

## What Do We Know About Chinese Industrial Subsidies?

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### Summary

While Chinese industrial subsidies have been one of the key drivers of international trade tensions, the details of the phenomenon itself are often overlooked.

Reviewing the existing datasets and methodologies used to assess Chinese public supports, this *Policy Brief* tries to bring more clarity on what is known, and what is not.

The most frequently used datasets in the literature are dated and/or largely incomplete, and find limited industrial support compared to more specific analyses.

To further complicate things, the new development model pursued by the current leadership seems to champion the idea of “guiding” economic entities to align with Party-State objectives, which, by diffusing public intervention throughout the economy, makes it more difficult to assess the scale of subsidies.

The Chinese authorities highly structured and detailed communication and policy planning offers alternative metrics to assess the distribution and evolution of public support to the industry, enabling a complementary approach to triangulate the actual subsidies to industrial production in China.

*Updated for Figure 2 and page 6 on July 25<sup>th</sup> 2023.*



In 2018, the United States launched a series of tariff measures against imports from the People's Republic of China (PRC), opening a chapter of trade tensions between two G20 economies unseen since the end of the Cold war. Behind the fury of the declarations, measures and countermeasures, the American authorities have expressed, among other things, their frustration with competitors deemed unduly supported by the Chinese authorities. Legally founded mostly on intellectual property infringements in China, the American grievances stem from a broader perception of state-led distortions orchestrated by Beijing to support Chinese domestic industries.

The Americans are not alone in their concerns about Chinese alleged flouting of the level playing field. The European Union (EU), Japan and even the G7 as a whole share a similar analysis, while differing on what approach to take.<sup>1</sup> In a recent and rare joint report, the International Monetary Fund (IMF), the World Bank, the Organization for Economic Co-operation and Development (OECD) and the World Trade Organization (WTO) emphasized that “sharp differences over subsidy practices contribute to broader trade tensions”.<sup>2</sup> These alleged distortions have also led the USA to block the WTO’s dispute settlement mechanism, the institution’s “crown jewel” and the only effective multilateral adjudication mechanism.

The EU has not confined itself to a commonality of analysis.

As early as 2017, a first-of-its-kind, official, 477-page report listed the “significant distortions” taking place in China, ushering in a new method for the use of EU trade defence instruments, for which the specificities of the Chinese economy had been one of the main motives. Since then, European tariff sanctions on Chinese goods have increased substantially.<sup>3</sup>

China, which defines itself as a “socialist market economy”, has become over the past two decades the world’s leading industrial and trade base. While the characterization of its economic model is open to debate, its economy is embedded in a political framework unique among large economies, with a de facto monopolistic Marxist-Leninist Communist Party of almost 100 million members. Besides, the symbiotic Party-State has tremendous legal, financial and industrial resources, notably through a government-controlled financial system.<sup>4</sup> Since 2015,

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and possibly since 2006, Beijing has added a highly ambitious industrial policy to its wide-ranging objectives.<sup>5</sup>

China is not alone, of course, in nurturing industrial ambitions. The peculiarity of its economic system, coupled with its industrial power and objectives, have motivated this specific study. Indeed, despite the relevance of the topic, the extent, distribution and evolution of the industrial distortions in China remain poorly understood and opaque. While the lack of empirical data is a difficulty for the entire field of studies on industrial policies, we will review the specific factors that cloak Chinese action in that regard.<sup>6</sup>

Reviewing the existing data and methodologies, this Policy Brief aims to clarify the state of knowledge, including grey zones, regarding China’s industrial distortions.<sup>7</sup> Overall, the data do not allow for a comprehensive, solid and up-to-date monitoring of Beijing’s industrial subsidies through time and space. Moreover, the channels more intensively mobilized by Chinese public authorities to advance their aims, blurring further the distinction between public and non-public actors, further impede such estimates. An alternative approach based on Party-State intentions and sectoral trend breaks could offer interesting alternatives to assess the scale and the impact of Chinese industrial subsidies.

## 1. Estimates of direct subsidies in China have detrimental limitations

Direct subsidies to production can be compiled from declarations made by public authorities or beneficiary companies (see box 1 for the definition of industrial subsidies). However, the changing nature of public intervention in China makes it difficult to undertake a comprehensive and solid assessment this way.

### 1.1. Lists of Chinese industrial subsidies are fragmented

Unlike in the EU and USA, the Chinese government does not keep an open registry of its public subsidies to production, nor does it publish a consolidated budget line for subsidies. On the other hand, as a member of the WTO, China is obliged to notify the organization of its subsidies on an annual basis, which are then published. Because of its accession protocol, this obligation for mainland China exceeds those of all WTO members. However, the lack of effective sanction associated with infringement of this obligation enabled China to make its first notification in 2006, and its second in 2010.

(1) See in particular the interview with the Director General of the Directorate General for Trade of the European Commission (Sabine Weyand) on a reference trade-policy podcast (“The EU’s new trade policy, with Sabine Weyand of DG Trade”, *Trade Talk* (PIIE), 148, January 2021). The US, the EU and Japan have had a formal framework for discussing their solutions to industrial distortions since 2018, which mainly targets Chinese practices (“Joint Statement on Trilateral Meeting of the Trade Ministers of the United States, Japan, and the European Union”, September 2018).

(2) World Bank *et al.* (2022)

(3) See Huotari and Jean (2022), in particular Box 2 by Kevin Lefebvre.

(4) Aveline-Ducach (2017); Piketty, Yang and Zucman (2019); Zhang (2019).

(5) Naughton (2021).

(6) Lane (2020).

(7) The effects, legality or legitimacy of the latter are not the topic of this analysis, and are not discussed.

## Box 1 – What are subsidies and direct public support for production?

There is no consensus on the definition of an industrial subsidy, whether legal or conceptual.<sup>1</sup> The very term to be used to qualify interventions by public authorities aimed at actively promoting industrial production is open to debate. To clarify the scope of this piece, the focus is here on subsidies in the industrial sectors, leaving aside agriculture and services. In addition, “indirect” horizontal supports to industries are also excluded (i.e. all policies aimed at facilitating production without directly creating an incentive to increase it in certain sectors, such as training policies or non-targeted tax cuts).

A subsidy refers to a transfer of wealth from public authorities to an economic entity, usually in order to achieve an assigned objective. Countries often have a legal definition of a subsidy in order to regulate them, and thus try to regulate distortions to competition. The WTO rulebook does the same at the international level (and not without leaving room for public intervention). These different definitions may diverge considerably, but remain close to a fairly narrow understanding of the phenomenon, reduced to a direct transfer of resources from a public entity to an economic actor.<sup>2</sup>

Recently, the international institutions of reference in the economic field have defined a subsidy in a broad sense as an uncompensated transfer from a government to an entity (World Bank *et al.*, 2022). In the case of an industrial subsidy to production, such transfers would need to be made with the aim of encouraging production. As illustrated by the long lists drawn up by the United Nations or the OECD, such measures can take a variety of forms, encompassing less intuitive actions such as monopolistic concessions or equity contributions.<sup>3</sup>

To avoid any confusion with these legal issues, and to better capture the phenomenon at stake, economists sometimes refer to direct public support for production as all actions by public authorities designed to directly encourage an increase in production, without restricting to direct financial transfer alone.<sup>4</sup> For the sake of fluidity, in this analysis the term subsidy will be used to refer to that definition. This terminology does not prejudice the legality or even the legitimacy of such a transfer.

(1) World Bank *et al.* (2022).

(2) Verouden *et al.* (2017).

(3) UNCTAD (2019), Chapter L. OECD (2019), Table 1.

(4) *Ibid.*

The list of subsidies provided by Beijing to the WTO remains patchy to date, despite a marked improvement in recent years.<sup>8</sup> Subsidies from local governments, which are responsible for the vast majority of Chinese public spending, and most likely subsidies, have only been included since 2018, and remain marginal. Supports intermediated by state-owned enterprises (SOEs) and state-owned banks are largely absent. Even when enriched with the counter-notifications made by third parties (the USA), the list appears largely incomplete (61 non-agricultural subsidies at the national level in 2014, and 200 counter-notified by the USA; to be compared with information from other sources listed below). What’s more, the values are not systematically provided, let alone assessed in an objective and standardized manner.

Beyond official declarations, the Global Trade Alert – a private institution based in Geneva – lists USA, EU and Chinese industrial subsidies based on information published by their administrations. This database, frequently mentioned by decision-makers and partly financed by international organizations, was created in 2021.<sup>9</sup> For the period 2008–2021, the stated aim is to produce “the first comprehensive directory of the world’s three main subsidy providers”.

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Although laudable in its intentions, the method of collection and the information recorded make the data of little use, particularly in the Chinese case. The database is built up from the publications of pre-identified public entities, screened according to seven criteria. Some of those can be problematic, with, for instance, the exclusion of subsidies on the grounds of “incontestable superior motive”, which is neither defined nor explained. Besides, the fact that only the number of measures is registered, without any consideration of their intensity or scope of application, greatly reduces the informative content of the database. Finally, in the case of China, local governments, development banks and export credit agencies are not covered, unlike their EU and US counterparts, which even represent the majority of the registered subsidies.

In light of these limitations, the numbers found by the database – 18,137 subsidies in the three zones, evenly distributed among the three – appear of limited value, while the conclusion that “subsidies are just as common in so-called market economies as in non-market economies” seems dubious at best.

## 1.2. Company declarations are slightly better, but far from comprehensive

An alternative to assessing subsidies from the issuers is to focus on the recipient – here companies. In the case of China, it might appear as a good alternative given that accounting requirements for publicly listed companies on the Chinese

(8) Gao (2018). See also the latest notification by Beijing for the 2019–2022 period (WTO, 2022).

(9) Evenett *et al.* (2021).

mainland stock exchanges include an entry on “monetary and non-monetary assets obtained from the government”.<sup>10</sup> Thus, since 2007, every listed company has provided such annual data to the financial markets regulator, the China Securities Regulatory Commission (CSRC), which can then be publicly retrieved, most often through aggregated data providers (mainly Wind). An amendment to this rule in 2017 clarified the definition, indicating both the vagueness of the previous framework and the impurities generated for any longitudinal analysis.<sup>11</sup>

The database contains multiple information over a rather large timespan. All sectors with listed firms are covered, with industrial ones accounting for the vast majority of the registered subsidies.<sup>12</sup> A private Chinese financial data provider based in Shenzhen (GTA Information Technology) has even collected the forms filled by companies to declare their subsidies, compiled under the paywalled China Stock Markets & Accounting Research Database (CSMAR). Apparently, those data indicate that these subsidies are mainly handed out by local governments and are used for a wide array of purposes, albeit often with inadequate information, with some lines covering multiple years and some not, inconsistent descriptions, and, in many cases, not even the mandatory details on the subsidies.<sup>13</sup>

In fact, this attractive dataset is mired with limitations. As the CSMAR gives a good indication, the accuracy of the data filled in this accounting line is uncertain, especially in a Chinese financial environment that has long been characterized by the low reliability of accounting data. To the best of our knowledge, there has never been any form of sanction for failing to fill in that information. Besides, most of the listed companies have only provided information for part of their overall activities, within a particular complex holding structure, especially for state-owned enterprises (SOEs).<sup>14</sup> Finally, despite being the second largest stock market on the planet, Chinese exchanges capture only a fraction of the industrial firms of the country. For instance, the revenues of listed SOEs, which are over-represented in the stock exchange, make up less than half of the revenues of industrial SOEs as reported by the statistics of the Ministry of Finance.<sup>15</sup>

Another often used dataset to assess Chinese industrial subsidies is the China Annual Survey of Industrial Enterprises (often referred to as the Chinese Industrial Survey, or CIS) compiled by the PRC National Bureau of Statistics, with a line for the amount of subsidies annually received. From 1998 to

2013 this dataset compiles a large number of financial (sales, assets, liabilities, margin, R&D spending, taxes, *etc.*), economic (employment, exports, industrial added-value, intangible assets, *etc.*) and non-financial data (shareholders, name, industry, address, funding date, *etc.*). It supposedly covers all industrial companies with sales over 5 million RMB (650,000 EUR), and over 20 millions from 2011, *i.e.* 160,000 companies in 1998 and 340,000 in 2013.

Certain features of this dataset hinder its usage for the study of Chinese industrial subsidies. First, the dataset was terminated in 2013, at the very early stage of the first tenure of Xi Jinping and two years before the publication of the Made in China 2025 industrial plan.<sup>16</sup> Multiple papers have identified substantial anomalies in the data, especially for 2008 (*e.g.* 30% of firms are missing compared to the previous year), 2009 (multiple variables

are not filled in) and 2010 (numerous abnormal extreme values).<sup>17</sup> More broadly, after 2007 the statistics suffer from a greater number of missing and inconsistent values, suggesting improper information.<sup>18</sup> Finally, the few papers that include data beyond 2007 were written by a Chinese researcher based in China, which may raise the question of the accessibility of the dataset from abroad, a more and more frequent issue with PRC datasets. As a result, most publications are confined to the 1998–2007 period, which has limited value for the recent practices and reality of the Chinese economy.

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### 1.3. A shift toward guidance and whole-of-society efforts for Chinese public policies further hinders comprehensive causal sequencing of Beijing’s industrial aims

The new centrality of the industrial priorities for Beijing, which appeared on the world stage with *Made in China 2025* and have been enshrined as a pillar of the new development model announced by Xi Jinping in 2017, has come with an overhaul of the tools to implement it. Blurring the boundaries between private and public entities and interventions, this new approach makes monitoring and assessing industrial subsidies even more complex.

In mainland China, tackling industrial subsidies was already a particularly difficult endeavor. Delegating the conduct of public policy to local authorities (more than 4,000 administrative

(10) Ministry of Finance of the PRC (2006).

(11) Ministry of Finance of the PRC (2017), Qi *et al.* (2023), Sanping (2020).

(12) Garcia-Herrero *et al.* (2021).

(13) Employment of disabled people, support for internal migrant workers, regional development, etc (see Branstetter *et al.*, 2022).

(14) Rithmire (2021), Chan (2022).

(15) Chinese SOEs represent 60% of the stock exchange capitalization of the mainland, but only 20% to 30% of the GDP (Zhang, 2019).

(16) Orbis has also built a paywalled database of Chinese companies up to 2018 based on the CIS until 2013 and with much less information. The coverage is also much more restricted, with 221,180 manufacturing companies in 2018 (vs 340,000 for the BIS in 2013) and less consistent over time. Indeed, the number of firms plunges by 60% between 2014 and 2015, along with a doubling of sales and assets. Besides, subsidies are not included. For more details, see Table 3 of Cerdeiro (2022).

(17) Brandt *et al.* (2014).

(18) Xiao and Xu (2018), Nie and Yang (2021).

entities) – something unmatched in the world in terms of share of public spending – makes any aggregation on a national scale especially tricky. The absence of a clear perimeter for the public sphere and its responsibilities adds an extra layer of difficulty. The role and characterization of companies with the state as main shareholder is often unclear, with local government financing vehicles in particular obscuring the perimeter of public authorities. The complicated history of private ownership in modern China does not help either.<sup>19</sup> Finally, the illiberal nature of the Chinese political system does not favour optimal access to and circulation of information.

Reforms under Xi Jinping have not necessarily helped in that regard. The Communist Party's capacity for influence has been deliberately strengthened to ensure that "the Party rules everything" (as added to the constitution of the PRC in 2017). Anti-corruption campaigns, which have hit many entrepreneurial figures, and the re-emphasis of the Party's absolute control over the whole of society, alongside "whole of society" efforts in the pursuit of strategic objectives that encompass techno-industrial priorities, encourage all economic players to internalize the objectives of the Party-State. In the meantime, Beijing has pursued the aim of "guiding" private economic entities toward the pursuit of political objectives as an integral part of a model that aims to combine market forces and Party-State planning.<sup>20</sup>

This general aim for political objectives to penetrate throughout society has also led to the strengthening of instruments to operate it. Communist Party committees in firms and associations, mandatory for any institution with more than two party members, have been reactivated to facilitate their alignment with the orientations set by Beijing, even though effective operations are unclear.<sup>21</sup> Public investment in firms has bounced back very actively over the past decade, be it through newly created golden shares, more recent government guidance funds (more on that *infra*), or

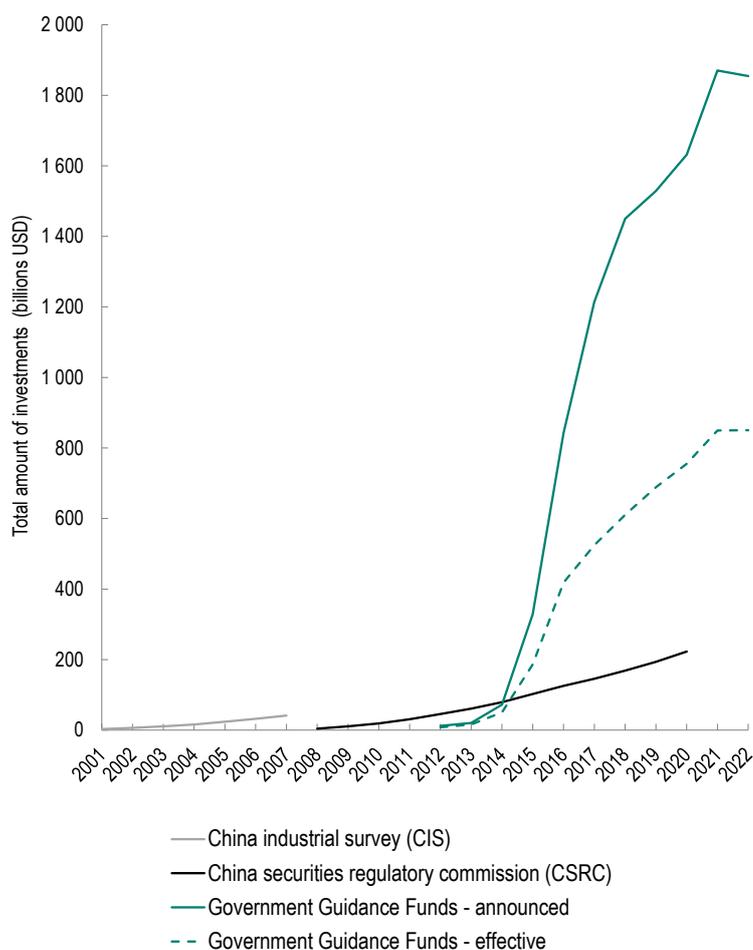
*state ownership has also been propelled by a rather novel central instrument in Beijing's industrial ambition: Government Guidance Funds*

(19) Rithmire (2021).

(20) Naughton (2020).

(21) Lin and Milhaupt (2021). For a more up-to-date and comprehensive version of this work, refer to their presentation at the event "How private are Chinese companies?" organized by the CSIS in February 2023.

Figure 1 – Industrial subsidies in China by sources



Sources: National Bureau of Statistics, CSRC, Zero2IPO.

more traditionally through SOEs.<sup>22</sup> With that pervasive Party-State presence in multiple firms, it is extremely difficult to assess whether a transaction responds to commercial or to political logic. When a state-invested firm provides an input to another firm aligned with state priorities, how can one tell whether this is done out of profit-seeking or has political motivation?

In addition to SOEs, state ownership has also been propelled by a rather novel central instrument in Beijing's industrial ambition: Government Guidance Funds (GGFs, or zhengfu yindao jijin 政府引导基金). Not entirely new to China, those funds really kicked off after 2014, rising to almost 2,000bn USD of assets under management by 2022, for an effective investment volume however estimated at twice lower.<sup>23</sup> All the indications are that this trend is here to stay.<sup>24</sup>

(22) Allen *et al.* (2022).

(23) Wei *et al.* (2022).

(24) In an interview with the mouthpiece of the CCP, The People's Daily, China's new Minister of Industry Jin Zhuanglong called for "full play to be given to the guiding role of the state-owned investment funds" (全力推动工业经济积极恢复、稳步回升 (权威访谈) (people.com.cn), January 4, 2023).

With no official directory and no obligation to publish accounting books, those more than 2,000 entities, mainly set up by local authorities, are difficult to keep track of.<sup>25</sup>

Moreover, by often operating as funds of funds (*i.e.* placing funds with venture capital boutiques for them to decide and operate the investment in industrial firms), these entities blur the path from political decision to its impact on companies and markets, something the US and the EU have already formally complained about to the WTO.<sup>26</sup>

While not every penny of GGF investments can be considered a subsidy (see below), a comparison of the amounts of subsidies recorded through the above-mentioned sources gives an idea of the limits of the latter (Figure 1). The diverging magnitude calls for alternative estimation methods for Chinese industrial subsidies.

## 2. Public support to industries in China can be triangulated with input prices and sectoral dynamics

The Chinese case highlights the importance of understanding direct public support not so much in terms of the face value of identified transfers from state entities to firms, but in terms of the deviation of the price of that exchange versus – often theoretical – free-market equilibria, *i.e.* without the distortion stemming from direct intervention by the public authorities. As one can guess, such an approach rests on a number of hypotheses, each of which is open to question.

### 2.1. Firms' input prices can provide a decent estimate

After similar efforts in the agriculture sector initiated back in the 1990s, the OECD has been conducting work based on company books to provide better information on industrial subsidies around the world (OECD 2023a). For the 14 sectors covered,<sup>27</sup> a standardized methodology is applied to the main firms to assess the direct public support for production they have received through several channels, mostly direct subsidies, taxation, energy, credit and equity.

The distortion caused by a preferential input price is measured as the difference with a theoretical price without those interventions.

It should be noted that the difference between the observed input price and the theoretical distortion-free, market-based price captures indiscriminately intended supports and the potential collateral effect of unrelated distortions.<sup>28</sup> Besides the sheer volume of support, the OECD offers an interesting breakdown by channel of support. Being a respected plurilateral international organization, when proposing such estimates the OECD provides an

authoritative methodology to estimate public support, especially for those forms of support that are more challenging to evaluate such as loans and equity (OECD, 2021).

The OECD estimates that, on average, Chinese public support for production amounts to 4.5% of the revenues of the Chinese firms covered, from 2005 to 2019, with 0.63% from direct subsidies, 0.75% through preferential taxation, 2.35% via credits and around 0.75% through equity injections (OECD, 2023A; OECD, 2021; for comparison purposes, the corresponding numbers in Figure 2 are converted into percentages of GDP). The latter, resulting from complex and less consensual computation methods, are not included in the aggregates proposed by the OECD, but are retrieved from the dedicated report on below-market finance using the method the most adequate to China (see footnote 64 of OECD, 2021).

Based on the data and methodologies presented in this policy brief, American think-tank The Center for Strategic and International Studies (CSIS) carried out in 2019 an international analysis of industrial subsidies for listed companies.<sup>29</sup> The channels covered are direct subsidies (based on CSRC data), tax breaks for R&D, direct support to R&D, preferential cost of credit (spread between SOEs and similar private firms) and GGFs (10% of the funds from those entities counted as public support). While these methods seem less refined and comprehensive than the OECD ones, the CSIS offers an alternative estimate more easily transposable in time and space.

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*direct official "subsidies" in China are only a marginal portion of the total direct support to production provided by public authorities in China*

(25) Luong *et al.* (2021).

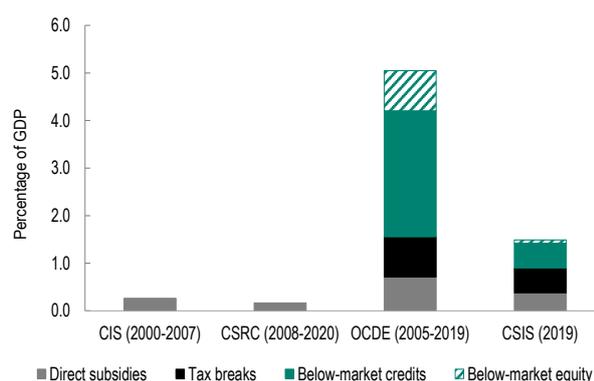
(26) WTO, (2022). The USA has formally claimed that these funds had been generalized for the very purpose of circumventing WTO rules, which seems excessive given the consistency of those funds with the new development model implemented by China since 2017 that seeks to articulate public guidance with market forces ("Building resilient supply chains, revitalizing American manufacturing, and fostering broad-based growth", *Executive order 14017*, June 2021, The White House).

(27) The sectors being: aluminum, cement, solar panels, glass and ceramics, wind turbines, semiconductors, steel, telecom network equipment, chemicals, aerospace and defense, automotive, rolling stock.

(28) For example, the case of land provided at preferential prices for industrial activities in China can be seen as a consequence of a growth-oriented political model (Liu and Xiong, 2018), but also of a desire to optimize local government revenues over time (He, 2022).

(29) DiPippo (2020).

Figure 2 – The channels of Chinese industrial support by sources in %



Note: All series are simple averages of annual data as a share of GDP over the period covered. OECD data has been converted to percentage of GDP by applying the 2005-2019 average ratio of total annual domestic industrial enterprise revenue (from the Chinese National Bureau of Statistics) to GDP.

Sources: NBS, CSRC, OCDE, CSIS.

Cumbersome to conduct and subject to multiple challengeable hypothesis, those studies enable acknowledgement that direct official “subsidies” in China are only a marginal portion of the total direct support to production provided by public authorities in China (Figure 2).

## 2.2. The combination of political intention and observed sectoral trends are complementary to triangulate the pervasive phenomenon of public support in China

The Chinese politico-economic model aims to mobilize the “whole of society” behind the key objectives defined by the Party-State, which encompasses its techno-industrial ambitions.<sup>30</sup> As previously briefly illustrated, the changes induced by political guidance in China can take diverse forms. Studying the consequences of these industrial ambitions through compiling channels for which data and methodologies exist therefore runs the risk of being incomplete, and hence underestimating the extent of the distortions.

As an illustration, the following channels of support have not, to our knowledge, been assessed despite multiple anecdotal evidence of intended distortions by Chinese authorities: coercive technology transfers,<sup>31</sup> strategic mobilization of public procurement,<sup>32</sup> purchase subsidies for domestic industries,<sup>33</sup>

(30) MERICS (2023).

(31) Prud'homme (2018).

(32) A note of the French administration details these efforts in the software sector (DG Trésor, 2022), which a study finds at work in strategic sectors (Kratz and Ortel, 2021). These practices are apparently not confined to industrial objectives: Hanming *et al.* (2022) identify a politically motivated allocation of public procurement by Chinese local authorities against competing peers.

(33) In the case of electric vehicles, purchase subsidies were conditional on the use of batteries from a specific list of providers exclusively made by national firms (*China's “white list” of power battery companies abolished*, Neware, June 28, 2019).

attracting foreign talent,<sup>34</sup> upstream sectors,<sup>35</sup> strategic attraction of foreign goods and capital,<sup>36</sup> and preferential treatment in administrative and even judicial procedures.<sup>37</sup> While the PRC certainly does not have a monopoly on the use of these levers, the frequency, comprehensiveness and intensity of their mobilization by Chinese public authorities are suspected to be unparalleled, and the same applies to their consequences, given the international footprint of Chinese industries.

Several recent studies have developed quantitative estimations of Beijing's industrial priorities, derived from official texts and speeches. Kalouptsidi (2018) builds a binary index of prioritization across time on the mention of shipbuilding in the PRC Five-Year Plans' list of strategic industries, to find a strong correlation with a sharp rise in China's world market shares. Using a Cournot global partial equilibrium model, she then estimates the scale of the subsidies granted from 2006 onward consistent with such a growth. In the same vein, Barwick *et al.* (2019) note a decline in Chinese market share from 2009 onwards, at a time when a national plan published by Beijing aimed at tempering the dynamism of domestic shipbuilding.

Some more refined works have developed quantifications of Chinese industrial policy priorities based on language analysis. Xiao *et al.* (2020) cross-reference CIS data with mentions in Five-Year Plans to identify industries supported by Beijing, in order to observe the consequences on Chinese and American business start-ups and labor markets, and find them to be very substantial. Their work relies on a methodology developed by Chen (2017) to estimate the effects of Chinese industrial policies. For quite a different purpose, Tan (2021) performs a language analysis of some 40,000 official documents to sort industrial policies by various levels of government in China between “most”, “mild” and “not”

(34) Lu *et al.* (2022).

(35) Garred (2018), Gourdon *et al.* (2014).

(36) For instance, the Guangdong provincial government circumscribed an effort to attract foreign capital to strategic industrial sectors, including selective market opening and incentives for domestic and foreign financial institutions to finance such projects (Notice of the General Office of the People's Government of Guangdong Province on Printing and Distributing Several Policies and Measures to Promote the High-quality Development of Investment Attraction in Guangdong, March 2023). Other illustrations of such openings based on the needs perceived by Beijing can be found in OECD (2023b) and OECD (2021b).

(37) The “Notice to support emission obligation of technological and innovative companies” published by the Chinese state participation agency and the financial regulator in November 2022 calls for a priority in the validation process of the issuance of bonds from such firms (中国证监会 国务院国资委关于支持中央企业发行科技创新公司债券的通知 中国证券监督管理委员会 (csrc.gov.cn)). A directive from the Ministry of Industry and the Intellectual Property Enforcement Agency recently encouraged the judicial system to deal diligently and severely with IP infringements penalizing firms recognized as strategic (CNIPA and MIIT, “Notice on intellectual property rights measures to help the innovation and development of ‘specialized and sophisticated’ SME, October 28, 2022).

*several recent studies have developed quantitative estimations of Beijing's industrial priorities, derived from official texts and speeches.*

interventionist measures. These recent methodologies enable an assessment of the intersectoral distribution and evolution over time of Chinese industrial efforts, offering interesting potential for measuring their effects and even anticipating their consequences, while losing the international comparability. Nevertheless, given the propensity of the Chinese public authorities for planning and tightly controlled communication, those approaches make an interesting complement to support compiled from channels of interventions.

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## ■ Conclusion

More comprehensive and reliable data on Party-State interventions, particularly in the financial sector, would provide the first-best solution in improving our collective monitoring of the scale, distribution and evolution of governmental industrial supports in China. Company data offer an interesting alternative for enriching our understanding of this much-

touted phenomenon, especially regarding comparability across countries and channels. The limitations of the latter and the unique nature of the PRC's political and economic system – dimensions reinforced under Xi Jinping – call for a less accurate but more comprehensive complementary approach based on matching the evolution of political intentions and sectoral dynamics.

Politics should also take note of such difficulties in accurately identifying distortions in China. The WTO framework as we know it, with a high burden of proof borne by the complaining party, has become less and less effective in enabling partners to prevent predatory gains in the face of Chinese distortive practices. In its anti-dumping investigation against Chinese products, the EU has already acknowledged the difficulty of identifying (as it usually does) the clear causal chain of events from a political decision to a distortive advantage provided to a firm, based on the non-market-based nature of China's sectors. Nevertheless, an economic system as unique and complex as Xi Jinping's China is giving rise to calls for a serious discussion on how it can be articulated with more liberal systems, without unfairly capturing some of the wealth created by the latter. Such discussions have yet to find any traction in Beijing.

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## Policy Brief

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