



Employees work on an electric vehicle production line in China. EVs were earmarked by Beijing for state support. JADE GAO/ AGENCIE FRANCE- PRESSE/ GETTY IMAGES

China Is Making Gains in Tech, But Holes in Economy Remain

BY BRIAN SPEGELE

BEIJING—In cities and small towns across China, two seemingly contradictory facts are simultaneously true: China is closing the gap with the U.S. for global technological dominance, and yet big parts of its economy are a mess.

Locally pioneered electric cars zip past deserted apartment blocks. Factory robots run by artificial intelligence churn out products that job-less college graduates can't afford. State technology funds throw billions of dollars at money-losing startups even as the national debt surges to unprecedented levels.

The emergence of AI startup DeepSeek earlier this year showed China can challenge the U.S. in some of the world's most competitive technologies.

But Beijing's gains are coming at a steep cost, with the state's heavy-handedness in directing investments wasting colossal amounts of money. The hundreds of billions of dollars China spends each year on domestic technology also eats away at the money for rural education, reinforcing the social safety net and other programs economists say are needed to put growth on a firmer footing.

“There is just massive misallocation that runs through the economy in multiple dimensions,” said Loren Brandt, an economist at the University of Toronto.

There are simply too many money-losing companies, with investments by local governments helping prevent weak ones from going under. Of the 129 brands selling electric cars and plug-in hybrids in China as of last year, only 15 are expected to be financially viable by 2030, according to consulting firm AlixPartners.

China now has more than

150 humanoid robot companies, a Chinese official said last month, warning against a glut in that industry.

China's strategy is to boost self-sufficiency in critical sectors as insurance against adversaries cutting off access to foreign technologies. Leaders are signaling that the high costs of doing so are worth it, especially as relations with Washington remain volatile. U.S. limits on selling advanced semiconductors to slow down China's AI development have added to Beijing's urgency.

President Trump's announcement to allow Nvidia to export its H200 chip to China is unlikely to significantly alter China's self-reliance strategy. The government has already urged big tech firms to shun some Nvidia chips over cybersecurity and other concerns.

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China's spending on research and development jumped nearly 50% between 2020 and 2024, and by many metrics, it is becoming more innovative.

At sea, China's navy launched its most advanced aircraft carrier this year, whose electromagnetic launch system brings China closer to U.S. capabilities. On land, its factories are installing more robots than any other country. In space, China is racing to land its first astronauts on the moon by 2030, the same year its Tiangong space station is expected to become the only permanent outpost in Earth's orbit when the International Space Station retires.

Unpleasant truths

Despite its advances, China looks vulnerable. Home prices are down 17% since the pandemic, according to the Bank for International Settlements, and uncertainty over China's economic future has many people pinching pennies.

That has forced companies to cut back on hiring and left wages depressed. Per capita disposable income in cities is less than \$700 a month, while in the countryside as many as several hundred million people subsist on just a few dollars each day.

In Mianchi County, in the central province of Henan, officials spend more on science and technology than on the police.

Between 2022 and 2024, Mianchi's spending on science and technology rose nearly 50%, even as government revenue fell more than 10%. An industrial park for the robotics industry is in the works, while state investment funds in the area are taking stakes in tech companies.

Yet some government workers aren't getting paid. In recent months, local teachers, sanitation workers, college interns and others have been demanding answers from officials about outstanding wages through a public message board on Mianchi government's website.

"In recent years, affected by multiple factors such as an economic downturn, Mianchi County has encountered unprecedented difficulties," the county government wrote in response to one message from a substitute teacher in September. It promised to gradually pay back money it owed, without specifying when.

Missed opportunities

Government debts across China are estimated to have roughly doubled between 2019 and 2024, hitting as much as \$23 trillion, including debts tied to local government investment arms. At the same time, productivity growth is slowing—an ominous trend when the country's population is falling.

The International Monetary Fund has estimated that state aid, such as cash subsidies and tax breaks, has reduced China's overall GDP by as much as 2%, and cost around \$800 billion in 2023 based on exchange rates at the time.

IMF Managing Director Kristalina Georgieva recently urged Beijing to shift its economy away from investment and exports toward consumption, kick-starting a new source of growth. In a city where many once-buzzing restaurants are now half empty or closed, Georgieva told Chinese journalists at a press conference to spread the word: "It's patriotic to spend money," she said.

Throttling back state support for companies would allow the market to play a bigger role in more efficiently directing China's money to where it is needed, she said.

It would also free up funds to help address another fundamental problem in China's economy: A relatively thin social safety net that leaves many people focused on saving rather than spending what they earn.

Digging in

For now, though, leader Xi Jinping's course looks clearly charted. Instead of upending China's economic model, the government has been determined to export its way out of trouble.

The country's trade surplus topped \$1 trillion in goods for the first time in the year through November, demonstrating the resilience of China's manufacturing ecosystem in the face of Trump's tariffs.

The outlines of China's push were clear even before Trump first took office, with Beijing earmarking strategic sectors such as electric vehicles for state support. Provincial officials poured tens of billions of dollars into government-favored sectors. Much of it has gone to waste, however.

One problem is that tech investments and state subsidies are flowing to sectors that aren't creating nearly enough jobs. One out of six young people in Chinese cities is out of work. Beijing is aware of the problems, though officials say self-reliance will remain crucial over China's next five-year plan.

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