direct government subsidies to listed companies up to 2022.<sup>5</sup> In 2022, the 5,260 companies in the sample received about €35.3 billion in direct government subsidies (Figure

<sup>4</sup> Firms based in China received tax concessions amounting to about 0.75% of their revenues, government grants of more than 0.63% of revenues and support in the form of below-market borrowings of more than 2.35%. For OECD-based firms, the corresponding figures are 0.32%, less than 0.1% and close to 0% (OECD, 2021, 2023; Chimits, 2023). For below-market equity, a support level of about 0.75% of sales appears to be a reasonable estimate for China, according to Chimits (2023). For the OECD, the relative benefit per government-invested firm seems to be comparable on average to that in China, the aggregate effect is substantially smaller in the OECD, however, due to the much smaller number of government-invested firms there (OECD, 2021).

<sup>5</sup> Companies listed in China are legally obliged to report on the subsidies they receive. However, this only applies to direct "official" subsidies, while various indirect or hidden forms of subsidies are not covered.

**Figure 3**  
**Approved NEV purchase subsidies in China**



Note: The average exchange rate for 2020 is used for calculating NEV purchase subsidies in euro for the first period (until 2020).

Sources: Ministry of Industry and Information Technology of China (2023, 2024) and Deutsche Bundesbank (2024); authors' own calculations and illustration.

2). This is double the amount in 2015.<sup>6</sup> Relative to 2019, the last year before COVID-19 and the reference year of the above CSIS study, subsidies increased by about 27.3% in 2022. The database also shows that in 2022 almost all listed companies in China (more than 99% in the database) have received direct government subsidies (Bruegel, 2024).

### Chinese subsidies in battery electric vehicles

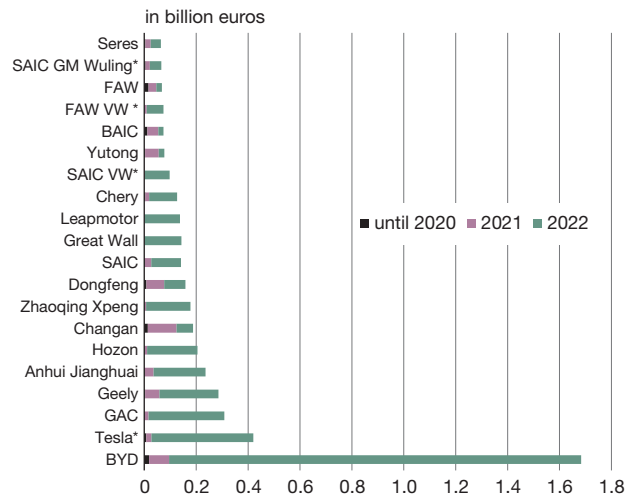
China's rise to the world's largest market and production base for battery electric vehicles has been boosted by the Chinese government's longstanding extensive support of the industry, which includes both demand- and supply-side subsidies. Substantial purchase subsidies and tax breaks to stimulate sales of battery electric vehicles (BEV) are, of course, not unique to China but are also widespread within the EU and other Western countries, where (per vehicle) purchase subsidies have often been substantially higher than in China. A distinctive feature of purchase subsidies for BEV in China, however, is that they are paid out directly to manufacturers rather than consumers and that they are paid only for electric vehicles produced in China, thereby discriminating against imported cars.

While these purchase subsidies have been phased out altogether by the end of 2022, they played an important role in the development phase of the sector.<sup>7</sup> Until 2022, the purchase subsidies for new energy vehicles (NEV), which

<sup>6</sup> Relative to GDP subsidies increased from 0.18% of GDP in 2015 to 0.21% in 2022.

<sup>7</sup> Zhang et al. (2024) find evidence that purchase subsidies have led to a substantial uptake in the sales of domestic EVs, while at the same time discouraging the uptake of imported EVs.

**Figure 4**  
**Approved new energy vehicle purchase subsidies in China: Top 20 recipients**



Note: \* Sino-foreign joint ventures or foreign-owned firms. New energy vehicles include battery electric vehicles, plug-in hybrid vehicles and fuel cell vehicles.

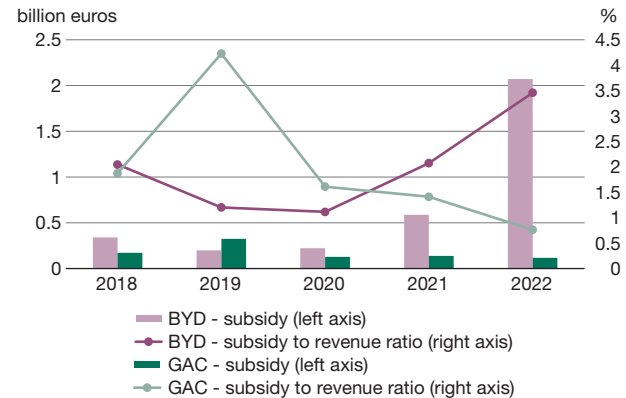
Sources: Ministry of Industry and Information Technology of China (2023, 2024), Deutsche Bundesbank (2024); authors' own calculations and illustration.

include BEV as well as plug-in hybrid vehicles (PHEV) and fuel cell vehicles, amounted to about €5.3 billion (Figure 3). The lion's share of the subsidies was paid in 2022, the final year of the policy. In 2022, purchase subsidies of about €4.2 billion were allocated to almost 3.2 million NEV, up from a total of €0.2 billion for about 75,000 NEV for the period 2010 to 2020. The average subsidy per NEV decreased over time, from about €2,300 between 2010 and 2020 to €1,300 in 2022.

By far the largest recipient of purchase subsidies was Chinese NEV manufacturer BYD, which in 2022 alone received purchase subsidies amounting to €1.6 billion (for about 1.4 million NEV) (Figure 4). The second largest recipient of purchase subsidies was US-headquartered Tesla, which received about €0.4 billion (for about 250,000 BEV produced in its Shanghai Gigafactory). While the ten next highest recipients of purchase subsidies are all Chinese, there are also three Sino-foreign joint ventures (the two VW joint ventures with FAW and SAIC as well as SAIC GM Wuling) among the top 20 purchase subsidy recipients.<sup>8</sup>

<sup>8</sup> In 2022, the top 20 purchase subsidy recipients jointly received about 95% of the total amount of NEV purchase subsidies and accounted for almost 96% of the total number of subsidised NEV.

**Figure 5**  
**Direct government subsidies to BYD and GAC, 2018-2022**



Note: Government subsidies consist of newly added longer-term government subsidies and new government subsidies of the year disclosed in the annual reports.

Sources: BYD annual report 2018-2022 and GAC annual report 2018-2022; Deutsche Bundesbank (2024); authors' own calculations and illustration.

The large differences in purchase subsidies received mainly reflect differences in the number of NEV sold and eligible for subsidy. In 2022, Tesla and the three Sino-foreign joint ventures taken together received purchase subsidies for about 408,000 NEV, whereas BYD alone received subsidies for 1.4 million NEV. The 16 Chinese NEV manufacturers among the top 20 purchase subsidy recipients combined received subsidies for 2.63 million NEV.

Purchase subsidies per vehicle depend on the technology (BEV or PHEV) and the basic performance characteristics (e.g. electric range, battery energy density, maximum speed) of individual car models. We find that BYD received more subsidies than its largest competitors — Tesla and GAC but also compared to VW joint ventures SAIC-VW and FAW-VW — in every relevant subsidy rate class in 2022, reflecting the breadth and competitiveness of the BYD model range.

Even as purchase subsidies have been phased out, BEV continue to be exempt from the vehicle purchase tax (usually 10% on car price including VAT). More specifically, there will be a complete purchase tax exemption for all NEV, not only but mostly BEV, up to savings of RMB 30,000 (about €3,920) per vehicle in 2024 and 2025. The exemption will be halved in 2026 and 2027. For the four years, this incentive package is scheduled



to amount to RMB 520 billion (about €68 billion) (China Briefing, 2023).

Apart from purchase subsidies (until 2022), there are several other forms of subsidies given to BEV manufacturers. According to the information in BYD's annual reports, direct government subsidies to that company totalled €3.4 billion in the period from 2018 to 2022. They increased massively, recently, from about €0.2 billion in 2020 to €0.6 billion in 2021, and to €2.1 billion in 2022 alone (Figure 5). Relative to business revenues, this corresponds to an increase of direct subsidies from 1.1% of revenues in 2020 to 3.5% in 2022. Direct subsidies to GAC, the second largest Chinese recipient of NEV purchase subsidies, were much lower and tended to decrease in recent years.

Other important forms of government support (not included above) are, e.g. below-market debt and equity, (discriminatory) government procurement (DiPippo et al., 2022), or the purchase of important inputs (such as steel and EV batteries) at subsidised prices, which are hard to measure, however.

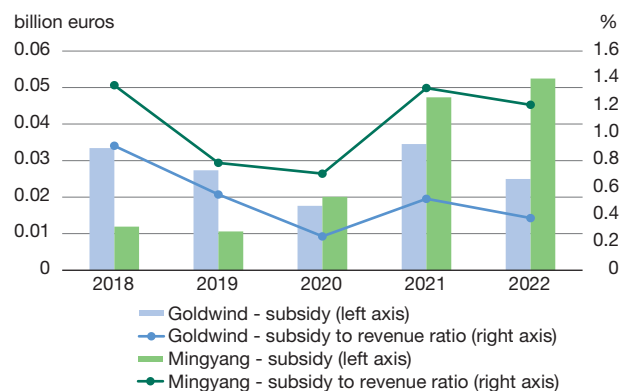
### Chinese subsidies for wind turbines

In the mid-1990s, the Chinese government introduced a purchase guarantee and feed-in-tariff schemes for wind energy as well as strong local content requirements, mandating that wind farms purchase at least 70% domestically manufactured equipment (Li et al., 2023). This resulted in a rapid expansion of installed wind energy capacity (from 1.26 GW in 2005 to 31 GW in 2020) and a rapid growth of the market share of domestic wind turbine manufacturers (from 25% in 2004 to 90% in 2010) (Li et al., 2023).

In the following years, feed-in tariffs were repeatedly adjusted downwards in accordance with falling wind energy costs. Eventually, the central government has completely abolished (preferential) feed-in tariffs for both onshore wind and offshore wind in 2020 and 2021.<sup>9</sup> In view of the sharp fall in the cost of wind power generation in China, the central government no longer seems to consider specific subsidies on the demand side to be necessary. Several large provinces including Guangdong, Shandong and Zhejiang have announced their own regional subsidy policies to stand in for the national ones, however (Caixin, 2023).

<sup>9</sup> The feed-in tariff model is replaced by a grid-parity model in which electricity generated from wind (renewables) will receive the same remuneration as electricity generated from coal-fired power plants (Global Wind Energy Council, 2023).

**Figure 6**  
Direct government subsidies to Goldwind and Mingyang, 2018-2022



Note: Government subsidies consist of newly added longer-term government subsidies and new government subsidies of the year disclosed in the annual reports.

Sources: Goldwind annual report 2018-2022 and Mingyang annual report 2018-2022; Deutsche Bundesbank (2024); authors' own calculations and illustration.

The strict local content requirements were revoked in 2009, allowing foreign producers to bid for projects (Li et al., 2023; Scheifele et al., 2022).<sup>10</sup> However, the market share of Western turbine manufacturers has fallen even further, allegedly also due to discriminatory treatment by the wind farm operators in award procedures. European wind turbine producers such as Vestas or Siemens Gamesa are still producing wind turbines in China but mainly or even only for export.<sup>11</sup>

While some important forms of government support for the wind turbine industry in China were abolished several years ago, the central and regional governments continue to support the industry through various other instruments. Notable examples are the direct subsidies for turbine manufacturers. Goldwind and Mingyang, two of the largest Chinese wind turbine manufacturers, each received €0.14 billion of these subsidies between 2018 and 2022 (Figure 6). For Mingyang, these subsidies have even increased substantially over recent years, from €0.02 billion in 2020 to €0.05 billion in 2022. Although they are much lower in absolute terms than those for the leading NEV manufacturers, they are of similar size in relation to business revenues as subsidies to car maker GAC. In 2021

<sup>10</sup> Statistical analysis by Scheifele et al. (2022) suggests that these local content requirements (LCR) have significantly increased exports of wind energy components from China.

<sup>11</sup> Already in August 2021, Siemens Gamesa announced it would continue producing wind turbines in Tianjin, China, but only for export (Wirtschaftswoche, 2021).

and 2022, subsidies amounted to about 1.2%-1.3% of business revenues for Mingyang and about 0.4%-0.5% for Goldwind.

In addition, there is a variety of indirect forms of support for the industry, including preferential land and financing arrangements (below-market debt and equity injections) from central or local governments. Another important form of support is lower prices for key inputs due to government subsidies or regulations in related industries. This includes, in particular, steel and rare earth materials but also shipping and shipbuilding, which are essential inputs in the offshore wind industry.

### Limits to quantifying subsidies and other forms of government support

The subsidies discussed above, however important, clearly underestimate the full extent of government support to Chinese companies as the Chinese subsidy system is extremely complex and intransparent, and it defies complete quantification. Subsidies are granted by different constituencies, and they can also be mediated by public financial institutions or SOEs. An open registry of public subsidies does not exist, and subsidies from local governments and support intermediated by SOEs are not adequately recorded (Chimits, 2023). The annual reports of publicly listed companies provide an alternative data source as these companies are legally obliged to report on subsidies received. However, listed firms account for just a small fraction of Chinese firms, and the annual reports only cover direct “official subsidies” and not the various more indirect or hidden forms of support that are omnipresent in China.

Public support is provided on almost all stages of production. Producers benefit not only from subsidies they receive, but also from subsidies provided to their suppliers (via cheaper input supplies) or customers (via increased demand). Due to the complexity of supply chains, it can be difficult to identify the final beneficiaries of government support. Moreover, Chinese producers benefit from tax breaks, below-market credits and below-market equity. OECD estimates suggest that these more indirect forms of support might be several times higher than the direct “official subsidies” (OECD, 2021).

Importantly, there are various other channels of government support for Chinese companies that are even harder to quantify. These include the Chinese government’s long-term safeguarding of critical raw materials, forced technology transfer, strategic use of public procurement and preferential treatment of domestic firms in administrative procedures. While the use of such poli-

cy levers is not unique to China, the comprehensiveness and intensity of their use is unparalleled (Chimits, 2023), and likely to have a substantial impact on the competitiveness of Chinese industries.

### Discussion

The empirical evidence presented in this article clearly shows that China strongly subsidises manufacturing industries that rank high on its economic policy agenda, including many green tech industries. Here industrial policies are targeted to help China to become independent of foreign technology, to establish itself as a global supplier of key manufactured products and to further strengthen its role as a leading export nation (Bickenbach & Liu, 2023). Extensive government support has allowed Chinese green manufacturing industries to scale up rapidly and to start dominating the Chinese home market and increasingly also foreign markets. This is true for solar panels or batteries for EVs, where Chinese companies have dominated the EU markets for several years now, and increasingly also for BEV and wind turbines where Chinese companies are only just starting to penetrate EU markets.

The European Commission has made clear that it is prepared to take strong action against subsidised imports from China. In October 2023, it officially launched an anti-subsidy investigation into the import of BEV from China (European Commission, 2023). And in April 2024, Commissioner Vestager announced the launch of an investigation under the newly enacted Foreign Subsidies Regulations into Chinese wind turbine companies participating in the development of wind parks in five European countries (Vestager, 2024).<sup>12</sup> In the BEV case, the European Commission stated on 12 June 2024 that as part of its ongoing investigation it “has provisionally concluded that the battery electric vehicles (BEV) value chain in China benefits from unfair subsidisation, which is causing a threat of economic injury to EU BEV producers” (European Commission, 2024c). As a result, the Commission announced the imposition of countervailing duties on imports of BEVs from China that would be introduced from 4 July 2024, should discussions with Chinese authorities not lead to an effective WTO-compatible solution. The duties would

<sup>12</sup> Earlier this year, the Commission had already launched investigations under the Foreign Subsidies Regulation (Regulation (EU) 2022/2560) into Chinese train manufacturer CRRC for allegedly using subsidies to undercut EU competitors in a public procurement procedure in Bulgaria (European Commission, 2024a) and into the potentially market distortive role of foreign subsidies given to two partly Chinese bidder consortia in a public procurement procedure for a photovoltaic park in Romania (European Commission, 2024b). Both investigations have been closed by the Commission after the companies concerned withdrew from the procurement procedures.

range from 17.4% for BYD to 38.1% for SAIC as well as all other BEV producers in China that did not cooperate in the investigation (European Commission, 2024c).<sup>13</sup>

However, whether such an intervention would be in the interest of the EU is anything but clear. An increase in import restrictions on green-tech products from China would likely lead at least in the short term to higher costs of such products in the EU and could make the green transition of the EU economy more expensive and slower. This applies even more to import restrictions on those green technology products for which the EU industry currently has too little capacity to meet the increasing domestic demand such as EV batteries or wind turbines.

From a more dynamic perspective, such an argument may neglect important geopolitical externalities, path dependencies, and the issue of technology control in key industries.<sup>14</sup> Battery cell technology, for example, is not only one of the key technologies in the energy transition, but also a general-purpose technology (GPT). Early mover advantages and spillovers into related sectors (aviation, underwater shipbuilding, medicine) could make it beneficial to push such technologies and avoid one-sided dependencies on systemic competitors like China. Import restrictions on such products may thus help reduce the EU's critical reliance on China ("de-risking") or even strengthen national security given the espionage or sabotage risks brought up against imports of wind turbines or connected cars from China.<sup>15</sup>

On the other hand, due to China's strong position as a production base for European firms and as a source of many critical products for the EU market (Langhammer, 2022), China has strong retaliatory capabilities against the EU. Hence, the costs for EU industries and consumers of import restrictions on subsidised Chinese goods could increase considerably if the Chinese government were to respond with countermeasures such as export

restrictions on inputs on which the (green-tech) industries in the EU are heavily reliant, such as refined rare earths.<sup>16</sup> Such export restrictions would harm the EU industry not just on the internal EU market but also with respect to its exports to China or third-country markets. And export restrictions on necessary inputs are just one of a myriad of possible countermeasures through which China could harm EU companies in the industry directly affected by EU measures or indeed any other EU companies trading with or producing in China. This is likely one reason why German carmakers, who are heavily engaged in trading, production and R&D in China, are rather sceptical about a potential EU intervention.<sup>17</sup>

Even without considering possible Chinese retaliatory measures, it is far from clear whether and to what extent EU industry would actually benefit from restrictions on Chinese imports. Take, for example, the case of EU import duties on BEV from China. First, these tariffs would also affect imports of BEV manufactured by European (German) companies producing in China.<sup>18</sup> Second, the (direct) effect of EU import tariffs on BEV from China would be restricted to the EU market, and would not help European producers on third-country markets and in China itself. Third, EU import tariffs would be equivalent to an implicit tax on EU exports since the domestic price of imports would rise relative to the price of exports. This would impede EU export competitiveness in related markets as well, and not only in the BEV market. Fourth, less intense competition due to import restrictions could reduce the EU industry's incentives to invest in R&D and in cost-efficient production facilities, thereby weakening the industry in the medium term.

From a purely industrial economics point of view, tariff protection or subsidies for the EU industry could be justified if subsidised imports from China would hinder the EU industry from scaling up and achieving the economies of scale necessary to compete internationally. Given the strong increase in demand and the comparatively high transport costs for BEV (or for other heavy and large green energy products such as wind turbines), it seems likely

13 Geely would be subject to a duty of 20%. All other BEV producers that cooperated with the European Commission in the investigation but have not been sampled for in-depth investigation would be subject to a duty of 21% (the weighted average of duties for the three sampled companies BYD, Geely and SAIC). Following a substantiated request, Tesla may receive an individually calculated duty rate, when definite duties are fixed (European Commission, 2024c). In all cases, the countervailing duties would be added to the existing import duty of 10% on BEV imports.

14 It neglects the risk of predatory dumping, that is that Chinese companies may raise the price after having driven EU suppliers out of the market.

15 There is also a purely EU-internal, political-economy argument in favour of a more stringent EU action against subsidised imports from China: without such action, EU policy is likely to find it increasingly difficult to fend off internal EU demands (lobbying activities) for higher subsidies and the promotion of European/national champions to compete with China on equal terms.

16 Of course, dependencies are not one-sided. In several respects, the Chinese economy is also reliant on the European and US economies, e.g. as a source of technology or a buyer of Chinese products. A recent estimate suggests that a complete decoupling between China (and its allies) and the West would actually be substantially more costly (in terms of welfare) to China than to the EU or the US (Baqae et al., 2024).

17 The interests and dependencies of individual German companies or those of a single sector (automotive manufacturing) must not be confused with those of the entire German (or European) economy, of course.

18 In 2023, the majority of BEV imports from China was still coming from Western carmakers such as Tesla, Renault's Dacia or BMW (Transport & Environment, 2024).



that the industry will be able to substantially increase production in the EU despite increasing Chinese imports. At least in the medium term, companies producing in Europe can be expected to have a substantial advantage in serving EU customers (the more so as import tariffs for BEV into the EU now stand at 10% even without additional countervailing duties). As technologies mature, manufacturers will have increased incentives to expand production near consumers to reduce shipping costs (Springford & Tordoir, 2023). We would thus also expect Chinese BEV manufacturers (like Chinese EV battery manufacturers before them) to build up production capacities in Europe to serve the EU market, unless they are prevented from doing so by Chinese or EU policy.

So how then should the EU deal with the problem of subsidised imports from China? In our view, there is a case in favour of driving forward the current EU proceedings against imports of green-tech products from China. The EU should use the information obtained there and its strong bargaining power due to the single market to enter into negotiations with the Chinese government and to try to induce the Chinese government to abolish the Chinese support measures that are particularly harmful to the EU. Given the current weak macroeconomic situation in China, the focus of the Chinese government on its political conflicts with the US and, at the same time, the relative strength of China's green-tech industries, there is a realistic chance that such negotiations will be successful.

## References

- Baqaei, D., Hinz, J., Moll, B., Schularick, M., Teti, F. A., Wanner, J., & Yang, S. (2024). What if? The Effects of a Hard Decoupling from China on the German Economy. *Kiel Policy Brief*, 170.
- Bickenbach, F., Dohse, D., Langhammer, J., & Liu, W.-H. (2024). Foul Play? On the Scale and Scope of Industrial Subsidies in China, *Kiel Policy Brief*, 173.
- Bickenbach, F., & Wan-Hsin L. (2023). Wie China internen und externen wirtschaftlichen Herausforderungen begegnen. *Wirtschaftsdienst*, 107(7), 484–490. <https://www.wirtschaftsdienst.eu/inhalt/jahr/2023/heft/7/beitrag/wie-china-internen-und-externen-wirtschaftlichen-herausforderungen-begegnen-will.html>
- Bruegel. (2024). *Bruegel China Economic Database* [Dataset]. Retrieved 22 March 2024, from <https://www.bruegel.org/dataset/china-economic-database>
- Chimits, F. (2023). What Do We Know About Chinese Industrial Subsidies? *CEPII Policy Brief*, 42. <http://cepii.fr/CEPII/en/publications/pb/abstract.asp?NoDoc=13835>
- Deutsche Bundesbank. (2024). *Exchange Rate Statistics March 2024, Exchange Rate Statistics 1 April 2024*. <https://www.bundesbank.de/resource/blob/927760/3d95a8347dbd5b141341266d38d3dd15/mL/2024-03-15-11-36-18-wechselkursstatistik-data.pdf>
- DiPippo, G., Mazzocco, I., & Kennedy, S. (2022). *Red Ink: Estimating Chinese Industrial Policy Spending in Comparative Perspective*. Center for Strategic & International Studies. <https://www.csis.org/analysis/red-ink-estimating-chinese-industrial-policy-spending-comparative-perspective>
- European Commission. (2023). Notice of Initiation of an Anti-subsidy Proceeding Concerning Imports of New Battery Electric Vehicles Designed for the Transport of Persons Originating in the People's Republic of China. *Official Journal of the European Union*, C/2023/160. [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C\\_202300160](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C_202300160)
- European Commission. (2024a, 3 April). *Commission Opens First In-depth Investigation under the Foreign Subsidies Regulation* [Press Release]. [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_24\\_887](https://ec.europa.eu/commission/presscorner/detail/en/IP_24_887)
- European Commission. (2024b, 16 February). *Commission Opens Two In-Depth Investigations under the Foreign Subsidies Regulation in the Solar Photovoltaic Sector* [Press release]. [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_24\\_1803](https://ec.europa.eu/commission/presscorner/detail/en/IP_24_1803)
- European Commission. (2024c, 12 June). *Commission Investigation Provisionally Concludes that Electric Vehicle Value Chains in China Benefit from Unfair Subsidies* [Press release]. [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_24\\_3231](https://ec.europa.eu/commission/presscorner/detail/en/ip_24_3231)
- Global Wind Energy Council. (2023). *Global Wind Report 2023*. <https://gwec.net/globalwindreport2023/>
- Interesse, G. (2023, 28 June). China Extends NEV Tax Reduction and Exemption Policy to 2027, *China Briefing*. <https://www.china-briefing.com/news/china-extends-nev-tax-reduction-and-exemption-policy-to-2027/>
- Langhammer, R. J. (2022). Reluctant US vs Ambitious German Direct Investment in China – the Tale of Two Strategies? *Kiel Policy Brief*, 162.
- Li, A., Sun, Y., & Song, X. (2023). Gradual improvement and reactive intervention: China's policy pathway for developing the wind power industry. *Renewable Energy*, 216, 119068. <https://doi.org/10.1016/j.renene.2023.119068>
- Ministry of Industry and Information Technology of China. (2023). *Public Announcement on the Final Review of the Clearance of Subsidies for the Promotion and Application of New Energy Vehicles in 2021 and Prior Years and the Advance Allocation of Subsidies for the Years 2021-2022*. [https://www.miit.gov.cn/zwgk/wjgs/art/2023/art\\_28940a03395c4866b2606b65f077e322.html](https://www.miit.gov.cn/zwgk/wjgs/art/2023/art_28940a03395c4866b2606b65f077e322.html)
- Ministry of Industry and Information Technology of China. (2024, 27 February). *Public Announcement on the Final Review of the 2022 New Energy Vehicle Promotion and Application Subsidy Funding Clearance and the Advance Allocation of Subsidies for the years 2016-2022*. [https://www.miit.gov.cn/zwgk/wjgs/art/2024/art\\_aefde322192a4bd3a6b-16c34e4bd3852.html](https://www.miit.gov.cn/zwgk/wjgs/art/2024/art_aefde322192a4bd3a6b-16c34e4bd3852.html)
- National Bureau of Statistics of China. (2023). *China Statistical Yearbook 2023*. <https://www.stats.gov.cn/sj/ndsj/2023/indexch.htm>
- OECD. (2021). Measuring Distortions in International Markets: Below-market Finance. *OECD Trade Policy Papers*, 247. <https://doi.org/10.1787/a1a5aa8a-en>
- OECD. (2023). Government Support in Industrial Sectors. A Synthesis Report, *OECD Trade Policy Papers*, 270. <https://www.oecd.org/publications/government-support-in-industrial-sectors-1d28d299-en.htm>
- Scheifele, F., Bräuning, M., & Probst, B. (2022). The Impact of Local Content Requirements on the Development of Export Competitiveness in Solar and Wind Technologies. *Renewable and Sustainable Energy Reviews*, 168, 112831. <https://doi.org/10.1016/j.rser.2022.112831>
- Schlesiger, C. (2021, 27 August). Siemens Gamesa beendet China-Geschäft und plant Preiserhöhung, *Wirtschaftswoche*. Retrieved 25 March 2024, from <https://www.wiwo.de/unternehmen/industrie/windtochter-von-siemens-energy-siemens-gamesa-beendet-china-geschaeft-und-plant-preiserhoeungen/27549856.html>
- Springford, J., & Tordoir, S. (2023). *Europe Can Withstand American and Chinese Subsidies for Green Tech*. Centre for European Reform. [https://www.cer.eu/sites/default/files/pbrief\\_JS\\_ST\\_green\\_tech\\_9.6.23.pdf](https://www.cer.eu/sites/default/files/pbrief_JS_ST_green_tech_9.6.23.pdf)
- Transport & Environment. (2024). To Raise or Not to Raise. How Europe Can Use Tariffs as Part of an Industrial Strategy. [https://te-cdn.ams3.cdn.digitaloceanspaces.com/files/2024\\_03\\_TE\\_EV\\_tariffs\\_paper.pdf](https://te-cdn.ams3.cdn.digitaloceanspaces.com/files/2024_03_TE_EV_tariffs_paper.pdf)
- Vestager, M. (2024, 9 April). *Speech by Executive Vice President Vestager on Technology and Politics at the Institute for Advanced Study*. [https://ec.europa.eu/commission/presscorner/detail/en/speech\\_24\\_1927](https://ec.europa.eu/commission/presscorner/detail/en/speech_24_1927)
- Xiaoying, Y., & Xuan, Z. (2023). *China's Offshore Wind Sector Gears up for Life after Subsidies*. Caixin. Retrieved 25 March 2024, from <https://asia.nikkei.com/Spotlight/Caixin/China-s-offshore-wind-sector-gears-up-for-life-after-subsidies>
- Zhang, T., Burke, P. J., & Wang, Q. (2024). Effectiveness of Electric Vehicle Subsidies in China: A Three-Dimensional Panel Study. *Resource and Energy Economics*, 76, 101424.