



# Was Made in China 2025 Successful?

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Camille Boullenois, Malcolm Black, Daniel H. Rosen

Made in China 2025 (MIC25) was unveiled in 2015 as a sweeping industrial policy to transform China into a global leader in advanced manufacturing by 2025. The policy aimed to reduce the country's reliance on foreign technology, enhance domestic innovation, and build global competitiveness and competitors in strategic industries such as robotics, semiconductors, and new energy vehicles. Following international criticism—particularly from the Trump administration and other governments concerned about its market-distorting effects—the policy officially disappeared from public discourse in 2018. However, the core objectives of MIC25 have continued under alternative frameworks and initiatives to incentivize localization and provide state support to priority industries.

From the outset, the strategy sparked concern among policymakers and businesses worldwide. The US Chamber's 2017 [report](#) on MIC25 provided a detailed examination of the policy's approach, documenting its ambitious goals, quantified targets, and reliance on state-led strategies to tilt the playing field in favor of domestic companies. The report [raised concerns](#) about how MIC25 signaled a further shift away from market economy norms, with China reinforcing government control and implementing discriminatory industrial policies to support local companies and reduce market access to US and other non-Chinese firms. This report builds on the [US Chamber of Commerce's 2017 analysis](#) of MIC25 to evaluate its performance and long-term impact.

In the years following the policy's launch, financial state support intensified, though often through indirect channels. Tax benefits aimed at innovation surged by an average annual rate of 28.8% between 2018 and 2022, and the proportion of companies enjoying additional deductions and tax reductions more than quadrupled between 2015 and 2023. State investment through government guidance funds increased more than five-fold between 2015 and 2020. Market barriers, particularly involving sales to Chinese government-linked entities and favored domestic competitors compelled foreign companies to localize production to continue accessing the market. Though discriminatory practices had been rife before, interviews with market participants confirmed that 2015 was a turning point in many sectors, with such practices growing and becoming increasingly targeted at high-tech areas.

## Measuring MIC25's success

But did all of this support actually make MIC25 a success? To answer that question, we measure outcomes across four main categories: China's import dependency, dependency on foreign companies, global competitiveness, and technological leadership.

### China's achievements in MIC25 objectives, as of 2023

	China's import dependency	China's dependence on foreign firms	Becoming a technological leader	Achieving global competitiveness
Advanced rail transit equipment	Strong	Strong	Strong	Strong
Electric power equipment	Strong	Strong	Strong	Strong
Agricultural equipment	Strong	Strong	Mixed	Mixed
Marine engineering equipment and high-tech ships	Mixed	Mixed	Mixed	Strong
New generation information technology	Mixed	Mixed	Mixed	Mixed
Energy saving and new energy vehicles	Mixed	Mixed	Mixed	Mixed
High-end CNC machine tools and robots	Mixed	Mixed	Mixed	Weak
New materials	n/a	Weak	Weak	Mixed
Aerospace equipment	Weak	Weak	Weak	Mixed
Biomedicine and high-performance medical devices	Weak	Weak	Mixed	Mixed

Source: Rhodium Group

## Reducing import dependencies

China has largely succeeded in reducing its import dependencies by leveraging foreign firms. Beijing has pursued strategies such as requiring or pressuring foreign firms to localize high-tech production and research as a condition for continued access to the market—thereby reducing imports as local production grew—as well as acquiring foreign companies to enable large-scale technology transfers. This strategy has been successful in sectors including memory chips and some medical devices and equipment. Overall, import vulnerabilities are now more limited than ten years ago. However, they persist in a few key areas, where foreign firms have kept their most advanced technologies outside of China. In fact, China's drive for industrial upgrades has, in some cases, even increased its demand for some highly specialized imported products.

## Dependencies on foreign firms

Newer Chinese firms gained market share at the expense of established foreign companies in all targeted sectors. Stringent restrictions on foreign participation and state support particularly boosted domestic industrial cloud services, new energy vehicles and components, and power generation equipment. Chinese firms also spearheaded new products where foreign firms were previously dominant, like LiDAR, automotive sensors, and high-speed rail brakes. However, China still remains highly dependent on foreign

companies in many critical sectors, including biomedicine, high-end machine tools and machinery, commercial aircraft, and cutting-edge semiconductors. Although the market share of domestic companies is poised to increase significantly in the years to come, the most bleeding-edge technologies will remain a challenge to localize.

## Competitiveness

Chinese companies are globally competitive on price in many low- and mid-tech sectors and they achieved global competitiveness in some high-tech sectors, including information and communication equipment, clean technologies, EVs and connected vehicles, agricultural equipment, ships, drones, and high-speed rail, among others. They saw their greatest technological advancement and market share growth when they had one or more of three factors: high capital intensity, a large (often state-supported) demand market, and emerging industries without an established global leader. In most MIC25 sectors, Chinese companies generally lag behind their foreign counterparts in global revenue, market share, and cutting-edge technologies. Even in some areas where firms have achieved significant self-sufficiency—like auto antennas and telematics—it has not yet translated into global competitiveness.

## Technological leadership

Chinese companies have made significant strides in closing the gap with foreign firms and advancing toward the technological frontier, with several sectors already demonstrating signs of parity or even leadership. China's share of global patents has risen across most industries, with notable gains in electric vehicles, new materials, electronics, and robotics, where its share grew by more than 4 percentage points. In basic research, China's output is equally remarkable, with its share of global top publications increasing by an average of 18 percentage points between 2015 and 2023. Despite this rapid progress, Chinese firms have yet to achieve parity in many MIC25 sectors, with 62% of foreign firms surveyed predicting that their Chinese competitors would catch up within 5 to 10 years. Key gaps remain in areas such as advanced semiconductors, where Chinese firms still lag significantly behind the global frontier.

## Will MIC25 enable future successes?

Growing opacity around China's technological capabilities, driven by Beijing's national security imperatives, complicates efforts to fully assess its position and future trajectory. Nonetheless, Chinese firms appear well-positioned to make significant advances in several high-tech sectors under MIC25, including biotechnology, medical devices, and robotics. Moreover, China's leadership in artificial intelligence—an area not originally part of MIC25 but now poised to transform global manufacturing and innovation ecosystems—has the potential to reduce barriers to manufacturing innovation and enable future breakthroughs. These developments suggest that China's trajectory in technological leadership could accelerate in the coming years, with far-reaching ripple effects across global industries.

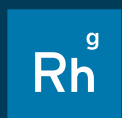
Our assessment of the results of MIC25 to date indicates the policy has driven substantial progress in building large industrial sectors, even as this success has been mitigated by continuing dependencies, particularly in high-tech components and specialized imports. At the same time, China has successfully created reverse dependencies—areas where the

world increasingly relies on Chinese firms and China-based production. While this has long been the case in low- and mid-tech sectors, it is now extending into high-tech areas like electric vehicles, solar energy, and telecommunications and is reshaping competitive dynamics in industries ranging from clean technologies to robotics.

In addition, overlapping technological achievements across sectors have arguably created a reinforcing effect that will amplify China's progress and grip over global supply chains in the years to come. Strengths in foundational technologies such as advanced materials, semiconductors, and artificial intelligence catalyze advancements in downstream applications like robotics, new energy vehicles, and telecommunications. These will likely continue to accelerate innovation and competitiveness in the future and may position China to deepen its influence across a [wide range of strategic sectors](#) globally.

But despite important areas of consequential success, Beijing's industrial policies have had unintended consequences, particularly for economic growth. China's industrial policy ecosystem has led to profound waste, as local governments piled in with duplicative and inefficient projects. Over the past decade, total factor productivity growth has stagnated and overall economic growth has slowed as the government struggles to transition the economy to a more sustainable model. The emphasis on industrial policy has also contributed to a stall in broader economic reforms, straining relations with China's key partners. Beijing's systemic bias toward supporting producers over households or consumers has created a growing imbalance between domestic supply and demand, especially in sectors like automotives, EV batteries, and legacy semiconductors. This industrial overcapacity has contributed to a rapidly expanding trade surplus, intensifying friction with China's trading partners and adding pressure to its innovation and industrial ecosystems. At the same time, local governments are grappling with the mounting fiscal costs of these policies, forcing difficult trade-offs in their expenditures and further exposing the economic strains of this approach.

Overall, China's economic growth is currently slowing, and significant imbalances and inefficiencies are hindering its progress. However, China's economy has also benefitted from a remarkable surge in industrial and technological capabilities and performance tied directly to MIC25. That surge, in turn, is driving China's competitiveness and innovation in MIC25 sectors on a global scale. Given the sheer size of China's economy and its strategic policy goals, this duality highlights how the country can simultaneously experience slowing growth and strengthening industrial and technological competitiveness. This momentum will likely continue in the coming years, although funding constraints from slower growth and the potential dampening effect of increased state control over innovation could lower this trajectory in the longer term.



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