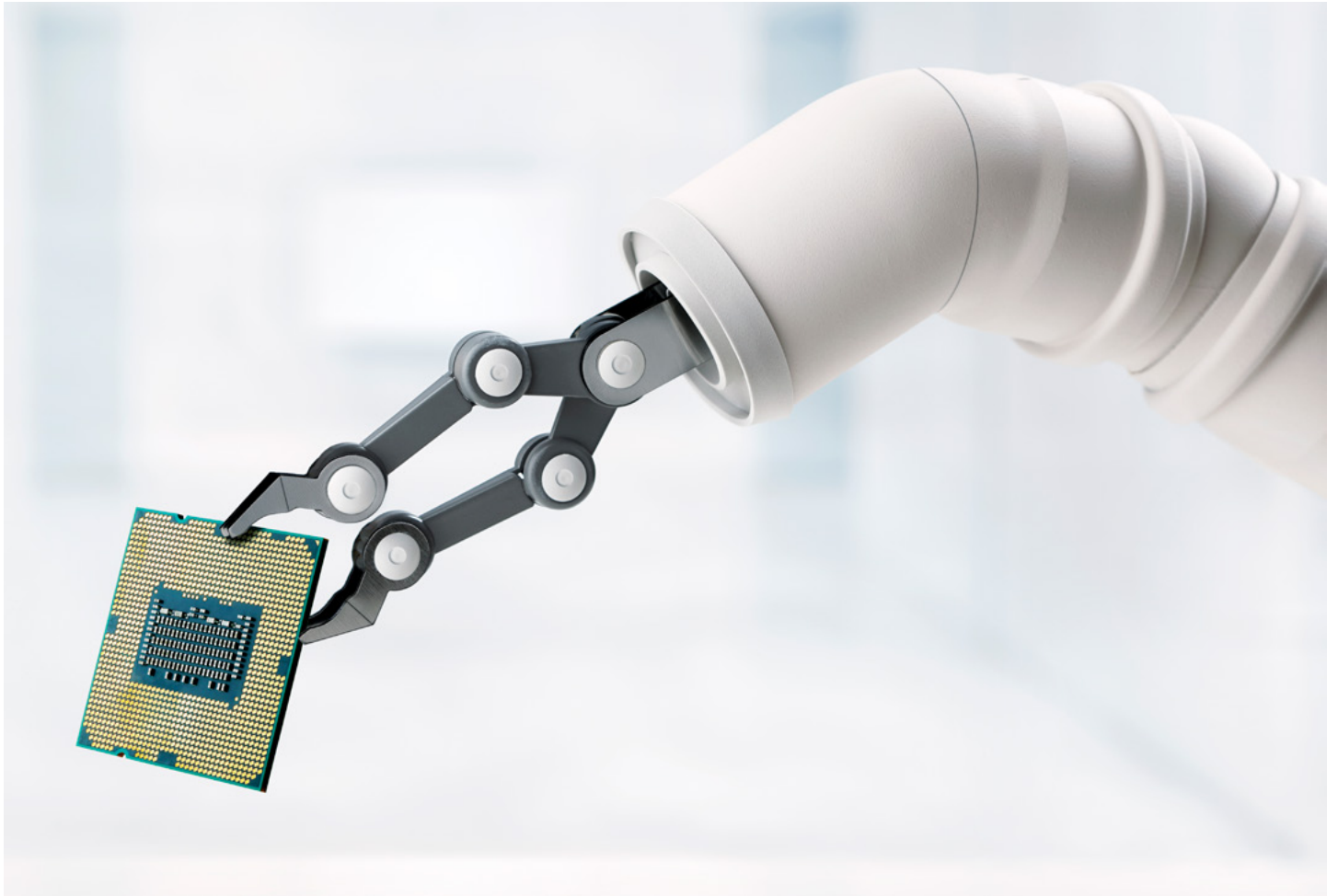


# China's dual industrial mandate: Autonomy and productivity

April 2026



This article, by S&P Global Market Intelligence, S&P Global Energy and S&P Global Mobility is a thought leadership report that neither addresses views about individual ratings nor is a rating action. S&P Global Market Intelligence, S&P Global Energy, S&P Global Mobility and S&P Global Ratings are separate and independent divisions of S&P Global.

# Authors

## S&P Global Market Intelligence

Yating Xu

Chief China Economist  
yating.xu@spglobal.com

Lei Yi

Senior China Economist  
lei.yi@spglobal.com

Jeffery McElroy

Senior Country Risk Analyst  
jeffery.mcelroy@spglobal.com

Aries Poon

Head of Regional Analysis,  
Asia-Pacific and Latin America  
aries.poon@spglobal.com

## S&P Global Energy

Rahul Kapoor

Head of Shipping & Metals  
rahul.kapoor@spglobal.com

Ivy Yin

Senior Principal Analyst  
ivy.yin@spglobal.com

## S&P Global Mobility

Gao Tao

Research & Analysis Associate Director  
gao.tao@spglobal.com

## Editorial, Design and Publishing

April Pascual

Lead Editor  
april.pascual@spglobal.com

Eemazar Khattak

Designer  
gao.tao@spglobal.com

James Mantooth

Senior Editorial Manager  
james.mantooth@spglobal.com

Oscar Eduardo Solano

Designer  
o.solano@spglobal.com

[Read the report  
with interactive  
graphics here.](#)

This article is written and published by S&P Global. It has no bearing on credit ratings.

# Key findings

- China’s industrial policy increasingly revolves around a dual mandate of autonomy and productivity, now the core framework shaping strategy, resource allocation, and long-term planning.
- The dual mandate is visible across major policies, including the 15th Five-Year Plan, which embeds parallel pushes for technological self-sufficiency, critical input security, efficiency, and sectoral upgrading.
- State-led capital deepens in frontier technologies, underscoring the economic and technological autonomy pillar, while productivity measures — consolidation, capacity control, and selective incentives — intensify in renewables, electric vehicles, and other mature sectors.
- Key tensions and constraints — heavy reliance on state direction, including in the financial sector, weak consumption, local finances, and supply-demand imbalances — limit productivity gains, affecting how effectively autonomy-driven investments translate into sustainable growth.
- External frictions and protectionism heighten the urgency of autonomy, while the inherent tension between autonomy and productivity, export dependence and overcapacity challenges complicate China’s ability to achieve both pillars of the dual mandate.






Autonomy and productivity are emerging as the two central pillars of China’s industrial policies in the foreseeable future. Reinforced by the country’s latest Five-Year Plan, S&P Global believes this dual mandate will continue to drive Beijing’s policies across a wide range of sectors despite uncertain payoffs and major challenges.

This report examines how this dual mandate will drive the evolution of China’s industrial policy over the medium term. It also examines the key challenges and implications for sectoral upgrading and global supply chains.





# China's industrial policy playbook

## Dual mandate: Autonomy + Productivity

**Strategic shift away from** broad, subsidy-fueled economic capacity **expansion**.  
**Emphasis on autonomy** and **productivity**.

| AUTONOMY   |   |
|--|---|
| <br>National security as central organizing principle                                 | <br>Domestic substitution in critical tech         |
| <br>"Whole-of-nation" approach (state + state-owned enterprises + private + research) | <br>Resource security for critical inputs/minerals |
| <br>State-led long-term "patient capital" to build domestic champions                |   |

| PRODUCTIVITY   |  |
|--|--|
| <br>Productivity-led growth over investment volumes      | <br>Technology adoption and firm-level upgrading        |
| <br>Better allocation of resources                       | <br>Consolidation + market discipline in mature sectors |
| <br>Targeted/conditional support vs. blanket subsidies |  |

| How it shows up by sector  |   |
|--|---|
| <b>Advanced manufacturing &amp; chips</b><br>Reduce non-domestic dependence <ul style="list-style-type: none"> <li>Sub-7nm AI processor tooling remains hard (3-5yr view)</li> <li>State-backed funding + incentives to scale viable domestic tech</li> </ul>     | <b>AI-plus adoption</b><br>Use AI to lift economy-wide productivity <ul style="list-style-type: none"> <li>Deep integration across priority areas</li> <li>Domestic AI ecosystem supported by procurement/incentives</li> </ul>                                    |
| <b>Future technologies (quantum/biomanufacturing)</b><br>First-mover advantages, new productivity frontiers <ul style="list-style-type: none"> <li>Quantum and other frontier tech funded early</li> <li>Patents/innovation push to avoid chokepoints</li> </ul>  | <b>Mature industries</b><br>Turn scale into sustainable competitiveness <ul style="list-style-type: none"> <li>Fewer blanket subsidies</li> <li>More auctions/market discipline</li> <li>Consolidation encouraged</li> <li>Overcapacity remains a risk</li> </ul>  |

# Dual mandate: Context and strategic objectives

The Chinese government is pursuing a “dual mandate” of autonomy and productivity, which involves the simultaneous pursuit of greater technological and supply-chain independence on one hand, and productivity-driven development on the other. In this context, “autonomy” refers to a state-led strategy to enhance self-reliance and reduce exposure to external vulnerabilities — rather than market-driven independence from state direction. This approach marks an evolution from an earlier industrial policy approach that focused more on attracting foreign direct investment and expanding industrial production.

Another defining feature of this approach is elevating national security to a “central organizing principle” of industrial policy. This signals the Chinese government’s intent to improve resilience and reduce foreign reliance through efforts to control critical inputs and innovate domestically.

## **Global competition is fueling the push for autonomy**

The rise in global protectionism and intensifying competition with advanced economies — including the US and the EU — have heightened the urgency behind the push for economic autonomy. These goals are so described as they do not aim for autarky, or cutting-off of trade. They aim to improve self-reliance and reduce foreign dependence, which is often referred to as “de-risking” among policymakers in many advanced economies.

Trade tensions, technology restrictions, and the risk of tariff escalation have led China to accelerate efforts behind these goals. To mitigate the impact of external shocks, the Chinese government is also placing greater emphasis on the development of indigenous capabilities in critical sectors.

## **Growth imbalances are raising the need for productivity**

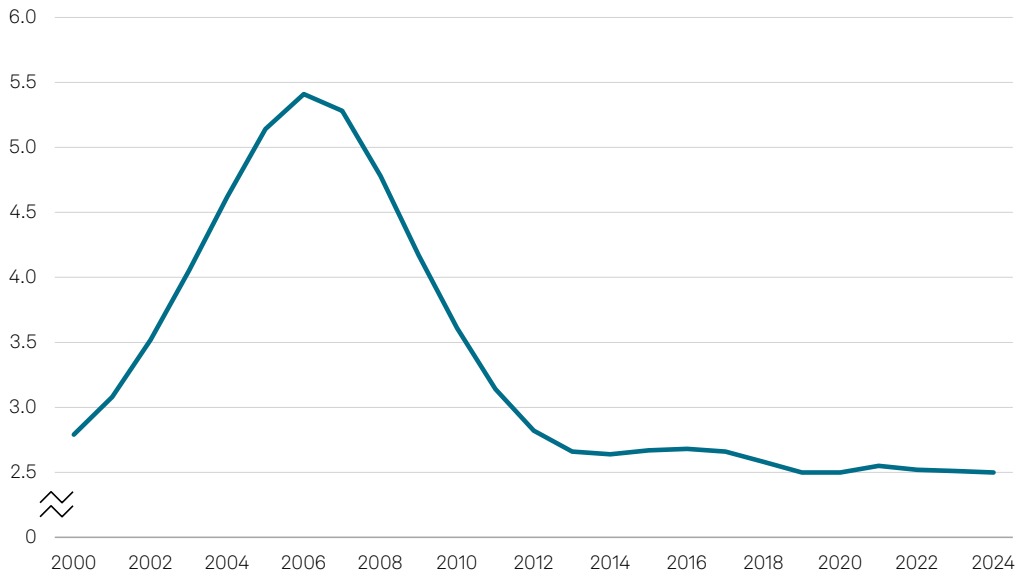
China’s rapid productivity gains of the 2000s have moderated for more than a decade (Chart 1). Returns are diminishing as the economy approaches the technological frontier. Unless otherwise specified, productivity in this report refers primarily to total factor productivity, rather than labor productivity.

They are also declining as more capital was allocated toward state-owned enterprises and strategic sectors, since many investments did not consistently translate into strong productivity gains. (Chart 2). These trends have increasingly underscored the need for industrial upgrading and technological advancement.

## **Domestic challenges are driving the urgency for change**

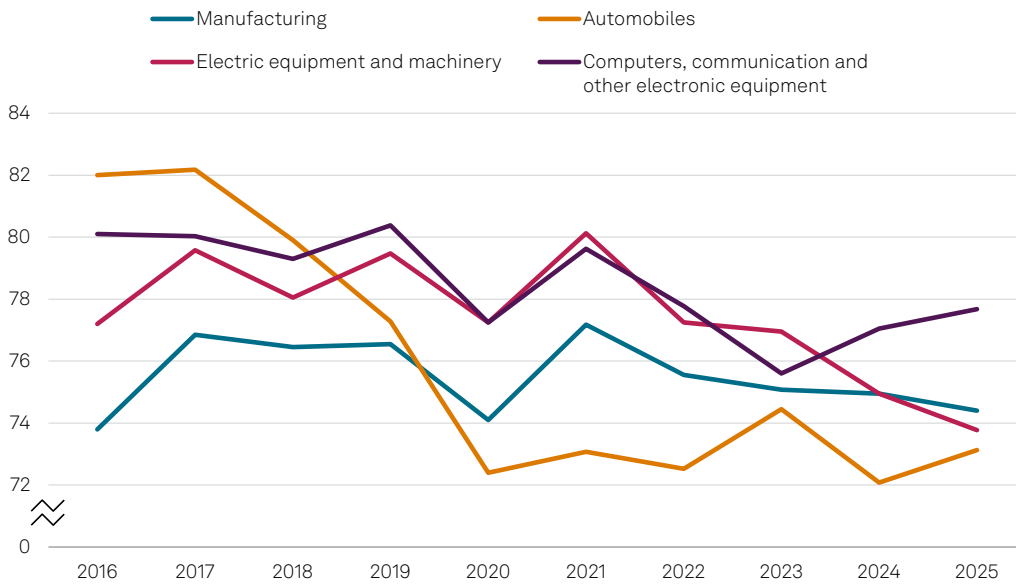
China’s property slump has squeezed local government finances and undermined household consumption. At the same time, manufacturing excess capacity has led to declining utilization. Labor market pressures, particularly among younger cohorts, further amplify the urgency to shift toward higher-quality growth.

**Chart 1 | China total factor productivity: Trend-based annual growth (YOY, %)**



As of Jan. 20, 2026.  
 Source: S&P Global Market Intelligence.  
 © 2026 S&P Global.

**Chart 2 | Mainland China's industrial capacity utilization rate (%)**



As of Jan. 19, 2026.  
 Source: S&P Global Market Intelligence, National Bureau of Statistics.  
 © 2026 S&P Global.

## Dual mandate: Autonomy and productivity

In response to the domestic and external pressures, the industrial policy is now anchored by the dual mandate: an emerging two-pillar framework centered on economic autonomy and industrial productivity.

The Chinese government seeks to enhance economic autonomy by reducing exposure to key external vulnerabilities. This includes securing reliable access to essential inputs — raw materials, core components, and critical technologies — to limit dependence on foreign chokepoints.

At the same time, the government seeks to maintain access to overseas markets while gradually reducing reliance on them through policies that aim at steering the economy toward stronger domestic consumption. The policy challenge is to strike a balance between state-led mobilization and market mechanisms that reward efficiency and innovation.

The state is taking an expanded role in directing and funding strategic sectors, particularly those linked to advanced manufacturing and critical technologies. This state-led approach aims to address both immediate vulnerabilities and long-term growth imperatives, moving away from the previous emphasis on sheer economic expansion.

National security is elevated to be a central organizing principle for economic policy. China's Fourth Plenum in October 2025 and 2026 Government Work Report confirmed this shift, signaling an even greater role for the state in strategic sectors.

While China's development model has long been state-led, the dual mandate marks a shift in emphasis: from maximizing output growth toward a more selective approach that prioritizes strategic control, productivity, and risk management. Policy tools increasingly differentiate between frontier technologies, where state support is concentrated, and mature sectors, where market discipline and consolidation are encouraged. Whether this approach will succeed is an open question.

## Strategic pillars of industrial planning

### Technological self-sufficiency and domestic substitution

The government is deploying large-scale funding, policy incentives, and regulatory support to foster domestically developed substitutes in pursuit of long-term resilience, even where efficiency tradeoffs exist.

This is evident in the rapid scaling of “new quality productive forces” — including domestic semiconductor, AI hardware capacity, and emerging industries such as energy and aerospace — as well as the push for breakthroughs in “future technologies” of quantum technology and biomanufacturing — illustrating the autonomy pillar of the dual mandate.

### Resource security: Critical inputs and minerals

Securing access to critical minerals is a core component of the autonomy pillar of the dual mandate. China is expanding diplomatic efforts and overseas investments in mineral-rich regions, building strategic reserves, and promoting technological advancements in extraction and processing to safeguard supply chains. Export license controls on rare earth elements and related technologies not only aim at giving Chinese firms leverage in expanding overseas, but also creating strategic chokepoints and external dependencies.

However, the US is countering this through international partnerships, investment incentives, and trade negotiations aimed at diversifying supply and building domestic and allied processing capabilities. The competition is embedded in broader geopolitical tensions, with ongoing risks of policy shifts and trade disruptions influencing the global critical minerals landscape.

## **‘Whole-of-nation’ approach to innovation**

China’s “whole-of-nation” system seeks to coordinate resources across government, state-owned enterprises, private firms, and research institutions to accelerate progress in priority sectors.

The central government promotes alignment across ministries, while provincial governments tailor directives to local strengths. For example, Beijing focuses on advanced technology, Shanghai on semiconductors and biomedicine, and Shenzhen on AI and EVs. This model facilitates the state in taking on higher-risk investments and supports long-term strategic objectives, leveraging both central and local government strengths.

Chinese government-backed investment funds — targeted to reach about \$2 trillion — will be central to upgrading the country’s industrial base. While these funds provide large-scale, long-term “patient capital” for high-risk, early-stage tech and strategic manufacturing projects, many are administered by local governments with varying capacities and oversight, raising concerns about potential inefficiencies and capital misallocation.

According to industry sources, nearly 90% of Chinese private equity funding as of end-2024 was government-related, channeling resources into high-tech and high-value-added sectors such as advanced manufacturing, AI, robotics, new materials, green energy, biomedicine, and semiconductors.

Much of the financial and execution risk resides with local governments and their financing vehicles and state-linked investment platforms, while the central government provides direction and backstops systemic stability.

Private capital participates selectively where incentives and expected returns align. The state-led approach, role of non-economic (national security) considerations and varying expertise among local governments may make it challenging to achieve the efficiency and productivity objectives.

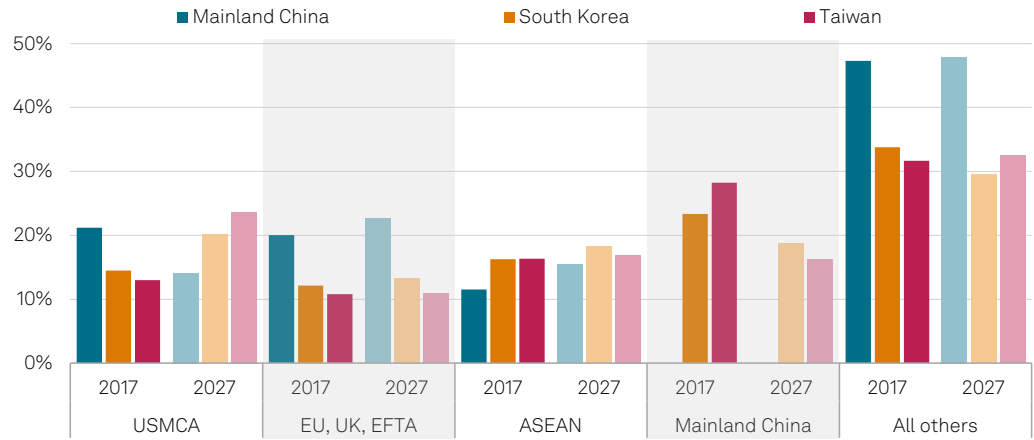
## **Trade and global partnerships**

This pillar supports industrial policy by helping secure external demand, inputs, and technological linkages that domestic substitution alone cannot provide. China is leveraging initiatives such as the Belt and Road Initiative (BRI), Regional Comprehensive Economic Partnership (RCEP), and the upgraded China-ASEAN Free Trade Area (CAFTA) (Chart 3).

At least 10 free trade agreements (FTAs) are under negotiation and eight more are under consideration, including with countries in Latin America, Africa, and Europe. These multilateral mechanisms focus on trade-related infrastructure and regional development, with China strengthening economic ties and engaging in the global investment and supply chain diversification (Chart 4).

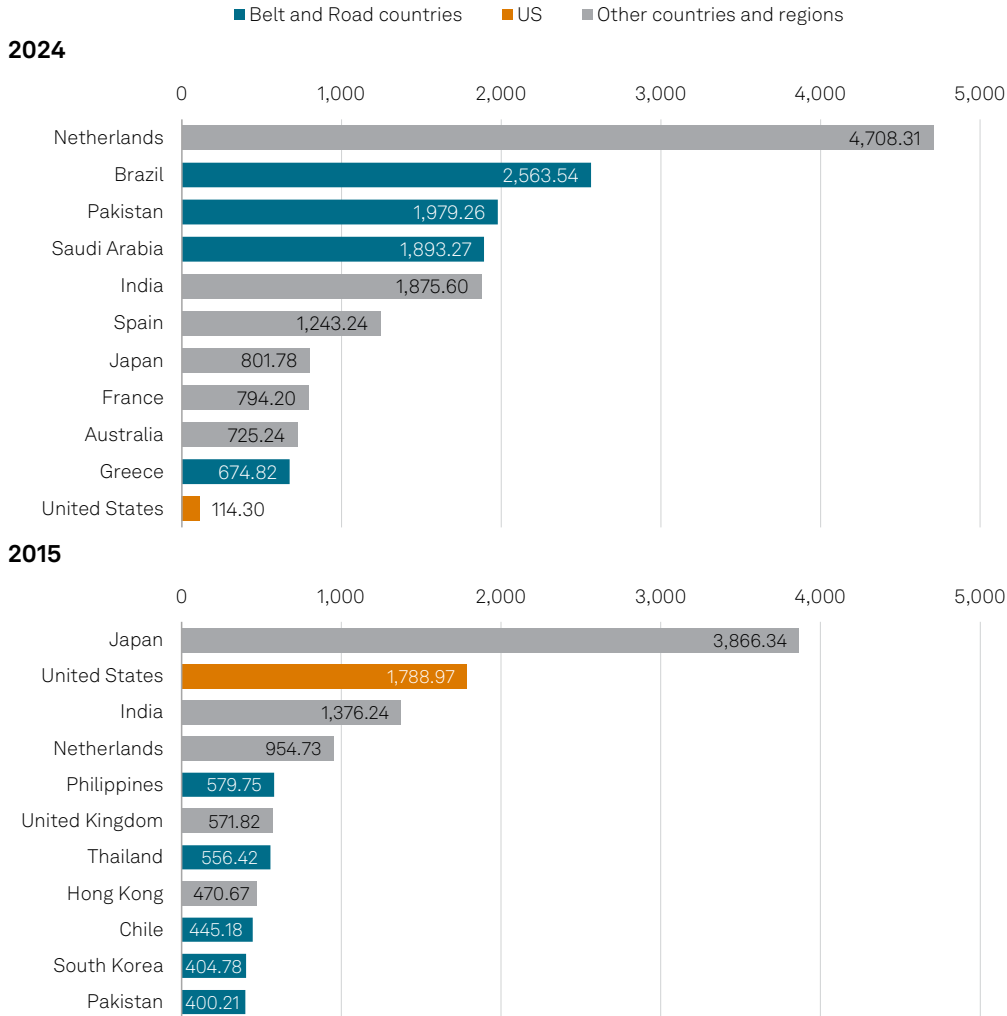
### Chart 3 | Mainland China exports share increases in ASEAN and EU but declines in the US market

USMCA import share rises for South Korea and Taiwan



As of Oct. 6, 2025.  
 EFTA = Europe Trade Association; ASEAN = Association of Southeast Asian Nations.  
 Source: S&P Global Market Intelligence.  
 © 2026 S&P Global.

### Chart 4 | Mainland China's top 10 markets for solar PV products (\$M)



As of March 5, 2025.  
 Source: S&P Global Energy.  
 © 2026 S&P Global.

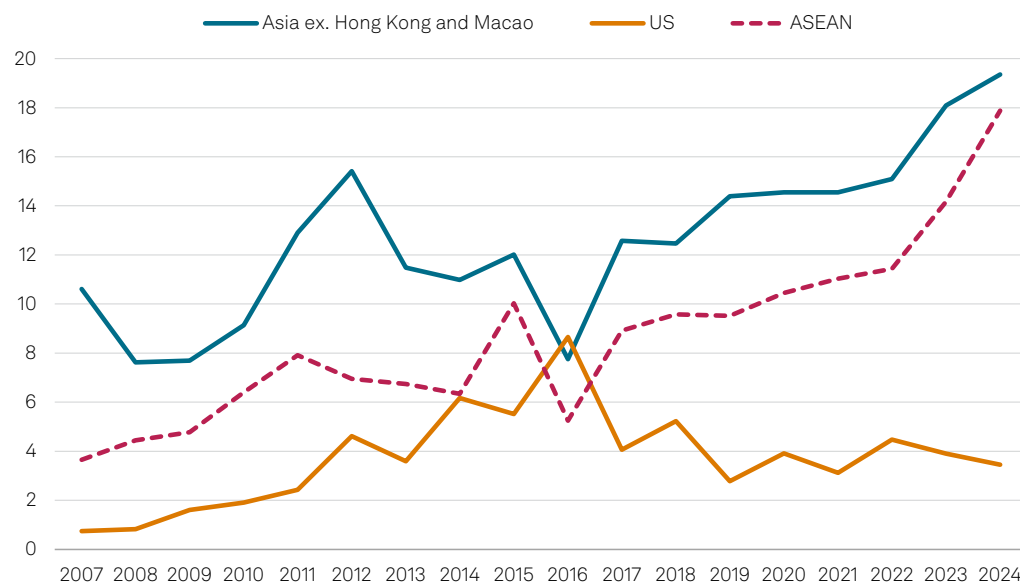
Chinese firms rank among the top three investors globally and lead manufacturing foreign direct investments (FDI) in Southeast Asia, Mexico, Central and Eastern Europe, and North Africa (Chart 5).

More Chinese companies are establishing offshore factories in emerging countries to leverage lower labor costs and bypass trade barriers. China's reliance on onshore output of low-end finished goods is easing but remains dominant, as its supply chain ecosystem still offers cost advantages.

China is advancing up the value chain while retaining a strong foothold in lower-end markets, which many emerging economies perceive as a strategy that reinforces their supply chain dependencies on China.

### Chart 5 | A diverging trend of non-China Asia and the US in mainland China's investment inflows

Percent of mainland China's outbound direct investment flow



Data compiled Sept. 9, 2025.  
Sources: Ministry of Commerce; S&P Global Market Intelligence.  
© 2026 S&P Global.

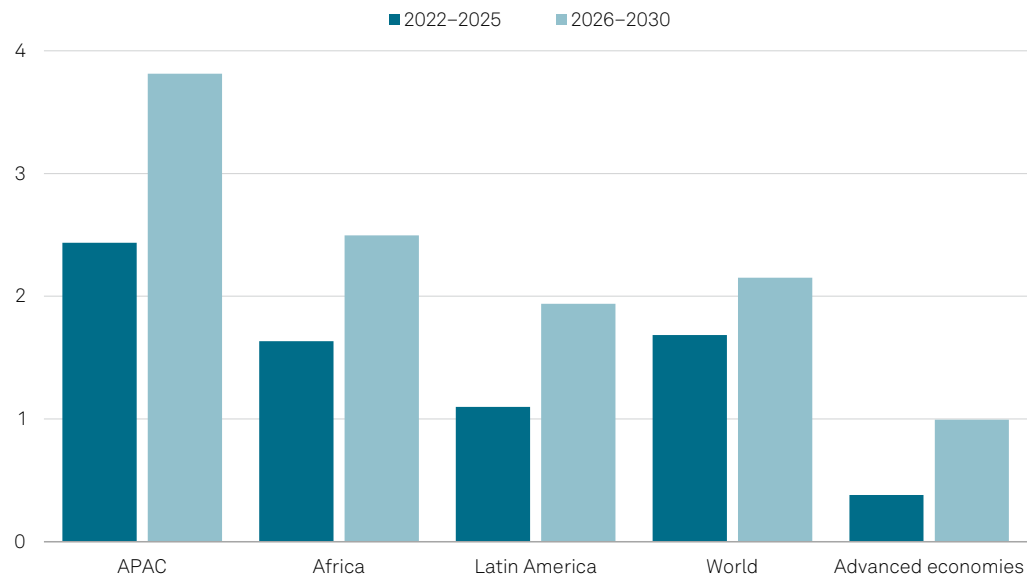
Easing financial restrictions and offering credit incentives — primarily for selected strategic and high-end industries such as semiconductors and critical materials — are intended to encourage firms to engage in cross-border mergers and acquisitions, while the growth of cross-border e-commerce relies on the establishment of overseas warehouses and local sales networks.

We expect industrial production in the Asia-Pacific region (excluding China and Japan) and Africa to accelerate and continue to lead the global growth over the next five years (Chart 6).

In many emerging markets, demand for capital goods, construction equipment, and intermediate inputs remains significant. China's exports to these economies are concentrated in such products, which can complement local industrial development by supplying machinery and components, even as low-cost Chinese consumer and light manufacturing exports may compete with nascent domestic producers in labor-intensive segments (Chart 7).

## Chart 6 | Industrial production growth by region (%)

Period average growth (%)



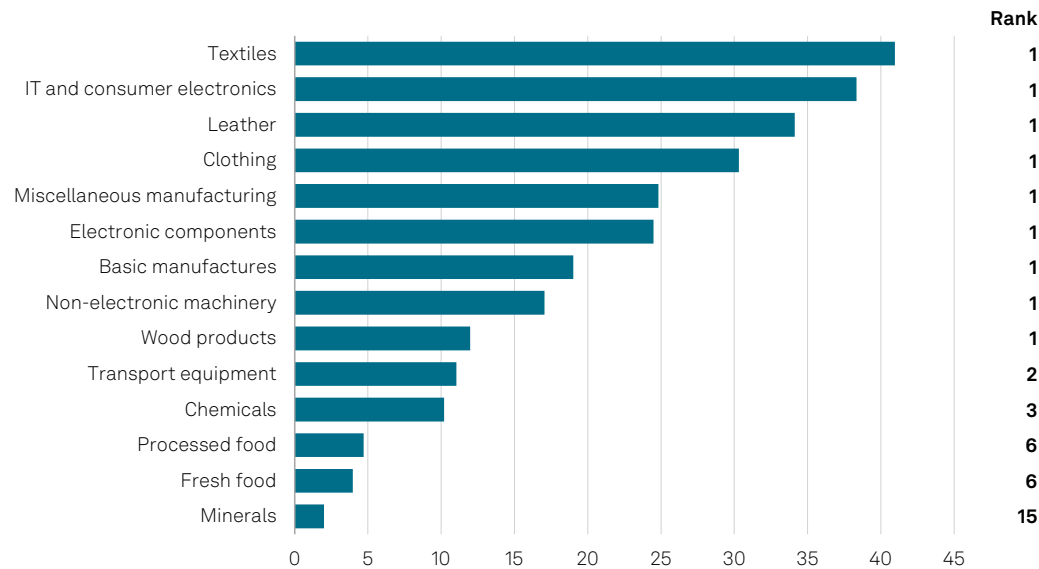
As of Jan. 19, 2026.

Source: S&P Global Market Intelligence.

© 2026 S&P Global.

## Chart 7 | Mainland China's share in world trade by sector

Percentage points



As of Jan. 19, 2026.

Source: S&P Global Market Intelligence.

© 2026 S&P Global.

# China's shipbuilding industry: Advancing under the radar

In just two decades, China's shipbuilding industry has established itself as a global powerhouse and secured a dominant position in the international maritime sector.

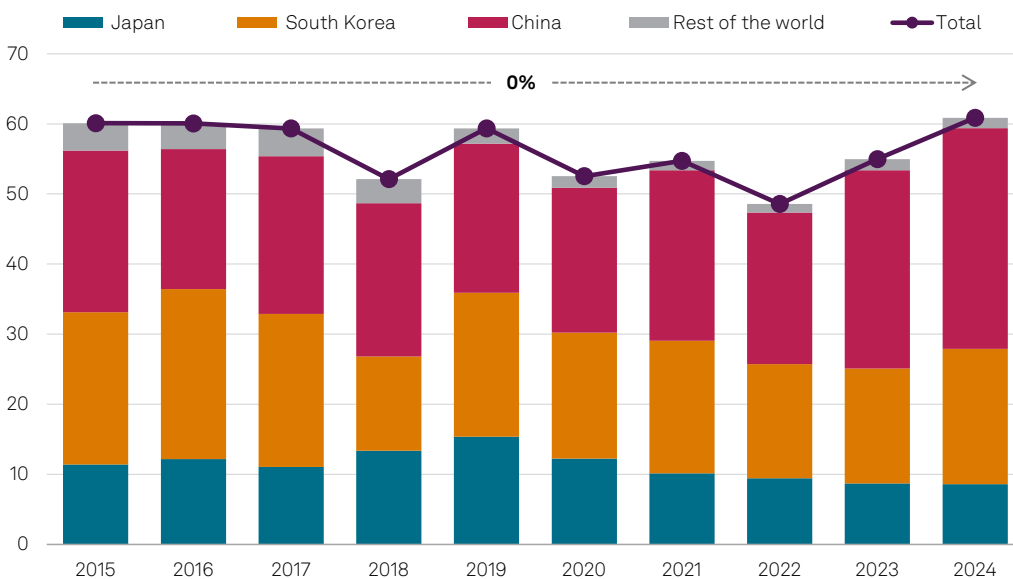
As of 2024, China controlled over 60–65% of the global shipbuilding market (Chart 8). Behind this growth has been the “Made in China 2025” initiative, a plan that targeted the shipbuilding sector for upgrades into high-value and high-tech segments such as LNG carriers and environmentally friendly vessels. Between 2015 and 2024, China's shipbuilding output grew at a 4% compound annual rate, pushing its market share from 37% in 2015 to 53% in 2024, while South Korea and Japan saw their positions decline over the same period.

China's geographical advantages and highly developed infrastructure have also facilitated efficient supply chain management, reduced costs and enabled the timely delivery of raw materials and finished ships. The consolidation of Chinese shipbuilding firms has further encouraged technological progress, giving rise to more efficient and environmentally advanced vessels.

Another key factor has been the rise of Chinese ship financing, particularly after the 2008–2009 global financial crisis, when Chinese banks filled the void left by European financiers, making it easier for Chinese shipyards to secure both orders and capital.

**Chart 8 | Historical shipbuilding output by country, 2015–2024**

GT, million



As of March 15, 2025.

Source: S&P Global Market Intelligence, S&P Global Energy.

© 2026 S&P Global.

# What we expect next in China's industrial policies

These shifts in China's industrial playbook are all geared toward advancing the dual mandate of greater technological autonomy and higher productivity, rather than broad capacity expansion.

Industrial policy will continue to accelerate autonomy-focused investment across strategic technologies, supported by “patient capital” in frontier sectors and a gradual pivot toward consolidation, market discipline, and efficiency in mature industries. The durability of this policy shift will hinge on several success conditions: better capitalized consolidation in overcapacity segments, stricter investment discipline at the local level, social policy levers that lift household consumption, and external market access that remains sufficiently open to absorb surpluses.

## Emerging industries: State-led acceleration

In emerging sectors such as AI, green energy, and quantum technology, Beijing leans into the “autonomy” side of the dual mandate by using state-led capital and policy support to build domestic champions in technologies where foreign dependence is still high.

Government-backed funds, targeted subsidies, and preferential policies are designed to scale these industries rapidly, with the expectation that they will become engines of future growth and global competitiveness.

The government's willingness to tolerate lower manufacturing yields for AI processors allows rapid iteration and scaling of technological advances that would not otherwise be commercially viable. Preferential procurement contracts and energy subsidies encourage data centers and state-backed tech firms to adopt local hardware, expanding the market share for domestic champions.

## 'AI-plus' initiative

Unveiled in August 2025, the “AI-plus” initiative aims for deep AI integration in six key areas and 70% penetration of intelligent terminals by 2027. Policy emphasis is placed on achieving breakthroughs in core AI technologies, including advanced semiconductors to improve yields and meet domestic demand for large language model ecosystems, as well as wider and deeper AI adoption to improve productivity. This initiative is a test case for how China intends to use industrial policy to lock in both technological sovereignty and productivity improvements across the real economy.

In the near term, large-scale AI development will likely focus on non-strategic sectors — such as manufacturing, healthcare, education and consumer services — where rapid integration can spur productivity and economic growth per China's industrial policy objectives. To accelerate this, the government will likely expand fiscal incentives (e.g., tax breaks, venture capital access, and the development of a unified national data markets) to attract private sector investment in AI R&D. However, adoption in strategically sensitive areas — such as defense, infrastructure, and governance — will likely advance more cautiously, with strict oversight to ensure state security and control. This approach is consistent with government attempts to harmonize private-sector innovation with national security priorities.

China's private sector is large in scale but operates in a system where state-linked finance and policy priorities shape access to capital and sectoral direction. Private firms dominate employment and significant value-added activities, yet participation in frontier technologies often hinges on alignment with government-guided funds and procurement.

# China's 'AI-plus' Initiative: Connecting applications to sovereignty strategies



## Science & technology

### Applications

- Accelerate scientific breakthroughs with AI
- Collaborate with biotech and 6G advancements

### Strategies

#### Talent competition

Attract foreign AI talent with tax incentives; launch interdisciplinary AI university programs



## Industrial development

### Applications

- Implement AI across industrial processes
- Develop smart manufacturing
- Enable new business models

### Strategies

#### Domestic substitution

Promote domestic tech (restrict Micron, expand Huawei/iFlyTek)

#### Compute competition

Build integrated national AI cloud (Huawei Pangu clusters)



## Services & consumption

### Applications

- Shift to intelligence-driven services (finance, law, logistics)
- Combine unmanned and human service models
- Innovate in entertainment, e-commerce, and care services
- Build ecosystem of smart devices (cars, phones, robots, wearables)

### Strategies

#### Agile governance

Use scenario-based regulation (strict for medical AI, relaxed for entertainment AI)



## Healthcare & education

### Applications

- Use AI for diagnosis and health management
- Enhance primary care efficiency
- Personalize education and enable human-computer collaboration

### Strategies

#### Agile governance

Use scenario-based regulation (strict for medical AI, relaxed for entertainment AI)



## Global cooperation

### Applications

- Promote AI as a public good
- Support open-source access
- Boost AI capabilities in the Global South

## Advanced manufacturing

In advanced manufacturing, policy is explicitly framed around upgrading domestic capabilities in core inputs — most notably chips and tools — to reduce strategic dependence and enhance technological autonomy yet bearing authorities' ultimate ambition to unlock economywide productivity gains in a self-reliant manner, reflecting the two complementary pillars of the dual mandate.

Indigenous semiconductor tooling and manufacturing required to produce advanced AI processors that are smaller than 7 nanometers is likely to remain a challenge for Chinese chipmakers in at least the 3–5-year outlook. Initiatives such as the \$8.2 billion state-backed AI fund and a broader \$137 billion industry plan over five years exemplify China's dual-track approach to incentivize immediate deployment of viable domestic technologies while investing heavily in next-generation manufacturing tools.

Beijing's leadership is likely to promote policies structured to favor domestic ecosystems despite potential performance gaps. While domestic processors like Huawei's Ascend series currently lag competition from Nvidia in performance and efficiency, the Chinese government intends to compensate for these disadvantages through state-backed incentives. The government's likely willingness to tolerate lower manufacturing yields for AI processors allows rapid iteration and scaling of technological advances that would otherwise not be commercially viable.

Local governments have reportedly provided energy subsidies and preferential procurement contracts to encourage data centers and state-backed tech firms to adopt local hardware, thereby expanding the market share for domestic champions. The government has reportedly leveraged China's large-scale power infrastructure to offer relatively low-cost, scalable energy to data centers to make large-scale AI computation with less efficient domestic processors economically viable.

Chinese LLM developers have also made significant progress in optimizing algorithmic efficiency, exemplified by models such as DeepSeek, which demonstrates competitive performance using less raw processing power.

## Future technologies

Support for future technologies such as quantum computing reflects the forward-looking edge of the dual mandate: securing first-mover advantages that both shield China from chokepoints and unlock new productivity frontiers.

The Chinese government has raised around \$20 billion toward developing nascent quantum computing technology. State support for developing the sector has driven enormous interest from Chinese companies, which filed over 50% of global patents related to quantum technology in 2024, according to the World Intellectual Property Organization (WIPO).

Heavy early-stage investment is justified as a way to build domestic control over critical "future" infrastructures while positioning these technologies to help drive the next wave of productivity growth.

## Mature industries: Focus shifts to efficiency

In sectors that have reached maturity — such as renewable energy, shipping, and EVs — due to their outsized production scale and emerging overcapacity in some sectors, the emphasis within the dual mandate shifts toward productivity, with policymakers using market discipline and consolidation to turn past capacity expansion into

sustainable, competitive strength. The policy stance is shifting from broad, front-loaded subsidies toward more targeted, conditional support and greater reliance on market-based discipline. In solar and wind, central authorities have already moved from generous feed-in tariffs and blanket construction subsidies toward competitive auctions, grid parity requirements, and stricter project approval, effectively reducing average subsidy intensity even if some local incentives remain. In EVs, direct purchase subsidies ended in 2022, while more selective tax exemptions, infrastructure support, and equity injections through government-guided funds have taken their place.

As industries mature, more market-oriented mechanisms are expected to foster competition and efficiency. The gradual phasing out of subsidies and encouragement of mergers are intended to foster a more competitive and resilient industrial base.

However, overcapacity remains a critical challenge. Traditional manufacturing industries, such as steel, non-ferrous metals, and cement, which are facing structural overcapacity due to the property downturn, are expected to rely more on administrative measures to reduce capacity.

Given their large scale and significant roles in the economy and employment market, the pace of reductions is likely to be more moderate than during the supply-side reforms from 2015 to 2017. In strategically important sectors, the restoration of the supply-demand imbalance will rely on tightening the control of new capacity.

Meanwhile, removing subsidies could expose inefficiencies and lead to production cutbacks or financial stress in sectors that have benefited from rapid scaling due to state support. Moving away from subsidies would also require financial market reforms that make capital less tolerant of persistently low or negative returns, along with stronger exit mechanisms and corporate governance, to curb inefficient resource allocation and “involution-style” competition.

By tightening subsidies, encouraging exits, and raising performance benchmarks, authorities are trying to preserve strategic capacity where needed while forcing firms to compete on efficiency, innovation, and returns.

## China’s evolving incentive structure for the EV industry

Recent policy adjustments indicate a structural shift in China’s new EV incentive framework.

Central purchase subsidies ended in 2022, but indirect measures remain: purchase tax exemptions are extended through 2027, and local governments continue to offer consumption vouchers, free license plates, and targeted replacement incentives. These steps appear aimed at maintaining market stability as reliance on direct subsidies declines.

At the industrial level, authorities emphasize investment-oriented mechanisms. National and provincial funds — such as the National Manufacturing Industry Investment Fund — reportedly provide capital and credit to strategic sectors like battery and semiconductor manufacturing. Some localities use “investment-

for-subsidy” models, taking equity stakes in automakers viewed as economically significant; Hefei’s involvement in EV startup NIO, cited in local reports, illustrates this approach.

Infrastructure expansion remains central, with plans for comprehensive charging coverage by 2025 and pilots for standardized battery-swap networks involving firms such as NIO and CATL. Public documents also mention recycling initiatives and overseas resource projects aimed at mitigating raw material risks.

Emerging programs promote experimental business models, including Battery-as-a-Service and Vehicle-to-Grid schemes, where owners can receive compensation for grid contributions. These pilots reflect efforts to develop new revenue streams and integrate EVs into the broader energy system.

Policy frameworks increasingly rely on indirect incentives — carbon trading, green finance, and ecosystem development — blending state direction in key technologies with market-led innovation. Further industry consolidation and stronger export orientation, particularly toward Southeast Asia, Europe, and the Middle East, is expected.

## Challenges and risks

These opportunities coexist with execution and coordination risks that could influence both elements of the dual policy mandate — namely, the pursuit of greater technological autonomy and higher productivity growth.

### Industrial policy in transition

Rapid technological change introduces uncertainty around demand and investment returns. Advances in battery chemistry or magnet design, for example, could alter reliance on specific rare earths and other materials, requiring adjustments in resource strategies. The emphasis on maintaining industrial self-sufficiency may reduce policy flexibility if technological pathways shift unexpectedly.

Policy prioritization may also lead to uneven resource allocation, as funding concentrates in designated strategic sectors. This creates opportunity costs for industries outside priority categories, potentially reshaping the broader balance of industrial activity.

### Balancing policy direction and market performance

An expanded government role can strengthen coordination in strategic industries, yet it also introduces operational challenges. Overlapping support programs can encourage capacity expansion over profitability, as seen in segments such as solar modules and EVs.

Persistent oversupply reflects incentives embedded in a supply-centric growth model — local performance metrics, state-preferred finance, and a policy tilt toward capacity expansion in strategic sectors. Authorities are signaling more discipline through capacity rationalization, consolidation, and anti-‘involution’ measures, yet sustainable rebalancing likely requires stronger demand-side reforms, such as income distribution, social safety nets, and more market-based capital allocation, to lift household consumption and investment efficiency over time.

Such dynamics may compress margins and reduce available resources for research and development. At the same time, administrative guidance mechanisms may slow the market exit of weaker firms and influence pricing dynamics, potentially affecting overall competitiveness and investment conditions.

The key policy question is how to align industrial coordination with market-based incentives that promote efficiency and innovation. Over time, adjustments in corporate governance, market mechanisms, and local performance evaluation systems could improve resource allocation and support higher-quality growth. There have been ongoing efforts from the government to guide restructuring and consolidation within manufacturing segments such as renewable energy and automotive, aimed at improving long-term competitiveness.

## China's solar industry seeks stronger discipline through consolidation

Chinese regulators and industry groups have identified persistent challenges in the solar manufacturing sector, including oversupply and declining margins amid continued price competition.

Ongoing consolidation is viewed as one route to strengthen operational efficiency and balance production capacity. Larger, well-capitalized firms have shown interest in acquiring smaller producers. Such mergers reflect an adaptation to tighter margins and evolving market conditions rather than a centrally coordinated directive.

Authorities have also issued policy guidance and standard-setting measures that indirectly shape market exits and restructuring decisions. Public statements from energy regulators emphasize rational capacity management and risk control in overseas expansion strategies.

In that context, some Chinese solar companies have disclosed asset divestments abroad (in the US, the Middle East, and other Southeast Asian countries like Laos and Indonesia), citing strategic portfolio adjustments and changing market conditions. These moves are largely framed as commercial decisions within corporate disclosures and industry reports.

Industry associations play a facilitating role in stabilizing market dynamics. The China Photovoltaic Industry Association (CPIA) has referenced indicative production cost benchmarks — reported by domestic trade media at around 0.69 yuan per watt — as a reference for assessing industry health, rather than an enforceable pricing mechanism. The establishment of quality and carbon-footprint standards also serves to strengthen compliance and differentiate producers based on technical and environmental performance.

Broader policy reforms, such as renewable energy portfolio standards, carbon trading mechanisms, and adjustments to power market pricing frameworks, are intended to create a more sustainable environment for industry development. These measures may indirectly favor technologically advanced and financially resilient enterprises capable of meeting higher regulatory and performance thresholds.

## External environment and global exposure

Industrial upgrading remains closely linked to China's external economic relations. Evolving trade policies, export controls, and investment screening frameworks are creating new sources of uncertainty for supply chains and financing decisions. Shifts in external regulatory environments — including tariff adjustments or technology-specific restrictions — can raise costs for projects linked to critical minerals or advanced manufacturing.

A core tension within the dual mandate lies between the pursuit of greater domestic autonomy and continued reliance on external demand to absorb industrial surpluses. Soft household demand and recurrent surpluses heighten China's reliance on exports to absorb capacity, amplifying friction with trading partners as strategic sectors scale. Industrial policy can mitigate chokepoint risks, but without stronger domestic absorption, it may reinforce external tensions through price competition and market-share shifts in sensitive product categories.

Trading partners have introduced various protective trade measures across industries sensitive to price competition, including machinery, electronics, and light manufacturing goods. China's own export licensing and control frameworks similarly increase compliance requirements for global firms, prompting supply chain diversification in some markets.

The overall trajectory of industrial policy will hinge on the authorities' ability to manage these technological and external challenges while maintaining momentum in upgrading and structural reform.

## Conclusion

China's industrial policy is set to advance the two pillars of its dual mandate – autonomy and productivity – through accelerating investment in strategic technologies and deeper integration into key supply chains. The productivity payoff, however, is uncertain given the large role of state direction, persistent overcapacity, fiscal constraints at the local level, and still-weak household demand. Over the medium term, absent stronger demand-side reform, productivity gains from industrial upgrading may struggle to translate into sustained growth, as excess capacity and weak domestic absorption constrain returns on investment.

## CONTACTS

[www.spglobal.com](http://www.spglobal.com)

[www.spglobal.com/en/enterprise/about/contact-us.html](http://www.spglobal.com/en/enterprise/about/contact-us.html)

Copyright © 2026 S&P Global Inc. All rights reserved.

These materials, including any software, data, processing technology, index data, ratings, credit-related analysis, research, model, software or other application or output described herein, or any part thereof (collectively the **"Property"**) constitute the proprietary and confidential information of S&P Global Inc its affiliates (each and together **"S&P Global"**) and/or its third party provider licensors. S&P Global on behalf of itself and its third-party licensors reserves all rights in and to the Property. These materials have been prepared solely for information purposes based upon information generally available to the public and from sources believed to be reliable.

Any copying, reproduction, reverse-engineering, modification, distribution, transmission or disclosure of the Property, in any form or by any means, is strictly prohibited without the prior written consent of S&P Global. The Property shall not be used for any unauthorized or unlawful purposes. S&P Global's opinions, statements, estimates, projections, quotes and credit-related and other analyses are statements of opinion as of the date they are expressed and not statements of fact or recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security, and there is no obligation on S&P Global to update the foregoing or any other element of the Property. S&P Global may provide index data. Direct investment in an index is not possible. Exposure to an asset class represented by an index is available through investable instruments based on that index. The Property and its composition and content are subject to change without notice.

THE PROPERTY IS PROVIDED ON AN "AS IS" BASIS. NEITHER S&P GLOBAL NOR ANY THIRD PARTY PROVIDERS (TOGETHER, **"S&P GLOBAL PARTIES"**) MAKE ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE PROPERTY'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE PROPERTY WILL OPERATE IN ANY SOFTWARE OR HARDWARE CONFIGURATION, NOR ANY WARRANTIES, EXPRESS OR IMPLIED, AS TO ITS ACCURACY, AVAILABILITY, COMPLETENESS OR TIMELINESS, OR TO THE RESULTS TO BE OBTAINED FROM THE USE OF THE PROPERTY. S&P GLOBAL PARTIES SHALL NOT IN ANY WAY BE LIABLE TO ANY RECIPIENT FOR ANY INACCURACIES, ERRORS OR OMISSIONS REGARDLESS OF THE CAUSE. Without limiting the foregoing, S&P Global Parties shall have no liability whatsoever to any recipient, whether in contract, in tort (including negligence), under warranty, under statute or otherwise, in respect of any loss or damage suffered by any recipient as a result of or in connection with the Property, or any course of action determined, by it or any third party, whether or not based on or relating to the Property. In no event shall S&P Global be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees or losses (including without limitation lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Property even if advised of the possibility of such damages. The Property should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions.

The S&P Global logo is a registered trademark of S&P Global, and the trademarks of S&P Global used within this document or materials are protected by international laws. Any other names may be trademarks of their respective owners.

The inclusion of a link to an external website by S&P Global should not be understood to be an endorsement of that website or the website's owners (or their products/services). S&P Global is not responsible for either the content or output of external websites. S&P Global keeps certain activities of its divisions separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions of S&P Global may have information that is not available to other S&P Global divisions. S&P Global has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process. S&P Global may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P Global reserves the right to disseminate its opinions and analyses. S&P Global Ratings' public ratings and analyses are made available on its sites, [www.spglobal.com/ratings](http://www.spglobal.com/ratings) (free of charge) and [www.capitaliq.com](http://www.capitaliq.com) (subscription), and may be distributed through other means, including via S&P Global publications and third party redistributors.