

26-16 Estimating Industrial Policy Subsidies in China

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A 2026 study by the Organization for Economic Cooperation and Development (OECD) charges that China's increasing industrial subsidies explain most of the country's global market share gains in recent years (OECD 2026b). This has fed a now-dominant narrative that China's growing export surplus in 2024–26 is the result of growing subsidies that should be curtailed, if not eliminated. Failing that, China may be subject to rapidly increasing protectionism (Froman 2026).

But the OECD study uses a flawed methodology to estimate interest rate subsidies, which account for about three-quarters of its estimate of Chinese industrial subsidies in 2005–24 (OECD 2026b, 8). Other studies also have substantial methodological weaknesses. Because of their flaws, these studies do not provide useful guidance for policymakers trying to judge the magnitude of Chinese industrial subsidies.

Future studies on the subject should improve their methodology, including by fully disclosing the data on which they base their estimates and by explaining why their estimates differ from prior studies.

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A PROFUSION OF SUBSIDY STUDIES

As more countries expand their use of industrial subsidies, attempts at measurement have proliferated. Unfortunately, these studies define the scope of industrial policy differently; necessarily rely on incomplete data; use alternative measurement metrics, sometimes based on unverifiable assumptions; usually make little or no effort to reconcile their findings that conflict with those of existing estimates; and cover differing time periods.

The International Monetary Fund (IMF), the OECD, and the World Bank have each released a study on industrial subsidies (Fernandes and Reed 2026; Garcia-Macia, Kothari, and Tao 2025; OECD 2026b). This Policy Brief seeks to shed light on these estimates of Chinese industrial subsidies, focusing on the 2026 *OECD MAGIC Database of Industrial Subsidies* study and the IMF's 2025 *Industrial Policy in China* study. Estimates of certain government subsidies for US firms, drawn in part from additional sources, are provided for comparative purposes.

Before getting into the details, it is worth noting the most important contradiction between the IMF and OECD studies. The IMF study finds that the total size of Chinese industrial subsidies as a share of GDP “has been broadly stable” between 2011 and 2023, whereas the OECD estimate of Chinese subsidies (expressed as a share of firm revenue) in 2024 was well above the 2005–24 average (Garcia-Macia, Kothari, and Tao 2025, 11; OECD 2026b, 8). Thus, the IMF study does not support the most important finding of the OECD study: that China's subsidies are increasing and can explain most of the country's global market share gains between 2005 and 2023.

INTEREST RATE SUBSIDIES

The OECD study estimates that between 2005 and 2024 Chinese firms, on average, received three to eight times more government support than firms based in OECD countries and that interest rate subsidies, called below-market borrowing, were especially large. In 2024 interest rate subsidies accounted for more than half of the OECD measure of Chinese industrial subsidies but were negligible in OECD countries (OECD 2026b, 8-9). In comparison, the IMF study

found that subsidized credit accounted for only 10 percent of its estimate of total Chinese industrial subsidies in 2023 (Garcia-Macia, Kothari, and Tao 2025, 8-9).¹ Though the OECD study was published a year after the IMF study, it makes no effort to explain the large discrepancy in its estimate of interest rate subsidies; indeed, it does not even cite the IMF study.

The explanation for the disparity in the size of the estimated interest rate subsidy in the two studies is the methodology the OECD uses to measure below-market borrowing. The OECD study uses the European Interbank Offered Rate (Euribor) and the Secured Overnight Financing Rate (SOFR) as benchmarks to determine whether euro and dollar borrowings by firms in OECD countries are below market.² Interbank lending in advanced economies is regarded as having a very low or close to zero risk, and SOFR lending is secured by US Treasury bonds, so its risk is essentially zero. Therefore, both rates are extremely low and, unsurprisingly, the OECD study found virtually no below-market corporate borrowing in OECD countries (OECD 2026b, 8).

Since the OECD used interbank rates as a base to measure interest subsidies in OECD countries, it should have used a comparable interest rate for China. It did not. Instead, the OECD used China's one-year loan prime rate (LPR) as the base rate for measuring whether loans are subsidized (OECD 2026b, 9).

The comparable base rate for China is the one-year Shanghai Interbank Offered Rate (SHIBOR). As shown in [figure 1](#), the one-year LPR is substantially higher than SHIBOR during the years 2010–24. The gap was about 300 basis points near the beginning of the period. The average gap over the whole period covered by the OECD study was 120 basis points. Assuming that all loans at a rate below the one-year LPR, rather than below SHIBOR, are

1 Unfortunately, the IMF and OECD numbers cannot be directly compared. The IMF number is an estimate for the whole economy and is presented as a share of GDP, whereas the OECD number is an estimate for the 147 Chinese firms in the OECD MAGIC database and is presented as a share of the total revenue of this group of firms.

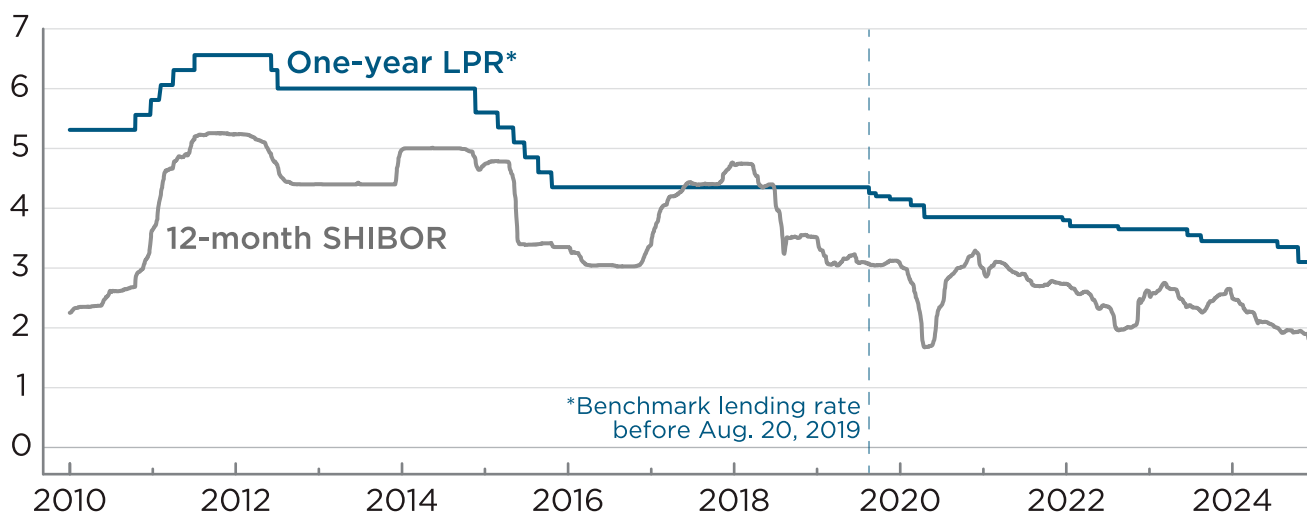
2 The benchmark for firms in OECD countries that borrow in both euros and dollars is a weighted average of the two rates.

subsidized overstates the magnitude of below-market borrowing in China. But since the OECD has not identified the Chinese firms in its database, the magnitude of the overstatement cannot be independently estimated.

Figure 1

One-year loan prime rate (LPR) and 12-month Shanghai Interbank Offered Rate (SHIBOR), 2010–2024

percent per year, daily



Sources: National Interbank Funding Center, People's Bank of China.

It is not clear why the OECD chose China's one-year LPR as a base rate to measure the extent of subsidized interest. The LPR, introduced in 2013, is frequently identified in Chinese sources as a reference or benchmark rate. In 2019, when the central bank announced a reform in its formulation, the LPR theoretically was supposed to reflect the rate that banks charged their highest-quality borrowers. But the specific guidance to the individual banks reporting this number (the individual reports are averaged to produce a single LPR) was that the LPR should be based on a markup over the rate in the central bank's medium-term lending facility. However, the participating banks did not always follow the central bank's instructions. Pan Gongsheng, the governor of the People's Bank of China, has said that the LPR quotes "deviate significantly from the actual rates for the most-favored

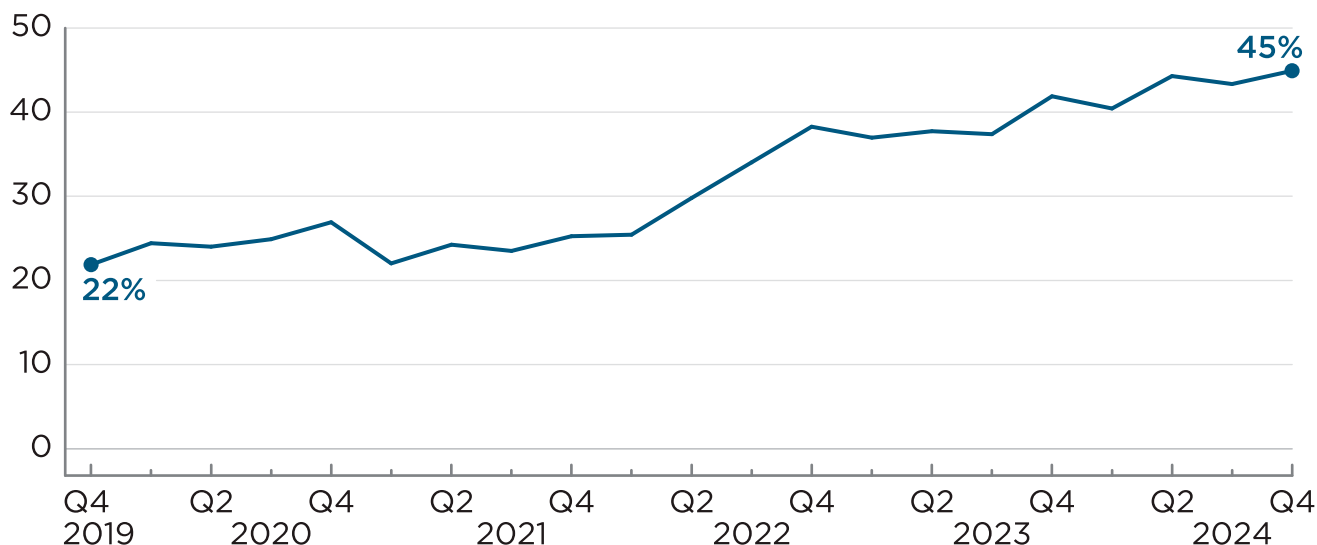
clients.”³ The bank’s Monetary Policy Report was more specific, stating that the LPR quoted by some banks “was on the high side, deviating considerably from their best quality client lending rates” (PBOC 2024b, 14).

Another reason to doubt the appropriateness of the LPR as a base for measuring interest rate subsidies is that the LPR has never been a floor. Indeed, when the central bank reformed the formulation of the rate in 2019, the announced goal was to remove the prevailing implicit floor on loan rates to smooth the transmission of monetary policy (PBOC 2020a). Figure 2 shows that the share of loans at a rate below the LPR rose from about 20 percent in 2019 to just over 40 percent in 2024, suggesting that the goal was achieved.

Figure 2

Share of new general loans priced below the one-year loan prime rate (LPR), 2019Q4–2024Q4

percent of new general loans



Source: People’s Bank of China, *China Monetary Policy Report*, 2019Q4 to 2024Q4.

3 People’s Bank of China, *China’s Current Monetary Policy Stance and the Evolution of the Future Monetary Policy Framework: Keynote Speech* by Pan Gongsheng, Governor of the People’s Bank of China, at the 15th Lujiazui Forum, June 19, 2024.

OTHER FLAWS

In comparing the estimates of industrial subsidies in the OECD and IMF studies, it is important to recognize the limitations of each study. The OECD MAGIC database covers 525 of the largest manufacturing firms globally in 15 industrial sectors. There are 147 Chinese firms in the database, which is 28 percent of the global total (OECD 2026a, 9). Although the OECD relies on public information such as firms' annual reports, financial statements, and bond and IPO prospectuses, it does not disclose its firm-level data, making it impossible for independent researchers to replicate its findings.

The IMF study of Chinese subsidies relies on public data for over 5,000 A-share-listed nonfinancial companies. Thus, the number of companies included is more than 30 times larger than in the OECD study. Moreover, the data used in the IMF study is supplied by Wind and is thus available to all researchers.⁴ To generate its estimates of subsidies as a share of GDP, the IMF study extrapolates the results for listed firms to all firms.

One major problem of the IMF study is that it assumes that the subsidies of nonlisted firms—a universe with tens of millions of companies—are of the same magnitude relative to value added as the subsidies received by listed firms.⁵ Using an older, larger database, the IMF study estimates that the cash and credit subsidies for about 456,000 firms amounted to 1.5 percent of GDP, compared to the estimate of 2.2 percent in the smaller universe of listed companies (Garcia-Macia, Kothari, and Tao 2025, 10, 26-27). Therefore, the estimate of the cash and credit subsidies for the whole economy may be overstated.

OTHER SOURCES OF GOVERNMENT SUBSIDIES

Governments also have long provided subsidies to businesses through direct funding and preferential tax treatment and, more recently, equity injections have become more important. However,

4 Access to the Wind database requires a subscription fee.

5 At the end of 2024, China had 38 million companies (National Bureau of Statistics 2026, 3).

accurately measuring the magnitude of these subsidies—whether in China or the United States—is challenging.

Direct funding

World Bank data show that the US government's direct budgetary funding of firms averaged 2.1 percent of GDP in 2020–22 (Fernandes and Reed 2026, 242). The World Bank does not provide an estimate for direct subsidies in China, but the 2025 IMF study pegs these subsidies for Chinese firms at 2.0 percent of GDP in 2023. The OECD study also measures industrial subsidies conveyed through government grants. Unfortunately, these subsidies are expressed as a percentage of firm revenue and thus are not comparable with the IMF and World Bank numbers. In 2024, grants amounted to about 0.8 percent of the revenue of the Chinese firms in the OECD database.

For the universe of listed Chinese firms, direct financing has been falling since the 2022 peak. By 2025 these subsidies had fallen about 25 percent to RMB183 billion or 0.1 percent of GDP (Gatley 2026; National Bureau of Statistics of China 2026, 23). Applying this decline proportionately to the IMF estimate would reduce the estimate of direct subsidies as a share of GDP for the whole economy in 2025 by one-third compared with 2022—a major adjustment since subsidies account for more than two-fifths of the IMF estimate of total subsidies.⁶

Preferential tax treatment

The IMF's estimate of preferential tax treatment in China is 1.5 percent of GDP, which is three times the World Bank's estimate of 0.5 percent of GDP in the United States. However, estimating preferential tax benefits in both China and the United States is challenging. An easier task is estimating reductions in corporate income taxes for listed Chinese firms. The IMF measures tax benefits in China “as the gap between the corporate income tax

6 Direct subsidies of listed companies in 2022 were RMB240 billion or 0.19 percent of GDP. In 2025 direct subsidies of RMB183 billion were 0.13 percent of GDP. See Garcia-Macia, Kothari, and Tao (2025, 11) for IMF estimates.

top statutory rate of 25 percent” and the effective tax paid (Garcia-Macia, Kothari, and Tao 2025, 5). About two-thirds of Chinese listed nonfinancial companies pay a preferential rate of only 15 percent because they either meet certain thresholds for research and development (R&D) spending—thus gaining the status of a high and new technology enterprise—or are located in certain development zones. Given the recent Chinese campaign to reduce subsidies, the number of firms qualifying for the tax break based on R&D expenditures fell for the first time in 2025, and the magnitude of this break for listed companies in 2025 was “little changed from the peak in 2021” (Gatley 2026). But provincial and local governments also use breaks on taxes other than the corporate income tax to support local companies or attract new investment, and these are almost impossible to measure.

Tax breaks extended by the US Treasury, referred to as tax expenditures, are immense—an estimated \$2.2 trillion in 2025 or 7.2 percent of GDP. However, the vast majority benefit individuals; benefits for corporations were only \$264 billion or 0.9 percent of GDP (Peter G. Peterson Foundation 2026). However, 0.9 percent is almost twice the World Bank’s estimate of preferential tax treatment of US companies.

As is the case in China, state and local governments in the United States also provide tax breaks to attract new investment; however, like similar Chinese tax benefits extended by subnational governments, these are almost impossible to measure in the aggregate. One recent example is in Louisiana. The state provided 1,400 acres of land at no cost to Meta where it is building its largest data center. In addition, the state agreed to exempt the state sales tax on the equipment purchased for the data center, a tax break that could be worth as much as \$10 billion.⁷

Equity investment

The United States and China are each making equity investments in their firms. China has been using government guidance funds to support its companies since at least 2005. Some of these funds,

7 Eli Tan and Maureen Farrell, “Meta’s Secret Push to Sweeten Megacenter Deal,” *New York Times*, July 29, 2026, pp. 1, 12–13.

such as the Integrated Circuit Industry Investment Fund (commonly called the Big Fund), are well-known, but there are hundreds of provincial and local funds that operate below the radar. Official data on the total magnitude of China's government guidance funds is not published. Zero2IPO, an independent consultancy, reports that by the end of 2024 China had established 2,200 government guidance funds with a cumulative targeted capital size of RMB12.8 trillion (\$1.8 trillion). Fund targets seem to be aspirational; at the end of 2024, assets under management were only about a third of the targeted level, and the magnitude of funds invested is unknown.⁸

During the global financial crisis of 2008, the US government took equity stakes in a number of US firms. Years later, during the COVID-19 pandemic, the US Treasury received warrants (the right to purchase equity at a price agreed in advance) in exchange for loans to support the payrolls of several US airlines that were on the verge of collapse given the dramatic decline in passenger volume.

While these were isolated cases in response to adverse financial conditions, more recently US government equity injections have been on a larger scale and have covered a broader range of industries. According to an [analysis by the Washington Post](#), during the first 18 months of the second Trump administration, the Departments of Commerce, Energy, and Defense took equity positions exceeding \$50 billion in more than 20 US companies. The firms span semiconductors, rare earth minerals, nuclear energy, defense manufacturing, and aerospace (Rogin 2026). This estimate appears not to include the cost of the US Department of Commerce's commitment to provide electric power for OpenAI's \$500 billion data center in Ohio. The cost of the power generation facility will be financed at least in part with the \$550 billion in funds the Japanese government has pledged to invest in the United States in exchange for more favorable tariff treatment on Japanese exports to the United States.⁹

8 [Zero2IPO 2024 Annual Report](#) via Xinhua Finance/Sina, April 25, 2025 (accessed August 17, 2026).

9 Joe Rennison and River Akira Davis, "A.I. Outlays and China Sap Big Tech," *New York Times*, July 29, 2026, pp. B1, B4.

There are two problems in estimating the subsidy provided by government equity injections. The first is obvious: There are no comprehensive measures of government equity injections for either China or the United States. Second, even if data were available, what portion should be regarded as a subsidy? The OECD has “work underway to add below-market equity as one additional subsidy type in the OECD MAGIC database” (OECD 2026b, 11). Presumably, determining whether a government equity injection is below market will be more complex than comparing a benchmark lending rate with the interest rate at which a firm has borrowed.

Understanding the magnitude of Chinese industrial subsidies is a critical input for formulating the economic policies of China’s major trading partners. Future studies can accelerate this understanding by disclosing the data on which their estimates are based and offering explanations where their estimates diverge from prior studies.

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