2026

REPORT TO CONGRESS

of the

U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

ONE HUNDRED NINETEENTH CONGRESS

SECOND SESSION

NOVEMBER 2026

Printed for the use of the
U.S.-China Economic and Security Review Commission
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The Commission, a legislative branch entity, was created on October 30, 2000 by the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001, Pub. L. No. 106–398 (codified at 22 U.S.C. § 7002), as amended by: The Treasury and General Government Appropriations Act, 2002, Pub. L. No. 107–67 (Nov. 12, 2001); The Consolidated Appropriations Resolution, 2003, Pub. L. No. 108–7 (Feb. 20, 2003); The Science, State, Justice, Commerce, and Related Agencies Appropriations Act, 2006, Pub. L. No. 109–108 (Nov. 22, 2005); The Consolidated Appropriations Act, 2008, Pub. L. No. 110–161 (Dec. 26, 2007); The Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113–291 (Dec. 19, 2014); and Pub. L. No. 117–286 (Dec. 27, 2022).

The Commission's full charter and statutory mandate are available online at: *www.USCC.gov/charter*.

November 18, 2026

The Honorable Charles E. Grassley
President Pro Tempore of the U.S. Senate, Washington, DC 20510
The Honorable Mike Johnson
Speaker of the U.S. House of Representatives, Washington, DC 20510

Dear Senator Grassley and Speaker Johnson:

On behalf of the U.S.-China Economic and Security Review Commission, we are pleased to transmit the Commission's 2026 Annual Report to Congress. This Report responds to our mandate "to monitor, investigate, and report to Congress on the national security implications of the bilateral trade and economic relationship between the United States and the People's Republic of China." The Commission reached a broad and bipartisan consensus on the contents of this Report, with all 10 members (two appointments remain vacant) voting unanimously to approve and submit it to Congress.

In accordance with our mandate, this Report, which is current as of October 8, 2026, includes the results and recommendations of our hearings, research, and review of the areas identified by Congress in our mandate, as defined in Public Law No. 106–398 (October 30, 2000) and amended by Public Laws No. 107–67 (November 12, 2001), No. 108–7 (February 20, 2003), 109–108 (November 22, 2005), No. 110–161 (December 26, 2007), No. 113–291 (December 19, 2014), and No. 117-286 (December 27, 2022). The Commission's charter, which includes the 11 directed research areas of our mandate, is included as Appendix I of the Report.

The Commission conducted five public hearings, taking testimony from 35 expert witnesses from government, the private sector, academia, think tanks, research institutions, and other backgrounds. For each of these hearings, the Commission produced a transcript (posted on our website at *www.USCC.gov*). This year's hearings included:

- India, China, and the Balance of Power in the Indo-Pacific
- Part of Your World: U.S.-China Competition Under the Sea
- China's Expanding Interests in Latin America: Development, Leverage, Coercion, and Crime
- Pricing the Future: China's Ambitions for Commodity Derivatives Markets
- Taking a Bigger Byte: China's Expanding Strategy for Data Dominance

The Commission received a number of briefings, both unclassified and classified, by executive branch agencies, the U.S. military, the intelligence community, foreign government officials, and U.S. and foreign nongovernmental experts on a range of topics within the Commission's mandate. The Commission includes key insights gained through these briefings either in its unclassified Annual Report or, as appropriate, in a classified annex to that Report.

The Commission conducted official fact-finding travel this year to Beijing, Hangzhou, and Shanghai, China, its first official travel to the country since 2019. The delegation held frank discussions with its interlocutors on a range of subjects, including artificial intelligence, advanced technology, biotechnology, local economic and business conditions, economic security, regional security, and global issues. The Commission also traveled to India, Panama, and Mexico to hear and discuss perspectives on China's economic, foreign policy, and security activities in each country and its region, U.S.-China relations, and efforts to reduce reliance on China in critical supply chains and infrastructure. Across these visits, Commission delegations met with U.S. diplomats, foreign government officials, think tanks, business representatives, academics, and other experts. Throughout the year, the Commission relied substantially on the work of our excellent professional staff and outside contracted research (see Appendix IV) in accordance with our mandate (see Appendix I).

The Report includes 30 recommendations for congressional consideration. The Commissioners agreed that ten of these recommendations, which appear on page 27, are the most important for congressional action. The complete list of recommendations appears on page 641 at the conclusion of the Report.

We offer this Report to Congress in the hope that it will be useful in helping guide policies to better address the economic and national security implications of the U.S.-China relationship, while advancing American interests and values. Thank you for the opportunity to serve. We look forward to continuing to work with Members of Congress in the upcoming year to address issues of concern in the U.S.-China relationship.

Sincerely,



Randall Schriver
Chair



Mike Kuiken
Vice Chair

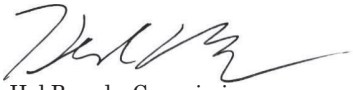
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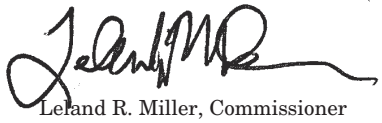
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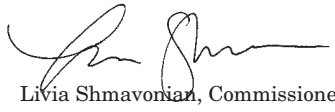
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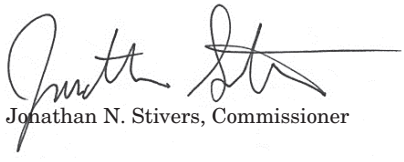
Reva Price, Commissioner



Livia Shmavonian, Commissioner



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Jonathan N. Stivers, Commissioner

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INTRODUCTION

Twenty-five years ago, China stood at the threshold of joining the WTO and Washington debated whether further opening the U.S. market and commerce to China would liberalize Beijing. Congress made a decision to create the U.S.-China Economic and Security Review Commission, charging the Commission with the responsibility to monitor the economic and national security implications of opening trade and economic ties between the United States and the People's Republic of China. Each report—with its corresponding set of legislative recommendations—issued since has documented abuses by China and the failed delivery of its promises and commitments.

In 2026, the United States and China have entered into a new phase, pursuing what both governments have termed a "constructive relationship of strategic stability based on respect, fairness, and reciprocity," built on an unusually active schedule of leader-level engagement between President Donald J. Trump and General Secretary of the Chinese Communist Party (CCP) Xi Jinping. At their May summit in Beijing, the two leaders agreed to establish a Board of Trade to identify goods the two countries can trade without crossing national security red lines and to oversee reciprocal tariff reductions as well as a Board of Investment to address specific investment issues between the two countries. At their September summit in Washington, the two sides agreed to launch a U.S.-China dialogue on artificial intelligence (AI) and to establish a bilateral communication channel for AI-related incidents. Yet China's conduct over the last 25 years shows that Beijing's version of "stability" does not mean restraint. Even as these channels have opened and expanded, Chinese leaders have continued to use every instrument of state power—military, economic, technological, legal, and diplomatic—to gain advantage over the United States and other countries while managing the risk of a confrontation that could interrupt their progress.

Beijing has offered this kind of framing before as a tool for managing the United States, often successfully. There have been several iterations, including in the 1990s, when Chinese officials proposed building a "constructive strategic partnership." During the George W. Bush Administration, the formulation was a "candid, constructive, and cooperative" relationship; during the Obama Administration, a "new type of great power relations." Whatever the packaging, a bill is attached: mutual respect for China's so-called core interests, which in Beijing's usage means yielding to its demands on Taiwan, Tibet, Xinjiang, and the South China Sea. "Constructive strategic stability" is the same product in newer wrapping, and it carries the same bill. Beijing is not seeking to stabilize competition so much as proposing the terms by which the United States would compete less aggressively—and it has chosen a phrase that makes the concession sound like statesmanship.

China accelerated its bid to reshape the international order in 2026, intensifying a coercive but controlled strategy that used its growing military, technological, economic, and diplomatic power to strengthen its position relative to the United States. Even as Beijing sought to manage its diplomatic relationship with Washington, it continued to conduct cyber operations targeting U.S. critical infrastructure, ran AI-enhanced influence campaigns aimed at the American public, attempted to co-opt U.S. officials, and carried out transnational repression on U.S. soil.

Over the last year, China remained a critical enabler of Russia's war effort and Iran's military capacity, facilitating more than 90 percent of Russia's imports of sanctioned dual-use technology and supplying Iran with drone components and materials used to make missile fuel while carefully avoiding direct involvement in either conflict. Beijing has used the growing dependence of both partners to expand its own strategic leverage.

Across Latin America, commercial relationships that appear mutually beneficial convert into political leverage the moment a government asserts its own sovereignty: weeks after Panama's Supreme Court voided a Hong Kong company's port concessions, COSCO walked out of the port of Balboa, and Chinese authorities detained nearly 500 Panama-flagged vessels, driving 230 ships off the world's second-largest registry within two months. Similarly, the Commission learned that in addition to legitimate Chinese businesses in Latin American markets, there are often illicit Chinese-linked networks that facilitate local and transnational crime. Similar to the way China has responded to its role in the U.S. fentanyl crisis, it only selectively cooperates against these destabilizing activities.

These are not the behaviors of a co-manager. They are the behaviors of a power that treats every dependence as a weapon in waiting.

Building on our recent reports, the Commission's work this year gives renewed emphasis to the growing dependencies Beijing is building across critical sectors. The rare earth controls China exercised in 2025 were a demonstration of a model, not its limit. Beijing is working to replicate that chokepoint position wherever the world depends on it for an input—active pharmaceutical ingredients and their starting materials, mature-node chips, battery materials and technology, and precursor chemicals necessary in the production of many modern goods. In several of these sectors the position is nearly consolidated, which means the window for preventing the next round of leverage is closing rapidly. Over the last few years, the Commission has made various recommendations to reduce critical dependencies on Chinese supply chains, including ideas focused on the demand side of resilience and working in coordination with allies and partners to develop joint responses, rather than walls alone, to make sure secure supply is commercially viable.

Beijing is also writing rules for domains where none yet bind. Last year the Commission documented this approach in space; this year it found the same playbook beneath the sea, where China is trying to shape the International Seabed Authority's regulatory environment in pursuit of favorable commercial mining rules. Meanwhile, it is leveraging seabed exploration, scientific research, and emerging technologies, and mapping the seafloor along the Hawaii-

to-Guam corridor and the approaches to the first island chain, in an attempt to narrow the U.S. undersea warfare advantage. In commodities, China is using consolidated state buying power to support alternative centers for exchanges, having already established the key commodity market for some products, like lithium, while compelling major iron ore producers off the established benchmark and toward its preferred pricing tools. In data, it is seeking to set the norms from the start: this year it launched a World Data Organization claiming members across 42 countries, reportedly enlisting the Chinese subsidiaries of American firms in the project. In the meantime, Washington still treats data in separate regulatory stovepipes. In each domain, the United States must contest the rules before they harden, because rules, once written, are a form of leverage for the authors that is difficult to unwind.

Nowhere are the stakes higher than Taiwan, where Beijing's aim is to win without fighting—applying gray-zone pressure, economic leverage, cyber operations, and political influence until the status quo has degraded far enough that its preferred outcome looks inevitable. This campaign has been underway for years, and the goalposts have already moved in China's favor. Taiwan is critical to American power in the Western Pacific, and its security is closely tied to allied confidence in U.S. commitments. Taiwan also produces the overwhelming majority of the leading-edge semiconductors powering the American artificial intelligence buildout, and it is equally vital for the foundational chips that run cars, appliances, medical devices, and weapons systems. The United States has spent decades building the capability to deter and defeat an invasion, and that work remains essential. We are less prepared for the alternatives China is openly exploring—blockade, quarantine, and coercion campaigns that put American geopolitical power and the world's semiconductor supply at risk without a single landing craft leaving port. This Report's analysis and recommendations address that gap directly.

The United States must compete for the countries Beijing insists do not matter. India is clear that it will not sit in any other country's camp, which is precisely why it matters so much in this competition—and why Beijing works so hard to keep India's industrial rise dependent on Chinese machinery, components, and expertise. That vulnerability is not India's alone: when Beijing demanded that Indian firms respect its export controls against the United States, it turned India's dependence into a weapon aimed at American supply chains.

Over a quarter century, the Commission's reports documented China's failures to comply with its WTO commitments when the consensus view still hoped for convergence; the Commission warned of rare earth leverage, forced technology transfer, and military-civil fusion years before those terms entered common use, and it supplied evidentiary support for measures Congress ultimately enacted, from the modernization of foreign investment screening to audit-access requirements for listings of Chinese companies to import restrictions on goods made with forced labor. The Commission continues to update its research to measure Beijing's words against its actions and tell Congress plainly where the gaps lie. The competition is real. The task now is to win it.

That task has a calendar, and the coming year is crowded. In 2027, the People's Liberation Army marks its centennial—the milestone against which Xi Jinping has ordered the capabilities for a Taiwan contingency to be ready. The CCP convenes its 21st Party Congress, where Xi is expected to claim a fourth term. Hong Kong reaches the 30th anniversary of its handover, still two decades shy of China's 50-year autonomy commitment, which Beijing dismantled in its first 25. And the trade arrangements that paused escalation in 2025 are set to expire soon after this Report goes to print, potentially returning both capitals to a landscape of live leverage. None of these dates makes conflict inevitable. Each raises the premium on decisions taken now: deterrence, resilience, and allied cohesion are built in the quiet months, not summoned in the loud ones.

For more than a decade, Beijing has worked to position itself as a technological rival and alternative to the United States, and 2026 once again revealed how much of that position is built on American ingenuity and capital. That is the campaign Beijing hopes to materialize—to have the United States accept it as its only peer—because that concession would ratify the levers of control it is building and isolate America from the allies whose weight together has created the durable power and peace of the 21st century, clearing Beijing's path to the center of future progress.

The Commission submits this Report as the 120th Congress prepares to convene. Over the past year, Beijing has treated dialogue with the United States as a means of managing risk and buying time while it continues to pursue advantage. Channels such as the new AI incident mechanism may serve U.S. interests by reducing the risk of miscalculation, but the United States cannot allow stability at the leader level to delay the policies needed to compete with and counter the PRC. China's leadership continues to plan against long-term milestones, including the PLA's 2027 readiness goal and the targets set out in the 15th Five-Year Plan, and U.S. policy must be sustained over a comparable horizon. It will be incumbent upon the new Congress, working with the Administration, to harden U.S. critical infrastructure against Chinese cyber intrusions, strengthen deterrence in the Indo-Pacific alongside allies and partners, give U.S. agencies the authorities and resources to wield economic statecraft effectively, and protect the U.S. innovation base from exploitation. Efforts to counter Beijing have long drawn support across party lines and across Administrations, and that consensus will be essential in the years ahead. This Report continues the Commission's work of identifying gaps and shortcomings in U.S. policy and providing recommendations to Congress to address them.

EXECUTIVE SUMMARY

Part I: The Year in Review

Chapter 1: U.S.-China Economic and Trade Relations (Year in Review)

In 2026, China's two-speed economy continues. The country's structural economic weaknesses became more apparent, even as the Chinese Communist Party (CCP) doubled down on its strategy to promote production and innovation in targeted industries and rely on exports to absorb the excess. Rather than address persistent weak domestic demand and deflationary pressures, China allowed its consumption support programs to expire and continues to funnel credit and investment toward its oversaturated manufacturing sector. The conflict in Iran has introduced a cyclical element to these challenges as global energy supplies tighten, raising costs for China's manufacturers and leading to economic hardship for many of China's trade partners.

China's export of its excess production means it is well on its way to a trade surplus of over $1 trillion for the second year in a row. This "China Shock 2.0"—a flood of low-cost exports—is hurting economies all over the world that fail to put up barriers to China's market distortions as their manufacturing sectors are undercut by cheaper products. Many of China's trade partners have introduced more measures to protect domestic manufacturing sectors, including traditional WTO remedies as well as non-tariff barriers. At the same time, China has sought to use concerns about U.S. trade policy to enhance its market access, ironically, claiming to be a more reliable trading partner that supports the rules-based trading system.

Instead of addressing these growing issues, China's 15th Five-Year Plan released in 2026 showcases its continued focus on technological dominance. Beijing hopes its efforts to dominate technology supply chains and innovate at the frontier—combined with its own de-risking measures—will allow it to weather the broader economic slowdown, achieve self-sufficiency, and enhance its geopolitical power. China has also deepened and expanded its toolkit to exert economic leverage on global markets as well as resist foreign sanctions and export controls.

Key Findings

- China's two-speed economy persisted in 2026. Weak domestic demand and shrinking profit margins weighed on businesses at home, even as General Secretary of the CCP Xi Jinping pressed ahead with efforts to dominate global manufacturing supply chains and advanced technology sectors while strengthening Beijing's ability to exert economic leverage and withstand pressure from abroad.

- China still has not lived up to its repeated promises to spur greater consumption. Continued malaise in the property market has kept domestic demand muted, contributing to excess supply in the manufacturing sector. An estimated 87 percent of Chinese urban households own property; with average home prices having declined 20–25 percent since their peak in 2021, the average Chinese household's wealth has been reduced significantly.
- Weak labor demand and technological displacement are pushing more workers into "flexible" employment in the "gig" economy, leading to lower and less stable earnings, limited career advancement, and weaker social protections. As of 2026, 320 million people worked flexible jobs, including workers from traditionally professional occupations, such as software engineers, financial analysts, and healthcare workers, placing constraints on China's ability to boost consumption.
- Beijing implicitly acknowledged the problem of excess production through its "anti-involution" campaign targeting harmful price competition, as Chinese companies repeatedly slash prices to unload surplus output. The campaign remains limited in 2026, however, and Beijing is unlikely to move more aggressively to curb supply; doing so would undercut exports, a core growth driver, and eliminate many firms' sole pressure release valve, in addition to putting greater pressure on the labor market.
- China Shock 2.0 shows no signs of abating: China's exports accelerated in the first half of 2026 after a record trade surplus in 2025. The resulting flood of exports is hurting manufacturers in developed and developing economies alike, while Beijing has used a range of tactics to forestall a coordinated response.
- Despite the current détente with the United States, China continues to expand its ability to wield supply chain leverage, withstand U.S. and allied sanctions and export controls, and retaliate against foreign measures the CCP deems "unjustifiable." These efforts are setting up a clash between competing regulatory systems that could leave foreign companies operating in China caught between conflicting demands while raising the costs the United States and its partners must weigh when using economic statecraft.
- The 15th Five-Year Plan confirmed that China remains committed to mobilizing the full weight of the state to advance its technology sector. Beijing treats artificial intelligence (AI) as a general-purpose technology—the connective layer driving other priorities, including biotechnology, robotics, and quantum—believing that mastering these foundational technologies will secure a durable, economy-wide advantage and overcome its economic challenges.
- China continues to face significant compute constraints due to U.S. export controls, yet its frontier AI capabilities have largely kept pace with advances in the United States. Chinese developers are using techniques such as distillation to steal the

methods and outputs of top U.S. models to develop capable, lower-cost Chinese alternatives. By releasing these models with open weights and encouraging their adoption abroad, China aims to make its AI systems the global default. U.S. leadership in frontier AI remains real, but China's strategy for spreading its models could make that lead less secure than it appears.

- As China's technologies advance, Beijing is refining its economic toolkit to keep capital, technology, data, and talent at home: screening outbound investment, blocking foreign acquisitions of Chinese firms, restricting AI researchers at frontier labs (and their families) from leaving the country, and limiting the types of foreign investment permitted in its AI companies.

Chapter 2: U.S.-China Security and Foreign Affairs (Year in Review)

Throughout 2026, China used its growing military, technological, economic, and diplomatic power more assertively while seeking to avoid direct confrontation with the United States. Summits between President Donald J. Trump and General Secretary of the CCP Xi Jinping in May and September 2026 reflected this dual-track approach. Beijing embraced "constructive strategic stability" as a framework for managing competition with the United States, even as it continued to strengthen its military capabilities, press territorial claims in the Indo-Pacific, support U.S. adversaries, and expand its influence abroad.

China continued to build the military capabilities needed to shift the regional balance in its favor while pressing its interests across the Indo-Pacific. Despite sweeping purges of the People's Liberation Army's (PLA) senior leadership, military modernization continued, including advances in amphibious warfare, uncrewed and AI-enabled systems, and nuclear forces. Beijing paired these growing capabilities with a more persistent military and law enforcement presence around Taiwan, increased pressure on Japan, and continued efforts to assert its maritime claims in the South China Sea. China also adjusted the timing and intensity of its activities when confrontation threatened other priorities, underscoring Beijing's effort to advance its regional objectives while limiting the risk of direct conflict.

Beijing used global conflicts to strengthen important partnerships and improve China's international standing while limiting its own exposure to its partners' confrontations with the United States and U.S. allies. China sustained Russia's war effort and Iran's military and economic capacity without becoming directly involved in either conflict. Beijing also expanded engagement with several U.S. allies and partners while portraying itself as a more stable and predictable international actor. China sought to expand BRICS and Shanghai Cooperation Organization (SCO) activities into new areas of security, technology, finance, and governance while expanding strategic infrastructure and security relationships across Africa and Latin America.

China's greater reach did not mean Beijing could always get other countries to follow its lead. Members of BRICS and the SCO resisted or slowed some Chinese-backed initiatives, while governments across the Indo-Pacific pushed back against Chinese pres-

sure. China's expanding security relationships also did not always give Beijing or its partners the ability to shape events in a crisis. These limits did not substantially alter China's direction. Beijing continued to pursue incremental gains, grow its military power, and advance its technology sector, strategic access, and global influence. With two more Trump-Xi meetings expected before year's end, Beijing will likely continue using "constructive strategic stability" to cement its version of the relationship while steadily strengthening China's position.

Key Findings

- China accelerated its bid to reshape the international order in 2026. Beijing pursued a coercive but controlled strategy, using its growing military, technological, economic, and diplomatic power to strengthen its position relative to the United States while managing the risk of a destabilizing confrontation. China's actions before and after the Trump-Xi summits demonstrated that its version of "constructive strategic stability" does not mean constraining China's broader competition with the United States.
- Even as Beijing sought to manage its diplomatic relationship with Washington, it continued destabilizing activities aimed at the United States, including cyber operations targeting U.S. critical infrastructure, AI-enhanced influence campaigns aimed at the U.S. public, attempts to co-opt U.S. officials, and transnational repression on U.S. soil.
- Xi Jinping concentrated military authority to a degree not seen since the Mao era through sweeping purges of the PLA's senior leadership, placing greater weight on his personal judgment in decisions over whether and how to use force. Despite the upheaval, PLA modernization continued toward its 2027 readiness milestone for a Taiwan contingency.
- China expanded the scale and sophistication of coercive gray zone activities around Taiwan in 2026 while continuing to build military capabilities for a future conflict. Beijing rehearsed blockade operations, practiced mobilizing civilian fishing fleets, and conducted its first-ever "traffic enforcement operation" in waters east of Taiwan, integrating military, law enforcement, and civilian assets to establish a more persistent presence around the island.
- China remained a critical enabler of Russia's war effort and Iran's military capacity in 2026 while carefully avoiding direct involvement in their conflicts. China facilitated more than 90 percent of Russia's imports of sanctioned technology and supplied Iran with drone components and materials used to make missile fuel while using the growing dependence of both partners to expand its own strategic leverage.
- China's new Ethnic Unity Law extended Beijing's legal claims beyond its borders, creating a statutory basis to target overseas individuals and organizations for activities it deems threatening to "ethnic unity." The provision could create legal and political

exposure under Chinese law for U.S. persons and institutions engaged in Taiwan advocacy or Uyghur, Tibetan, and other minority rights work.

- Beijing expanded efforts to build long-term influence and strategic access abroad in 2026. China grew its partnerships, pushed multilateral institutions into new security and governance roles, embedded dual-use infrastructure across Africa and Latin America, and weaponized commercial relationships for political coercion. Beijing also sought to portray itself as a more reliable partner than the United States, but resistance from key partners revealed the limits of its ability to dictate outcomes.

Part II: China's Efforts to Expand Its Global Power and Influence

Chapter 3: China's Other Front: India and the Future of U.S. Strategy in the Indo-Pacific

India is one of the few powers outside the U.S. alliance system with the scale to materially affect the long-term competition with China. India is the world's most populous country and largest democracy. It is a nuclear power with one of the world's largest militaries. It shares a 2,100-mile contested border with China and occupies a commanding position along critical sea lanes in the Indian Ocean that carry much of China's energy and trade. While the Western Pacific remains the principal geographic theater of U.S.-China competition, New Delhi presents Beijing with another strategic challenge both on land and at sea. India's rivalry with China is driven by its own strategic interests, not by alignment with Washington. For the United States, a stronger India could contribute to a more favorable balance of power in Asia while providing an important alternative to Chinese manufacturing and supply chains.

China understands this, and it is actively working to suppress India's rise across multiple domains. Beijing is continuing its military buildup, asserting sovereignty claims along the disputed border, deepening military support for Pakistan, and expanding its naval and surveillance presence in the Indian Ocean. China's sharpest tool, however, is economic. Beijing is using its control over critical industrial inputs, technology, and expertise to preserve its manufacturing advantages and make it harder for India to build competing capacity. China has restricted exports of key inputs and products to India to exert economic pressure, recalled engineers and withheld equipment to slow India's electronics manufacturing, slashed pharmaceutical input prices to undercut new Indian plants, and imposed export controls on battery technology to impede the development of India's clean energy industry. More consequential for Washington, in 2025 Beijing began to require Indian firms to certify that certain Chinese-supplied inputs would not be re-exported to the United States. While China suspended this requirement as part of the broader Trump-Xi trade détente, it is a lever that can turn India's dependence on China into a weapon aimed at U.S. supply chains.

India is responding to Chinese pressure while balancing security concerns against its economic development needs. New Delhi is modernizing its military, building domestic manufacturing capacity,

restricting Chinese involvement in sensitive sectors, and expanding cooperation with the United States and other partners. However, India recently eased some restrictions on Chinese investment and equipment as the costs of limiting access to Chinese inputs, technology, and expertise have grown. Much of India's industrial expansion still runs on Chinese machinery, components, and technical know-how, and its dependence on Chinese components has deepened even as its de-risking measures multiplied.

These tensions create both opportunities and constraints for the United States. Washington and New Delhi have spent a quarter century building closer ties across defense, technology, and trade, but India will continue to guard its strategic autonomy rather than align automatically with U.S. objectives.

The two governments have established an ambitious foundation for cooperation. A ten-year defense framework, a bilateral trade agreement under negotiation, technology initiatives ranging from semiconductors to biomanufacturing, and a revitalized Quadrilateral Security Dialogue all point toward deeper ties. The legal and institutional architectures needed to support that cooperation have not changed as quickly, however. Export control regimes, procurement rules, and financing tools that were designed for a different era and a different strategic environment limit what these initiatives can deliver. The result is a growing gap between the ambitions of the partnership and what its underlying rules and institutions can deliver.

Key Findings

- India is one of the few countries with the demographic, economic, military, and geographic scale to significantly affect the long-term balance of power with China. Beijing views India's rise as a strategic challenge and is applying military, economic, maritime, and other forms of pressure to constrain it. India has its own interests driving its rivalry with China and is committed to "strategic autonomy," so closer U.S.-India cooperation will not necessarily translate into alignment with broader U.S. objectives.
- The unresolved border remains the central fault line in China-India relations. The 2020 Galwan Valley clashes marked a major turning point, making India less willing to separate the territorial dispute from its wider relationship with China. Although New Delhi and Beijing have gradually rebuilt ties since late 2024, strategic distrust remains high and India continues to view peace along the border as necessary for broader normalization.
- China's evolving military partnership with Pakistan has made a two-front contingency an increasingly critical concern for India. The May 2025 India-Pakistan conflict demonstrated how China could strengthen Pakistan during a crisis without Beijing entering the fighting directly, adding to India's concerns about how a future conflict with Pakistan could develop.
- China's expanding naval and surveillance presence is beginning to erode India's longstanding strategic advantages in the

Indian Ocean and place additional demands on Indian forces. Beijing is building the infrastructure and logistical networks needed to sustain more persistent naval operations while Chinese naval, surveillance, and research vessels operate closer to India and critical sea lanes. China is also beginning to bring its South China Sea playbook to the Indian Ocean, invoking historic rights and renaming undersea features in ways that could lay the groundwork for more assertive activities and potential claims of jurisdiction.

- India's dependence on Chinese manufacturing has become an important source of leverage for Beijing—and a growing vulnerability for the United States. China has restricted industrial inputs, equipment, technology, and expertise to India and required some Indian firms to certify that Chinese-supplied goods would not be re-exported to the United States. Chinese pricing has also undercut new Indian pharmaceutical production, illustrating Beijing's intent to undermine Indian suppliers that can compete with established Chinese producers. These dependencies complicate U.S. efforts to diversify supply chains away from China by shifting production to India.
- India has reduced its exposure to China in some sensitive sectors, but its underlying industrial dependence has continued to grow. New Delhi has restricted Chinese investment, limited Chinese participation in strategic industries, and subsidized domestic manufacturing, yet India's industrial growth has increased demand for Chinese machinery, components, and technical expertise. India's efforts to build domestic supplier networks will require substantial capital, technology, and time, even as it progresses as a global China Plus One hub.
- U.S.-India cooperation has become more ambitious, but many of the rules and institutions governing it remain poorly suited to the partnership's current scope and strategic importance. New defense, technology, supply chain, and maritime initiatives have broadened the partnership, but export controls, procurement requirements, financing constraints, and fragmented bureaucratic processes continue to delay or limit implementation.

Chapter 4: China's Predatory Diplomacy in Latin America: Broken Promises, Harmful Practices

For two decades, China has presented itself to Latin America and the Caribbean as a provider of economic opportunity without political conditions, infrastructure without Western constraints, and respect for sovereignty without interference in domestic affairs—yet it has repeatedly failed to deliver. Its economic engagement has reinforced a neocolonial trade pattern in which the region ships raw materials and buys back finished goods. A "China Shock 2.0" export wave is undercutting local manufacturers and driving the region's trade deficit with China to a record high. Beijing's shift from financing toward ownership and control of ports, power grids, telecommunications, digital, and space infrastructure has converted commercial investment into political leverage and strategic vulnerabilities.

Beneath its pledge of noninterference, Beijing works to influence regional institutions through subnational diplomacy, media and diaspora cultivation, coercion relating to Taiwan, and corruption. At the same time, Chinese-linked actors sustain a "Silk Road of Crime" supplying fentanyl precursors, laundering cartel proceeds, driving illicit resource extraction, and supporting other destabilizing illegal activities that Beijing only selectively addresses.

These trends unfold during a period of both vulnerability and opportunity. China's principal authoritarian partners are weakening: Nicolás Maduro has been removed in Venezuela, Cuba faces an acute crisis, and Nicaragua confronts intensifying U.S. pressure. The United States is contesting Chinese influence and finding receptive audiences among new pro-U.S. leaders moving to diversify trade, restrict Chinese technology, and reclaim strategic assets. Yet two decades of embedded relationships across the region's economies, infrastructure, and institutions have created dependencies that are costly to unwind, and China's successes in emerging sectors such as electric vehicles (EVs) and AI ensure it will remain formidable.

Key Findings

- China has inconsistently delivered on promises to advance Latin American development, sovereignty, and security. Instead, its engagement has deepened regional dependence, constrained government autonomy, and aggravated governance challenges.
- The United States is pushing back against some instances of Chinese influence, including by pressuring Beijing's authoritarian partners in Venezuela, Cuba, and Nicaragua. China's muted response, along with growing skepticism among new pro-U.S. leaders, may constrain its near-term agenda. Nevertheless, its subnational networks, critical infrastructure presence, and strength in technologies such as EVs and AI will continue to give it influence in the region.
- The view that China's regional engagement centers on high-profile Belt and Road Initiative (BRI) projects is outdated. Beijing now uses national, subnational, and multilateral channels to create overlapping economic and political dependencies that endure across election cycles.
- Beijing's trade ties have hindered Latin American industrialization and diversification. The region exports raw materials and imports finished goods, while People's Republic of China (PRC) firms dominate higher-value refining. As exports to China have risen, regional manufacturing employment and value added have declined. China Shock 2.0 excess capacity exports threaten further economic harm to the region's manufacturers, contributing to a record $46.9 billion regional trade deficit with Beijing last year and prompting some governments to raise trade barriers.
- China's operational control of ports, telecommunications, energy, and digital networks creates strategic leverage over host governments and potential vulnerabilities for regional sovereignty and U.S. national security.

- Beijing frequently operates below the national level, cultivating governors, mayors, and provincial officials through commercial agreements, sister city partnerships, and Party contacts. These relationships survive elections, provide alternative channels when national governments resist Beijing, and create commitments that are difficult to unwind.
- China's selective law enforcement cooperation leaves gaps that China-linked actors exploit. A "Silk Road of Crime" supplies criminal syndicates with drug precursors, money laundering services, illicit extraction networks, and shell companies—activities Beijing often declines to address.

Chapter 5: Active Intercept: China's Efforts to Narrow U.S. Undersea Advantage

For decades, the United States has enjoyed a military advantage beneath the sea. China is systematically seeking to erode that advantage. Even as it modernizes and expands its submarine force, Beijing is pursuing multiple means to constrain U.S. submarine operations, particularly by improving its ability to detect them inside the first island chain through a layered sensing architecture and a growing portfolio of autonomous underwater systems. These efforts could be consequential in a Taiwan contingency, where U.S. submarines would pose a significant threat to PLA forces crossing the Taiwan Strait.

China treats the undersea domain as a single arena of strategic competition. Beijing is integrating military modernization, scientific research, commercial industries, and emerging technologies into a mutually reinforcing ecosystem that allows capabilities and knowledge developed for one purpose to support others. Military-civil fusion provides institutional channels for scientific and commercial capabilities to support national and defense priorities. Submarine modernization, undersea sensing, autonomous systems, and subsea telecommunications infrastructure provide Beijing multiple ways to improve its ability to understand, operate in, and ultimately contest the undersea environment. Regardless of whether commercial seabed mining becomes economically viable, China's oceanographic research and seabed exploration have produced environmental data, seafloor knowledge, and deep-sea technologies with applications for submarine operations, undersea sensing, and anti-submarine warfare.

China remains well short of displacing the United States as the dominant undersea military power. Its sensing networks remain fragmented, autonomous systems face substantial technical barriers, and many of its more ambitious concepts remain developmental. However, China does not need to eliminate the U.S. advantage to constrain U.S. operations. Continued gains in sensing, autonomous systems, submarines, and dual-use technologies could narrow that advantage enough to make U.S. operations in the Western Pacific—especially within the first island chain—more difficult, more costly, and more uncertain.

Key Findings

- China is seeking to erode the U.S. undersea advantage through multiple lines of effort that extend well beyond traditional na-

val modernization. Beijing's investments in submarines, sensing networks, autonomous systems, oceanographic research, subsea infrastructure, and seabed technologies give it several avenues to narrow the U.S. advantage, with institutional links that allow capabilities and knowledge developed in one area to support others.

- China does not need to match the United States submarine-for-submarine to alter the military balance in the Indo-Pacific. China's most immediate undersea objective is not destroying U.S. submarines but rather making them easier to detect. Even intermittent detection of U.S. submarines inside the first island chain could force changes in how they are routed and employed, increase the effort required to preserve stealth, and raise the risks of U.S. intervention in a Taiwan contingency.
- China is developing a layered sensing architecture that could make strategically important waters less permissive for U.S. submarines. Satellites, autonomous systems, seabed sensors, and oceanographic mapping are expanding China's ability to collect undersea data, but integrating these systems into a reliable operational picture remains a major challenge.
- The PLA has a growing portfolio of uncrewed underwater vehicles (UUVs) that conduct a range of missions, but its ability to employ large numbers of them effectively remains unproven. UUVs already support oceanographic collection, sensing, and surveillance, while China is developing systems for mine warfare and other combat missions. If China overcomes persistent communications and coordination challenges, its manufacturing capacity could become an important advantage in fielding autonomous systems at scale.
- China's submarine modernization will place additional demands on U.S. forces charged with preserving the undersea advantage. A larger, quieter, and increasingly nuclear-powered Chinese submarine force will be more difficult to monitor and track, extend the PLA Navy's operational reach, and improve the survivability of China's sea-based nuclear deterrent.
- China's role across the subsea cable industry gives Beijing access to critical infrastructure and strategically important waterways with military and intelligence value. Chinese firms manufacture, own, install, and repair cables supporting global communications, creating opportunities for intelligence collection and maritime surveillance as well as coercion or disruption during a crisis. U.S. actions have constrained Chinese participation in some projects but have not eliminated Beijing's presence across the global cable ecosystem.
- China is gaining military value from seabed exploration and oceanographic research, driving investments well beyond seabed mining's commercial viability. Seafloor mapping and environmental data can improve understanding of the acoustic environment and inform submarine operations, anti-submarine warfare, and sensor placement, while deep-sea exploration advances relevant robotics and engineering capabilities. China's

investments could also position its firms to play a leading role if seabed minerals become commercially important.

Chapter 6: The Price of Everything: China's Bid to Reshape Global Commodities Markets

U.S. Ambassador to China David Perdue recently warned that Beijing had "weaponized" its dominant position in critical minerals against the world. China's licensing regime and new regulations could expose individuals trying to diversify supply chains away from China to arrest, criminal prosecution, and asset seizures. While critical minerals are the most urgent chokepoint, China is working to exert greater influence over global commodities markets, pursuing numerous policies that expand its leverage over production and refining, supply chains, and pricing. China has expanded its production and processing of core commodities and become a major force in many segments of agricultural, metals, and energy markets. It has also spent the last three decades developing domestic futures exchanges as a further avenue to exert influence.

The United States and its allies in the UK and elsewhere have long dominated global financial markets, governing the process by which prices of key commodities are negotiated. These deep, liquid markets reduce volatility and let buyers and sellers agree on a fair price—not one dictated by the government of a non-market economy. China views this status quo as a vulnerability, and its 15th Five-Year Plan signals that it will continue to step up efforts to develop its futures markets and optimize domestic commodity supply chains.

China's influence has already transformed established markets. China has significant reach into the physical infrastructure that transports bulk commodities around the world, vertically integrating mineral extraction, transportation and logistics, refining, and manufacturing of end goods. In 2012, Hong Kong Exchanges and Clearing acquired the London Metal Exchange, which has since approved more Chinese exchange and clearinghouse members, added the renminbi (RMB) as an acceptable currency for margin, and deepened its ties with China's metals industry.

Chinese domestic commodity exchanges are some of the world's largest by trading volume, and they are opening more trading to foreign participants. At the start of 2020, China allowed foreign investors access to only six futures contracts and no options contracts; today it allows foreign access to over 100 combined. Contracts for lithium traded on the Guangzhou Futures Exchange have achieved global benchmark status over similar contracts introduced by exchanges in the United States and the UK. China has used the China Mineral Resources Group (CMRG), a state-owned consolidated purchaser of iron ore, to compel producers to use its preferred benchmarks and settle more trade in RMB. Even in crude oil, one of the largest and most liquid markets long based on U.S. dollar pricing, China has fostered a regional benchmark for medium sour crude denominated in RMB. This benchmark not only expands China's influence over crude pricing but also could be used to further facilitate sanctions evasion.

As Chinese benchmarks become more widely adopted, China could set the parameters of contracts that global buyers and producers must meet and encourage use of Chinese firms and exchanges. China's success in broader commodities markets has heretofore been hampered by the network effects enjoyed by existing exchanges and hesitation from international producers and consumers to use China's financial markets, which are subject to currency and capital controls, are not protected by the rule of law, and have a high potential for opaque regulatory intervention. However, as a witness noted in written testimony for the Commission, "China's approach is gradual and strategic. It is not attempting to replace existing benchmarks overnight. Instead, it is building parallel systems that may, over time, reshape the global landscape."

Key Findings

- China is moving to translate its physical presence in markets into an alternate network of price benchmarks and futures contracts to give it leverage in key commodities. China has the largest physical presence in commodities markets but has nowhere near commensurate influence or leverage over prices under the current system, partly due to the financialization of commodities markets and the critical role of the U.S. dollar as the dominant currency of exchange.
- China is the world's largest buyer, producer, importer, or refiner of many key commodities. Reliance on imported raw materials led China to take numerous measures to vertically integrate access and operations, including by purchasing the rights to overseas mines, building transport and logistics infrastructure to transport raw materials from overseas to China, and becoming a global leader in refining capacity.
- Beijing is using its physical presence in markets to displace established price benchmarks. In 2022, China consolidated its market power by establishing CMRG to manage purchases of iron ore on behalf of the country's steelmakers. China has since compelled sellers to shift to preferred pricing benchmarks. A state-owned entity, CMRG's political heft has allowed it to issue directives to steel mills to boycott certain suppliers and obtain the support of Chinese government agencies in enhancing its negotiating leverage, including more stringent cargo inspections and higher port storage fees.
- China is leveraging its dominant position in extraction and refining to make rapid progress in expanding domestic commodity futures trading. It is also making progress improving the quality of price signals generated by trading activity. Chinese commodity futures are mostly "in China, for China," a common approach by the CCP to establish an initial market at home before expanding abroad. Still, China has limited influence over global commodity prices, which are largely set by markets, are denominated in U.S. dollars, and are tied to financial exchanges in the United States and other countries.

- To build greater sway in international commodities markets, China is pursuing a multipart strategy that has already influenced pricing and governance:
  - China is leveraging its position in certain newer markets where it has a dominant position in numerous segments of the supply chain, particularly those relating to critical minerals for renewable energy and batteries—for example, lithium. China's dominance of refining and downstream manufacturing limits the capacity for alternative benchmarks to form.
  - China is expanding its network of warehouses for physical delivery in Hong Kong, Shanghai, and abroad to support futures contract settlement. Warehouses linked to commodities exchanges provide the essential infrastructure for storing, managing, and delivering raw materials when futures contracts expire. China's moves increase the appeal of using Chinese futures, expand China's role in price discovery, and grow offshore access to physically delivered Chinese futures.
  - As China shifted its purchases of soybeans from the United States to Latin America, the market is fragmenting between a CME Group exchange and China's competing soybean futures contracts traded on the Dalian Commodity Exchange. U.S. farmers are exposed to further volatility from trade frictions as China substitutes U.S. soybeans for imports from Latin America. China's state-owned agricultural giants are investing in overseas grain storage, port terminals, and soybean crushing capacity that afford them greater insight into pricing dynamics at each stage of production.
  - The conflict in Iran has demonstrated how China has reduced its reliance on global oil markets. Although China's onshore oil benchmark still lags behind major Western benchmarks, it has become an important regional price discovery tool. The existence of an RMB-denominated and locally relevant price discovery tool could allow China's independent refiners to better hedge price risk associated with purchases of sanctioned oil.

Part III: China's Technology Ambitions

Chapter 7: Collect, Steal, Buy, Fuse, Monetize: How China Is Turning Data into Assets and Ammunition

Beijing sees data as a source of national power, not just a commercial asset or a privacy concern. Under Xi Jinping, it has built a state-backed framework for collecting and using data from across society to advance economic, technological, intelligence, and military goals. China's strategy is to maximize the amount and variety of data available to Chinese actors (including but not limited to the Chinese government), improve the state's ability to aggregate and analyze those data, and convert them into economic and strategic advantage. Even seemingly mundane or disconnected information can become more valuable when collected, combined, and analyzed to identify "patterns of life," behaviors, relationships, and anomalies.

China is building the infrastructure and sector-specific datasets needed to put this strategy into practice. Economically, Beijing has designated data as a factor of production and encouraged local governments and companies to commercialize data within a state-controlled framework. In AI, Beijing is promoting a "data flywheel" in which deployment of AI systems generates real-world data that can improve those systems and support further deployment. In biotechnology, Chinese entities can draw on large domestic biological datasets and, in some circumstances, foreign repositories, while Chinese regulations restrict foreign access to comparable Chinese data. Data also support China's military, intelligence, and security objectives: the PLA is researching how new datasets can improve equipment, train AI systems, monitor adversaries, identify vulnerabilities, and support operational planning, while Chinese cyber actors have already acquired sensitive personal, technical, and critical infrastructure information with potential intelligence and operational value.

For the United States, the challenge extends beyond protecting individual databases from theft. China can acquire data through both illicit and lawful channels and use them for espionage, coercion, influence operations, technological development, and military planning. U.S. measures have restricted some paths to sensitive American data, but significant vulnerabilities remain, as current U.S. policy largely addresses cybersecurity, privacy, foreign investment, biotechnology, and AI as separate issues. In contrast, Beijing approaches data as a strategic resource that spans across sectors and issues. However, China's ability to translate its data resources into concrete advantages is not assured: commercial data remain fragmented, and high-quality AI training data are scarce. Even so, its drive to collect, aggregate, and exploit data at scale poses an enduring challenge to U.S. competitiveness and national security.

Key Findings

- Beijing pursues a state-directed strategy to acquire, consolidate, and exploit data from a vast array of sources, including state surveillance infrastructure, cyber operations, scientific and biomedical sources, and even routine commercial activity, while leveraging AI to fuse disparate datasets into actionable intelligence.
- China acquires data illicitly through state operations as well as via a contracted "hackers-for-hire" ecosystem. This provides it with access to vast troves of information via cyber operations. Yet cyber theft is only one component of a far broader collection apparatus.
- China's legal and institutional architecture ensures state access to data held by any Chinese entity, while cross-border controls allow Beijing to retain high-value Chinese data domestically. Any data a Chinese company collects can be claimed and absorbed by the state, no matter how mundane their commercial purpose.
- In 2020, China became the first country to designate data as a factor of production, alongside land, labor, capital, and technology, a deliberate decision that elevated data to a strategic nation-

al asset and an instrument of national power. It is perhaps the only country to have built an end-to-end, state-directed system to control, collect, aggregate, deploy, and exploit data.

- China converts data into power through aggregation. Capabilities refined through its domestic surveillance state—fusing biometric, financial, communications, behavioral, and any other data into predictive profiles—are being applied to foreign targets, with AI accelerating the transformation of disparate datasets into "pattern-of-life" intelligence.
- Beijing is converting its data position into competitive advantage: building a national data infrastructure to power its digital economy; enforcing strategies to generate high-quality AI data by deploying the model in a system that feeds the data back for further iteration; and engineering deliberate asymmetries—most starkly in biotechnology—that maximize access to foreign data while denying reciprocal access to China's data.
- China's data dominance strategy threatens U.S. national security. The aggregation of data on Americans enables espionage, coercion, and influence operations with unprecedented precision; supports pre-positioning campaigns such as Volt Typhoon that collect critical infrastructure data to support "system destruction warfare" in a future conflict; and facilitates the use of stolen technical data to accelerate PLA modernization. Where Washington sees a privacy problem, a cyber problem, and a trade problem, Beijing sees a single resource of national power and has organized its laws, economy, and intelligence apparatus to control it end to end.

Chapter 8: Silicon to Sovereignty: China's Bid to Control the AI Stack from Wafer to Weights, Part One

Competition between the United States and China for leadership in AI extends across the technologies, infrastructure, and applications that underpin the development and deployment of AI systems. Leadership at one layer can create advantages elsewhere in the stack, but weaknesses at one layer can also constrain the performance of the entire system. This makes control over key AI-related technologies, infrastructure, and supply chains a critical issue for U.S. economic and national security. The United States and its allies and partners currently hold substantial advantages in many of the most technically difficult and concentrated segments of this stack. U.S. firms lead in advanced AI chip design and software; Taiwan dominates leading-edge semiconductor fabrication; the Netherlands maintains a monopoly over extreme ultraviolet lithography systems; and South Korean and U.S. firms currently dominate high-bandwidth memory. Together, these advantages have constrained China's access to the advanced computing resources required to develop frontier AI systems.

China has pursued technological self-sufficiency for more than two decades, and U.S. technology restrictions since 2019 have increased the challenges—and likely the urgency—of Beijing's localization campaign. Export controls on advanced AI chips, semiconductor manufacturing equipment, and related technologies have disrupt-

ed China's access to advanced computing capabilities and slowed the development of its indigenous semiconductor ecosystem, even as Chinese firms continue to make progress. China is simultaneously attempting to engineer around its remaining technological chokepoints while leveraging advantages elsewhere in the AI stack, including China's dominance of critical minerals and materials. These strengths could help China compensate in part for less efficient domestic AI hardware and other technological constraints.

Ultimately, U.S.-China AI competition is unlikely to be determined by dominance at any single layer of the technology stack. Despite constraints on advanced compute, Chinese firms have produced near-frontier models with fewer advanced computing resources, while inexpensive open-weight models have facilitated their rapid international adoption. China could therefore remain dependent on foreign technology at critical portions of the infrastructure layer while gaining influence in global model and application ecosystems. Conversely, U.S. leadership in advanced computing will not automatically translate into broader AI leadership without sufficient energy, networking, and data center infrastructure to deploy these technologies at scale. U.S. and allied export controls can preserve critical technological advantages and slow China's progress, but their strategic value ultimately lies in buying time for the United States to strengthen or solidify its competitiveness across the entire AI technology stack. Part Two of this research will dive deeper on how China is attempting to overcome its own chokepoints across the AI tech stack, including those associated with software, servers, hyperscalers, and energy constraints.

Key Findings

- The United States and allies hold decisive advantages at the top of the stack, and export controls are the principal tool slowing China. Their continued effectiveness depends on closing loopholes and working closely with allies to prevent their erosion.
- For more than two decades, Beijing has been pursuing self-sufficiency and global competitiveness across the entire semiconductor ecosystem and—more recently—the AI technology stack. U.S. and allied controls did not drive China's indigenization efforts, but they have added urgency in recent years.
- Although China has made some progress in achieving its goals, it has not yet closed the hardest chokepoints—including the most advanced capabilities in logic fabrication, memory, and semiconductor manufacturing equipment, as well as the Nvidia Compute Unified Device Architecture (CUDA) software moat—and likely will not for some time.
- China is investing heavily to engineer around major chokepoints: alternative lithography, advanced packaging, photonics, and an open-weight, lower-compute model strategy. Success is not assured, but U.S. policymakers need to closely follow developments in these areas.
- China's dominance in processing and refining several critical minerals and rare earth elements creates upstream vulnerabilities throughout the AI technology stack for the United States

and its allies and partners. Beijing has demonstrated its willingness to leverage this position through export restrictions, raising the risk that it could disrupt U.S. access to materials needed for advanced semiconductors, data center hardware, power systems, and other AI infrastructure during a geopolitical or trade dispute.

Part IV: Taiwan and Hong Kong

Chapter 9: Taiwan: A Crucial Window for a Critical Partner

The next 24 months could shape cross-Strait relations for years. Beijing will assess Taiwan's 2026 and 2028 elections to gauge whether coercion and political pressure can move Taiwan toward unification. However, even an outcome the PRC favors may not deliver what it expects. Taiwan's public remains overwhelmingly opposed to political integration with China, limiting how far any elected government can move toward Beijing. Xi Jinping could therefore reach 2028 with greater military capabilities and less confidence that political and economic pressure and other forms of coercion can achieve unification. This realization may increase the risk that China will take more aggressive coercive actions against Taiwan, including imposing a quarantine or blockade.

The stakes for the United States have never been higher. Taiwan is indispensable to the Indo-Pacific balance of power and to U.S. technological leadership and economic security. Taiwan's central geographic location in the first island chain and near key maritime routes constrains China's options and concurrently enhances U.S. access, capabilities, and operational freedom in the Indo-Pacific. In recent years, Taiwan's world-leading semiconductor industry has become foundational to U.S. leadership in advanced technologies, particularly AI. A change in Taiwan's status would alter the military balance in the Western Pacific, test confidence in U.S. alliances, and threaten critical technology supply chains.

Beijing is pursuing its objectives through coercion backed by a credible threat of force. China is seeking to weaken Taiwan's resistance through military and coast guard activity, cyber and information operations, economic leverage, lawfare, and political influence while building capabilities to blockade or invade the island. Taiwan has responded with increased defense spending, military reforms, investments in resilience, and stronger cooperation with the United States, but significant vulnerabilities remain. Political divisions have slowed defense investments, Taiwan depends heavily on imported energy, and nearly $30 billion in approved U.S. weapons remained undelivered as of August 2026. The near-term challenge is therefore not only to deter invasion but to prepare better for the coercion already happening and likely to escalate—sustained pressure designed to change the status quo without triggering war.

Key Findings

- The next 24 months will test Beijing's belief that it can move Taiwan toward unification through coercion and political influence rather than force. This coercion strategy hinges on eventually having a conciliatory government in Taipei, but Taiwan's

public overwhelmingly favors the status quo, constraining how far any elected government can move toward Beijing. Even electoral outcomes in 2026 and 2028 that Beijing favors may fail to produce the political movement toward unification it expects. If China concludes its political strategy is failing, Beijing may turn to greater coercion to force progress on its terms, including through imposing a quarantine or blockade.

- Taiwan is a first-order U.S. national security interest. A crisis in the Strait would threaten U.S. military power and economic security simultaneously.
- Taiwan's continued autonomy is critical to the military balance in the Western Pacific, and its security is closely tied to allied confidence in U.S. commitments. Taiwan's geographic location denies the PLA a forward military position between Japan and the Philippines and complicates its access to the Western Pacific. Taiwan's own surveillance, coastal defense, air defense, and maritime capabilities force the PLA to account for threats from the island, while U.S. and allied forces elsewhere along the first island chain further constrain its operations. Chinese control of Taiwan would shift these advantages toward Beijing, extending PLA power in the Western Pacific.
- Taiwan's technology ecosystem is at the foundation of U.S. advantage in AI. Taiwan dominates advanced semiconductor production and supplies critical hardware across the AI stack. U.S. reshoring is building domestic capacity but remains deeply dependent on Taiwan's companies, technology, workforce, and supply chains, making the two economies more integrated rather than making Taiwan dispensable.
- Coercion and military buildup are mutually reinforcing components of Beijing's dual-track strategy rather than alternative paths to unification. Political influence, economic pressure, cyber and information operations, lawfare, and other gray zone activities work to erode Taiwan's will to resist, while the PLA's growing military capabilities make those efforts more credible and preserve Beijing's option to impose unification by force if they fail. U.S. and Taiwan planning remains more heavily oriented toward countering an invasion, leaving both less prepared for the challenge likely to come first.
- China is intensifying its efforts to intimidate and coerce supporters of Taiwan's autonomy, moving beyond symbolic legal threats toward more concrete efforts to punish opposition to Chinese malign influence and to deter support for Taiwan. Over the past year, Beijing introduced new legal authorities, launched criminal investigations, and took public enforcement actions to intimidate a broader range of Taiwan officials, civil society leaders, and public figures, regardless of their location.
- Taiwan is strengthening its military and national resilience, but domestic political divisions and persistent vulnerabilities threaten to slow progress during a critical period. Taipei is strengthening its asymmetric defenses, civil preparedness, critical infrastructure resilience, and counterintelligence efforts, but

legislative gridlock has delayed or reduced investments that could produce near-term capabilities. Taiwan's heavy dependence on imported energy also leaves it particularly vulnerable to the quarantine or blockade scenarios Beijing is increasingly rehearsing.

- Delays in U.S. foreign military sales are hindering Taiwan's ability to field critical military capabilities and weakening deterrence even as Chinese pressure increases. A backlog of undelivered weapons, compounded by delays in finalizing additional arms sales, is pushing needed capabilities further into the future. These challenges slow Taiwan's ability to enhance its capacity to resist Chinese coercion, blockade, or invasion.

Chapter 10: Hong Kong: Enabler of China's Global Finance and Technology Ambitions

Hong Kong's political and judicial systems are now subject to complete CCP control. In 2026, Hong Kong's loyalist legislature passed new rules allowing the chief executive to unilaterally label any criminal matter as a national security case. Those accused of committing national security offenses cannot contest the designation, and there are no elements of civil society left to provide meaningful resistance. With the CCP takeover, the prerequisites for a thriving financial center—rule of law, a fair legal system, and robust market institutions—are at odds with Beijing's autocratic rule. Yet with the CCP's support, Hong Kong's economy has become a controlled valve for China to achieve its strategic aims vis-à-vis the global trading and investment system.

Despite years of trying, the Mainland's financial markets have not replaced Hong Kong as a conduit to the global financial system. Underdeveloped financial markets and the Party's need to prevent capital outflows limit the ability of cities like Shanghai and Shenzhen to attract offshore capital. As Western markets have become less viable alternatives, Hong Kong has solidified its role as a venue for mainland technology firms to raise foreign capital for global expansion; almost all of Hong Kong's initial public offerings (IPOs) in the first half of 2026 were for mainland companies. Hong Kong is also instrumental to China's efforts to build offshore infrastructure for RMB circulation and investment as it seeks to grow the role of RMB in international financial flows and insulate itself from U.S. sanctions authorities. Hong Kong's active and complex financial system also helps China act as a key enabler of Iran, Russia, and North Korea's sanctions and export control evasion.

The international business community and global financial institutions appear willing to overlook the loss of freedom and rule of law in Hong Kong—and the changing nature of Hong Kong's financial system—as long as the impact to the corporate bottom line remains limited. However, Hong Kong's economy and financial sector are more exposed to geopolitical and economic risks associated with the Mainland. The implementation of top-down economic planning through Hong Kong's first five-year plan and the ongoing subversion of market interests for state priorities set up a fundamental contradiction between what makes a financial center attractive and the purpose China wants Hong Kong to serve.

Key Findings

- Beijing's strong support has been the decisive factor behind Hong Kong's financial improvements over the last year. Hong Kong led the world in IPOs in 2025, with a comparable level of activity in the first half of 2026—not as a revived global hub but as a venue of choice for mainland firms in Beijing's priority sectors to access foreign capital. Mainland-controlled firms accounted for 96 percent of these IPOs by number, more than double the percentage from 2018. Rather than suggesting that Hong Kong retains its role as a global financial center, this resilience marks its transformation into a key node in the CCP's technology ambitions and ties its financial and economic future to Beijing's priorities.
- Over the past year, the Hong Kong government has continued to systematically expand executive and security powers and give Beijing's security offices a greater role in local processes, eliminating the legal predictability and judicial independence that previously distinguished the city from the rest of China. The chief executive now has the unilateral ability to define what constitutes a national security matter and can apply the label retroactively to events that occurred prior to the passage of the National Security Law in 2020.
- Beijing's successful imposition of the mainland security regime in Hong Kong remains basically unchecked. Hong Kong authorities have jailed or quelled through repression elements of civil society that had resisted. The government may force anyone in Hong Kong to unlock personal devices and has restricted trade unions from engaging with foreign organizations. Many with the resources to do so have left Hong Kong. Voter participation has plummeted, reflecting widespread rejection of an electoral system that has forced out any elements disloyal to Beijing.
- The city's leadership has aligned its development goals more closely with the Mainland, even following the CCP in issuing Hong Kong's first-ever five-year plan. The government is diverting its resources toward supporting mainland ambitions for global expansion, technological dominance, and self-sufficiency even at the expense of its own fiscal health. In turn, Hong Kong's business community incentives are aligned with China's agenda.
- Hong Kong's growing role in China's export-oriented economy and a resurgence in the financial sector led by Chinese tech stock IPOs have contributed to strong GDP growth. Beijing's cooptation of Hong Kong's economic system is more insidious in some cases. China is using Hong Kong to raise foreign capital for firms that face U.S. restrictions and/or serve the PLA.
- Hong Kong continues to enable China's support for autocratic regimes in Russia, Iran, and North Korea by acting as a central nexus for sanctions and export control evasion. The city's position as a global financial center and its lax regulatory environment for business registration combined with the leadership's refusal to proactively enforce sanctions have allowed corpora-

tions to complete billions of dollars of transactions that route dual-use components to Russia's war in Ukraine, facilitate Russia and Iran's crude oil sales, and allow North Korea to launder stolen cryptocurrency proceeds.

- Beijing's direct intervention in the city's economy has been limited to date, but the stage is set for major challenges ahead. Beijing has ratcheted up its own economic statecraft toolset with expanding export controls, limits on data and technology transfers, and tools to penalize companies complying with U.S. policies Beijing deems objectionable.

THE COMMISSION'S 2026 KEY RECOMMENDATIONS

The Commission highlights 10 of its 30 recommendations to Congress below. The complete list of recommendations appears at the Report's conclusion on page 641.

I. Data are a strategic asset that can drive scientific discovery, economic growth, and national security, but their value depends on the ability to organize, protect, and use them effectively. The United States needs a coordinated framework that makes data more accessible for legitimate uses, gives Americans control over their personal data, and prevents exploitation by China and other adversaries. An American Data Initiative would advance these goals while providing Americans meaningful control over their personal data.

Congress should establish an American Data Initiative to put American data to work as a source of national power, while preserving decentralized ownership, giving Americans control over their own data, and keeping their data out of the hands of China and other adversaries. Congress should:

Organize Federal Data

- Make the Administrator of General Services the Federal Chief Data Officer, with binding standards authority over all agencies and every agency Chief Data Officer appointed by and reporting to the Administrator, after consultation with the agency head.
- Direct the Administrator to govern all federal data by sensitivity and value, including in aggregate, and to make Data.gov the catalog of all federal data, open by default, with registered access for non-public data.
- Direct the Administrator to establish sectoral data foundries that produce AI-ready datasets, beginning with biology and embodied AI.
- Require the Administrator's approval of agency data budgets and bar funding for noncompliant data systems.
- Apply the confidentiality protections of Title 13 to personal data shared through the Initiative and record every access to non-public federal data in a tamper-proof log.
- Give the Government Accountability Office continuous access to those logs and authority to review any access to personal data and require an annual report to Congress with agency scorecards and privacy and civil liberties compliance audited by the Government Accountability Office.

Put Data on the Balance Sheet

- Make it U.S. policy that data held by federal agencies and U.S. businesses are an asset recognized on the balance sheet.
- Direct the U.S. Securities and Exchange Commission to require the Financial Accounting Standards Board to set standards for recognizing data as an asset within two years.

- Direct the Federal Accounting Standards Advisory Board to set comparable standards for federal agencies.
- Direct the Public Company Accounting Oversight Board to set matching audit standards.
- Direct the federal banking regulators to exclude data assets from regulatory capital.
- Condition the Governmental Accounting Standards Board's federal funding on comparable standards for state and local governments.

Let Americans Decide Who Gets Their Data

- Codify the core prohibitions of the U.S. Department of Justice's Data Security Program, including its bars on giving China and other countries of concern and covered persons access to Americans' bulk sensitive personal data and government-related data and its limits on onward transfer, and leave compliance requirements to regulation.
- Direct the President to designate an appropriate Cabinet or agency official to establish a national opt-in program under which data brokers may not sell, license, or share Americans' personal data unless the consumer has opted in through a single federal portal that brokers must check before any transfer.
- Extend the Protecting Americans' Data from Foreign Adversaries Act to require data brokers, under a common statutory definition that applies throughout the Initiative and includes resellers and other intermediaries, to register with the designated official, hold them liable for transfers made without consent, bar transfers to persons under the jurisdiction of China or another foreign adversary regardless of consent, and make these obligations follow the data through every resale.
- Require data brokers, within two years, to obtain consent for personal data they already hold or delete it.

Bring Data Sales Out of the Shadows

- Define the rights in data that companies, governments, and consenting individuals can buy, sell, and license.
- Direct the designated official to register and supervise data exchanges, require data brokers, within two years, to sell personal data only through registered exchanges, and require exchanges to verify data provenance and consumer consent, screen buyers for ties to China and other foreign adversaries, including beneficial ownership and intended use, keep auditable records of every transfer, bar unauthorized resale and improper data combination, bar onward transfers to third countries without equivalent controls, meet security standards, and bar participants under foreign-adversary jurisdiction.
- Direct the Secretary of Commerce to open U.S. data exchanges to participants from allied and partner countries

whose governments adopt equivalent consent, provenance, and foreign-adversary screening rules and extend reciprocal access to U.S. participants.

II. The Federal Government has spent years building a wall against risky suppliers in strategic sectors. It now needs a purchasing strategy that makes trusted pharmaceutical production commercially viable. The central obstacle is commercial: manufacturers cannot justify investing in alternative sources of active pharmaceutical ingredients (APIs) and key starting materials (KSMs) without confidence that buyers will continue purchasing from them even when cheaper Chinese supply is available.

To break China's leverage over the supply of essential medicines, Congress should establish a Comprehensive Critical Drug Diversification (C2D2) program built around U.S.-India cooperation. The program should:

- Establish a pharmaceutical supply chain early warning mechanism for a list of essential medicines to identify APIs, KSMs, and critical intermediates and their production sites; identify single-country and single-facility dependencies; flag emerging disruptions; and direct purchasing and investment toward gaps.
- Authorize the U.S. Department of Health and Human Services to establish a Federal Trusted Demand Program, including multiyear commitments for essential medicines made with qualifying U.S. or trusted partner APIs and KSMs. The U.S. government should buy finished medicines it needs while making verified sourcing of critical inputs a condition for participation. The U.S. government should also ensure consistent purchase pricing across agencies. The program should:
  - Coordinate how participating agencies verify suppliers and the origins of their critical inputs, including subpoena authority to demand documentation;
  - Have the ability to make multi-year purchase commitments for essential medicines; and
  - Direct the U.S. government to work with providers to address cost disparities of buying medicines under long-term contracts.
- Include an initiative to support public and private investment in API and KSM production in India. For APIs, producers should be mandated to prove minimal and declining reliance on Chinese KSMs to receive the funding. The initiative should, to the maximum extent practicable, require matching funds from India and coordination with Indian producers to withstand predatory Chinese pricing.

III. The growing proliferation and adoption of Chinese open-weight artificial intelligence (AI) models in the United States carries national security implications for sensitive data, cybersecurity, and dependence on Chinese technology. Uncer-

tainty about how these models behave in sensitive applications, what vulnerabilities they may introduce, and whether safeguards can adequately mitigate those risks warrants greater federal scrutiny. Congress should require enforceable protections for sensitive applications before these models become embedded in critical systems and costly to replace.

Congress should require the Secretary of Commerce, through the Office of Information and Communications Technology and Services (OICTS), in coordination with the Center for Advancing Innovation and Standards for Super Intelligence (CAISSI) and relevant federal agencies, to:

- Restrict deployment in sensitive applications unless safeguards are demonstrated. Within 180 days, identify sensitive uses—including systems controlling critical infrastructure, performing national security functions, or processing bulk sensitive personal data—and prohibit new deployment of covered models in those uses absent a time-limited authorization based on independently evaluated safeguards. Authorizations should address the model, its deployment environment, and its access to data, networks, and tools.
- Require identification and mitigation of existing exposure. Direct federal agencies and covered operators in designated sensitive sectors to inventory existing deployments and implement enforceable mitigation or replacement plans within deadlines established by the Secretary.
- Establish continuing security obligations. Require independent security testing, reporting of significant security incidents, reassessment following material modifications, and verification of compliance. Direct the Secretary to restrict or prohibit the commercial provision or deployment of designated models where identified risks cannot be adequately mitigated.
- Reduce strategic dependence. Require providers serving designated sensitive applications to maintain documented capabilities to replace covered models and migrate affected systems and data to alternatives meeting federal security requirements.

Within 180 days, the Secretary should also complete a consolidated assessment, building on existing federal evaluations, the National Telecommunications and Information Administration's (NTIA) open-model assessment, and federal supply-chain restrictions. The assessment should distinguish risks inherent in model weights from those arising from hosting, software, updates, and system integration; identify gaps in testing and verification; and inform subsequent requirements without delaying initial implementation.

Congress should authorize and appropriate funding, information-gathering and enforcement authorities, and penalties for noncompliance. The legislation should provide narrowly tailored exceptions for security research and authorized national security activities and require annual reporting to Congress

on deployment exposure, compliance, mitigation effectiveness, and remaining dependencies.

IV. The People's Republic of China's (PRC) aggressive actions to reshape the Western Pacific and force unification with Taiwan are intensifying. Yet much U.S. and allied contingency planning focuses on large-scale invasion scenarios rather than coercion below the threshold of war. The United States needs a coordinated playbook with allies and partners for responding to a range of coercive gray zone activities by the PRC in the Indo-Pacific, specifically concerning Taiwan.

Congress should:

- Direct the National Security Advisor to develop a common playbook with allies and partners calibrated to counter multi-domain day-to-day PRC coercion. Departments and agencies involved in executing the playbook should develop tiger teams to address U.S. actions and coalition/allied actions under each area of responsibility. That playbook should provide a unified framework for participating nations to:
  - Share situational awareness and arrange pre-coordinated responses;
  - Counter disinformation and lawfare;
  - Expand combined coast guard operations with Taiwan and regional partners, including through multilateral initiatives; and
  - Support resistance against economic coercion.
- Amend and extend the Taiwan Enhanced Resilience Act to establish a Taiwan Democratic Resilience Initiative led by the U.S. Department of State, implemented through the American Institute in Taiwan in coordination with the Office of the Director of National Intelligence and other appropriate departments and agencies.
  - The Initiative should strengthen U.S.-Taiwan cooperation to support the resiliency of Taiwan's civil society and counter PRC united front activities, election interference, and disinformation campaigns. It should also include information sharing with U.S. allies and partners.
- Direct the National Security Advisor to lead an interagency process to develop a whole of government strategy for deterring, preparing for, and responding to coercive actions by the PRC against Taiwan that are intended to rapidly or substantially alter the status quo, but that fall below the threshold of a large-scale invasion or armed conflict.
  - It should include an assessment of contingency scenarios and for each, provide an assessment of indicators and warnings, likely PRC objectives, decision points, escalation risks, potential effects on Taiwan's access to critical goods and services, and options for coordinated actions with allies and partners.

V. As the 14th Dalai Lama advances in age, China is preparing to turn his succession into an international contest over legitimacy and will likely use coercive tools to shape its outcome. India, which hosts the Dalai Lama and the Tibetan government-in-exile and shares a longstanding disputed border with China, is the center of gravity in this dispute.

Congress should make it the policy of the United States that the Gaden Phodrang Trust is the sole legitimate authority to identify and recognize the successor to the 14th Dalai Lama and that the United States will not recognize any successor selected or installed by the Government of the People's Republic of China. To carry out this policy and ensure U.S. government readiness for the Dalai Lama's succession, Congress should direct the Secretary of State to:

- Lead an internal interagency tabletop exercise on succession scenarios, with participation by the National Security Advisor, the Director of National Intelligence, and the Secretary of Defense, and brief the appropriate congressional committees on its findings within 180 days.
- Establish a senior-level channel with the Government of India for succession contingency planning, including intelligence sharing on Chinese influence operations, and report to the appropriate congressional committees on its status within 180 days.
- Conduct Track 1.5 and Track 2 dialogues and tabletop exercises with Indian counterparts on the political and security implications of succession scenarios.
- Coordinate with allies and partners on a diplomatic response that denies international legitimacy to any successor selected by the People's Republic of China.
- Counter succession-related influence operations by strengthening the Central Tibetan Administration's cybersecurity and resilience against China's cyber and artificial intelligence (AI)-enabled disinformation campaigns.

Congress should provide authorizations and appropriations to carry out these activities.

VI. The Commission reaffirms its 2025 recommendation on post-quantum cryptography. Post-quantum risk is coming faster than the government is acting, and the federal response does not yet match the threat. China is investing heavily in quantum computing and has demonstrated sustained, large-scale collection against U.S. government networks. What Beijing steals encrypted today, it can read once a cryptographically relevant quantum computer exists. That same capability would also allow adversaries to forge the digital signatures that authenticate federal software, firmware, and certificates. The U.S. Government Accountability Office reports that agencies are only beginning migration, citing gaps in expertise, inventories, funding, and testing plans. At this pace, the gov-

ernment will miss its own 2030 target for critical systems. The government needs to treat this with far greater urgency.

Congress should:

- Require by statute that federal agencies migrate high-value assets, Federal Information Security Modernization Act (FISMA) high-impact systems, and public key infrastructure—including root certificate authorities and code- and firmware-signing systems—to National Institute of Standards and Technology (NIST)-approved post-quantum cryptography within 24 months of enactment. The statute should also set an accelerated, binding schedule for all remaining unclassified systems.
- Establish a dedicated post-quantum migration appropriation, separate from agency cybersecurity budgets, based on agency cost estimates certified by the Office of Management and Budget.
- Fund NIST's Cryptographic Module Validation Program and Cryptographic Algorithm Validation Program at levels sufficient to reduce validation wait times for post-quantum products.
- Require agency heads to certify progress to Congress every six months, with signed waivers for any missed milestone.
- Make crypto-agility and vendor post-quantum roadmaps conditions of federal information technology procurement.

VII. Americans should know when the government services they receive and the commercial products they use rely on AI models developed by Chinese companies. Clear disclosure would help consumers, businesses, and investors assess potential risks to data security, privacy, service reliability, and national security.

Congress should make it U.S. policy that Americans know when governments and businesses rely on AI models developed by Chinese companies. Congress should:

- Require federal agencies, and any state or local government or other entity that receives federal funds or federal tax credits, to disclose any use of AI models developed by an entity headquartered in, or organized under the laws of China, or owned or controlled by such an entity, including models fine-tuned on or derived from them, wherever they are hosted. Disclosure should appear in clear language on their public-facing platforms and in their filings with the federal government.
- Require businesses that use such models in any part of a product or service offered in the United States to consumers or other businesses to disclose that use clearly on their websites and in product documentation and treat failure to disclose as an unfair or deceptive act or practice enforceable by the Federal Trade Commission.

- Require reporting companies, as part of quarterly and annual disclosure filings with the U.S. Securities and Exchange Commission, to disclose as a material business risk the extent of their use of such models.

VIII. Sustaining U.S. leadership in AI requires reliable access to advanced chips and the manufacturing capacity needed to produce them. Exports to China should not come at the expense of capacity needed to support U.S. AI development and deployment. Requiring auditable exporter certifications would help ensure that export decisions account for these constraints and protect U.S. access to critical capacity.

Congress should ensure that AI chip exports to China do not divert capacity from the U.S. market, including by amending the Export Control Reform Act of 2018 (ECRA) to condition exports, reexports, or in-country transfers of advanced AI chips to China on exporter certification that they will not divert advanced semiconductor manufacturing or AI capacity from the U.S. market. The legislation should:

- Cover upstream capacity, including advanced-node wafer fabrication, high-bandwidth memory, and advanced packaging—not finished-chip inventory alone;
- Require auditable capacity-allocation data submitted to the Bureau of Industry and Security, subject to ECRA recordkeeping and enforcement provisions, including criminal penalties for false certification;
- Require the Bureau of Industry and Security to report annually to the committees of jurisdiction on certifications, validation methods, and exports coinciding with unmet U.S. or allied demand for equivalent capacity; and
- Prohibit regulatory waivers or narrowing of the requirement without an affirmative national security determination transmitted to Congress for a 30-day review period.

IX. The Submarine Cable Act of 1888 only allows the United States to prosecute damage to subsea cables that occurs within U.S. territorial waters (i.e., within 12 nautical miles of its coastline) or damage caused by U.S.-flagged vessels wherever they operate. Current law limits the United States' ability to address other intentional damage to subsea cables landing in the United States or owned by U.S. entities. The United States must also address its limited repair ship capacity, which has led regulators to allow foreign adversaries to maintain U.S. cables that connect to the United States from a third country. This means provisions that would expand a trusted repair fleet and would ensure reinsurance for cable repair surge capacity during a crisis.

To address adversarial attacks on critical U.S. telecommunications infrastructure in international waters, Congress should:

- Amend the Submarine Cable Act to expand jurisdiction to prosecute acts of intentional sabotage against any critical

undersea infrastructure landing in the United States or having any ownership stakes from U.S. entities.

- Strengthen undersea cable repair capacity by:
  - Barring the use of foreign adversaries' repair ships on U.S. cables and directing regulators to take associated action;
  - In a manner consistent with current law, establishing a Pacific Allied Cable Repair Fleet, under which the Secretary of Transportation may enter operating agreements with qualified cable vessels flagged in the United States, and, where necessary, Japan, South Korea, and Taiwan; and
  - Directing the Secretary of Transportation to provide insurance or reinsurance against war risks for foreign vessels engaged in cable installation and repair, in coordination with allied countries when possible.

X. For over two decades, China has quietly pursued the development of domestic commodities exchanges, and expanded its production and processing of core commodities, becoming a key market maker in many segments and sectors. China is actively working to exert greater influence over global commodities markets with the aim of advantaging its domestic manufacturers and insulating itself against U.S. sanctions. To this end, China is pursuing numerous policies to expand its leverage, growing its domestic commodity exchanges, and opening more "in China for China" commodities trading to foreign participants. In recent years, China established the China Mineral Resources Group and other state instruments to consolidate purchasing of key commodities and has begun leveraging its position as a major buyer in physical markets to compel producers to use its preferred benchmarks and, in some cases, transact in RMB. China is building parallel systems that, absent action, may, over time, reshape the global landscape.

Congress should direct the U.S. Commodity Futures Trading Commission (CFTC) to monitor Chinese engagement and influence in commodities exchanges and warehousing and provide an annual report to Congress on activity, strategic risks, and efforts to coerce market participants as well as signs of market manipulation. To support this activity, Congress should:

- Expand CFTC foreign market surveillance and provide the CFTC the direction and, as needed, authority to monitor trading activity on Chinese exchanges, including but not limited to the Dalian Commodity Exchange (DCE) and the Shanghai International Energy Exchange (INE), with particular attention to participant concentration, state-owned enterprise positioning, and coordination among state-owned buyers. Current CFTC jurisdictional limits leave this activity unmonitored, and the China Securities Regulatory Commission does not make these data public.

- Direct the CFTC to monitor the development of China's futures markets, in particular for semiconductor, battery, renewable energy, and critical industrial materials. Data on commodity pricing are difficult to obtain, particularly in markets where benchmark usage and settlement terms are embedded in opaque, privately negotiated contracts and are not systematically reported. Thinly traded contracts are susceptible to a risk of biased market data, putting U.S. producers at a disadvantage.
- Require disclosure of U.S. financial institution exposure to Chinese exchanges and other non-CFTC-registered foreign exchanges, as appropriate. Dodd-Frank reporting captures most U.S. derivatives activity on domestic and CFTC-registered foreign exchanges; however, many Chinese exchanges, including the INE, fall outside this framework, and these exchanges have not sought CFTC registration as Foreign Boards of Trade, meaning U.S. firms can trade on them without that activity being systematically captured in CFTC reporting.

PART I

THE YEAR IN REVIEW

CHAPTER 1: U.S.-CHINA ECONOMIC AND TRADE RELATIONS (YEAR IN REVIEW)

Executive Summary

In 2026, China's two-speed economy continues. The country's structural economic weaknesses became more apparent, even as the Chinese Communist Party (CCP) doubled down on its strategy to promote production and innovation in targeted industries and rely on exports to absorb the excess. Rather than address persistent weak domestic demand and deflationary pressures, China allowed its consumption support programs to expire and continues to funnel credit and investment toward its oversaturated manufacturing sector. The conflict in Iran has introduced a cyclical element to these challenges as global energy supplies tighten, raising costs for China's manufacturers and leading to economic hardship for many of China's trade partners.

China's export of its excess production means it is well on its way to a trade surplus of over $1 trillion for the second year in a row. This "China Shock 2.0"—a flood of low-cost exports—is hurting economies all over the world that fail to put up barriers to China's market distortions as their manufacturing sectors are undercut by cheaper products. Many of China's trade partners have introduced more measures to protect domestic manufacturing sectors, including traditional WTO remedies as well as non-tariff barriers. At the same time, China has sought to use concerns about U.S. trade policy to enhance its market access, ironically, claiming to be a more reliable trading partner that supports the rules-based trading system.

Instead of addressing these growing issues, China's 15th Five-Year Plan (FYP) released in 2026 showcases its continued focus on technological dominance. Beijing hopes its efforts to dominate technology supply chains and innovate at the frontier—combined with its own de-risking measures—will allow it to weather the broader economic slowdown, achieve self-sufficiency, and enhance its geopolitical power. China has also deepened and expanded its toolkit to exert economic leverage on global markets as well as resist foreign sanctions and export controls.

Key Findings

- China's two-speed economy persisted in 2026. Weak domestic demand and shrinking profit margins weighed on businesses at home, even as General Secretary of the CCP Xi Jinping pressed ahead with efforts to dominate global manufacturing supply chains and advanced technology sectors while strengthening Beijing's ability to exert economic leverage and withstand pressure from abroad.
- China still has not lived up to its repeated promises to spur greater consumption. Continued malaise in the property market has kept domestic demand muted, contributing to excess supply in the manufacturing sector. An estimated 87 percent of Chinese urban households own property; with average home prices having declined 20–25 percent since their peak in 2021, the average Chinese household's wealth has been reduced significantly.
- Weak labor demand and technological displacement are pushing more workers into "flexible" employment in the "gig" economy, leading to lower and less stable earnings, limited career advancement, and weaker social protections. As of 2026, 320 million people worked flexible jobs, including workers from traditionally professional occupations, such as software engineers, financial analysts, and healthcare workers, placing constraints on China's ability to boost consumption.
- Beijing implicitly acknowledged the problem of excess production through its "anti-involution" campaign targeting harmful price competition, as Chinese companies repeatedly slash prices to unload surplus output. The campaign remains limited in 2026, however, and Beijing is unlikely to move more aggressively to curb supply; doing so would undercut exports, a core growth driver, and eliminate many firms' sole pressure release valve, in addition to putting greater pressure on the labor market.
- China Shock 2.0 shows no signs of abating: China's exports accelerated in the first half of 2026 after a record trade surplus in 2025. The resulting flood of exports is hurting manufacturers in developed and developing economies alike, while Beijing has used a range of tactics to forestall a coordinated response.
- Despite the current détente with the United States, China continues to expand its ability to wield supply chain leverage, withstand U.S. and allied sanctions and export controls, and retaliate against foreign measures the CCP deems "unjustifiable." These efforts are setting up a clash between competing regulatory systems that could leave foreign companies operating in China caught between conflicting demands while raising the costs the United States and its partners must weigh when using economic statecraft.

- The 15th FYP confirmed that China remains committed to mobilizing the full weight of the state to advance its technology sector. Beijing treats artificial intelligence (AI) as a general-purpose technology—the connective layer driving other priorities, including biotechnology, robotics, and quantum—believing that mastering these foundational technologies will secure a durable, economy-wide advantage and overcome its economic challenges.
- China continues to face significant compute constraints due to U.S. export controls, yet its frontier AI capabilities have largely kept pace with advances in the United States. Chinese developers are using techniques such as distillation to steal the methods and outputs of top U.S. models to develop capable, lower-cost Chinese alternatives. By releasing these models with open weights and encouraging their adoption abroad, China aims to make its AI systems the global default. U.S. leadership in frontier AI remains real, but China's strategy for spreading its models could make that lead less secure than it appears.
- As China's technologies advance, Beijing is refining its economic toolkit to keep capital, technology, data, and talent at home: screening outbound investment, blocking foreign acquisitions of Chinese firms, restricting AI researchers at frontier labs (and their families) from leaving the country, and limiting the types of foreign investment permitted in its AI companies.

Introduction

On many levels, the story of 2026 for U.S.-China economic relations is continued détente. The two presidents have met twice as of the date this report was completed and were slated to meet two more times during the year. Little new was sought or accomplished at these meetings, with the main focus being modest purchases of certain U.S. goods by China and professed stability on economic issues. Each country exercised restraint around areas of leverage while actively seeking to de-risk in ways that did not undermine the détente.

China Awards Itself Top Marks, Strives for Continuity in Its Management of the Economy

The Party's high level of confidence in its handling of the economy was palpable during the Commission's trip to China in July 2026. In early 2025, the prospect of tariff and trade uncertainty loomed.[1] Yet rather than addressing longstanding domestic economic imbalances, the Party doubled down on its traditional economic playbook of export-driven growth. Even as the United States and China began a new phase of trade tensions, China's exports hit a new record as global markets absorbed its manufacturing surplus.[2] Additionally, in retaliation for U.S. tariffs on China, Beijing imposed rare earth export controls on the United States.[3] This move ultimately contributed to the two countries coming to the negotiating table, and

it demonstrated to the world China's geo-economic leverage around rare earths and critical minerals.

China released its 15th FYP in March 2026, indicating continuity in China's core economic policies. The FYP calls for accelerating breakthroughs in a range of frontier technologies, including AI, quantum technology, nuclear fusion, life sciences and biotechnology, brain science, clinical medicine, and deep-sea and deep-space exploration.[4] The plan signals China's intent to continue pursuing manufacturing dominance and technological self-reliance rather than rebalancing growth toward greater domestic consumption, which outside observers have long insisted China needs to support more sustainable long-term growth.[5] Just months after China released its national-level plan, several provinces unveiled their own FYPs that echoed the national plan.[6]

The CCP's unwillingness to rebalance its economy toward greater domestic consumption may seem irrational to free market observers, but it is entirely consistent with the CCP's belief in its model. For China, household consumption is a byproduct of industrial and technological development rather than a goal in its own right. Two recent articles in China's state-run publications *Qiushi* and *Economic Daily* argue that manufacturing and diffusion of advanced technologies should be the primary drivers of future productivity growth and will ultimately resolve the country's economic slowdown.[7] Even the 15th FYP's consumption measures are framed as an "investment in human capital" serving industrial ends.[8]

China's successes have reinforced its leaders' confidence in their management of the economy, despite an erosion in profitability, high debt levels, glacial wage growth, low returns on investment, and significant economic weakness outside of favored sectors. Viewed through the lens of geopolitical competition, market inefficiency is a feature of the CCP economic system, not a bug. Beijing appears willing to bear the near-term economic costs of expanding manufacturing capacity to undercut foreign industry, capture global market share, and gain the power to wield critical supply chains as geopolitical leverage.

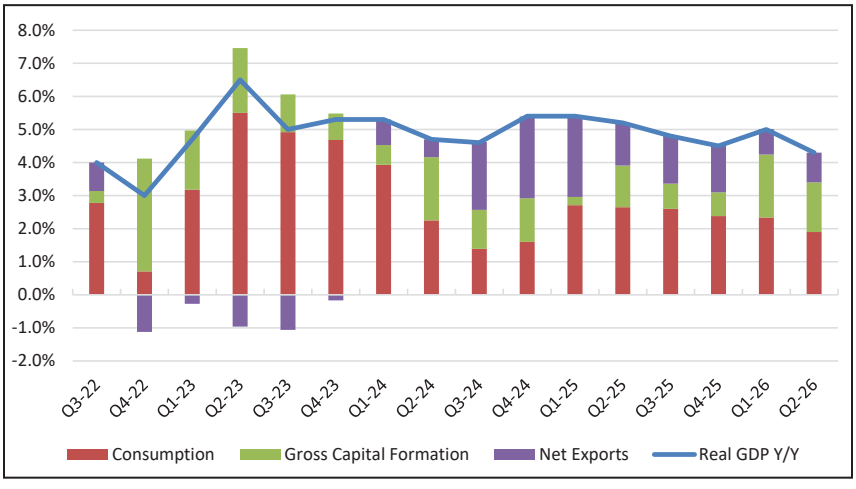
GDP Growth Dips, Investment Plummets Despite Strong Exports

China's year-on-year GDP growth was 4.7 percent* in the first half of 2026, but further examination of this fairly strong topline figure's composition reveals a deteriorating outlook. First quarter GDP growth of 5.0 percent exceeded expectations, buoyed by 14.7 percent first quarter export growth and frontloaded infrastructure

*China often pauses or modifies the methodology of economic datasets, raising questions around the reliability of official data. Independent estimates by prominent outside organizations posit that actual growth in China's economy is likely far lower than reported. Rhodium Group estimates 0–1 percent topline GDP growth in Q2 2026 compared to the official 4.3 percent. Rhodium Group derives alternative estimates of China's GDP growth by reconstructing expenditure-side GDP from a range of underlying economic indicators, and it adjusts official national accounts where they diverge from observable economic activity. For more, see U.S.-China Economic and Security Review Commission, Chapter 1, "U.S.-China Economic and Trade Relations (Year in Review)," in *2025 Annual Report to Congress*, November 2025, 52–53. Thomas Hale, Joe Leahy, and Haohsiang Ko, "Five Things to Watch When China Reports Economic Growth," *Financial Times*, July 14, 2026; Daniel H. Rosen et al., "China's Economy: Rightsizing 2025, Looking Ahead to 2026," *Rhodium Group*, December 22, 2025; Logan Wright, "The Strategic Logic of China's Economic Data," *Rhodium Group*, September 11, 2025.

investment.[9] After solid growth in Q1, topline growth in Q2 fell sharply to 4.3 percent, the lowest quarterly figure since 2022.[10] Weakening investment and consumption, exacerbated by global uncertainty and fluctuating energy prices from the Iran conflict, contributed to the dropoff.[11] However, manufacturing output remained resilient. Industrial value-added output increased 5.4 percent year-on-year from January to June. High-tech manufacturing value added increased 13.3 percent year-on-year during this period, including a 28 percent increase for industrial robotics and a 39.3 percent increase for lithium-ion batteries.[12] Exports grew 13.4 percent in the period while imports were up 22.1 percent, driven by demand for AI gear, tightening a goods trade surplus that reached $576 billion halfway through the year.[13] Integrated circuits and automated data processing equipment exports accounted for 40.1 percent of year-on-year export growth through June.[14] The precipitous growth in exports was driven primarily by AI-related demand. While China does not currently export advanced semiconductors for AI, the AI boom drove up prices for memory chips and other lower-value semiconductors as well, which China does export.[15] In June, China's exports of integrated circuits were up 120 percent year-on-year by value, but only 5.1 percent by volume (in other words, China sold slightly more semiconductors, but at significantly higher average prices).* [16]

Figure 1: Year-to-Date Contributions to Real GDP Growth
Q3 2022–Q2 2026



Source: China's National Bureau of Statistics, via Haver Analytics.

Despite resilient industrial output and exports, China's relatively strong GDP growth is not translating into more high-quality jobs. Export growth is increasingly driven by capital- and technology-intensive manufacturers rather than labor-intensive processes, de-

*The increase in export values did not indicate China is exporting advanced semiconductors. Market conditions, in part driven by global AI infrastructure demand, led to higher prices for the less advanced semiconductors China exports.

creasing headcount on factory floors.[17] Industrial profits were under pressure entering 2026 from "involution"—fierce price competition among firms resulting from excess capacity. Such factors contributed to stagnant wage growth and shifting composition of the labor force, as jobs in traditional growth sectors like manufacturing and construction dissipate and more workers take flexible employment opportunities in the "gig" economy.[18] Negative consumer sentiment continues to be reflected in low retail sales growth, which in the first half of 2026 reached its weakest point since 2022 under zero-COVID policies.[19]

Falling fixed asset investment (FAI) is also notable for an economy that relied upon investment to fuel growth for decades, especially since consumption is not rising as would be necessary for a genuine rebalancing of the economy.[20] In 2025, overall FAI declined for the first time since the late 1980s; it had only registered similar drops during the Great Leap Forward and subsequent famine (1961) and the Cultural Revolution (1967).[21] After starting 2026 in the black, FAI turned negative in April and was down 7.2 percent year-to-date through August.[22] Official FAI statistics show a rapid decline, reflecting both a structural slowdown and a likelihood that China's investment figures have been overstated for years.*[23] (For more on China's overstatement of FAI and other economic metrics, see U.S.-China Economic and Security Review Commission, Chapter 1, "U.S.-China Economic and Trade Relations (Year in Review)," in *2025 Annual Report to Congress*, November 2025, 52–53.) The drawback of investment across the board comes despite significant policy signals from Beijing at the end of 2025 indicating it was prioritizing investment as a driver of growth.[24] On December 31, 2025, the National Development and Reform Commission (NDRC) announced $42 billion for infrastructure projects.[25] However, this has proven insufficient to offset falling investment in the aggregate. By sector, real estate FAI declined 18 percent, infrastructure investment dropped 2.4 percent, and investment across manufacturing fell 1.2 percent (see Table 1).[26] In one bright spot for FAI, manufacturing of computers and information and communications technology (ICT) equipment was up 7.8 percent year-to-date through July 2026 after finishing last year in the red.[27] China's manufacturers are therefore facing a challenge on two fronts: not only compressed margins from higher costs but also weak domestic demand, made all the more difficult amid deflationary pressures from continuing excess supply-fueled price wars and mounting trade tensions globally.[28]

*The credibility of China's FAI figures has been questioned by commentators such as Derek Scissors at the American Enterprise Institute, who points to backward revisions as evidence that official GDP growth statistics have been overstated. Separately but related, following a change in methodology, the infrastructure portion of FAI grew 8.9 percent year-on-year during Q1 2026 after declining 2.2 percent in all of 2025. The sharp increase was driven partly by the National Bureau of Statistics adding power investment into the figure, which had previously been tracked separately by the National Energy Administration. Allen Feng, "Apples to Oranges in Infrastructure Investment Data," *Rhodium Group*, April 20, 2026; Derek Scissors, "When Does China Stop Growing (Entirely)?" *American Enterprise Institute*, March 2026; China's National Bureau of Statistics, via Haver Analytics.

Table 1: Key Economic Metrics (Year-on-Year Growth)

	Q1 and Q2 2026	2025	2023–2025 avg.	2015–2019 avg.
Retail Sales	**1.4%**	**3.7%**	**4.8%**	**9.6%**
Total FAI	**-5.7%**	**-3.8%**	**0.8%**	**7.3%**
real estate	*-18.0%*	*-17.5%*	*-12.1%*	*6.1%*
infrastructure	*-2.4%*	*0.7%*	*6.2%*	*10.9%*
manufacturing	*-1.2%*	*0.6%*	*5.4%*	*5.9%*
Exports	**18.1%**	**5.2%**	**2.1%**	**1.7%**

Source: China's National Bureau of Statistics and General Administration of Customs, via Haver Analytics.

Beijing's Anti-Involution Campaign Is Implicit Acknowledgment of Overcapacity

Excess industrial capacity remains one of the defining distortions in China's economy, and Beijing has had little success in curbing destructive price wars without sacrificing the production and exports supporting economic growth. Although there is not a single measurement for overcapacity, it is reflected in persistently low industrial capacity utilization rates, suppressed producer prices, weak corporate profitability, and a rising share of loss-making firms.* Outside of chipmakers experiencing a windfall from AI-related demand, firm profitability continues to decline, and industrial capacity utilization in Q2 dropped to 73.0 percent, a tenth of a percent shy of an all-time low outside the pandemic.[29] About a quarter (23.8 percent) of Chinese industrial enterprises were loss-making in 2025, compared to 11.9 percent a decade earlier, according to official statistics.[30] Under free market conditions, unprofitable firms would exit the market, bringing supply and demand back into equilibrium. But heavily subsidized loss-making "zombie firms" in China's state-guided economic system continue operating and even increase production despite insufficient demand.†[31] Though China generally does not admit that its economic model leads to overcapacity, conditions have become severe enough that Beijing now describes the fierce price competition that results as "involution" and has launched a campaign to—in Xi Jinping's words—rectify the "chaotic situation of disorderly competition among enterprises."[32]

After setting the tone for curbing excess supply, Beijing has stepped up scrutiny of disorderly competition cases. But in the face of the rising price pressure on manufacturers, slowing growth, and increasing trade tensions, it has stopped short of stronger enforce-

*For more on indicators of China's overcapacity, see U.S.-China Economic and Security Review Commission, Chapter 1, "U.S.-China Economic and Trade Relations (Year in Review)," in *2025 Annual Report to Congress*, November 2025, 41–42.

†The total value of subsidies under China's industrial policy is estimated to be equivalent to 4 percent of GDP, according to a 2025 working paper from the International Monetary Fund. These include cash subsidies, tax benefits, subsidized credit, and subsidized land. The Organisation for Economic Co-operation and Development (OECD) estimated that between 2005 and 2024, industrial firms in China received on average three to eight times more government support than competitors based in OECD countries. "OECD Magic Database of Industrial Subsidies," *Organisation for Economic Co-operation and Development*, June 2026; Daniel Garcia-Macia, Siddharth Kothari, and Yifan Tao, "Industrial Policy in China: Quantification and Impact on Misallocation," *International Monetary Fund*, August 8, 2025.

ment measures. The anti-involution campaign has included regulatory pressure to rein in price wars. In February, the State Administration for Market Regulation (SAMR) issued price guidance for the auto industry as subsidies for trade-ins were phased out to steer consumers toward higher-end models.[33] In May, SAMR vowed to increase investigations of "unfair competition" in certain industries and is rolling out measures to implement central government guidance on standardizing local government regulation, decreasing local protectionism, reducing excessive local government support for the same sectors, and creating a more integrated national market to facilitate industry consolidation.[34]

The anti-involution campaign has thus far yielded limited results. Meaningfully curbing overcapacity would run counter to Beijing's reliance on manufacturing and exports to boost growth, while allowing more firms to fail would put additional pressure on the labor market. Another structural inhibitor is local government subsidies. Local governments rely heavily on value-added tax and corporate tax revenue derived from production and manufacturing within their jurisdiction, creating a strong incentive to prop up provincial champions even if they are unprofitable or redundant on a national level.[35] The unwinding housing market has intensified this fiscal dynamic for local governments as they can no longer rely on income from land sales, which had provided roughly one-third of revenue during the boom years.*[36]

Iran Price Shock Adds Further Stress

China's ability to weather energy disruptions and rising prices from the Iran conflict reflects its gains in energy security, but the conflict has also added economic strain. Despite nearly half of its oil imports traveling through the Strait of Hormuz, China has managed to largely insulate itself from severe energy price shocks due to its large oil stockpiles, shift to renewable energy, substantial domestic coal reserves, and other policy responses that afforded it more flexibility than many other countries.[37] Nevertheless, the energy price spike from the Iran conflict serves as a natural experiment for China's state-supported industrial production and export-driven growth model. Tellingly, 2026 has seen a decline in investment in manufacturing segments most exposed to the price shock.[38] For instance, in the first half of 2026, year-on-year FAI fell in resource-intensive industries and those with high exposure to energy input costs, including petroleum processing (-5.7 percent), chemical fibers (-13 percent), and automotive manufacturing (-4.2 percent).[39] Pressure from the Iran conflict has also exacerbated the structural slowdown in traditional growth segments of the economy, such as the property sector, as developers confronted with higher material costs put projects on pause.[40]

China's Flexible Sourcing Cushioned Oil Shock

China has used a variety of methods to insulate its economy from an energy shock. As crude oil futures doubled from $57 per barrel at

*For more on local government fiscal dynamics, see U.S.-China Economic and Security Review Commission, Chapter 3, Section 2, "Fiscal, Financial, and Debt Problems Weigh Down Beijing's Ambitions," in *2023 Annual Report to Congress*, November 2023, 340–393.

the beginning of 2026 to a peak of $112 per barrel in April, China reduced the volume of its imports by 23 percent month-on-month in April and 14 percent in May.[41] China exercised several levers concurrently to compensate for the fall in available crude. First, it tapped into its nearly 1.4-billion-barrel stockpile,* withdrawing an estimated one million barrels per day starting in May, primarily from its commercial reserves.[42] Next, it drew on meaningful volumes of floating, sanctioned oil from Russia and Iran.[43] China also restricted exports of processed petroleum products between March and June, causing refiners to reduce processing to a four-year low and helping ensure supply for domestic buyers.[44] Finally, manufacturers relied on renewable energy, which accounted for a third of China's total electricity consumption in 2025, and coal, which it uses as a substitute for oil and gas to produce fertilizer and plastics.[45]

By cutting back on crude oil purchases and consumption, China has dampened Hormuz-related stress on its manufacturing sector. Its producer price index for producer goods spiked in March and April but appeared to level out at around 4 percent year-on-year since June.[46] By reducing its oil purchases during a time of compressed global supply, China hoped to slow the rise of oil prices so energy prices did not dissuade its trade partners from buying trillions of dollars of exports.†[47]

The global energy price spike ostensibly reversed years of deflation in China, but supply shock inflation should not be mistaken for a healthy return of demand. After hovering around zero since April 2023, the consumer price index rose from 0.2 percent growth year-on-year in January to 1 percent in June.[48] The producer price index rose from a 1.4 percent year-on-year decline in January to a 4.1 percent increase in June.[49] Though impact on consumption is negligible, higher input prices for producers compress already razor-thin margins for China's manufacturers.

Structural Challenges Continue to Suppress Domestic Demand

Business and consumer confidence remained subdued in 2026 as mutually reinforcing structural challenges ossified within China's increasingly imbalanced economy. Despite some positive signs, the property sector continues to weigh heavily on the broader economy. Credit expansion has slowed dramatically as the financial sector struggles to remain profitable under pressure from the central government to service poor-quality debt on longer time horizons. Another key indicator is the struggling labor market. Official unemployment figures from China's National Bureau of Statistics, including the headline "surveyed urban unemployed" rate, have remained stable around 5 percent.[50] But this figure excludes large segments of the population such as rural and migrant workers, and independent analysis estimates are often much higher, including one from Tsin-

*China's national stockpiles consist of roughly 360 million barrels of government-held inventories and an additional one billion barrels held by national oil companies, blurring the lines between commercial and strategic reserves. U.S. Energy Information Administration, *China, the United States, and Japan Hold Most Strategic Oil Inventories in 2025*, April 20, 2026.

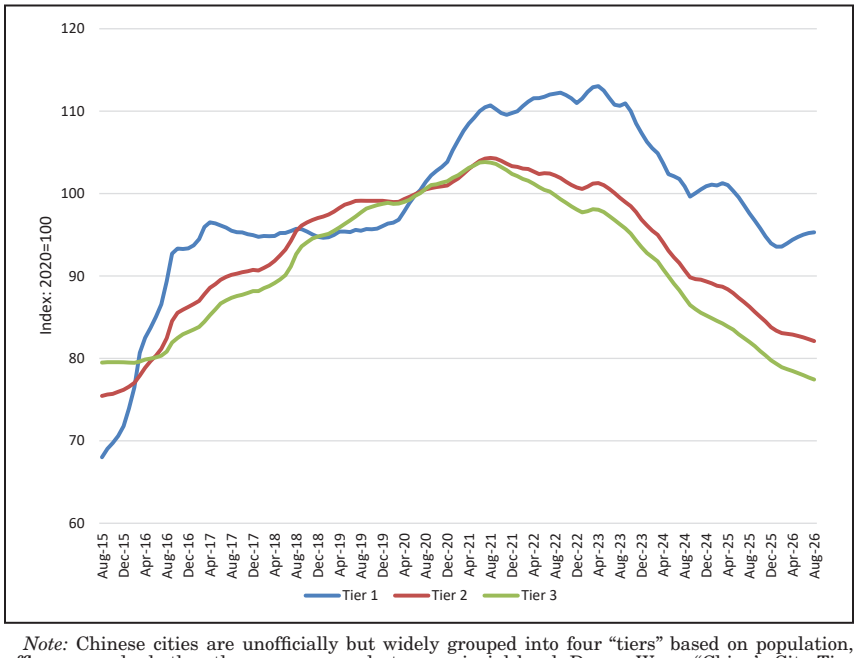
†It is also possible that China is using the experience from the Strait of Hormuz as a "live experiment" on ways to reduce its vulnerability and enhance its resiliency to a disruption in seaborne oil imports in the case of a Taiwan contingency. China has demonstrated that it can reduce oil imports abruptly by about 30 percent with a negligible impact on its economic activity.

ghua University that calculated 10.2 percent unemployment in July 2026.[51] Wages have stagnated and the rise of more tenuous flexible employment coincides with growing anxiety around displacement from AI and automation. Diminished asset values and precarious wage growth prospects all contribute to anemic household spending and demand.

Slow Unwinding of Property Sector Continues to Be a Drag on Economy Five Years On

China's massive property sector continues to weigh heavily on consumer sentiment and the broader financial system five years on from the 2021 peak. FAI in real estate has been negative since 2022, and in 2026 the decline accelerated to -21.5 percent year-on-year for the eight months through August.[52] While reduced investment is necessary to bring supply back in line with demand, in the interim the continued drop puts pressure on developers, local governments, and the banking system.[53] Prices in Tier 1 cities (i.e., Beijing, Shanghai, Guangzhou, and Shenzhen) showed signs of recovery, rising 1.9 percent year-to-date through August.[54] However, prices more broadly in cities across the country continue to decline, albeit at a slowing rate (see Figure 2). In August, prices for new housing in 65 of the 70 largest cities in China were lower than a year before, and prices for existing real estate were down in every city compared to the year prior, even those in Tier 1.[55]

Figure 2: Property Price Index for 70 Cities, Existing Residential Buildings (2020=100), August 2015–August 2026



Note: Chinese cities are unofficially but widely grouped into four "tiers" based on population, affluence, and whether they are governed at a provincial level. Dorcas Wong, "China's City-Tier Classification: How Does It Work?" *China Briefing*, February 27, 2019.
Source: China's National Bureau of Statistics, via Haver Analytics.

Real estate still comprises as much as 70 percent of wealth held by Chinese households, with over 20 percent owning multiple properties due to low returns on savings and limited alternative investment options.*[56] A study from 2021 estimated 87 percent of Chinese urban households owned property, among the highest rates of home ownership in the world.[57] With average home prices declining 20–25 percent since the 2021 peak, the average Chinese household's wealth has been reduced significantly, leading indirectly to a pullback in broader spending. The consumer confidence index dropped from 121.5 to 88.3 in 2022 under zero-COVID and has flatlined since, signaling that most Chinese consumers remain pessimistic about their economic prospects.†[58]

Existing debt burdens and local government fiscal conditions further complicate Beijing's effort to stabilize the housing market. Banks are directing credit to roll over property-related debt on longer time horizons at the expense of more efficient deployment of capital.[59] Local state-owned enterprises (SOEs) are buying unsold housing from developers for conversion into "affordable housing" and are borrowing from banks to do so, often with the support of local governments.[60] The drag on real estate continues to lower revenue for fiscally constrained local governments. Moreover, local governments are using bonds traditionally earmarked for infrastructure to clean up hidden debt‡ and buy back land from property developers, contributing to the previously mentioned decline in infrastructure investment.[61]

A number of policy moves in August 2026 indicate Beijing may feel the need to shore up the property sector in the days and months ahead.[62] On the demand side, regulators raised the maximum debt-service-to-income ratio for homebuyers from 55 percent to 60 percent and extended the maximum mortgage term from 30 to 40 years, measures intended to expand access to mortgages and lower monthly payments.[63] The rule changes shift lending decisions toward individual projects rather than developers' overall credit profiles and allow loan terms to vary according to project type.[64] Perhaps most importantly, new rules seek to move the property sector away from the pre-sale model that fueled the sector's debt-driven expansion.[65] Going forward, developers will generally be required to complete a building's main structure before beginning pre-sales, while mortgage proceeds from pre-sold units will not be disbursed until completion filings.[66] These measures may improve project completion and help restore the confidence of buyers. However, tighter restrictions on pre-sale financing could lengthen developers' working-capital cycles and further constrain new construction and property investment.[67]

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*Despite efforts in recent years to boost the role of equity markets in funding high-tech sectors, returns for investors in China's stock markets have been flat for years, compared to large gains in U.S. equity markets. Shanghai Stock Exchange, via Haver Analytics.

†Scores greater than 100 indicate optimistic consumer confidence. China's National Bureau of Statistics, via Haver Analytics.

‡"Hidden" or "implicit" debt refers to borrowing by local government financing vehicles (LGFVs) and other entities acting on behalf of local governments to finance infrastructure, public services, or other government expenditures outside the formal budget. Although these liabilities are legally corporate rather than government obligations, investors have often treated them as implicitly backed by local governments, creating moral hazard. As part of efforts to "clean up" hidden debt, China's Ministry of Finance has authorized provincial governments to issue explicit local government refinancing bonds to replace qualifying LGFV liabilities, converting implicit obligations into explicit government debt. "Why China Is Hoping $1.6 Trillion Can Fix Its Hidden Debt Problem," *Bloomberg*, April 16, 2025; Cheng Siwei et al., "China's Economy Hostage to Local Governments' Hidden Debts," *Nikkei Asia*, August 23, 2023.

Falling Credit Demand Despite Low Rates Sends a Warning Signal

In 2026, China's sizable debt burden continued to weigh on the financial system. Bank profitability remained historically compressed and credit demand weakened significantly, despite exceptionally low interest rates.[68] Lending dropped precipitously in the first half of 2026. New renminbi (RMB) loans totaled 10.7 trillion ($1.6 trillion), a 17 percent drop from the same period in 2025.*[69] Total social financing (TSF),† a broad measure of credit in China's economy, grew just 7.4 percent in June, its slowest pace on record and well below the 12 percent average in the five years before COVID.[70] These declines come even though the People's Bank of China (PBOC) has held benchmark rates at record lows for more than a year, with the one- and five-year loan prime rates at 3.0 and 3.5 percent, respectively.[71] China announced it would inject RMB 290 billion ($42.8 billion) into three state banks to shore up capital levels, following similar moves last year.[72]

Competition over shrinking credit demand, combined with central government direction to roll over bad loans on longer time horizons, has squeezed bank profit margins such that roughly 90 percent of listed banks now fall below the industry standard profitability threshold.[73] Official figures likely understate the problem. Chinese authorities reported a nonperforming loan ratio of 1.5 percent, but some independent estimates put the real figure closer to 10 percent.[74] Thin margins leave banks less able to absorb bad loans and build capital to lend. While heavy state control substantially reduces the risk of an immediate liquidity crisis, the deeper problem is a persistent drag on growth as banks devote more capital to rolling over existing debt rather than financing new, productive activity.

Chinese officials have cast slower credit growth as a deliberate transition from bank lending toward "direct financing" through stocks and bonds—suggesting credit is being allocated in the economy via more market-based mechanisms.[75] This claim does not hold up under scrutiny. Government bonds comprise about 85 percent of direct financing, and 70 percent of those are held by commercial banks; equity financing accounts for a mere 3 percent.[76] In other words, under this supposed transition of the financial system, credit is held and distributed largely by the same state-controlled or influenced lenders and it goes largely to the same government destinations.[77]

Stable Employment Figures Mask Slowing Wage Growth and Rising Job Insecurity

China's headline urban unemployment rate changed little through 2025, but beneath this apparent stability, job quality deteriorated and structural strains intensified. The reported urban unemployment rate, which surveys only a narrow subcomponent of overall unemployment, continues to hover around 5 percent, remaining conveniently below Beijing's official target of around 5.5 percent, while

*Unless otherwise noted, this section uses the following exchange rate throughout: $1 = RMB 6.78.

†Measured since 2011, TSF, or "aggregate financing to the real economy" is a broad measure of credit and liquidity that reflects fundraising by Chinese non-state entities. "FACTBOX-What Is China's Total Social Financing Indicator?" *Reuters*, November 13, 2012.

authorities claimed to exceed their target of creating 12 million new urban jobs in 2025 by more than half a million.[78] Despite these supposed gains, average nominal wages rose just 4.3 percent from 2024 to 2025—well below the 6 to 10 percent annual growth common earlier in the decade—as intense price competition and shrinking profit margins limited firms' ability to raise pay.[79]

Youth unemployment also remains elevated. Despite a 2024 methodological revision excluding students from the official measure, the unemployment rate for urban 16- to 24-year-olds reached 18.9 percent in August 2026, roughly three times the headline unemployment rate.[80] At the same time, China's transition toward advanced manufacturing, AI, and other high-technology industries has reshaped labor demand faster than many workers can adapt.[81] Rapid adoption of automation and AI is reducing demand for routine manufacturing, administrative, and other white-collar jobs while increasing demand for specialized technical skills, widening labor market mismatches.[82] Although these sectors are intended to generate higher-value employment, they have failed to absorb the country's growing pool of educated workers, including the 12.2 million higher education graduates entering the labor market in 2025.[83]

Beijing portrays automation as compatible with long-term productivity gains and job creation (see textbox below); however, weak labor demand and technological displacement are pushing more workers into "flexible" employment in the "gig" economy. This includes white-collar workers from traditionally professional occupations, such as software engineers, financial analysts, and healthcare workers.[84] In 2025, more than 200 million people worked flexible jobs, including roughly 84 million platform workers,* according to Chinese government estimates.[85] In 2026, that number is expected to reach approximately 320 million, roughly 44 percent of the workforce.[86] While flexible employment helped absorb displaced workers, its lower and less stable earnings, limited career advancement, and weaker social protections have contributed to underemployment and labor insecurity, potentially undermining Beijing's efforts to boost household consumption by encouraging precautionary saving.†[87]

China's View on AI Productivity and Labor Displacement

China treats AI as a "general-purpose technology" that will boost total factor productivity (TFP) and enhance industrial competitiveness. (For more on China's strategy to deploy AI as a general-purpose technology, see "China's 15th FYP: Technology Dominance and Security Priorities and Trajectory" below.) At the same time, Beijing acknowledges short-term frictions around unemployment. A study by Chinese scholars at Capital University

*Platform workers are individuals who obtain employment through digital platforms that connect service providers with customers. In China, this category includes ride-hailing drivers for DiDi Chuxing, food delivery couriers for Meituan and Ele.me, and workers engaged in other app-based delivery, logistics, and on-demand service occupations.

†Many gig workers are rural-to-urban migrants employed outside the locality of their registered household (hukou). Because China's hukou system ties many social benefits (pensions, healthcare, unemployment insurance, and other public services) to local registration, migrant platform workers often have weaker access to social protections than local residents, contributing to greater income insecurity and precautionary saving. Yizhi Xu et al., "Reforms to Reduce China's High Household Savings," *International Monetary Fund*, December 2025, 4.

China's View on AI Productivity and Labor Displacement—*Continued*

of Economics and Business and Wuhan University found that "AI serves as a crucial TFP driver in China and may help mitigate the risks associated with the country's aging population and the potential middle-income trap."[88] However, in a 2019 study, Chinese researchers raised concerns that roughly one-third of Chinese workers (around 278 million people) could be displaced by automation by 2049, with agriculture, manufacturing, construction, and transport most affected.[89] A separate survey by Tencent Research Institute also found that 40 percent of its respondents are concerned about their roles being replaced by AI.[90]

The Chinese government has pursued a number of policies to balance AI's pains with its gains. In 2025, the NDRC issued guidance framing AI as a net positive for employment, as the state builds training, matching, and safety net infrastructure alongside China's AI industrial growth.[91] An August 2025 "AI+ Initiative"—a national strategy to integrate AI across various sectors—also seeks to "actively exploit AI's role in creating new jobs and empowering traditional job positions."[92]

These policy frames are beginning to show up in practice. Chinese courts have ruled against companies that dismissed workers citing AI automation. A Hangzhou court ordered $38,000 in compensation for an unlawful AI-related firing, while a Beijing arbitration court ruled that companies must retrain displaced staff for new roles rather than simply cut them.[93] State media framed these rulings as a warning that businesses benefiting from AI must also bear responsibility for protecting workers' jobs.[94]

Anti-Corruption Campaign Picks Up Steam

While Xi Jinping's military purges have received much attention, Beijing is also engaged in a widening purge of senior financial officials. Court records indicate extensive and longstanding corruption allegations among various senior financial regulators and executives at state-affiliated banks who have been dismissed since 2022 (see Table 2). Yet many of the purges also involve allegations of violating Party discipline, failing to implement Central Committee directives, and undermining efforts to control financial risk.[95] (For more on China's military purges, see Chapter 2, "U.S.-China Security and Foreign Affairs (Year in Review).") For example, authorities accused former Bank of China Chairman Liu Liange of implementing Central Committee decisions "half-heartedly" and neglecting his responsibility to prevent financial risks before detailing allegations that he accepted bribes.[96] The campaign therefore appears to be serving two objectives at once: (1) rooting out entrenched corruption in China's state-dominated financial system, and (2) enforcing Party discipline over how regulators and bankers direct capital and manage financial risk. This convergence has become particularly salient since Beijing's 2023 financial sector restructuring strengthened direct Party oversight of financial policymaking.[97]

Table 2: High-Level Officials in Financial Sector Charged

Year	Name	Position	Criminal Charge	Sentence
2022	He Xingxiang	Former Vice President, China Development Bank (CDB)	Bribery; illegally issuing financial instruments; illegally granting loans; concealing overseas deposits	20 years imprisonment
2022	Cai Esheng	Former Vice Chairman, China Banking Regulatory Commission (CBRC)	Bribery; accepting bribes through abuse of influence; abuse of power	Death with two-year reprieve
2022	Tian Huiyu	Former Party Secretary and President, China Merchants Bank	Bribery; abuse of power by personnel of a state-owned company; trading on undisclosed information; insider trading and divulging insider information	Death with two-year reprieve
2023	Fan Yifei	Former Deputy Governor, PBOC	Bribery	Death with two-year reprieve, subsequently life imprisonment without commutation or parole; property confiscated
2023	Liu Liange	Former Party Secretary and Chairman, Bank of China	Bribery; illegally issuing loans	Death with two-year reprieve; also ten years for illegal lending; political rights revoked for life and property confiscated
2023	Li Xiaopeng	Former Party Secretary and Chairman, China Everbright Group	Bribery	15 years imprisonment
2023	Zhou Qingyu	Former Vice President and former Discipline Inspection Secretary, China Development Bank	Bribery	15 years imprisonment
2024	Zhang Hongli	Former Executive Vice President, Industrial and Commercial Bank of China (ICBC)	Bribery	Death with two-year reprieve; political rights revoked for life and property confiscated

Table 2: High-Level Officials in Financial Sector Charged—*Continued*

Year	Name	Position	Criminal Charge	Sentence
2024	Lou Wenlong	Former Vice President, Agricultural Bank of China; previously senior CBRC regulator	Bribery	Life imprisonment; political rights revoked for life and property confiscated
2025	Lin Jingzhen	Former Executive Vice President, Bank of China	Bribery	No final sentence; expelled from Party, benefits revoked, and referred for prosecution
2025	Wang Jianjun	Former Vice Chairman, China Securities Regulatory Commission (CSRC)	Bribery	Life imprisonment; political rights revoked for life and property confiscated
2026	Xu Yiding	Former Vice President, Agricultural Development Bank of China	Bribery	No final sentence; expelled from Party, dismissed, and referred for prosecution
2026	Fang Xinghai	Former Vice Chairman, CSRC	Bribery	No final sentence; under investigation
2026	Zhou Liang	Former Deputy Director, National Financial Regulatory Administration (NFRA)	Bribery	No final sentence; under investigation
2026	Yi Huiman	Former Chairman, CSRC; former Chairman, ICBC; later Deputy Director, CPPCC Economic Committee	Bribery	Expelled from Party and public office and referred for prosecution

Source: China's Central Commission for Discipline Inspection.

China's External Economic Relations

In 2026, China has sharpened and broadened its economic statecraft toolkit, even as it softened the impact of its critical minerals and rare earth export controls. The CCP has long believed that global economic conditions would eventually shift into a more unfavorable and uncertain environment for Chinese exports and investment.[98] Xi perceives that period is well underway as countries begin to erect barriers designed to protect their domestic manufacturing from China's overcapacity.[99] Beijing has been working to expand the range of policies, legal tools, points of economic leverage, and capacity for retaliation available to China to address geo-economic tensions.[100] China's extra-territorial critical mineral and rare earth controls in

2025 were a watershed development, demonstrating its ability to effectively wield export controls and supply chain dependencies as global economic leverage.[101] Developments in 2026 indicate that China plans to continue expanding its tools for economic statecraft, economic coercion, and technology self-reliance while retaining its traditional toolkit involving access to its home market.

China Shock 2.0 Deepens

Discussed at length in the Commission's 2025 Annual Report to Congress, China's domestic economic imbalances, fueled by substantial government intervention in favor of targeted industries, generate excess production far beyond domestic demand, which flows outward as cheap goods that undercut competitors. According to a 2026 report, between 2005 and 2024, Chinese firms received from three to eight times more government support than those in Organisation for Economic Co-operation and Development countries.[102] Furthermore, these subsidies are linked to 60 percent of Chinese firms' gains in global market share.[103] In 2026, this export flood—often referred to as "China Shock 2.0"—continued to undermine the manufacturing sectors in both developed and emerging economies. The resulting harm has prompted alarm and protective measures from China's trade partners. Beijing has calibrated its response: it has retaliated aggressively against many developed economies while granting concessions and exercising greater restraint toward countries that supply its commodities, offer geopolitical value, or represent opportunities for future export growth.

China Shock 2.0 Threatens Both Emerging and Developed Economies

China's flood of low-cost, subsidized exports has continued unabated. With domestic demand too weak to absorb its excess production, China posted a record $1.2 trillion trade surplus in 2025.[104] In 2026, China's total exports increased 19.3 percent over the first eight months of the year, to $2.9 trillion.[105] Chinese exports to Southeast Asia, Latin America, and Africa grew 25.8 percent, 13.6 percent, and 25.7 percent year-on-year, respectively, through August on top of already enormous trade surpluses (see Table 3).

Table 3: China's Trade Surplus Swamps Emerging Markets, Year-to-Date August 2026

	ASEAN	Latin America	Africa
China's Total Exports	$546.0 billion	$221.4 billion	$177.0 billion
China's Trade Surplus	$230.0 billion	$22.2 billion	$80.6 billion
China's Year-on-Year Export Growth	25.8%	13.6%	25.7%

Source: China's General Administration of Customs, via Haver Analytics.

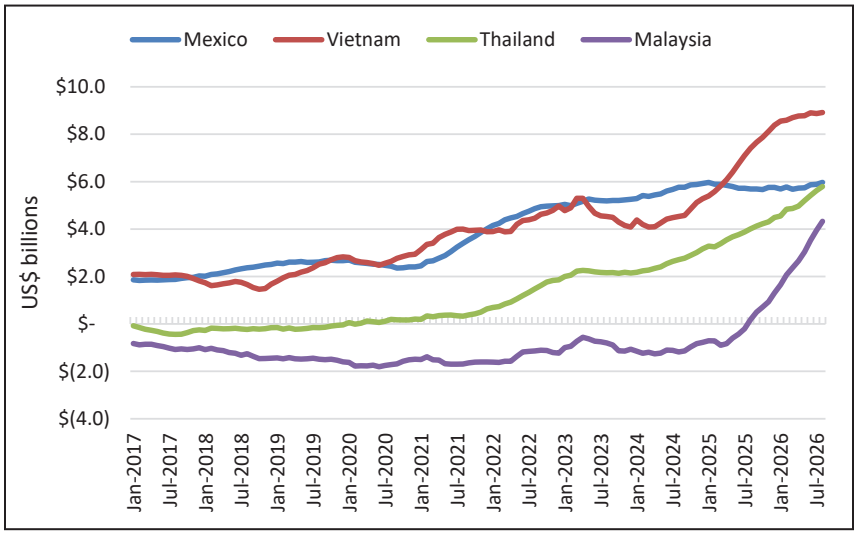
This flood of exports is threatening emerging economies' ability to move up the value chain and increasingly bringing China into direct competition with developed economies both at home and in third country markets.

Emerging Economies: Fewer Opportunities to Advance Beyond Low-Level Assembly

In the past few years, emerging economies have begun to absorb the brunt of China's exports, limiting domestic development opportunities. As China moved up the value chain into manufacturing higher-end goods, it has held onto production of low-end and intermediate goods as well. These goods are flooding into emerging economies, causing local factories to shut down and displacing workers. Thailand's trade deficit with China grew 59 percent year-on-year through July 2026 as imports of machinery and components grew rapidly (see Figure 3).[106] Factory closures in Thailand outnumbered new openings in the first quarter of the year, with the trends especially apparent among small and medium-sized enterprises.[107] Manufacturing employment in Indonesia and Vietnam was growing at a healthy pace prior to the COVID-19 pandemic.[108] Since then, growth has slowed or stalled as China has ramped up exports to these markets.[109] Labor-intensive industries—including furniture, footwear, and plastics—have experienced the worst slowdowns, compounded by rising energy costs.[110] Factories in the Philippines laid off 217,000 workers in March 2026, while over 100 furniture factories in Malaysia closed in recent months.[111] Mexico's national textile chamber estimates that seven of every ten fabrics and garments sold in its street markets are illicit and have cost the industry $8.8 billion, connecting the figure to Chinese products illegally rerouted through Vietnam and other countries to evade tariffs.[112] Chinese exports, having already devastated Mexico's textile industry, are now threatening its steel and automobile industries.[113] Manufacturing employment in Mexico declined 2 percent in 2025 as automobile factories closed under pressure from imported Chinese vehicles.[114] Chinese car brands' share of new vehicle sales in Mexico rose from 14 percent in the first half of 2025 to 17 percent in the first half of 2026.[115] Mexico imposed a sweeping set of tariffs at the beginning of 2026, including 50 percent tariffs on Chinese autos, but Chinese car brand sales continued to grow nearly 30 percent through June.*[116] (For more on the impact of Chinese exports to Latin America, see Chapter 4, "China's Predatory Diplomacy in Latin America: Broken Promises, Harmful Practices.")

*Chinese automakers appear to have front-loaded shipments ahead of the new tariffs, but imports fell by 43 percent year-on-year from January to May 2026, so Chinese vehicle sales may start to decline. In September, Chinese regulators issued new rules for its automakers, instructing them to avoid unfair price competition and misleading advertising and protect the reputation of Chinese brands in their operations abroad. The move likely reflects Beijing's awareness of growing pushback on Chinese auto exports and a desire to avoid more stringent restrictions and tariffs. "China Issues Guidelines for Automakers' Overseas Operations," *Reuters*, September 1, 2026; Emily Green, "Chinese Car Sales in Mexico Surge Despite New Tariffs," *Reuters*, July 20, 2026.

Figure 3: China's Trade Surplus with Manufacturing Competitors Grows, January 2017–August 2026, Trailing 12-Month Average

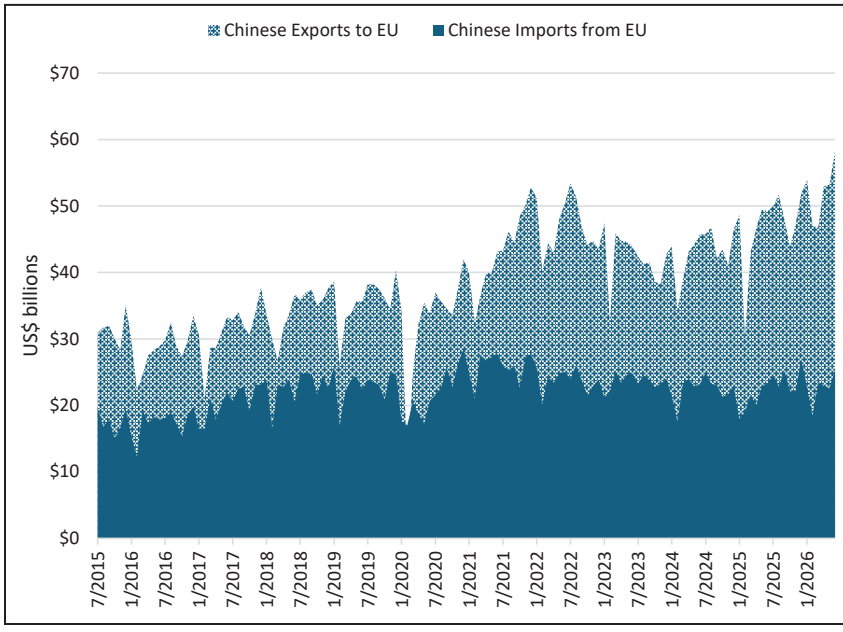


Source: China's General Administration of Customs, via Haver Analytics.

Developed Economies: Direct Competition Eroding Profit Margins and Taking Market Share

China Shock 2.0 is simultaneously hitting developed countries, eroding market share away from high-tech manufacturing industries at home and contributing to job losses. The Export Similarity Index (ESI), a measurement of how much two economies' export baskets overlap, shows how China's export basket now resembles that of developed economies much more than during the first China Shock, a reflection of how China has moved into higher-value-added manufacturing.[117] China's high-tech exports present the greatest challenge to countries including Germany, Japan, and South Korea in sectors like chemicals, machinery, and equipment.[118] In each of these countries, manufacturing capabilities in a few highly specialized sectors and firms contribute a relatively high share of economic output and exports, making them even more vulnerable to disruption from China Shock 2.0.[119] Developed economies are hit on multiple fronts. At home, firms must contend with greater competition from subsidized Chinese goods if tariffs are still too low to constitute a meaningful barrier to imports.[120] They also risk losing their traditional export markets (including China), as end customers purchase "good enough" Chinese goods, sold at lower costs due to China's market distortions. Rhodium Group estimated that 12 percent of G7 manufacturing exports could be exposed to China's growing market share by 2030.[121] The EU lost almost one million manufacturing jobs between 2019 and 2023.[122] Competition from Chinese firms is causing layoffs among Germany's Mittelstand, its high-tech manufacturing base made up of specialized, medium-sized firms.[123] One report estimated that the country is losing over 10,000 industrial jobs per month.[124]

Figure 4: China's Trade Surplus with the EU Grows, 2015–2026



Source: China's General Administration of Customs, via Haver Analytics.

China's Managed Currency Helps Perpetuate Flood of Exports

China's currency controls limit the appreciation of the RMB and contribute to its persistent and outsized trade surpluses. China manages the value of the RMB within a fixed trading band, ostensibly to a basket of currencies. The PBOC announces the midpoint of the trading band and maintains the peg by buying and selling currency either directly or through instructions to state-owned commercial banks.[125] By definition, countries that save more than they invest must run a current account surplus, the largest component of which is typically a country's trade balance.*[126] However, a country with a persistent trade surplus like China should see its currency appreciate as foreign buyers purchase the currency needed to pay for imports. Currency appreciation can cause exports to become relatively more expensive compared to trading partners' exports, and the trade surplus falls as a result. Despite China's trade surplus reaching $575 billion for H1 2026 and on track to exceed $1.2 trillion in 2026, the RMB is undervalued relative to the currencies of its trading partners.[127]

*China's present-day trade surplus is often compared to Japan's situation in the 1980s as the country became a leading exporter of electronics and other manufactured goods. China's high savings rate has persisted for longer due to a poor social safety net, weak wage growth, and negative wealth effects from the property market downturn. This has the added effect of depressing Chinese demand for imports, exacerbating the trade surplus. Erik Green and Olivia Parker, "China's Consumption Problem," *International Institute for Strategic Studies*, February 19, 2026; Alicia García-Herrero and Jianwei Xu, "Will China's Economy Follow the Same Path as Japan's?" *Bruegel*, February 27, 2025.

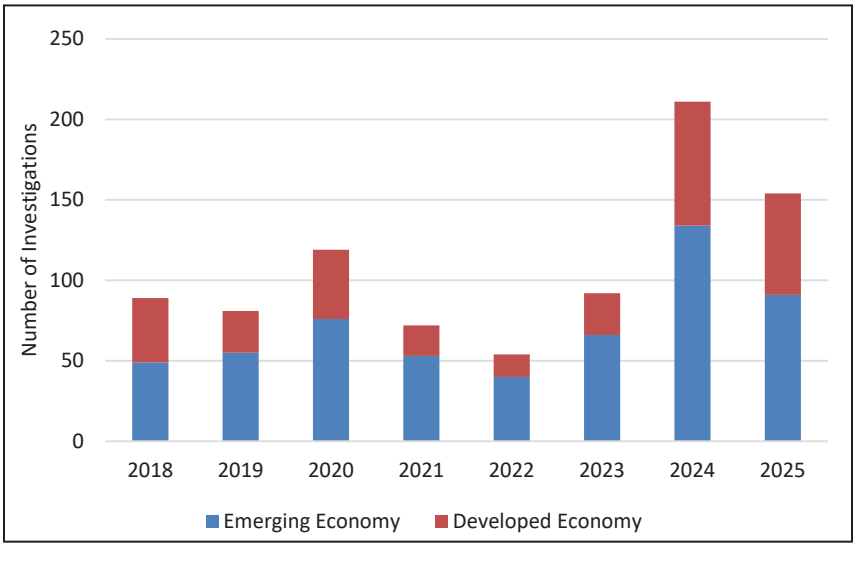
China's Managed Currency Helps Perpetuate Flood of Exports—*Continued*

The International Monetary Fund estimated the RMB's real exchange rate to be undervalued by around 16 percent, while Brad Setser at the Council on Foreign Relations estimated the RMB is up to 35 percent undervalued after adjusting for rising gold imports and understated investment income.[128] In July 2026, the U.S. Department of the Treasury declined to designate China as a currency manipulator, although China remains on a watchlist with nine other U.S. trading partners due to a lack of transparency around its currency management policies.[129]

Pushback on China Shock 2.0 Grows

Countries are intensifying efforts to protect their manufacturing bases from China's export flood. At a meeting of G20 finance ministers in August 2026, U.S. Treasury Secretary Scott Bessent's chair statement called on countries to address global imbalances for their impact on global growth, supply chain security, and economic resiliency.[130] All G20 members present except China agreed with the statement.[131] WTO members across emerging and developed economies initiated 154 antidumping and countervailing duty (AD/CVD) investigations against China in 2025 (see Figure 5).[132] India accounted for 30, the greatest number of any individual economy.[133] Even Russia, a staunch Chinese ally, initiated two antidumping cases.[134]

Figure 5: New AD/CVD Investigations Initiated Against China by Type of Reporting Economy, 2018–2025



Source: World Trade Organization, "Trade Remedies Data Portal."

China's trade partners are also exploring new response pathways, including regulations, tariffs, and quotas. EU measures have sought to protect its advanced manufacturers from Chinese exports. The EU has investigated Chinese rail, wind turbine, security scanning, and e-commerce companies under its Foreign Subsidies Regulation, introduced in 2023 to prevent third-party country subsidies from distorting domestic competition.*[135] In 2025, following an investigation of China's own preferential procurement policies for its domestic companies, the European Commission excluded Chinese medical device firms from public procurement for tenders over 5 million euros ($5.68 million).[136] Emerging economies have also employed a variety of targeted quotas and tariff barriers. Mexico introduced heightened tariffs effective January 2026 on apparel, automobiles, steel, and other products, impacting only those countries with which it does not maintain a free trade agreement, including China.[137] Other countries in Southeast Asia have implemented or are exploring similar tariffs targeting Chinese exports.[138] Thailand imposed a new tariff in 2026 on low-value packages in an effort to slow the flow of imports from Chinese e-commerce platforms.[139] In the Western Hemisphere, Brazil, Canada, and Chile have also extended tariff-rate quotas or implemented tariffs on steel imports.[140]

EU leaders have begun to consider more widespread measures to protect its manufacturing sector. The EU trade remedy tariffs of 17 to 35.3 percent on Chinese EV imports, instituted in 2024, have not protected Europe's auto sector from bearing the brunt of China's industrial policy.[141] Chinese car exports to Europe rose 26 percent in 2025 despite the tariffs; imports of Chinese hybrid vehicles, which the EU tariffs excluded, rose 155 percent.[142] This trend has continued in 2026. Through July, the value of China's total passenger vehicle exports to the EU rose 90 percent year-on-year, nearly reaching the 2025 total of $19.1 billion.[143] Initially reluctant to impose more widespread tariff measures due to concerns of retaliation from China, EU leaders have begun to reconsider.[144] At a meeting between EU Trade Commissioner Maros Sefcovic and Chinese Commerce Minister Wang Wentao in June 2026, the EU and China agreed to a joint monitoring mechanism for bilateral trade.[145] However, the EU has yet to implement some of its more aggressive proposals, including an instrument that would allow it to address systemic distortions from Chinese overcapacity rather than requiring industry-by-industry investigations.[146] In an October 2026 letter to the European Commission, France and Germany proposed new tools for diversifying supply chains, combating third country-induced systemic distortions, and addressing foreign non-tariff barriers as well as

*While the WTO specifically allows countervailing duties against subsidies, the EU determined that these rules do not cover subsidies provided by third-party countries: "existing WTO rules . . . are limited in scope, for reasons such as their focus on trade in goods, and face some challenges in view of transparency shortcomings and enforcement constraints. In the absence of comprehensive and effective multilateral rules capable of addressing the full range of distortions observed in the internal market, the EU considered it necessary to equip itself with an autonomous instrument to address distortions caused by foreign subsidies, while remaining open to future multilateral solutions." European Commission, *Commission Staff Working Document Accompanying the Document: Report from the Commission to the European Parliament and the Council on the Implementation and Enforcement of Regulation (EU) 2022/2560 of 14 December 2022 on Foreign Subsidies Distorting the Internal Market, in Accordance with Article 52(2) Thereof*, July 14, 2026, 4; U.S. Department of Commerce, International Trade Administration, "Regulations Improving and Strengthening the Enforcement of Trade Remedies Through the Administration of the Antidumping and Countervailing Duty Laws," 89 Fed. Reg. 20766 (March 25, 2024).

undervalued exchange rates—though not specifically naming China, clearly aimed at China.[147] While the details of the proposal and the likelihood of approval from the rest of the EU were unclear as of early October 2026, such a toolkit would enhance European countries' ability to respond quickly to market distortions caused by China's exports.

China's Counteractions: Tough on Developed Economies, More Calibrated on Others

China's responses to its trade partners' efforts to protect domestic manufacturing and achieve other strategic aims have varied by target. Beijing retaliates most aggressively where it sees little prospect of shifting a country or bloc's alignment, as is the case for the United States and the EU. In those cases, Beijing has demonstrated its willingness to escalate with sanctions, investigations targeted at companies from those jurisdictions, and export controls.[148] For instance, China responded to the United States' imposition of additional 20 percent tariffs in March 2025 with antidumping investigations of U.S. exports, export and import controls, and tariffs of its own.[149]

By contrast, Beijing has shown greater flexibility toward emerging economies, often absorbing product-level measures and offering concessions. It expanded zero-tariff treatment to 53 African countries in 2026 and did not retaliate after South Africa imposed 74.98 percent tariffs on its structural steel exports in March.[150] Less than two months later, the Chinese Embassy in Pretoria hosted a seminar highlighting economic cooperation and China's zero-tariff policy for Africa.*[151] Manufacturing powerhouses in Southeast Asia have imposed a number of protective measures targeting imports of low-value goods, electronics, and automobiles, but China's response has been muted so far.[152] China upgraded its free trade agreement with ASEAN in October 2025, and state-run media have also touted the benefits of the Regional Comprehensive Economic Partnership, a separate free trade agreement that includes all ASEAN countries except Timor Leste.[153] Turkey imposed additional tariffs of 40 percent on Chinese EVs in 2024, and China's primary response to date has been a WTO challenge.[154] The WTO adjudicated in China's favor in July 2026, and Turkey and China jointly requested an extension on next steps to October 27, 2026.[155] If Turkey appeals, the decision will be largely unenforceable given the stalled WTO appellate system, and as of the "pens down" date for this publication, China has not taken any other retaliatory actions.[156]

Three sometimes overlapping motives appear to drive China's varied responses. First, geopolitical positioning: for smaller markets, China seems more interested in bilateral goodwill, "Global South" alignment, and positive regional dynamics than marginal export revenue.[157]

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*Chinese state media contrasted the temporary lapse of the U.S. African Growth and Opportunity Act (AGOA) with China's newly announced zero-tariff policy, calling AGOA "self-serving" while presenting China's zero-tariff policy as offering "hope" to Africa's industries. The United States extended AGOA for two more years in September 2026. Witney Schneidman, "AGOA Was Extended for Two Years—Now the Real Work Begins," *Brookings Institution*, September 17, 2026; "Interview: AGOA Hampers Africa's Industrialization amid Political Motives, Says Kenyan Scholar," *Xinhua*, March 18, 2026.

Second, Beijing has taken a lighter touch with many of the economies that supply China's critical inputs like Brazilian iron ore and soybeans, Indonesian nickel, and South African ores and metals.[158] Africa's exports to China are primarily commodities, including crude oil and minerals.[159] Aggressive retaliation could threaten Beijing's diversification and economic resilience goals as well as its access to key inputs for the manufacturing sector.

Third, muted retaliation discourages emerging economies from joining a coordinated response as they weigh China's ability to retaliate. China has responded to many countries' restrictions on Chinese imports through tariff concessions, market access offers, and diplomatic engagement. By contrast, it escalates against the United States and the EU to demonstrate that neither the world's largest economy nor a bloc of 27 can establish escalation dominance in a tit-for-tat confrontation.[160] Emerging economies see the potential costs of escalation and realize they must choose their battles carefully.* In this way, China hopes to keep its aggregate access to global markets open given the importance of exports to its economic model.

China Seeks to Exploit U.S. Trade Tensions to Expand Relationships with Third Countries

Beijing is seeking to exploit concerns about uncertainty caused by U.S. trade policy to promote itself as the upholder of the international economic order. Ironically, China has trumpeted its support for multilateralism and the rules-based trading system, free trade, and win-win cooperation. Over the past 18 months, China's senior leaders, including General Secretary Xi, Premier Li Qiang, and Vice Premier He Lifeng, have repeated these themes in meetings at the World Economic Forum and other regional meetings.[161] At the World Economic Forum's annual summer forum in Dalian in June 2026, Premier Li notably dismissed the threat of China Shock 2.0 as overblown and instead said that domestic investment and new market creation presented a "China Opportunity 2.0."[162] State-run newspaper *Global Times* noted that China's imports grew 22 percent in the first half of 2026.†[163]

Whether China's rhetoric has been persuasive is not clear, but China has received many high-level engagements with other countries, including U.S. allies and partners, to promote trade and investment cooperation (see Table 4). China signed new agreements that included trade and investment with the UK and Spain.[164] Canadian Prime Minister Mark Carney's visit to Beijing—the first by a Canadian Prime Minister to China since 2017—yielded a trade agreement and several memoranda of understanding (MOUs) on other areas of cooperation.[165] Beijing also hosted leader-level visits from Ireland, Finland, and South Korea.[166]

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*Some developed countries have reached agreements with China when beneficial to their own economies. Canada slashed its EV surtax to a managed quota in exchange for China cutting canola tariffs. Its exports to China, which are dominated by commodities like crude oil, liquified propane, and metals, grew 30 percent year-on-year through June 2026. Lisa Xing, "Amid Trump Trade War, Canada's Exports to China up 30% in First Half of 2026," *CBC*, September 14, 2026; Maria Cheng, "Canada, China Slash EV, Canola Tariffs in Reset of Ties," *Reuters*, January 16, 2026.

†Notably, China's total imports grew less than 1 percent in 2025. China's General Administration of Customs, via Haver Analytics.

Table 4: China's Recent High-Level Trade and Investment Negotiations

Date	Country	Officials	Outcomes
January 5, 2026	South Korea	Xi Jinping and President Lee Jae Myung	Over 15 MOUs on environmental cooperation, technology partnerships, and export promotion. Agreed to conclude negotiations on investment aspects of Korea-China Free Trade Agreement this year.
January 14–17, 2026	Canada	Xi Jinping and Prime Minister Mark Carney	Agreement to collaborate on new energy technology and expand Chinese investment in Canadian auto industry, and preliminary measures for China to lower tariffs on Canadian agricultural goods.
January 27, 2026	Finland	Xi Jinping and Prime Minister Petteri Orpo	11 commercial agreements between Finnish firms and Chinese counterparts. Additional MOUs signed on new energy cooperation and other sectors.
January 29, 2026	UK	Xi Jinping and Prime Minister Keir Starmer	Commitments to deepen bilateral trade in services, expand UK access to the Chinese market, and invite additional Chinese direct investment in the UK.
February 25, 2026	Germany	Xi Jinping and Chancellor Friedrich Merz	Soft commitments for bilateral investment and trade in high-tech goods and agreements, including agricultural protocols.
April 11–15, 2026	Spain	Xi Jinping and Prime Minister Pedro Sanchez	Limited Chinese concessions on agricultural imports and MOUs on technology transfers, joint ventures, and capacity building.
April 15, 2026	Vietnam	Xi Jinping and General Secretary To Lam	32 cooperation documents including for a cross-border economic cooperation zone, working group on supply chain cooperation, and phytosanitary requirements for agricultural exports.
May 25, 2026	Serbia	Xi Jinping and President Alexandar Vucic	Agreements for cooperation, including in AI, digital economy, technological development, and food exports.

Table 4: China's Recent High-Level Trade and Investment Negotiations—*Continued*

Date	Country	Officials	Outcomes
June 25, 2026	Bangladesh	Xi Jinping and Prime Minister Tarique Rahman	13 MOUs, including increased Chinese support for Bangladeshi infrastructure projects and other investment priorities.
July 17, 2026	Thailand	Xi Jinping and Prime Minister Anutin Charnvirakul	Five MOUs on science and innovation cooperation in nuclear energy, education exchange, space, and other joint research initiatives.
August 18–19, 2026	Ecuador	Xi Jinping and President Daniel Noboa	Agreements on promoting cooperation in trade and investment, ensuring effective implementation of the bilateral free trade agreement, and refraining from taking unfair or discriminatory economic and trade measures against each other.
August 24, 2026	Jordan	Xi Jinping and King Abdullah II	Agreements for cooperation in trade and supply chains.
August 31, 2026	Kyrgyzstan	Xi Jinping and President Sadyr Zhaparov	More than 20 cooperation documents in science and technology, education, people-to-people exchanges, and media.
September 2, 2026	Egypt	Xi Jinping and President Abdel Fattah El-Sisi	Agreements on BRI cooperation, expanding a joint economic zone, increasing bilateral local currency trade, promoting people-to-people exchanges, and increasing technology cooperation.
September 12, 2026	India	Xi Jinping and Prime Minister Narendra Modi	General statements on expanding trade, resolving economic issues, increasing the number of people-to-people exchanges, and strengthening both sides' support for multilateral organizations like BRICS.

Note: Xi Jinping met with leaders from Uzbekistan and Mongolia on the sidelines of the Shanghai Cooperation Organization in August.
Source: Various.[167]

U.S.-China Economic Relations: A Trade Détente Masks Continued De-Risking

Over the past year, U.S.-China trade relations stabilized after a contentious 2025, when both sides imposed escalating tariffs on each other and China effectively froze soybean purchases from U.S. suppliers for several months.[168] Beijing then ratcheted up export controls on rare earth elements and related products, claiming that broad international controls on commodities were justified by "national security" concerns.[169]

Still, both countries indicated an interest in stability. The United States and China reached an agreement in May 2025 to unwind a portion of their retaliatory tariffs.[170] President Donald Trump and General Secretary Xi agreed to reset the tariff truce at a meeting in Busan, South Korea, in October 2025.[171] According to the U.S. readout of the meeting, China made a number of other pledges, including:*

- To stem fentanyl precursor exports in exchange for lowering the United States' fentanyl-related tariffs from 20 to 10 percent.[172]
- To resume soybean shipments from the United States with specific goals through the end of 2025 and for 2026–2028.† [173]
- To suspend implementation of a subset of rare earth export controls and issue licenses to restart the flow of critical minerals, rare earths, and related products to U.S. purchasers.‡ [174]

As of October 2026, these data indicate less than full compliance with the terms of the existing presidential agreements. U.S. buyers have continued to experience difficulties in purchasing critical minerals from China due to licensing delays and export controls that have made some rare earths "nearly unobtainable."[175] China's total exports of dysprosium, lutetium, scandium, terbium, and yttrium to the United States fell to zero in May 2026. Average monthly exports from January to May 2026 were only 20 metric tons, compared with a monthly average of 75 metric tons for the full year in 2024.[176] In September 2026, U.S. Ambassador to China David Perdue warned that China has "weaponized" its dominance over critical minerals while also expanding domestic regulations that could criminalize actions taken by foreign entities to diversify away from Chinese supply

*The Chinese Ministry of Commerce's readout of the meeting was far less detailed than the United States'. For example, China only noted its commitment to increase purchases of agricultural products rather than giving hard purchase targets. China's Ministry of Commerce, 商务部新闻发言人就中美吉隆坡经贸磋商联合安排答记者问 [Ministry of Commerce Spokesperson Response to Reporter Questions Regarding the U.S.-Kuala Lumpur Trade Arrangements], October 30, 2025; China's Ministry of Foreign Affairs, *President Xi Jinping Meets with U.S. President Donald J. Trump in Busan*, October 30, 2025.

†Notably, China's soybean purchase commitments further strengthen South American suppliers' share of its market. The agreement commits China to purchase at least 25 million metric tons of U.S. soybeans each year through 2028; this is below both the preceding five-year (29 million metric tons) and ten-year (27 million metric tons) average annual purchases by China, skewed by very low imports in 2018 at the start of the first trade war. Joana Colussi and Michael Langemeier, "U.S.–China Soybean Deal: Comparing Past Export Levels and Global Market Impacts," *Purdue University Center for Commercial Agriculture*, November 14, 2025.

‡China did not agree to roll back these export controls. The approach allows China to leave the legal framework in place and to continue to build up its experience with and capacity for continued imposition of its broad critical minerals export control regime and elements of its rare earth export controls. Aidan Powers-Riggs, Brian Hart, and Matthew P. Funaiole, "The U.S.-China Trade Truce Has Not Solved the Gallium Problem," *Center for Strategic and International Studies*, May 11, 2026; "China Rolls Back, Suspends Retaliatory Measures Against Some US Entities," *Reuters*, November 5, 2025.

chains.[177] China has not fulfilled a promise to increase its purchases of U.S. agricultural products, which the White House claimed included a commitment of at least $17 billion annually, not including soybeans.[178] While it has met its soybean purchase commitments so far, China's other agricultural imports have barely risen through July 2026.[179] An airplane deal has also reportedly stalled as China made new requests for assurances that the United States would not restrict its access to servicing and spare parts in the future.[180]

The United States likewise reversed or paused various measures it had imposed on China, including the so-called "Affiliates Rule," a measure that would have substantially expanded Commerce Department Entity List controls by covering subsidiaries owned 50 percent or more by listed entities.[181] Separately, President Trump decided to allow licenses for sales of certain advanced semiconductors to China that had previously been prohibited.[182] Penn Wharton's latest customs-based estimate puts the effective U.S. tariff rate on Chinese goods at 22.8 percent in July 2026, down from 33.9 percent in January.[183] These figures measure customs duties as a share of actual import value.

The efforts to maintain stability and establish guardrails for economic tensions continued in 2026. The two presidents are set to meet four times in 2026.*[184] In May 2026, President Trump met General Secretary Xi in Beijing for a two-day summit.† Under the rubric of "constructive strategic stability based on fairness and reciprocity," the United States and China agreed to establish a U.S.-China Board of Investment to discuss investment-related issues and a U.S.-China Board of Trade to discuss bilateral trade in non-sensitive goods and work to resolve trade tensions.‡[185] China made additional commitments to resume purchases of U.S. agricultural products and airplanes and to address supply chain concerns related to exports of rare earth-related products.[186]

In September 2026, Xi made his first official state visit to the White House since 2015, meeting with President Trump and setting the stage for two additional meetings later this year. The United States and China agreed to extend last year's tariff truce two months from its original November 2026 expiration date and moved forward on operationalizing the Boards of Trade and Investment.[187] Each side pledged to review a list of non-sensitive imports from the other worth $30 billion for potential tariff reductions.[188] U.S. exports under review include agricultural goods, fish and seafood, logs and wood products, cosmetics, and medical devices, while U.S. imports under review include consumer products such as small ap-

*As was evident during the Commission's trip to China in July 2026, while both U.S. and Chinese sources include the phrasing "constructive strategic stability," the United States also emphasizes the underlying need for "fairness and reciprocity," while China instead focuses on cooperation. Edward Wong, "Trump's Sharp Turn on China: Embracing It as a Peer Power," *New York Times*, June 9, 2026.

†The summit covered a range of topics beyond economics and trade. For a discussion of outcomes surrounding issues of security and foreign affairs, see Chapter 2, "U.S.-China Security and Foreign Affairs (Year in Review)."

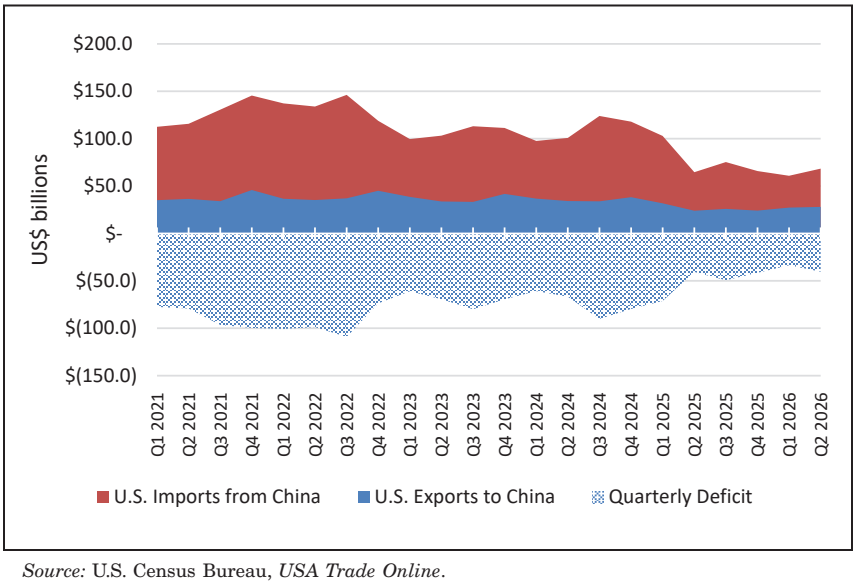
‡The 2026 Supreme Court decision striking down the president's authority to level tariffs under the International Emergency Economic Powers Act did not fundamentally alter the U.S.-China trade dynamic. The decision did not affect existing Section 301 tariffs covering a broad array of Chinese imports. The Administration has pursued tariff authority under other statutes, including for balance of payment imbalances under Section 122 of the Trade Act of 1974 and various other Section 301 investigations. William F. Burkhart, "Active Presidential Tariff Actions in 2026: Fact Sheet," *Congressional Research Service* (Report No. R49481), October 8, 2026.

pliances, toys, holiday decorations, and children's car seats.[189] China also agreed to purchase 10 million metric tons of coal from the United States in both 2027 and 2028.*[190] The two countries also established a new forum to discuss risks and benefits related to AI and a bilateral channel to report certain AI-related incidents.[191]

U.S.-China Trade Trends Show Immediate Response to Tariffs

U.S.-China bilateral trade slowed dramatically in 2025, as high tariffs accelerated some combination of supply chain diversification, transshipment, or diversion. Bilateral trade between the two countries fell nearly 30 percent in 2025 from $584 billion to $415 billion (see Figure 6). The slowdown continued in the first half of 2026; total trade with China fell 17 percent through June.[192] Compared with full year 2025 when trade in both directions dropped dramatically, declining imports from China contributed almost all of the decrease in the first half of 2026, while exports to China held steady.[193] As a result, the U.S.-China trade deficit declined 34 percent year-on-year.[194] Notably, semiconductor exports to China grew by over $600 million during this time frame, comprising 11 percent of all U.S. exports to China.[195] For the first time in recent history, Taiwan is set to overtake China in total bilateral goods trade with the United States, driven by rising demand for Taiwan's export of advanced AI hardware.[196]

Figure 6: Quarterly U.S.-China Bilateral Trade and Deficit, Q1 2021–Q2 2026



Source: U.S. Census Bureau, *USA Trade Online*.

However, bilateral figures alone paint only one component of the overall picture. U.S. trade statistics understate the real value of goods

*In 2025, the United States exported just below 1 million short tons of coal to China, a decline of 92 percent from 2024 exports of 13.1 million short tons. U.S. Energy Information Agency, *Quarterly Coal Report October–December 2025*, April 2026.

produced in China and transshipped through third countries as well as the persistence of Chinese-origin inputs in global supply chains. Illegal transshipment, whereby a product's country of origin is relabeled despite no substantial transformation to the product, contributes to lost tariff revenue and displaced domestic production.[197] Countries including Vietnam, Taiwan, and Mexico saw large increases in exports to the United States at the same time their imports of similar products from China grew.[198] A White House report released in August 2026 noted that estimates of transshipment range from $34.2 billion to $303 billion, reflecting both the variety of methodologies available and the opaque nature of the problem.[199] The White House Council of Economic Advisers estimated a midpoint figure of around $60 billion for 2025 data.[200] On the upper end, detailed supply chain data tracking facility-level product movements produce a figure as high as $303 billion.[201] This estimate likely incorporates both unlawful transshipment and tariff-avoidance strategies whereby Chinese firms move factories and production abroad.[202] This latter phenomenon is qualitatively different than transshipment but still gives the appearance of more diversified supply chains, even as the origin of much of value added remains under Chinese control.

While both countries continue to take measures to promote de-risking and reduce reliance on each other, their economies remain intertwined. Import statistics suggest that U.S. importers continue to prefer Chinese sourcing across many categories of imports. Out of 4,463 six-digit harmonized tariff schedule (HTS) codes the United States imported from China between January and June 2026, China accounted for over 50 percent of total imports for 385 of these products; it accounted for over 25 percent of total imports for 944.*[203] The products where total import value is both large and highly reliant on China include household and consumer goods, smartphones and printed circuits, and lithium-ion batteries.[204] And, as noted above, these metrics only account for final goods imported into the United States and do not include Chinese-manufactured components earlier on in the value chain. For example, India became the largest supplier of smartphones, including iPhones, to the United States in 2025, but upstream supply chains for electronic components, including semiconductors and printed circuit boards, still trace back to China-based manufacturers.[205]

U.S. Government Initiatives to Protect Supply Chains See Progress

The U.S. government has undertaken a concerted effort over the past several years to reduce reliance on Chinese critical minerals while proactively addressing supply chain risks in other sectors with new initiatives. These initiatives aim to encourage

*In comparison, the United States only has a similar level of dependence on Canada among its top trading partners. Of the five economies—Mexico, Canada, China, Taiwan, and Vietnam—with exports to the United States over $100 billion in the first half of 2026, Canada had 531 products that accounted for over 50 percent of total U.S. imports of that good. Mexico had 233, Vietnam had 45, and Taiwan had 33. In 2019, China was the world's dominant producer (defined as producing more than 50 percent of global exports within a six-digit product category) of six times as many products as the United States, Japan, or any other country. Sebastien Jean et al., "Dominance on World Markets: The China Conundrum," *CEPII*, December 2023; UN Comtrade.

U.S. Government Initiatives to Protect Supply Chains See Progress—*Continued*

manufacturing capabilities outside of China for connected devices or other critical components.

Critical Minerals and Rare Earth Elements: The U.S. Department of Energy announced $134 million in available funding for projects that aim to recycle rare earth elements from mine tailings, e-waste, and other waste materials.[206] The Export-Import Bank approved $10 billion to Project Vault, a new critical minerals strategic stockpiling initiative, and the U.S. International Development Finance Corporation has invested in multiple overseas mines and critical mineral cooperation initiatives.[207] The Office of the U.S. Trade Representative has signed action plans with Mexico and the EU agreeing to explore critical mineral price floors, regulatory and technical cooperation, and joint research and development.[208] The U.S. Department of Defense (DOD) continued its support for rare earth miner and refiner MP Materials with price floors after its $400 million equity investment in 2025.[209]

AI Technologies: The U.S. Department of State has convinced 24 countries to sign onto its Pax Silica initiative to build a secure global AI supply chain.[210]

Robotics and Autonomous Systems: The U.S. Federal Communications Commission (FCC) added multiple technologies to its Secure Networks Act covered list for communications equipment, banning imports of foreign-produced humanoid robots, quadruped robots, and uncrewed aircraft systems and their critical components. The FCC has been building on the standards for connected vehicles established in 2025 by the U.S. Department of Commerce's Office of Information and Communications Technology and Services.[211]

Telecommunications: The FCC added foreign-manufactured routers to the Secure Networks Act covered list, banning the sale of new router models in the United States without explicit approval.[212]

Electrical Grid: Executive Order 14420 banned the purchase, sale, and installation of critical power grid components produced in countries of concern that pose an unmitigable risk to the United States.[213] The U.S. Department of Energy plans to implement a $375 million program to upgrade domestic refurbishment capacity and invest in next-generation manufacturing for critical equipment in the grid such as transformers and circuit breakers.[214] The FCC also banned imports of foreign-produced power inverters.[215]

China Continues to Sharpen Its Economic Statecraft Toolkit

While Beijing pulled back from its most aggressive threat of export control enforcement in 2025 as part of the trade détente with the United States, it deployed its toolkit in more targeted ways. China has continued to block exports of critical minerals to Japan since January 2026 after Prime Minister Sanae Takaichi commented on the impact of a hypothetical Taiwan contingency on Japan's

security.[216] In May and June 2026, China detained multiple Japanese executives of companies with operations in China over alleged violations of dual-use export controls, escalating tensions between the two countries.*[217] China also imposed company-specific export controls for dual-use items in June 2026, targeting Japanese heavy industry firms.[218] China has also targeted the EU; in response to new EU sanctions on Chinese and Hong Kong entities for enabling Russia's war in Ukraine, China restricted dual-use exports to European entities.[219]

China Expands and Hones Its Legal Framework to Hinder Effectiveness of Sanctions

In addition to sharpening its export control regime, the CCP created several new tools to blunt the effectiveness of U.S. and allied sanctions, export controls, and supply chain de-risking efforts, which will create significant new legal risks for foreign companies operating in China (see Table 5). In March and April 2026, the State Council introduced two regulations that expand Beijing's legal authorities to counter foreign economic statecraft efforts.[220] Decree No. 834, the Provisions on Industrial and Supply Chain Security, broadens Beijing's authority to punish foreign entities deemed to threaten China's industrial or supply chain security and allows Chinese authorities to restrict supply chain due diligence efforts by foreign organizations.†[221]

Decree No. 835, the Regulations on Countering Foreign Improper Extraterritorial Jurisdiction, focuses on countering U.S. and allied sanctions and export controls. The decree enables Chinese authorities to deem a foreign measure that harms Chinese security, interests, or entities an application of "improper extraterritorial jurisdiction."[222] If Chinese authorities issue an associated blocking announcement, entities and individuals within China (including foreign subsidiaries of U.S. companies) may not comply with the foreign measures identified as such unless they receive express approval from Beijing.[223] Chinese entities may bring civil lawsuits against companies implementing unjustifiable measures, potentially even those with no operations in China.[224] In addition, Chinese authorities may designate "Malicious Entities"—foreign entities and individuals that "promote" or help implement unjustifiable measures—potentially triggering sanctions including limits on imports or exports, restrictions on visas, deportation, asset freezes, and fines; violating a prohibition could result in criminal liability.[225] The scope of "promote" is vague, giving Beijing broad discretion to determine what types of actions might be implicated.[226] Decree 835 also gives the

*The detentions came just before China's Ministry of Commerce published implementation guidance for its supply chain security measures outlining various offenses, setting up a whistleblower hotline for suspected violations, and detailing investigative procedures. China's Ministry of Commerce, 商务部公告2026年第26号 公布关于进一步完善战略矿产两用物项出口管制违法违规行为举报处理工作有关事项 [Ministry of Commerce Announcement No. 26 of 2026: Matters Concerning Further Improving the Handling of Reports of Violations of Export Controls of Strategic Mineral Dual-Use Items], June 24, 2026.

†The CCP has been steadily chilling due diligence efforts within China since at least 2021, when Chinese officials closed the Shenzhen office affiliated with well-known U.S. labor auditing firm Verite, followed in 2023 by significant actions against U.S. due diligence firm Mintz Group and Bain & Company. A. Launder, "Due Diligence in China Is Over," *Fintel Brief*, May 14, 2023; Lingling Wei et al., "China Closes U.S. Auditor as Tensions Mount over Forced Labor Allegations," *Wall Street Journal*, August 19, 2021.

Chinese government the power to exercise its own extraterritorial jurisdiction over foreign conduct with an "appropriate connection" to China that harms Chinese interests, and it may extend liability across multinational corporate structures to controlled or affiliated entities.[227]

While the two decrees overlap in many ways with existing provisions of Chinese law and regulation, they indicate that "China has transitioned from ad hoc countermeasures to a comprehensive, multiagency countersanctions legal framework capable of addressing commercial conduct, regulatory compliance decisions and cross-border legal conflicts."[228] In practice, these provisions could allow Chinese authorities to pursue liability against foreign parent companies or affiliated entities when overseas conduct by a subsidiary is deemed to harm China's interests.

Chinese firms have already been making use of China's anti-coercion toolkit—as shown by two legal disputes resolved in 2026. In the first, a Chinese shipbuilding company sued a Swiss company under Article 12 of the 2021 Anti-Foreign Sanctions Law (AFSL) for withholding $12 million in outstanding payments when the Chinese company was placed under U.S. sanctions.[229] A Chinese court ultimately mediated a resolution that resulted in the Swiss company paying the outstanding amount.[230] In a separate case, a Singaporean company refused to deliver electronic goods to a Hong Kong buyer on the U.S. entity list.[231] Chinese courts ordered the Singaporean company to pay damages to the Hong Kong firm in the first court ruling to establish the mandatory application of the AFSL.[232] In June 2026, China's Supreme People's Court highlighted the case as a representative use case for the law.[233] China's Ministry of Commerce also invoked a 2021 blocking law for the first time to protect Hengli Petrochemical, a large private Chinese refiner, after the United States sanctioned it for purchasing Iranian crude oil.[234] The blocking order puts entities between conflicting systems: Chinese law bars them from complying with or enforcing the sanctions, while continued transactions with Hengli could expose them to U.S. secondary sanctions.*[235]

China has also already deployed its new Regulations on Countering Foreign Improper Extraterritorial Jurisdiction to counter EU investigations into its companies. Under its Foreign Subsidies Regulation, the European Commission has opened two investigations into activities of Chinese companies in European markets—one in December 2025 relating to Nuctech's involvement in the threat detection systems market and a separate one in August 2026 involving Chinese e-commerce firm JD.com's pending acquisition of a German electronics retailer.[236] In both cases, the EU alleges that Chinese companies may have received state subsidies that could distort competition in the EU market.[237] In May 2026 and August 2026, respectively, China invoked its rules on improper extraterritorial jurisdiction to prohibit Chinese firms from fully assisting with the investigations, including by providing certain China-based informa-

*China's NFRA reportedly asked large Chinese banks under its supervision to suspend new loans to Hengli and review their exposures to the company despite the blocking order, indicating that China's regulators are still weighing the risks of secondary sanctions for its largest financial institutions. "China Asks Banks to Pause New Loans to US-Sanctioned Refiner," *Bloomberg*, May 7, 2026.

tion.*[238] Similar to the use of the Blocking Law in the Hengli case, opposing directives from Beijing and the EU force the companies into selective compliance.[239]

Table 5: China's Growing Economic Statecraft Toolkit Pushes Back Against the United States' Supply Chain Diversification Efforts

Effective Date	Instrument	Authority	Purpose and Key Milestone
September 19, 2020	Unreliable Entity List	Ministry of Commerce	Creates authority for China to place restrictions on foreign entities that endanger China's national security, apply discriminatory measures, or otherwise cut off market relations with Chinese entities. First use in February 2023.
December 1, 2020	Export Control Law	National People's Congress Standing Committee	Regulates dual-use technology and codifies license regime for sensitive products, services, and other transfers. First cited use in January 2021.
January 9, 2021	Measures for Blocking Improper Extraterritorial Application of Foreign Laws and Measures	Ministry of Commerce	Creates authority for China's government to block implementation of secondary sanctions and prohibit compliance with some foreign laws and measures. First use in May 2026.
January 18, 2021	Measures for Security Review of Foreign Investment	Ministry of Commerce, National Development and Reform Commission	Establishes security review process for inbound foreign investment in certain sectors.
June 10, 2021	Anti-Foreign Sanctions Law (AFSL)	National People's Congress Standing Committee	Creates legal tool for reciprocating against foreign sanctions and authority to impose retaliatory sanctions on a wide variety of targets, along with family members and affiliates. First use in July 2021.
March 23, 2025	AFSL Implementation Provisions (State Council Decree No. 803)	State Council	Broadens explicit scope of AFSL trigger actions and clarifies countermeasures.

*It is notable that China invoked its extraterritorial jurisdiction authority over cases involving the EU's foreign subsidies regulation regime. While this EU regime is focused on competition policy-type impacts of foreign subsidies and is separate from its CVD regime, the underlying logic of China's position would suggest it could impose blocking orders on requests for information in China related to a CVD or AD case. Were China to impose a blocking order in an AD or CVD case, that would add further tension to its membership in the WTO.

Table 5: China's Growing Economic Statecraft Toolkit Pushes Back Against the United States' Supply Chain Diversification Efforts—*Continued*

Effective Date	Instrument	Authority	Purpose and Key Milestone
March 31, 2026	Provisions on Industrial and Supply Chain Security (State Council Decree No. 834)	State Council	Unifies a national system for monitoring and responding to threats to supply chains. Targets foreign due diligence and information collecting in China.
April 7, 2026	Regulations on Countering Improper Extraterritorial Jurisdiction by Foreign States (State Council Decree No. 835)	State Council	Targets foreign measures deemed extraterritorial and unjustified. Creates a Malicious Entity List of companies that participate in implementing the foreign measures. First use in May 2026.
June 15, 2026	Regulations on the Implementation of the Mineral Resources Law (State Council Decree No. 839)	State Council	Expands state authority over the granting of mining rights and clarifies process for determining national list of strategic minerals.
July 1, 2026	Regulations on Outbound Investment (State Council Decree No. 837)	State Council	Restricts outflow of technology, services, goods, or other information.

Source: Various.[240]

Even as China has suspended and relaxed its export controls under the presidential agreements, it continues to grow the capacity to enforce and expand its regime in the future. China's issuance of export licenses for rare earths remains volatile, and companies have flagged repeated delays in receiving approvals.[241] Companies requesting licenses must provide extensive detail on the intended use and end user, providing China with more visibility into supply chain dependence at the firm level.[242] Given that China is targeting sales to U.S. defense manufacturers, it is likely gaining insights into these companies' supplier networks and import dependencies. China has also used its licensing regime to restrict rare earths and dual-use exports to defense-related U.S., Japanese, and European companies, such as U.S. firms MP Materials and USA Rare Earth, which are developing alternative rare earth supply chains.[243] As noted above, China's exports of key rare earths to the United States remain significantly below pre-export control levels despite Xi's commitment to Trump in Beijing. As noted above, in 2026 China expanded its economic statecraft policy toolkit, providing new authorities and mechanisms to punish compliance with U.S. sanctions and export controls and protect its supply chains. New regulations effective as of June 2026, for example, expanded state authority over the critical mineral and rare earth elements industries to reinforce China's leverage against foreign de-risking efforts.[244] As discussed in the section below on "China's 15th FYP: Technology Dominance and Security Priorities and Trajectory," China is working to preserve

its control over domestically produced technology by tightening controls over outbound investment, limiting access to foreign capital, and preventing domestic technology companies, talent, data, and knowhow from moving overseas.

China is also cognizant of other sources of leverage or potential leverage over the United States. In addition to its growing global exports of foundational semiconductors, China has sought to preserve its role as a major buyer of U.S. soybeans, using purchases as leverage during trade negotiations.[245] The United States' share of Chinese soybean imports has fallen from 35 percent in 2017 to 15 percent in 2025.[246] However, China accounted for an average of 45 percent of U.S. soybean exports over the last five years, making U.S. soybean farmers asymmetrically dependent on the Chinese market.[247] (For more on China's efforts to diversify soybean supplies, see Chapter 6, "The Price of Everything: China's Bid to Reshape Global Commodities Markets.")

China's 15th FYP: Technology Dominance and Security Priorities and Trajectory

China has laid out a comprehensive state-led strategy to compete with the United States and other countries across key emerging and critical technologies, including AI, biotechnology, and robotics. The essence of the 15th FYP rests not only on the development of frontier technological capabilities but also on the commercialization of key technologies at the near-frontier level across various applications. As documented in the plan, Beijing treats these technologies as general-purpose capabilities that create compounding advantages and drive broader innovation. The worrisome implication is that the United States could win the frontier AI capabilities race but still lose the broader technology competition if China succeeds in scaling low-cost adoption of AI, robotics, and biopharmaceuticals across its economy. Beijing is also playing defense: tightening state control over key components of its tech ecosystem and restricting overseas transfers of technology, talent, and capital while boosting state-backed financing.

China's "New Frontier" for Science and Technology Gets More Specific, More Ambitious, and More AI

Among frontier technologies prioritized in the 15th FYP, AI occupies a uniquely prominent position. The plan presents AI as a foundational strategic capability for advancing China's security, political, and economic objectives.[248] AI receives more mentions than any other emerging technology in the plan, reflecting its central role in Beijing's development agenda.[249] Its prominence has also increased dramatically over successive planning cycles. The term "artificial intelligence" appeared four times in the 13th FYP, rising to six mentions in the 14th FYP and 52 in the 15th.*[250] Chinese leadership further reinforced its emphasis on AI at the 2026 World Artificial Intelligence Conference (WAIC) in Shanghai, where Xi Jin-

*Although the Chinese term for "artificial intelligence" (人工智能) only appeared in the 13th FYP four times, the term "intelligentization," or "intelligentize" (智能化), appeared seven times in the plan. In the 14th FYP, the word appeared 11 times. One could argue that these words represent an earlier interpretation of China's aim to encourage the adoption of AI throughout the Chinese economy and military domain.

ping delivered a keynote address portraying China as a champion of international AI cooperation, safety, and "open" development, with "openness" likely referring to the broad diffusion of AI throughout Chinese industry and the wider economy rather than an explicit commitment to unrestricted open-weight models.[251] Xi also paired the release of new frontier AI models with new international AI governance initiatives, underscoring China's effort to advance domestic technological leadership while shaping global AI standards and positioning Chinese AI as an alternative to U.S. systems.[252]

The 15th FYP also promotes AI as an enabler of breakthroughs in other key technologies and critical sectors. From its initial efforts to drive China's AI development, Beijing has long viewed AI as a general-purpose technology that drives innovation elsewhere: for example, the Chinese government has promoted AI for science, encouraging research institutions to explore ways to use AI to enhance scientific discovery.[253] The 2025 AI+ Initiative and the subsequently released 15th FYP reinforce the concept of AI convergence with scientific research into a cohesive national-level, state-driven strategy.[254] The plan specifically envisions AI converging with other technologies such as quantum, life sciences, new materials, new energy, and 6G, leveraging technical advances in one sector to catalyze breakthroughs in another.[255] Beyond scientific discovery, the plan also emphasizes the practical application of AI technologies and their widespread adoption across critical sectors, including manufacturing, finance, healthcare, agriculture, and logistics.[256] Essentially, China is seeking to lead in global adoption and reap the benefits of AI across diverse sectors by focusing on deploying the technology throughout society rather than focusing exclusively on reaching the AI frontier.

Moving into the 15th FYP era, China has also articulated more specialized and operational objectives for other frontier technologies. In the 14th FYP, deep-sea and deep-space exploration were grouped together under the broad goal of advancing frontier scientific research and exploration capabilities. In contrast, the 15th FYP pulls deep-space exploration into a separate domain, with specific objectives including planetary exploration and the advancement of China's lunar program and launch vehicles, while deep-sea exploration remains grouped with other technology frontiers like deep-earth and polar exploration.[257] Whereas the 14th FYP emphasized advancing quantum information science broadly, the 15th FYP expands these ambitions to include building an integrated space-ground quantum communication network; developing fault-tolerant, general-purpose, and scalable specialized quantum computers; and achieving breakthroughs in high-precision quantum sensing.[258]

China's 31 provincial governments submitted new provincial-level FYPs in June 2026 that build on the central government's technology focus. The provincial plans show unity on several technology-related priorities: all 31 name new energy, biopharma, new materials, and AI as key sectors; 28 highlight aerospace and semiconductors; and 27 emphasize robotics, even as provinces pitch different approaches to upgrading these industries.[259] For example, Guizhou is positioning itself as a low-cost compute hub, Anhui is targeting memory and advanced packaging for semiconductors, and resource-rich provinces

such as Sichuan and Hunan are focusing on scaling up China's raw materials and rare earths.[260]

China's Trajectory in Key Areas of U.S.-China Technology Competition

As previously mentioned, Chinese labs, firms, and policymakers are not simply racing to match the United States in its drive toward frontier capabilities—they are also pursuing widespread AI adoption and deployment both domestically and globally. Beijing believes this dual approach offers parallel and mutually reinforcing pathways to leadership across multiple technology sectors. Chinese AI labs are flooding the global market with increasingly capable open-weight models that are quickly becoming the default choice for developers worldwide, including in the United States. Chinese robotics firms are enhancing capabilities, scaling production, and reducing prices, while Chinese biopharmaceutical companies are offering faster, cheaper drug development that is drawing Western pharmaceutical firms into deepening licensing relationships, presenting China with another potential point of supply chain leverage.[261]

China Improves Frontier AI Capabilities While Making Its Open Models the Default

From the perspective of Beijing and Chinese AI labs, AI competition with the United States is no longer solely about the race to the frontier. Rather, Beijing believes leadership in AI is contingent upon a country's ability to increase widespread adoption of AI across its own economy and around the world.[262] As the Commission found in a March 2026 paper examining China's AI development, Chinese AI labs are pursuing multiple pathways to compete with U.S. frontier labs as they grapple with compute constraints imposed by U.S. export controls. (For more, see Ngor Luong, "Two Loops: How China's Open AI Policy Reinforces Its Industrial Dominance," *U.S.-China Economic and Security Review Commission*, March 23, 2026.) These labs are simultaneously striving to achieve frontier model capabilities* while deploying open-weight models (i.e., models that release the learned numerical values that determine how AI processes inputs and generates outputs) globally and at scale.† China's open model strategy serves as a means for Chinese AI labs to increase their user base, innovate, tailor their models for specific industries and use cases, and obtain access to specialized data.‡[263]

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*Frontier AI models are the most capable models at a given time, representing the most cutting-edge technology based on performance benchmarks and capabilities that are regularly evolving. "What Is a Frontier Model?" *IBM*.

†Open-weight models also have varying degrees of licensing permissions, which may allow developers to independently understand, audit, recreate, and build upon the model, unlike closed or proprietary models. U.S.-China Economic and Security Review Commission, *AI Technology Stack Glossary*, June 25, 2026.

‡U.S. frontier AI labs, including OpenAI, Anthropic, and Google DeepMind, have accused Chinese labs such as DeepSeek, Moonshot, Minimax, and Alibaba of using fraudulent proxy accounts to harvest outputs from U.S. models at scale to generate synthetic training data—an attack U.S. labs called adversarial distillation—allowing them to build near-peer models cheaply. The U.S. National Security Agency, U.S. Cybersecurity and Infrastructure Agency, and U.S. Department of Justice published a joint cybersecurity advisory in September 2026, noting that DeepSeek, Moonshot AI, StepFun, and other Chinese AI labs had used adversarial distillation of U.S. models to reduce their training costs. (For more on adversarial distillation attack and synthetic data, see Chapter 8, "Silicon to Sovereignty: China's Bid to Control the AI Stack from Wafer to Weights, Part One.") National Security Agency, Cybersecurity and Infrastructure Security Agency, and De-

China's strategy to widely deploy open-weight models across key sectors such as manufacturing, robotics, and scientific research creates a feedback loop where deployment generates domain-specific data, these data refine models, and the refined models enable more advanced deployment.[264] (For more on China's "data flywheel" strategy for AI, see Chapter 7, "Collect, Steal, Buy, Fuse, Monetize: How China Is Turning Data into Assets and Ammunition.")

In 2026, Chinese open-weight models have gained significant traction among AI developers worldwide, including those in the United States.[265] By June 2026, Chinese models accounted for around 60 percent of all open model downloads on Hugging Face—a global open-source platform—surpassing U.S. models.[266] With their increased popularity, Chinese open models are now embedded in some U.S. businesses. Major U.S. companies—including Airbnb, DoorDash, Amazon, and Microsoft—have reportedly adopted, considered adopting, or have integrated into their products Chinese models.[267] U.S. startups such as Cursor, Lindy AI, and Perplexity also rely on them; Lindy and Perplexity cited their cost efficiency while delivering competitive performance.[268] (For more on China's open-weight models in the AI tech stack, see Chapter 8, "Silicon to Sovereignty: China's Bid to Control the AI Stack from Wafer to Weights, Part One.")

China continues to face constraints in frontier AI development due to export controls the United States and its allies have placed on its AI and semiconductor manufacturing equipment industries. Leadership in advanced semiconductor manufacturing depends on a small number of highly specialized firms concentrated in the United States and other allied countries and partners, and these jurisdictions have worked to establish controls targeting multiple chokepoints across the supply chain. Nvidia designs the most advanced AI chips, which are manufactured at or below 7 nanometer nodes. Since 2022, U.S. export controls have kept Chinese AI labs such as DeepSeek behind U.S. frontier labs by restricting their access to these chips and hampering Chinese firms' ability to manufacture them domestically.[269] Chip design also relies on electronic design automation (EDA) software dominated by U.S.-based Synopsys and Cadence and Germany-based Siemens, while high-end AI chip manufacturing is nearly monopolized by Taiwan Semiconductor Manufacturing Company, which currently depends on Netherlands-based ASML's extreme ultraviolet lithography equipment.[270] Advanced AI systems also require high-bandwidth memory, manufacture of which is controlled largely by South Korea-based SK Hynix and Samsung, and U.S.-based Micron, with Chinese competitor CXMT lagging by at least two generations.[271] (For more on China's challenges and progress in indigenizing its advanced semiconductor industry, see Chapter 8, "Silicon to Sovereignty: China's Bid to Control the AI Stack from Wafer to Weights, Part One.")

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partment of Justice, *China-Based Artificial Intelligence Companies Conducting Industrial-Scale Distillation Campaigns Against U.S. AI Companies,* September 8, 2026, 3–5.

Threat From China's Foundational Semiconductors Sector Begins to Take Shape in 2026

Chinese producers of foundational semiconductors are becoming more competitive in the global market, driven by China's massive subsidies in recent years to expand capacity.* As the Commission reported in its 2025 Annual Report to Congress, once planned investments come online, they are projected to push China's share of global production of foundational semiconductors from 34 percent in 2024 to 47 percent by 2027, exceeding Taiwan's share as the leading producer.[272] China's capacity buildout, supported by both industrial policy programs and investments to localize supply chains, has started to translate into export growth. In the first half of 2026, China's integrated circuit exports—which include memory, microcontrollers, and other foundational semiconductors—already nearly doubled from a year earlier, totaling $177.28 billion across 179.44 billion units.†[273]

China's capacity buildup creates conditions for intensified competition with market-based producers. According to microelectronics industry association SEMI, China's 12-inch wafer fabs are projected to account for 25 percent of global capacity this year, surpassing South Korea (23 percent) and Taiwan (21 percent).[274] Backed by a decade of Made in China 2025 industrial policy and more recent urgency following the 2022 and 2023 U.S. export controls, China's capacity expansion is already reshaping the competitive landscape for foundational semiconductor manufacturing, previously dominated by market-based players.[275] In the wafer manufacturing segment, for example, Taiwan market research firm TrendForce reported a 40 percent price drop of six-inch silicon carbide wafers (from $1,000 to $600) in 2024, with Chinese firms offering record-low prices of $400 per wafer.[276] In response to China's nonmarket practices in the foundational semiconductor sector, the Office of the U.S. Trade Representative concluded a Section 301 investigation in December 2025, finding China's semiconductor practices unreasonable and burdensome to U.S. commerce and imposing a tariff action that holds at 0 percent until it rises to an as-yet-to-be-determined rate, scheduled to be announced on June 23, 2027.[277]

AI Accelerates Other Strategic Technologies

For China, AI integration has the potential to accelerate breakthroughs in biotechnology, including synthetic biology, which applies engineering principles to design or modify biological systems for specific purposes.[278] Developments in AI have already dramatically sped up how fast and widely these advances are developed and deployed, and this trend is likely to continue.[279] Against this backdrop, a number of Chinese companies are attempting to replicate, match, or surpass Google DeepMind's AlphaFold's protein-folding capability,

*Foundational chips are sometimes called legacy chips or mature nodes because they are produced on long-established process nodes with older-generation equipment. Bryon Moyer, "Legacy Process Nodes Going Strong," *Semiconductor Engineering*, July 23, 2024.

†The export growth is partly driven by the rise in memory chip prices. Graham Ayres et al., "China Bulletin," *U.S.-China Economic and Security Review Commission*, July 23, 2026.

often positioning their domestic models as commercial competitors. For example, Baidu-backed Biomap claims its xTrimo model is more accurate than AlphaFold in testing ways that 70 antibodies and 44 single-domain antibodies each bind to their target molecules.[280] ByteDance claims its open-weight SeedFold model outperforms AlphaFold3 on protein-related tasks such as predicting how proteins bind to RNA and how two proteins bind to each other.[281]

AI is also a force multiplier for the robotics sector. As China climbs the value chain, it is leveraging AI to move from conventional automation to embodied AI—systems that can perceive, interact with, and act in a physical world, adapting to tasks and environments for which they were not explicitly programmed.[282] Yao Maoqing, a partner at China's embodied AI company Agibot, explained, "Industrial robots do not have intelligence. Embodied intelligence uses large models to form abilities… to perform tasks in relevant environments and adaptively adjust according to environmental changes."[283] The convergence of AI and robotics will be critical for China to maintain its dominant position in the sector. (For more on China's use of data to improve embodied AI, see Chapter 7, "Collect, Steal, Buy, Fuse, Monetize: How China Is Turning Data into Assets and Ammunition.")

China Deploys More Humanoid Robots and Drives Down Prices

The year began with humanoid robots* taking the center stage at China's New Year celebration and performing coordinated martial arts moves and flips—a visible marker of China's growing competitiveness.[284] According to the Commission's 2025 Annual Report, China's lead in manufacturing has driven rapid industrial robot deployment, and this year the advantage has extended to humanoid robots, which have demonstrated growing capabilities alongside falling prices.[285] In 2025, Chinese humanoid robotics companies such as Agibot, Unitree, and UBTech accounted for nearly 70 percent of the global humanoid market share.[286] Morgan Stanley projects China's humanoid robots sales will more than quadruple to 50,000 units in 2026, with input costs dropping 16 percent.[287] Unitree's initial public offering (IPO) filing points to scale as a driver of falling prices, noting that "large-scale production has further strengthened our bargaining power with upstream suppliers, creating a sustained cost advantage."[288] Longer-term forecasts point to a much wider gap, where Chinese humanoid robot companies are expected to sell 263,000 units by 2030, nearly eight times the projected U.S. total.[289] China's push for faster robotics deployment and lower pricing may also reflect a deliberate strategy. Faced with compute and data constraints, Chinese firms may be attempting to generate a positive feedback loop of real-world data needed to improve the software systems that run their robots.[290]

The United States has taken several notable steps in response to China's robotics surge. On June 8, 2026, DOD released an updated Section 1260H list identifying "Chinese military companies" oper-

*Humanoid robots combine humanlike form, mobility, dexterity, and embodied intelligence. Not all humanoid robots guarantee advanced embodied intelligence, as some perform fixed, tightly programmed motions with limited perception and in a structured environment. U.S.-China Economic and Security Review Commission, *Humanoid Robots*, October 10, 2024.

ating in the United States, adding Unitree and RoboSense.*[291] On July 27, 2026, a White House-convened interagency body issued a National Security Determination stating that all foreign-made advanced robots—including those from China—pose national security and safety risks.[292] Afterwards, the FCC added these devices to its Covered List, which means covered entities cannot obtain new equipment authorizations to import, market, and sell in the United States.†[293] Separately, on June 23, 2026, *Politico* reported that Department of Commerce Secretary Howard Lutnick said the department is reviewing Chinese state-subsidized robotics imports to the United States, signaling potential trade-related policies.[294]

China's Biopharmaceutical Rise Reshapes U.S. Drug Development

In March 2026, Pfizer CEO Albert Bourla warned that "for the first time in history or in recent decades… U.S. dominance in biotech technology is [being] challenged by a competitor, and that's China."[295] China is gaining a competitive advantage in biopharmaceuticals, which rely on biological processes rather than standardized chemical synthesis and could uncover novel new treatments. Due to the growing innovative capacity of Chinese biopharma companies, Western firms are increasingly paying large upfront licensing fees for global rights to China-origin biologics and next-generation candidates.[296] As shown in Figure 7, China's outbound licensing deals (i.e., agreements that grant non-Chinese companies the right to develop and commercialize a Chinese company's innovative products for upfront payments) hit a record $130 billion in 2025, a 150 percent increase from 2024.[297] The year 2026 was on pace to set a new record, with $110 billion in licensing value across 81 deals already in the first half of the year.[298] Chinese biotech firms have had particular success in developing potential oncology (cancer) biologics.[299] (For more on China's strategy to leverage data for advances in clinical trials and drug discovery, see Chapter 7, "Collect, Steal, Buy, Fuse, Monetize: How China Is Turning Data into Assets and Ammunition.")

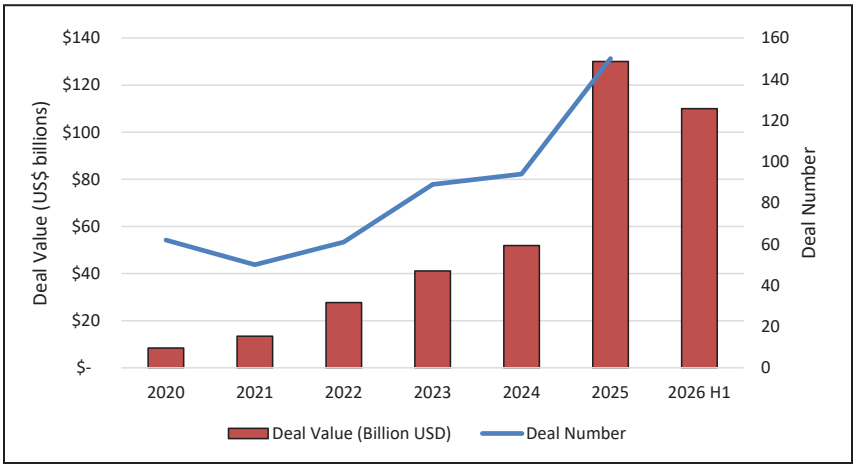
Since the launch of its Made in China 2025 industrial policy program in 2015, China surpassed its drug approval targets, boosted by streamlined regulations, cheap access to drug ingredients, strong oncology demand, and a well-developed biotechnology intermediate production infrastructure.[300] (For more on China's use of industrial policy to grow its biotechnology sector, see U.S.-China Economic and Security Review Commission, Chapter 6, "Interlocking Innovation Flywheels," in *2025 Annual Report to Congress*, November 2025, 313–357.) In addition, clinical trials in China are now 30 percent cheaper and 20 to 40 percent shorter than they were in the past.[301]

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*While Section 1260H of the Fiscal Year 2021 National Defense Authorization Act itself does not impose sanctions, provisions that took effect this year restrict DOD from contracting with listed entities. U.S. Department of Defense, *Department of War Launches New Website to Help Industry Partners Navigate Section 805 Supply Chain Requirements*, June 30, 2026.

†Unlike the 1260H listing, which only constrains DOD's own procurement, the Covered List reaches the broader consumer market, effectively banning the sale of Chinese robots in the United States by requiring online marketplaces to prevent sales of unauthorized covered equipment. U.S. Federal Communications Commission, *Covered List FAQs: UAS and UAS Critical Components*, July 21, 2026.

Figure 7: China's Outbound Licensing Pharmaceutical Deals Growth, 2020–2026*



Note: *2026 is as of June.
Source: Various.[302]

In response to China's growing advantages in biotechnology, the United States has attempted to curb U.S. dependence on Chinese companies for intermediate steps in the biopharmaceutical supply chain. The BIOSECURE Act, enacted December 18, 2025, as part of the Fiscal Year (FY) 2026 National Defense Authorization Act (NDAA), establishes a framework under which certain entities can be designated "biotechnology companies of concern (BCCs)," prompting federal contracting and funding restrictions.[303] While the Act doesn't name specific BCCs, it treats any companies on DOD's Section 1260H list as "Chinese military companies" and therefore subject to the same restrictions as designated BCCs.[304] On June 8, 2026, DOD updated the list to include WuXi AppTec.[305] In August, a federal district court blocked enforcement of the designation based on a legal challenge by WuXi.[306] WuXi AppTec and other Chinese contract development and manufacturing organizations are deeply embedded in U.S. supply chains. In 2024, experts estimated U.S. companies will need roughly eight years to disentangle themselves and shift to alternative providers.[307] The full list of BCCs is scheduled to be published by December 18, 2026.[308]

China Aims to Sustain and Expand U.S. Dependency on Its Pharmaceutical Ingredients

The United States is heavily dependent on China for raw pharmaceutical ingredients—particularly active pharmaceutical ingredients (APIs) and key starting materials (KSMs)—used in generic drugs, which make up 90 percent of U.S. prescriptions.[309] In its 2025 Annual Report to Congress, the Commission noted that while the precise nature and degree of U.S. dependence is unclear, nearly a quarter of APIs used in U.S. generic drugs come from China.[310] The Commission further estimated that anywhere

China Aims to Sustain and Expand U.S. Dependency on Its Pharmaceutical Ingredients—*Continued*

between 24 and 46.8 percent of generic daily doses distributed in the United States that use APIs from India depend on upstream Chinese inputs.[311] In addition to high average dependencies, certain KSMs are sole-sourced from China. One US Pharmacopeia study found that 12 percent of a sample of almost 2,000 APIs rely solely on China for their KSMs.[312] Drugs with high U.S. reliance on Chinese inputs include those with few immediate substitutes, including the blood thinner heparin, the immunosuppressant mycophenolate, and other hospital antibiotics.[313] China is taking actions to consolidate and grow this dependency. In September 2025, Chinese producers flooded the global market with below-cost APIs and KSMs to undercut India's attempts to stand up alternate supply.[314] In 2026, the 15th FYP called for cultivating new capabilities in biomanufacturing, including novel cell and gene therapy drugs and emergency vaccine and drug development.[315] And, in September, China's Ministry of Industry and Information Technology released a new FYP for the pharmaceutical industry to enhance innovation-driven drug development and strengthen supply chains alongside indicative 2030 targets, including to have at least five drugs reach global annual sales exceeding $1 billion.[316] (For more on India's reliance on China for pharmaceutical ingredients, see Chapter 3, "China's Other Front: India and the Future of U.S. Strategy in the Indo-Pacific.")

U.S. reliance on China for APIs and KSMs poses national security, economic, and public health risks to the United States, as some medical drugs—including certain anticoagulants, antibiotics, and cancer treatments—appear wholly sourced from China.[317] As the critical minerals example has demonstrated, reliance on Beijing for inputs in sensitive sectors creates significant risks, exacerbated given the immediate threat to many Americans' health if China caused shortages or disruptions to U.S. access.[318]

China Strengthens Control over Technology and Capital

China Updates Its Regulatory Toolkits to Protect Domestic Technology Ecosystem

As China seeks to maintain critical capabilities in AI and other advanced technologies, it is tightening its legal authorities to regulate the transfer of commercially valuable technology, data, and expertise. Beijing seeks to retain control over strategically valuable technology, capital, and talent while expanding tools to deter, penalize, or retaliate against firms that hinder China's technological advancement.

China's weak private investment climate, slowing economic growth, and constrained access to capital have incentivized some Chinese AI companies to seek overseas financing or relocate abroad.[319] As a result, Beijing has turned to more aggressive regulatory measures to retain technology, talent, and investment within China. On April 17, 2026, the State Council adopted a new outbound investment regula-

tion preventing investors from exporting restricted technology, know-how, data, or other goods and services under the guise of outbound investment.[320] The regulations were published and made effective on June 1, 2026, but even before the regulations became public, the NDRC had already begun taking steps to discourage AI firms from relocating overseas or accepting Western capital. On April 27, 2026, the NDRC blocked Meta's proposed $2 billion acquisition of Chinese AI startup Manus (headquartered in Singapore) after a months-long review of the company and its owners.[321] The companies have since complied with the decision and returned to operating as independent entities.*[322] The CCP's concerns even extend to foreign capital invested into China's AI sector—Beijing reportedly instructed several firms, including ByteDance, Moonshot AI, and StepFun to reject investment of U.S. origin unless explicitly approved.[323]

Reflecting its view of technology as a strategic national asset, the Chinese government has also expanded its oversight beyond companies to include AI talent. In 2026, authorities reportedly prevented employees at frontier AI firms, including Alibaba and DeepSeek, from leaving China without government approval, barring the founders of Manus from departing the country during the government's review of Meta's proposed acquisition of the company.[324] These efforts will likely make it harder for Chinese firms to tap private capital from more capital-rich global investors and will force entrepreneurs to choose whether to build their companies in China, Singapore, or the West.

In June 2026, SAMR introduced the Regulations on Trade Secret Protection (Order No. 126), expanding China's trade secrets regime to explicitly cover data, algorithms, and other digital assets.[325] The regulations introduce several legal authorities that allow Beijing to scrutinize and penalize cross-border business activity relating to AI, such as sharing internal business data with foreign affiliates or hiring foreign technical staff who may have access to proprietary information. Additionally, they significantly increase administrative penalties for trade secret theft and strengthen enforcement tools against employees and firms that misappropriate proprietary data, algorithms, and code.[326] While the United States provides trade secret treatment in appropriate circumstances for AI algorithms, knowhow, and data, the new decree coincides with China's recent push to control commercial decisions made by its firms and tech talent to move abroad or to make deals with foreign firms.

State Role in Financing Technology Sector Has Grown, Increasing Importance of Hong Kong

Reflective of Xi Jinping's effort to further centralize technology development, state-backed capital now dominates China's venture capital (VC) ecosystem.[327] China has emphasized the use of state-backed equity funding to provide companies "patient capital"—long-term capital for technology research and commercialization.[328] According to China-based independent research group Zero2IPO, the share of state-backed funds serving as limited partners in Chi-

*Given the steps taken by the Chinese government in 2026, it seems likely that so-called "Singapore-washing," a corporate strategy in which Chinese-founded companies relocate or restructure operations through Singapore to obscure their Chinese identity, is no longer an option without severing operational ties to China.

na's VC fundraising rose from 65 percent in 2019 to 81 percent in 2025.[329] As of February 2026, the ten largest VC investors in China were all state-backed entities and had committed RMB 33 billion ($4.87 billion), accounting for half of total contributions.[330]

VC investments have focused on supporting Beijing's technology goals. Investments in China's information technology sector in particular rose 53 percent from 2024 to 2025—with a large share of investments going to AI, embodied AI, and autonomous driving.[331] Many of these technology-related VC investments are also backed directly by the state. Chinese AI lab MiniMax, for example, raised a $300 million funding round from investors, including the State-Owned Assets Supervision and Administration Commission of the Shanghai Municipal Government.[332] China's AI chip startup MetaX Integrated Circuits has also raised VC funding from Shanghai Science and Technology Innovation Fund and the Pudong District Fund.[333]

As Chinese tech companies mature, Hong Kong serves as an important gateway to global financial markets, allowing them to access foreign capital to advance China's technology ambitions.[334] The Hong Kong stock exchange led the world's capital market in 2025, raising approximately $36.4 billion from 119 new listings.[335] In the first half of 2026, 83 companies listed on the exchange, raising $26.4 billion and making it the second-largest IPO market after U.S.-based Nasdaq.[336] MiniMax, for example, raised $619 million in January.[337] AI lab Z.ai also raised $4 billion on the Hong Kong stock exchange in July 2026.*[338] In addition, China hosted two of its biggest tech IPOs on the Shanghai STAR market: China's leading memory chip production company CXMT in July and leading robot company Unitree in August. CXMT, which is profitable, raised almost $10 billion to fund domestic expansion and briefly surpassed Tencent to become China's most valuable company.[339] Unitree intends to use a portion of its IPO proceeds to fund research and development and manufacturing expansion.[340] While sector champions like CXMT and Unitree both chose Shanghai for their IPOs in August 2026, first-day trading pops of over 400 percent for each of them reflect the difficulties Chinese underwriters have in assigning accurate valuations in an environment where retail investors lack many attractive investment opportunities.[341] Mainland regulators also discourage assigning ultra-high valuations in scenarios that lack publicly listed comparable firms to protect retail investors from potential losses.[342] (For more information on Hong Kong as a financial and tech hub and China's use of the Hong Kong stock exchange versus the STAR market, see Chapter 10, "Hong Kong: Enabler of China's Global Finance and Technology Ambitions.")

*Z.ai (formerly Zhipu AI), listed under its legal name Beijing Zhipu Huazhang Technology Co., Ltd., was added to the Department of Commerce's Entity List on January 16, 2025. See U.S. Department of Commerce, Bureau of Industry and Security, "Addition of Entities to and Revision of Entry on the Entity List," 90 Fed. Reg. 10 (January 16, 2025): 4617–4620.

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CHAPTER 2: U.S.-CHINA SECURITY AND FOREIGN AFFAIRS (YEAR IN REVIEW)

Executive Summary

Throughout 2026, China used its growing military, technological, economic, and diplomatic power more assertively while seeking to avoid direct confrontation with the United States. Summits between U.S. President Donald J. Trump and General Secretary of the Chinese Communist Party (CCP) Xi Jinping in May and September 2026 reflected this dual track approach. Beijing embraced "constructive strategic stability" as a framework for managing competition with the United States even as it continued to strengthen its military capabilities, press territorial claims in the Indo-Pacific, support U.S. adversaries, and expand its influence abroad.

China continued to build the military capabilities needed to shift the regional balance in its favor while pressing its interests across the Indo-Pacific. Despite sweeping purges of the People's Liberation Army's (PLA) senior leadership, military modernization continued, including advances in amphibious warfare, uncrewed and artificial intelligence (AI)-enabled systems, and nuclear forces. Beijing paired these growing capabilities with a more persistent military and law enforcement presence around Taiwan, increased pressure on Japan, and continued efforts to assert its maritime claims in the South China Sea. China also adjusted the timing and intensity of its activities when confrontation threatened other priorities, underscoring Beijing's effort to advance its regional objectives while limiting the risk of direct conflict.

Beijing used global conflicts to strengthen important partnerships and improve China's international standing while limiting its own exposure to its partners' confrontations with the United States and U.S. allies. China sustained Russia's war effort and Iran's military and economic capacity without becoming directly involved in either conflict. Beijing also expanded engagement with several U.S. allies and partners while portraying itself as a more stable and predictable international actor. China sought to expand BRICS* and the Shanghai Cooperation Organization (SCO) activities into new areas of security, technology, finance, and governance while deepening strategic infrastructure and security relationships across Africa and Latin America.

*BRICS originated as BRIC, an informal diplomatic grouping established in 2006 by Brazil, Russia, India, and China to promote cooperation among emerging economies and advocate for reforms to international institutions. South Africa joined in 2010, after which the group became known as BRICS. The group now also includes Egypt, Ethiopia, Indonesia, Iran, and the United Arab Emirates. Saudi Arabia has been invited, but it is not clear if it has joined.

China's greater reach did not mean Beijing could always get other countries to follow its lead. Members of BRICS and the SCO resisted or slowed some Chinese-backed initiatives, while governments across the Indo-Pacific pushed back against Chinese pressure. China's expanding security relationships also did not always give Beijing or its partners the ability to shape events in a crisis. These limits did not substantially alter China's direction. Beijing continued to pursue incremental gains, grow its military power, and advance its technology sector, strategic access, and global influence. With two more Trump-Xi meetings expected before year's end, Beijing will likely continue using "constructive strategic stability" to cement its version of the relationship while steadily strengthening China's position.

Key Findings

- China accelerated its bid to reshape the international order in 2026. Beijing pursued a coercive but controlled strategy, using its growing military, technological, economic, and diplomatic power to strengthen its position relative to the United States while managing the risk of a destabilizing confrontation. China's actions before and after the Trump-Xi summits demonstrated that its version of "constructive strategic stability" does not mean constraining China's broader competition with the United States.
- Even as Beijing sought to manage its diplomatic relationship with Washington, it continued destabilizing activities aimed at the United States, including cyber operations targeting U.S. critical infrastructure, AI-enhanced influence campaigns aimed at the U.S. public, attempts to co-opt U.S. officials, and transnational repression on U.S. soil.
- Xi Jinping concentrated military authority to a degree not seen since the Mao era through sweeping purges of the PLA's senior leadership, placing greater weight on his personal judgment in decisions over whether and how to use force. Despite the upheaval, PLA modernization continued toward its 2027 readiness milestone for a Taiwan contingency.
- China expanded the scale and sophistication of coercive gray zone activities around Taiwan in 2026 while continuing to build military capabilities for a future conflict. Beijing rehearsed blockade operations, practiced mobilizing civilian fishing fleets, and conducted its first-ever "traffic enforcement operation" in waters east of Taiwan, integrating military, law enforcement, and civilian assets to establish a more persistent presence around the island.
- China remained a critical enabler of Russia's war effort and Iran's military capacity in 2026 while carefully avoiding direct involvement in their conflicts. China facilitated more than 90 percent of Russia's imports of sanctioned technology and supplied Iran with drone components and materials

used to make missile fuel while using the growing dependence of both partners to expand its own strategic leverage.

- China's new Ethnic Unity Law extended Beijing's legal claims beyond its borders, creating a statutory basis to target overseas individuals and organizations for activities it deems threatening to "ethnic unity." The provision could create legal and political exposure under Chinese law for U.S. persons and institutions engaged in Taiwan advocacy or Uyghur, Tibetan, and other minority rights work.
- Beijing expanded efforts to build long-term influence and strategic access abroad in 2026. China grew its partnerships, pushed multilateral institutions into new security and governance roles, embedded dual-use infrastructure across Africa and Latin America, and weaponized commercial relationships for political coercion. Beijing also sought to portray itself as a more reliable partner than the United States, but resistance from key partners revealed the limits of its ability to dictate outcomes.

Introduction

In May 2026, President Trump met General Secretary Xi in Beijing, where they announced "constructive strategic stability based on fairness and reciprocity"* as a new framework for bilateral relations. By Xi's September state visit to the United States, China was already moving to define the framework on its own terms and asserting its bottom lines as the operating basis of the new relationship.[1] Yet even as Beijing sought greater stability in its relationship with Washington, it continued conducting destabilizing activities around the world. China expanded gray zone activities and military pressure in the Indo-Pacific, facilitated Russia's war effort, sustained Iran despite U.S. sanctions, and continued cyber, influence, and other activities targeting the United States and others. Neither summit signaled a pause in strategic competition. Beijing's concept of "constructive strategic stability" envisions a managed rivalry bounded by predictability, an arrangement designed to create favorable conditions for long-term competition, not reduce it. By projecting a desire for stability, China seeks to manage U.S. responses and discourage countermeasures as it shapes the international environment in favor of its own terms.

Both leaders expressed their intention to attend upcoming summits hosted in each other's countries in November and December, presaging two more meetings before the end of the year.[2] Such regular leader-level engagement provides Beijing further opportunity to promote its version of "constructive strategic stability" and portray China as a major power on equal footing with the United States. Meanwhile, China continues to employ its military, technological, diplomatic, economic, and informational campaigns in mutually re-

*As the Commission learned through meetings leading up to and during its July 2026 trip to China, Beijing prefers the formulation "constructive strategic stability." U.S. government readouts of bilateral meetings have consistently added the phrase "based on fairness and reciprocity."

inforcing ways to compete with the United States and its allies and partners around the world.

China Leverages Growing Power to Strengthen Its Position Against the United States

In 2026, China sought to translate its growing military, technological, and economic power into strategic leverage to reshape the global security environment while eroding the influence of the United States and its allies and partners. Beijing moved to close military and technological gaps, challenge U.S. influence in international institutions, and press its interests more assertively while calibrating its actions to limit the risk of direct confrontation. This approach reflects China's growing confidence that it can press its advantages more aggressively without provoking a destabilizing conflict that could jeopardize its longer-term objectives.

China Builds Military Capabilities to Shift the Indo-Pacific Balance in Its Favor

Beijing treats military development and hard power as central to strategic competition with the United States. In 2026, Chinese state media emphasized China's military modernization as a core component of "major power strategic competition."[3] This likely reflects Beijing's conviction that closing the capability and combat-effectiveness gaps with the United States is necessary to compete as a rising world power.[4] This priority is evident in China's spending: military expenditure rose an estimated 7.4 percent in 2025—the largest year-over-year increase in ten years—even as real GDP growth remained steady, signaling that Beijing prioritizes sustaining the pace of its military modernization.[5] With the 2027 PLA centenary approaching, official Chinese policy documents have framed 2026 as crucial and called for concentrated efforts to meet the 2027 milestone of achieving accelerated military modernization—a date that coincides with Xi's reported directive for the PLA to be capable of conducting a successful invasion of Taiwan.[6]

Xi believes that taking control of Taiwan is central to Beijing's long-term strategic trajectory and has made it a requirement of his overarching and oft-repeated goal of "national rejuvenation."[7] Xi's order for the PLA to be capable of invading Taiwan by 2027 is fueling aggressive preparation for conflict, visible in China's military development, training, and persistent encroachment around the island.*[8] Beijing's focus on Taiwan is fueling greater gray zone activity and coercive statecraft aimed at deterring outside support, including an aggressive pressure campaign against Japan and more active efforts to stop arms sales to Taipei. (For more information on China's efforts to expand its control over Taiwan and Taiwan's strategic importance to the United States, see Chapter 9, "Taiwan: A Crucial Window for a Critical Partner.")

Beyond its efforts to lay the groundwork for control of Taiwan, China is simultaneously advancing other efforts to become the preeminent military power in the Indo-Pacific. PLA and China Coast Guard (CCG) presence throughout the first island chain expanded

*To be clear, analysts generally agree that the 2027 date is a military "readiness" goal and not a date certain for China to launch a blockade or invasion.

over the past year. China conducted three separate large-scale deployments of naval and coast guard vessels across the region during this period: a record-setting deployment of more than 100 ships in December 2025, another deployment of similar scale in May 2026, and a new record of more than 110 vessels deployed along the first island chain in July 2026.[9]

Figure 1: Record-Breaking PLA and CCG Vessel Deployment Throughout First Island Chain, July 3, 2026



Source: Taiwan National Security Council Secretary-General Joseph Wu (@josephwutw), "#China's massive maritime mobilization along the #1stIslandChain is a clear sign of its expansionism. We've tracked a record high of over 110 #PLAN & #CCG vessels. This bully has too much money to throw around, but none for its own people." X, July 4, 2026, 4:42 a.m. Created for the U.S.-China Economic and Security Review Commission. Names and boundary representation are not necessarily authoritative.

China's naval activities beyond the first island chain in the past year reflect its far-seas ambition. PLA Navy operations in the Western Pacific—including the forward deployment of an amphibious assault task group during the December 2025 Justice Mission blockade exercise around Taiwan, *Liaoning* aircraft carrier deployment from May to June 2026, and combined naval patrols with Russia in July 2026—demonstrate China's focus on sustaining complex naval operations at greater distances from its shores.[10] Over the past year, China utilized a full range of statecraft to punish U.S. allies and partners that opposed its aggression and sought to uphold regional deterrence, most notably vis-à-vis Japan. By directing its coercive actions at regional countries rather than the U.S. presence, Beijing increases pressure on these countries for their role in the U.S.-led regional security architecture while avoiding confrontation with the United States itself.

China Elevates Technology as a Decisive Front in Strategic Competition

China's rhetoric and policy actions over the past year continued to emphasize Xi's view that technology is the central arena of strategic competition and most important source of comprehensive national power.[11] High-level policy directives in 2026 such as the 15th Five-Year Plan made clear that technological self-reliance will continue to be an organizing principle of China's national development.[12] For more than a decade, Xi has sought to enhance China's indigenous innovation capacity to prevent strategic vulnerabilities in critical technology supply chains. The latest policy directives uphold this priority and deepen the integration of national security and technological development.

China is tightening regulations over its domestic technology industries while criticizing foreign measures that constrain its technological development.[13] Although Beijing issued general licenses in December 2025 to mitigate the tension from its aggressive export controls, it continued to restrict U.S. access to rare earth elements and other critical minerals through 2026 while accusing the United States of suppressing China's development.[14] China also tightened state control over the supply chains that technology depends on. New regulations in May 2026, for example, expanded state authority over the critical mineral and rare earth elements industries to reinforce China's leverage against foreign de-risking efforts.[15] (For more information on China's efforts to expand its influence over global commodities markets, see Chapter 6, "The Price of Everything: China's Bid to Reshape Global Commodities Markets.")

As explained in Chapter 1, "U.S.-China Economic and Trade Relations (Year in Review)," Beijing has placed AI at the center of its technology advancement efforts. Beijing seeks to develop and diffuse AI to enhance its comprehensive national power and innovation capacity, especially to expand its international influence and drive military modernization. At the September Trump-Xi summit, the United States and China established the U.S.-China Super Intelligence Dialogue to discuss AI risks and benefits and agreed to a bilateral communication channel for AI incidents.[16] While these mechanisms could improve communication on AI-related national security risks,

further coordination on the trajectory of frontier AI development and AI safety and security remains unlikely in the near term, given Beijing's distrust of U.S. proposals and policies it views as limiting China's technological advancement.[17] China's record on nuclear arms control may offer a useful precedent for its likely approach to AI regulation—outwardly advocating for responsible governance while resisting transparency measures and binding commitments that could constrain its own development.[18]

China's reluctance to accept constraints on its own AI development does not preclude Beijing from seeking a leading role in AI governance initiatives. Rather, China pursues international cooperation on AI insofar as it promotes itself as a world leader in AI governance and augments its international influence, which Beijing can use to popularize its own technology and technical standards. China's establishment of the World AI Cooperation Organization (WAICO) in July 2026—alongside Xi Jinping's first-ever address to the World AI Conference in Shanghai—signals that leadership over the emerging international order for AI has become a priority of China's global governance agenda.[19] China leverages homegrown international forums and AI capacity-building initiatives as vehicles to promote the export of Chinese AI infrastructure, models, and technical standards—a strategy that was on full display at the World AI Conference.[20]

China Used Summit Preparation to Contain Tensions While Sustaining Competitive Pressure

In the months before the May 2026 Trump-Xi meeting, the United States and China largely refrained from public confrontation and cycles of retaliation in anticipation of the summit. Trump and Xi's meeting in South Korea in late October 2025 laid the groundwork for this temporary détente, when the two leaders agreed to a year-long trade truce and eased their reciprocal escalation on tariffs, rare earth minerals, and technology controls.[21] Beijing's interest in a successful summit was evident in December 2025 when it had only a muted response to a record U.S. arms sale to Taiwan. China reportedly warned the United States that the sales could derail the summit but limited China's concrete response to sanctions on U.S. defense firms—a relatively symbolic action likely calculated to keep Xi positioned to press the more consequential goal of shaping future arms sales.[22]

Xi made the Taiwan issue a primary focus of the leaders' May meeting, with China signaling in the leadup to the summit that Taiwan would be a key issue for negotiation.[23] Chinese readouts of the meeting repeatedly emphasized that Taiwan is "the most important issue in U.S.-China relations."[24] President Trump confirmed that he discussed arms sales to Taiwan with Xi "in great detail," marking a departure from the long-held U.S. policy that it would not consult with Beijing on arms sales to Taipei.[25]

The bilateral calm surrounding the summit, however, was a product of deliberate Chinese management rather than genuine strategic restraint. As Xi cultivated an air of stability with the United States during his meeting with President Trump, he framed the relationship in the context of the Thucydides Trap—the theory that war becomes likely when a rising power threatens to displace a ruling

one.[26] By invoking the Thucydides Trap, Xi framed accommodation of China's growing power as necessary to avoid conflict. Beneath the diplomatic surface, Beijing put this strategic logic into practice as it continued pressing its interests on every front while attempting to steer the United States toward accommodation of its growing power.

China Sustains Malign Activities Against the United States Despite Overtones of Stability

China continued to conduct a broad range of malign activities over the past year that undermined U.S. sovereignty and threatened national security. New revelations in 2026 underscored the persistence of Beijing's efforts to co-opt U.S. political figures. Eileen Wang, former mayor of Arcadia, California, pleaded guilty in May 2026 to charges related to her publishing of CCP propaganda at the direction of Chinese handlers.[27] China's transnational repression efforts and united front work on U.S. soil also continued to surface over the past year. Bronx resident and U.S. citizen Lu Jianwang was convicted in May 2026 of acting as an illegal agent of China in connection with his operation of an overseas police station in New York for China's Ministry of Public Security.[28]

Chinese cyber operations targeting U.S. critical infrastructure remain a serious risk to national security. In the past year, U.S. officials and cybersecurity researchers noted persistent threats from Chinese cyber actors such as Volt Typhoon and Salt Typhoon.[29] The U.S. Cybersecurity and Infrastructure Security Agency (CISA) released an advisory in April 2026 warning of the growing propensity of Chinese hackers to conduct malicious cyber operations through networks of compromised internet-connected devices, which supports China's goals of feeding its global espionage system and pre-positioning offensive cyber capabilities in critical infrastructure.[30]

China's efforts to shape and undermine the U.S. information environment are growing more sophisticated and more targeted. Threat intelligence researchers documented efforts by a Chinese company with links to the Chinese government to develop AI-enabled influence operations capable of operating at greater scale and sophistication, including systems designed to autonomously identify target audiences, generate tailored content, and more effectively mask inauthentic accounts.[31] U.S.-based threat intelligence reporting in 2026 identified a potential coordinated Chinese information operation to amplify opposition to the construction of AI-related data centers and infrastructure, which may be advancing across both Chinese state media and coordinated inauthentic online accounts.[32] These attempts to incite controversy in legitimate U.S. political debates align with China's broader information manipulation strategy, which focuses on deepening social and political divisions to erode the domestic consensus needed to govern effectively.

China Exploits U.S. Foreign Policy Shifts and Global Conflicts to Advance Its Interests

China leveraged global conflicts in 2026 to strengthen its strategic position and present itself as a stable partner while carefully limiting the risks of direct confrontation with the United States. Beijing used the ongoing Russia-Ukraine war, U.S. attacks on Vene-

zuela and Iran, and uncertainty surrounding U.S. policy priorities to enhance the benefits it obtains from its authoritarian partnerships and its broader international influence. By framing itself as a more stabilizing international power than the United States, China aimed to improve its global image and deepen cooperation with several U.S. allies and partners. At the same time, China remained a key enabler of the "Axis of Autocracy"—Russia, Iran, and North Korea—by supporting their military and regional destabilizing activities and helping them evade U.S. and European sanctions regimes. (For more on the "Axis of Autocracy," see the Commission's 2025 Annual Report, Chapter 3, "Axis of Autocracy: China's Revisionist Ambitions with Russia, Iran, and North Korea"; for more on China and Hong Kong's role in sanctions evasion, see the Commission's November 2025 staff paper, "China's Facilitation of Sanctions and Export Control Evasion.")

China Casts Itself as a More Stable Alternative to the United States

China used global conflicts in 2026 to portray itself as a more stable and responsible international actor than the United States, advancing Beijing's broader effort to shape global perceptions in its favor. This effort reflects Beijing's pursuit of "discourse power," or the ability to shape how the world perceives China and its role in the international system. In explaining the CCP's Five-Year Plan outline, state-run *Xinhua News Agency* acknowledged that, despite great progress in its international propaganda, China's global image is still largely "shaped by others" rather than "self-shaped."[33] It identifies discourse power as a near-term priority to secure external influence.[34]

Beijing sought to capitalize on U.S. military actions and economic policies by portraying Washington as a source of instability and China as a more predictable alternative. Chinese foreign policy commentary paired criticisms of U.S. "unilateralism" and "hegemonism"—especially in the context of the U.S. capture of Venezuela's Nicolás Maduro and the U.S. bombing of Iran—with claims that China serves as a regional stabilizer, is committed to peaceful development, and can provide alternative governance frameworks grounded in equality.[35] Chinese state-run media hailed Beijing's resolution efforts in the Cambodia-Thailand ceasefire—for which President Trump also claimed credit—as standing in "stark contrast" to the West's "transactional mediation."[36] Beijing credited the conflict's end to its Asian Security Model, a blueprint for conflict resolution and security specifically aimed at China's neighboring countries.[37]

China sought to elevate its regional image throughout the Iran war by presenting itself as a stabilizing force that took steps to help address the energy security problems created by the conflict. China reportedly cut its oil imports from its average 11.5 million barrels per day down to eight million barrels per day, thus decreasing demand and helping to stabilize oil prices.[38] (For more on China's responses to the Iran war and the Strait of Hormuz closure, see the Commission's report, "Enabling Iran: A Timeline of China's Role During and After Operation Epic Fury.")[39] China initially cut exports of jet fuel to its neighbors to protect its own supply, causing shortages among its neighbors, but it eventually took the opportuni-

ty to present itself as a regional problem solver when countries like Vietnam and Australia appealed for help.[40]

Beijing is also using uncertainty over U.S. policy to develop closer diplomatic, economic, and security ties with U.S. allies and partners. Amid tensions between the United States and many partners over tariffs and ongoing Section 301 investigations, China signed agreements with Spain and Canada and hosted then-UK Prime Minister Keir Starmer for a state visit, which Chinese readouts framed as advancing a long-term, stable, and comprehensive strategic partnership.[41] U.S. allies and partners are still aware, though, of the risks of deepening cooperation with China. As the official UK press release prior to Starmer's visit to China noted, the UK did not intend to "trade economic co-operation for our national security."[42] The engagements nevertheless gave Beijing opportunities to deepen relationships with U.S. allies and partners at a time of heightened uncertainty over Washington's policies, offering important U.S. economic and security partners a tool to hedge against U.S. tariffs. (For more on China's attempt to exploit trade partner concerns about U.S. trade policy in 2026, see Chapter 1, "U.S.-China Economic and Trade Relations (Year in Review).")

The cumulative effect of these dynamics may be a more favorable international environment for China's discourse interests. A July 2026 Pew Research study found that people in many countries around the world now view China more favorably than the United States, a shift that may, in part, reflect the impact of China's sustained messaging.[43] In the past few years, views of the United States across 20 countries have declined, while views of China have steadily increased. In many countries, the public's overall confidence in General Secretary Xi is higher than it is in President Trump.[44] This shift in public opinion could reduce political constraints for governments seeking to receive investment or engage in security cooperation with China. Increasingly positive perceptions of China, combined with declining perceptions in the United States, could open doors for China to expand its global presence at the cost of U.S. influence.

China Enables Russia's War While Capitalizing on Moscow's Growing Dependence

China's claims of neutrality in the Russia-Ukraine war, always tenuous given the Xi-Putin "no limits partnership," diverged further from its actions over the past year. Although European leaders repeatedly urged China to use its influence to bring Russia to the negotiating table, Beijing responded with generic calls for dialogue rather than applying meaningful pressure on Moscow.[45]

China's actions in 2026 reinforced what Foreign Minister Wang Yi admitted to EU leaders in July 2025: Beijing does not want to see Russia lose to Ukraine.[46] As Foreign Minister Wang told EU High Representative Kaja Kallas, Beijing worries that, should the war end, the United States might then shift all of its attention to China.[47] China continued supplying Russia with technologies and components that sustained its war effort, adding to the billions in advanced machinery and technology China has reportedly supplied to the country since 2022.[48] According to 2026 reports, Chinese companies continued providing Russia with drones and drone com-

ponents through sanctions evasion mechanisms, including transshipment and proxy end user companies, bypassing both Western sanctions and China's own export laws.[49] Despite this, China continued asserting that it "strictly controlled" dual-use military and civilian good exports.[50] According to a report published by the Eastern Human Rights Group and the National Endowment for Democracy, telecommunications networks in Russian-occupied territories of Ukraine rely heavily on Chinese equipment, while the yuan has reportedly become the second most used currency in the region, putting China's imprimatur on Moscow's control over occupied areas of Ukraine.[51] More than 90 percent of Russia's imports of sanctioned technology reportedly came through China in 2026, up from approximately 80 percent the previous year.[52] These developments prompted additional U.S., UK, and EU sanctions against Chinese entities and reinforced assessments that Beijing remained Russia's principal external enabler.[53]

Beijing has turned its support for Moscow into strategic leverage, using Russia's growing dependence to advance Chinese interests on more favorable terms. What was once viewed as a near-equal partnership has evolved into an imbalanced and asymmetric relationship.[54] Russian dependence on China has increased across sectors including energy exports, dual-use products, and other technology.*[55] Ongoing delays in the Power of Siberia 2 (PoS-2) gas pipeline project exemplify the increasing asymmetry of the relationship. Though Xi and Putin agreed in concept on the PoS-2 in 2025, China has leveraged its position to drive a hard bargain. Even when Putin visited China in an attempt to close the deal, Xi refused to accept Russia's preferred terms and reportedly pressed for decreased pricing and other demands, leading to claims by some that Putin left Beijing "empty handed."[56] Russia needs the pipeline more than China, and China is willing to wait until the deal swings in its favor.

Russia's Growing Dependence Enables China's Arctic Expansionism

Russia's growing dependence on China since 2022 has given Beijing leverage to expand its Arctic footprint, overcoming Moscow's traditional hesitancy to allow China to deepen its involvement in the region. Beijing pursues a range of economic, energy, scientific, technological, and security interests in the Arctic. As a non-Arctic state, though, its ability to realize many of these objectives depends on cooperation with Arctic countries, particularly Russia.[57] Moscow has long treated the Arctic as a core national interest and sought to maintain its perceived position as the region's leading power.[58] As a result, Russia historically approached cooperation with China cautiously, initially focusing

*China's purchases of Russian and Iranian energy exports have largely been in violation of U.S. and allied sanctions. In early 2026, however, President Trump temporarily eased some U.S. sanctions restrictions on oil from both countries to alleviate energy shortages and price increases caused by the effective closure of the Strait of Hormuz. For more on China's sanctions violations, see the Commission's staff paper, "Enabling Iran: A Timeline of China's Role During and After Operation Epic Fury." For more on the temporary ease of sanctions, see Alan Rappeport, "Trump Removes Sanctions on Russia to Help Oil Flow Amid Iran Conflict," *New York Times*, March 12, 2026; Freddie Clayton, "U.S. Eases Iranian Oil Sanctions in Scramble to Contain Energy Prices, Handing Tehran a Boost," NBC News, March 21, 2026.

Russia's Growing Dependence Enables China's Arctic Expansionism—*Continued*

selectively on scientific research and oil and gas projects while seeking to limit Beijing's regional influence.[59] That caution has eroded as Moscow's need for Beijing's economic and political support has deepened.

Russia's growing dependence on China has enabled Beijing to expand its involvement in several areas of Arctic activity. In trade, the Northern Sea Route continues to create new opportunities for Sino-Russian commerce, particularly as Russia seeks alternative markets for its energy exports amid Western sanctions.[60] As an example, in February 2026, the Russian Duma ratified a bilateral agreement designed to facilitate expanded cooperation with China on Arctic natural gas projects.[61] Beyond trade and energy, Russia has expanded cooperation with China in maritime capacity building. Russian institutions such as Admiral Makarov State University of Maritime and Inland Shipping and Maritime State University have started training Chinese sailors in Arctic navigation, helping China develop expertise for operations in polar waters.[62]

China Sustains Iran While Limiting Its Own Exposure to the Conflict

China sustained Iran's military and economy while protecting its own energy and strategic interests. The closure of the Strait of Hormuz has significantly disrupted China's energy supply chains, as 40 percent of its crude oil and 30 percent of its liquefied natural gas travel through the channel.[63] This exposure gives Beijing a strong incentive to press for the restoration of normal navigation, while Iran has raised the prospect of preferential transit fees for Chinese vessels.[64] China has long been a key facilitator of Iran's sanctions and export control evasion, serving as the country's largest trading partner, supplier of dual-use technologies for Iran's economy and weapons, and primary purchaser of Iran's energy exports that keep the regime funded.[65] Throughout the Iran conflict, China continued these activities, reportedly providing Tehran with missile fuel precursors and drone-related dual-use components while continuing to purchase Iran's oil.[66]

China followed its playbook for responding to other international conflicts involving its partners: condemning U.S. actions diplomatically while providing discreet support and refraining from overt involvement.[67] China has maintained a lower-profile role in the Iran war than it has throughout the Russian war against Ukraine, largely limiting its official support for Iran to statements and general calls for de-escalation.[68] Chinese officials called the U.S. and Israeli strikes violations of international law and condemned the killing of Iran's Ayatollah Ali Khamenei.[69] In contrast, Beijing has avoided criticizing Iran, generically condemning "indiscriminate attacks against civilians and non-military targets" instead of explicitly calling out Iran's attacks on its Gulf State neighbors.*[70] (For more on

*The war with Iran began amid preparations for the first 2026 Trump-Xi summit, so Beijing's decision not to take a mediation role between the United States and Iran may reflect caution over any potential disruptions to bilateral relations at that time.

how China has sustained and enabled Iran, see the Commission's "China-Iran Fact Sheet: A Short Primer on the Relationship" and "Enabling Iran: A Timeline of China's Role During and After Operation Epic Fury.")

Xi Reassures Kim Jong Un That Engagement With Washington Will Not Come at Pyongyang's Expense

Xi Jinping's first visit to Pyongyang in seven years—coming just weeks after his summit with President Trump—signaled that Beijing intended to preserve its role as North Korea's primary patron regardless of what bilateral engagement with Washington produces.[71] The official statement following the June 8, 2026 meeting stated that "no matter how the international situation changes, the firm position of the Communist Party of China and the Chinese government in highly valuing the traditional China–DPRK [Democratic People's Republic of Korea] friendship will not change."[72] One significant motivator for Xi's visit to Pyongyang appears to have been Beijing's concerns over recent deepening economic and security cooperation between Russia and North Korea. Xi's emphasis on the "traditional" nature of China-North Korea relations and reference to the "international situation" underscored his interest in reassuring Pyongyang of Beijing's support while also indicating to Moscow that closer DPRK-Russia relations would not marginalize China.[73]

Beijing prioritized stabilizing relations with Pyongyang over pressing North Korea on its nuclear program by leaving denuclearization off the meeting agenda. Prior to the meeting, North Korea had indicated an unwillingness to discuss denuclearization during Xi's visit.[74] On June 14, North Korea had labeled denuclearization an "irreversibly finalized" matter in response to a South Korea-U.S. reaffirmation of the goal on June 11.[75] Shortly after, a North Korean official published an article that cited North Korea's "continuous development of nuclear force and thorough exercise of its position as a nuclear weapons state" as the only way to "defend peace and security in the Korean peninsula and the region."[76] Beijing did not publicly state whether denuclearization was on the agenda for the Xi-Kim visit or surrounding official meetings. North Korea's statements, however, suggest that the issue was not up for negotiation.

Xi Tightens Party Control While Advancing Military Modernization

Over the past year, Xi Jinping continued to prioritize tightening CCP control, expanding ideological and legal authority over Chinese society, and purging the senior ranks of the PLA—the latter at a scale not seen since the Cultural Revolution. Despite this internal upheaval, China's military modernization has pressed forward, strengthening Beijing's ability to pursue increasingly coercive measures to alter the strategic environment in the Indo-Pacific.

Xi Expands Legal and Ideological Control Across Society and the Military as a National Security Imperative

China's January 2026 draft Cybercrime Prevention and Control Law demonstrates Xi's latest effort to transform national security concepts into legal authorities that strengthen CCP control over so-

ciety. The draft law would significantly expand police authority to monitor online activity, compel cooperation from digital platforms, and strengthen mechanisms for identifying and suppressing politically sensitive content.[77] The draft law reflects Xi's view of cyberspace as both a potential threat to regime security and a critical domain for reinforcing ideological conformity and strengthening CCP control.[78] The proposal builds directly on China's 2025 National Security White Paper, which elevated political security above all other priorities and treated economic, technological, cultural, ideological, and ethnic issues as components of regime security. (For more on the CCP's fixation on a broad national security concept to preserve CCP rule, see the Commission's 2024 Annual Report, Chapter 7, "China's New Measures for Control, Mobilization, and Resilience.")

China's New Ethnic Unity Law Extends CCP Control at Home and Abroad

China codified a new ethnic unity policy in March 2026 that more forcefully asserts CCP control over ethnic and religious minorities in China and aims to assimilate all citizens into a Han Chinese-centric ethnic identity. The law, which went into effect on July 1, 2026, calls for the sinicization of religion, the prioritization of Mandarin language in schools, and expanded ideological education aimed at strengthening identification with the Chinese nation and the CCP.[79] The law solidified Xi's shift away from policies that at least ostensibly allowed regional ethnic autonomy toward a policy that prioritizes assimilation into a unitary Han national identity, with especially significant implications for Xinjiang and Tibetan regions.[80] These measures illustrate the Party's impulse to expand societal control as a security imperative and more deeply integrate Party ideology into law.[81]

The Ethnic Unity Law also has implications for China's transnational repression efforts targeting individuals and entities involved in activities Beijing deems to be separatism. The law authorizes legal action against organizations and individuals Beijing determines to have undermined ethnic unity or promoted ethnic separatism, even outside China's borders.[82] The provision could create legal and political exposure under Chinese law for individuals and organizations outside China engaged in Taiwan advocacy or Uyghur, Tibetan, and other minority rights work. The Ethnic Unity Law's extraterritorial provision exemplifies Beijing's use of lawfare to suppress dissent beyond China's borders, creating legal mechanisms to target individuals and organizations for conduct Beijing deems separatist. China's efforts to establish a legal basis for cracking down on dissent abroad raise the risk that Beijing will pressure foreign governments to extradite those it targets, as it has done in hundreds of documented cases involving people from Taiwan transferred to mainland China.*[83]

*The Ethnic Unity Law reflects a trend: Beijing is codifying measures to crack down on any activities it perceives to be separatism to protect what it deems as sovereign territories, even if that requires using transnational repression tactics against overseas Chinese citizens or trying foreign nationals in absentia. The 2020 Hong Kong Security Law, which effectively ended Hong Kong's "one country, two systems" status, criminalized secession movements. In 2024, China's judicial and security authorities published guidance for using existing laws to prosecute "Taiwan independence" supporters in Chinese courts, with criminal penalties up to the death penalty.

Xi Concentrates Military Authority Amid Unprecedented Purges

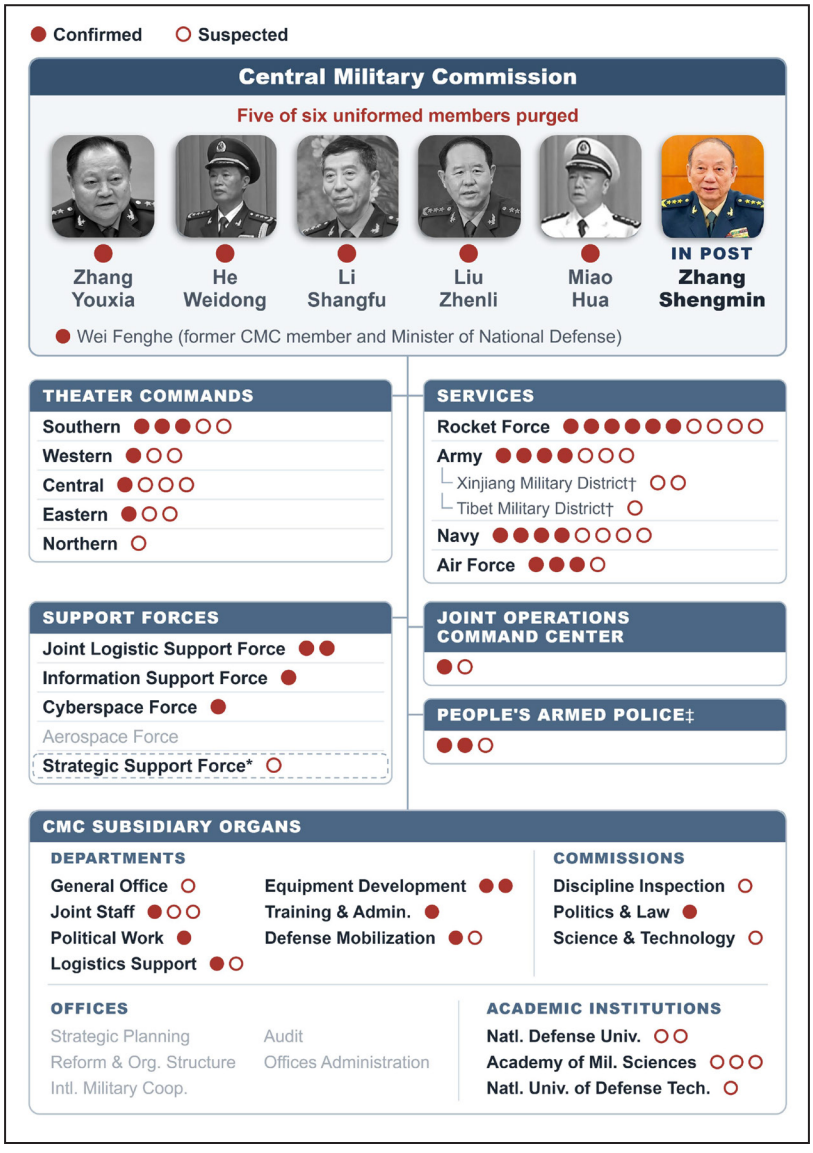
The same impulse—to extend CCP authority over anyone Beijing deems a threat, regardless of borders—drives Xi Jinping's fixation on ensuring a tight grip on the Party itself, where Xi's ongoing anticorruption campaign continues to affect the senior cadres in every corner of the Party-state bureaucracy.[84] In April 2026, China's top disciplinary organs announced an investigation into the once politically influential former Xinjiang Party Secretary and Politburo member Ma Xingrui, underscoring the unusually senior ranks affected by Xi's latest purges.[85]

Xi's consolidation of personal military authority, while introducing short-term institutional uncertainty, likely reflects his conviction that ideological reliability and centralized command are prerequisites for the kind of decisive military action China's strategic objectives may eventually require. No part of the CCP apparatus has been so affected by purges as the military. In August 2026, Xi officially removed two of the most senior remaining members of the Central Military Commission (CMC)—Vice Chairman Zhang Youxia and Joint Staff Department Chief of Staff Liu Zhenli—marking the most significant escalation of Xi's military purges to date.[86] Coming shortly after the purging of Vice Chairman He Weidong and Political Work Department Director Miao Hua in October 2025, Xi's removal of Zhang and Liu leaves Secretary of the Discipline Inspection Commission and new CMC Vice Chairman Zhang Shengmin as the only uniformed member on the CMC, alongside CMC Chairman Xi Jinping himself.[87] Beyond the CMC, Xi's purges have likely targeted the commanders and political commissars of all theater commands and military services, many of which still have vacancies in the highest ranks.[88]

Though most often framed in the context of rooting out corruption, Xi's purge of senior military officials in the past year likely points to a motivation to root out potential dissenters or figures he sees as disloyal. Official Chinese media accused Zhang and Liu of undermining the CMC Chairman Responsibility System—referring to the ultimate authority of CMC Chairman Xi over the military—and ideological unity in the PLA, suggesting their transgressions extended beyond typical graft or corruption and involved perceived threats to Xi's authority.[89] The purges have targeted a notably high number of political commissars or officials involved in political work, underlining the likely ideological motivations behind the purges.

Hong Kong Special Administrative Region Government, *The Law of the People's Republic of China on Safeguarding National Security in the Hong Kong Special Administrative Region Gazetted and Takes Immediate Effect*, June 30, 2020; Michael C. Davis and Victoria Tin-bor Hui, "Beijing's National Security Law Brings Mainland Repression to Hong Kong," *Diplomat*, July 03, 2020; China's Supreme People's Procuratorate, *China Issues Judicial Guidelines on Imposing Criminal Punishment on Diehard 'Taiwan Independence' Separatists*, June 21, 2024.

Figure 2: Purges of Senior Officers in the PLA Affect Nearly Every Major Organization



Note: This chart shows the known and suspected purges of PLA officers ranked Lieutenant General/Vice Admiral and above between July 2023 and October 2026. Solid circles indicate officially confirmed disciplinary action: expulsion from the CCP, arrest, or removal from post or from China's national legislature or political advisory body for violations of discipline and law. Hollow circles indicate individuals who are missing from public view, reportedly under investigation, or removed or replaced without a stated disciplinary reason. Affiliation reflects the individual's most recent position, which may predate their purge.

*The Strategic Support Force was dissolved in 2024.

†Administered by the PLA Army, operationally subordinate to the Western Theater Command.

‡The People's Armed Police is a paramilitary force separate from the PLA but answers directly to the CMC.

Source: Various; portraits from Wikimedia Commons, China (press handout).[90]

In the past year, Xi took new measures to strengthen the Party's governance of the military, highlighting his prioritization of achieving complete ideological uniformity in the PLA. Official media and meetings during China's Two Sessions, the concurrent annual meetings of its congress and top political advisory body, had a stronger emphasis on ensuring the PLA's political obedience to Xi's authority compared to recent years.[91] The CMC released new regulations in May 2026 to tighten the political education and supervision of senior military cadres.[92]

Xi's distrust of the military and his related efforts to strengthen political control over the PLA are unlikely to fade in the near term. It is notable that as Xi's 2027 military readiness deadline for Taiwan nears, his purges have continued. Official Chinese media, high-level policy documents, and Xi himself have repeatedly emphasized the necessity of political cohesion and loyalty in the military to ensure combat effectiveness.[93] Political rectification efforts to reinforce Xi's vision of Party control over the PLA are likely to persist in the near term, given the importance Xi places on political conformity for China's ability to win wars.

Xi's increasing concentration of power and the sweeping purges in the top ranks of the PLA introduce new uncertainties over China's military performance and decision-making calculus to launch large-scale operations. The concentration of military authority means decisions over whether and how to use force rest almost entirely on Xi's personal judgment alone, even as the purges create uncertainty about PLA readiness and performance.

The PLA Presses Toward Its Modernization Goals Despite Leadership Upheaval

Political instability in the upper ranks of the PLA has not translated to slower military modernization. Over the past year, Beijing pressed ahead at a rapid pace toward developing its military to strengthen both near-term operational advantages and achieve eventual military superiority over the United States. China's military modernization drive in the past year was especially evident in three key areas: a sustained naval buildup paired with expanding power projection, sealift, and amphibious capabilities; the accelerating development of uncrewed systems; and the push to integrate AI into military systems.

China Continues Its Naval Expansion with a Focus on Amphibious Capabilities

China's navy continued to grow in both size and reach over the past year, advancing a long-term effort to become the preeminent maritime power in the Indo-Pacific. Official Chinese reporting documented at least ten new surface combatants operating with the PLA Navy over the past year, including six guided-missile destroyers and four guided-missile frigates, extending a years-long buildup of its surface combatant fleet.*[94] Backed by the world's largest shipbuilding industry, China's sustained expansion poses a growing long-term

*This count includes vessels identified in Chinese reporting during the review period as newly commissioned or recently entering service as well as new vessels documented conducting operational training. Precise commissioning dates are not publicly confirmed for all vessels.

challenge to U.S. efforts to maintain a favorable balance of power in the region.

China's continued progress on developing aircraft carriers underscores its determination to build a true blue-water navy. China's third aircraft carrier, *Fujian*, entered service in November 2025—the first of its kind to be indigenously designed.[95] Throughout 2026, satellite imagery showed steady progress on the construction of China's fourth aircraft carrier, which is likely to be nuclear-powered, marking a significant step toward sustaining longer-range deployments.[96] The relatively fast progress on the so-called Type 004 aircraft carrier in 2026—compared with the United States' 12-year-long construction of its last commissioned aircraft carrier—reflects China's determination to produce six more aircraft carriers by 2035, supporting Beijing's far-seas power projection ambitions and strengthening its ability to conduct anti-access/area denial operations in the Western Pacific.[97]

Alongside its naval expansion, China has enhanced amphibious lift capabilities necessary for an invasion of Taiwan, much of it through the militarization of civilian vessels. A Reuters ship-tracking investigation from November 2025 documented civilian roll-on roll-off (RORO) vessels and deck cargo ships' participation in a series of amphibious landing exercises earlier that year.[98] Japanese news outlet *Yomiuri Shimbun* reported in January 2026 that the PLA had begun deploying militarized civilian cargo ships alongside its fleet of newly constructed Landing Platform Utility (LPU) "jack-up barges" to simulate amphibious landings in environments that resemble Taiwan's coastal geography.[99]

China Expands the Role of Uncrewed Systems in Warfare

Over the past year, China further integrated uncrewed systems into PLA force structure and operational concepts, underscoring the growing prominence of drones in PLA conceptions of modern warfare. China's 15th Five-Year Plan explicitly called for the need to accelerate the adoption of intelligent uncrewed systems and countermeasure capabilities, illustrating the growing prominence of drone warfare in Chinese conceptions of the future of war and elevating drone technology as a core priority for China's military development through 2030.[100]

In 2026, China showcased its adoption of several new drone platforms, including the Atlas AI-enabled drone swarm system; autonomous uncrewed underwater vehicles (UUVs) for mine-clearing and intelligence, surveillance, and reconnaissance; and the Jiutian drone mothership, which can deploy and coordinate swarms of smaller aerial drones.[101] China likely believes its adoption of uncrewed systems across all domains will strengthen the PLA's ability to conduct complex operations with enhanced battlefield awareness, operational reach, force survivability, precision strike capabilities, logistics and resupply, saturation warfare, and more. UUVs and autonomous systems may prove to be China's most disruptive long-term undersea capability, enabling it to leverage scale, persistence, and distributed sensing to complicate U.S. operations and impose disproportionate costs. (For more information about China's development of undersea drones, see Chapter 5, "Active Intercept: China's Efforts to Narrow U.S. Undersea Advantage.")

China Accelerates Its Pursuit of AI-Enabled Military Capabilities

China's focus on autonomous drones is one facet of a broader transformation toward what the PLA calls "intelligentized warfare," which refers to the integration of AI into military systems, including weapons systems, kill chains, command and control, and logistics.[102] In the past year, China has advanced its adoption of intelligentized military systems, reflected in official discourse, systems development, and training. PLA exercises in the past year have featured the use of crewed-uncrewed teaming, AI-enabled target recognition and firepower allocation, and intelligent command decision-support systems.[103]

China is seeking to evade U.S. export controls to gain the most advanced semiconductors that underpin its intelligentization drive. Researchers from the Center for Security and Emerging Technology assessed in April 2026 that the PLA is actively soliciting Nvidia's advanced chips to develop its AI-enabled military capabilities, based on PLA procurement documents from the past several years.[104] China is also seeking to expand access to military-relevant data. PLA researchers have highlighted shortages of sufficiently diverse real-world training data for unmanned systems as a constraint on developing robust perception capabilities.[105] Data on Russian drone performance in Ukraine could provide valuable insights for China's equipment development, with Chinese manufacturers providing Beijing a potential channel for obtaining that information.[106] (For more information about China's pursuit of large-scale data to support its military intelligentization efforts, see Chapter 7, "Collect, Steal, Buy, Fuse, Monetize: How China Is Turning Data into Assets and Ammunition.")

China Expands Its Nuclear Deterrent While Resisting Constraints on Its Strategic Capabilities

China continued to expand its nuclear arsenal faster than any other country in 2026.[107] Beijing portrays its growing arsenal as a defensive response to an increasingly hostile security environment, but its simultaneous rejection of arms control negotiations and continued modernization suggest it views nuclear expansion as an important component of long-term strategic competition with the United States.

Arsenal growth: The U.S. Department of Defense (DOD) assessed in December 2025 that China is on track to produce 1,000 nuclear warheads by 2030.[108] The Stockholm International Peace Research Institute estimated in June 2026 that China's stock of nuclear warheads stands at approximately 620.[109] Beijing continued efforts to portray itself as a responsible nuclear power despite its rapid arsenal expansion. China released its first arms control white paper in over two decades in November 2025, which emphasized its defensive nuclear doctrine and non-aggressive posture while justifying its capability development against what it deemed as growing threats to its security from antagonistic U.S. behavior.[110]

China Expands Its Nuclear Deterrent While Resisting Constraints on Its Strategic Capabilities—*Continued*

Resistance to arms control: Following the expiration of the U.S.-Russia New START Treaty in February 2026, China rejected calls to enter formal multilateral nuclear arms control negotiations, even as it engaged in preliminary discussions with the United States.[111] Beijing's position leaves it greater flexibility to continue expanding and modernizing its nuclear forces.

Improving readiness: Beyond expanding its arsenal, China is improving the readiness of its land-based nuclear forces. DOD assessed in December 2025 that China has likely loaded more than 100 DF-31 class intercontinental ballistic missiles at its three silo fields, demonstrating a trend toward strengthening readiness posture and early warning counterstrike capability.[112] Satellite imagery in May 2026 showed sprawling construction of launch pads near China's nuclear missile silos in the northwestern Xinjiang Uyghur Autonomous Region, illustrating sustained efforts to enhance the operability of its land-based nuclear arsenal.[113]

China Normalizes Aggressive and Coercive Activities in the Indo-Pacific

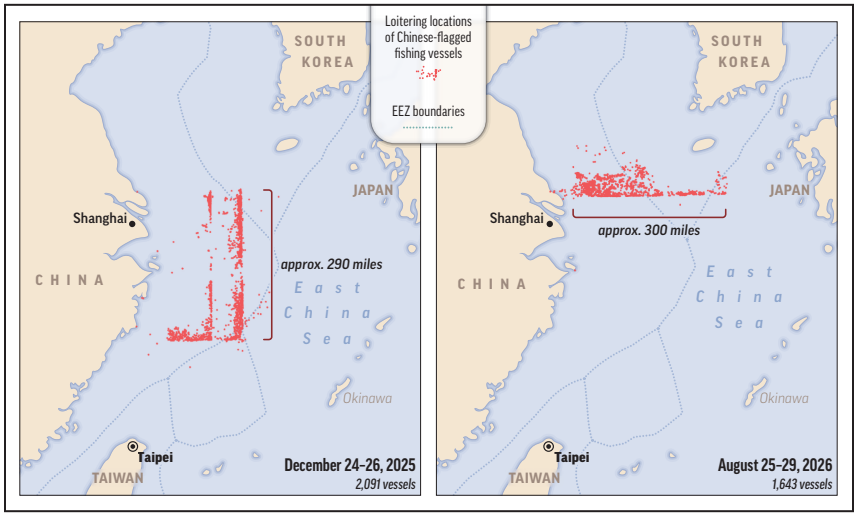
China intensified efforts to shape the Indo-Pacific security environment in its favor in 2026, from rehearsing a blockade of Taiwan to using economic and gray zone coercion against Japan amid Tokyo's efforts to bolster defense capabilities. At the same time, China presented itself as a regional stabilizer, mediator, and leader. Beyond the first island chain, China continued expanding its ability to sustain military activities, project its model of security governance, and increase its infrastructure footprint in competition with other actors in the region.

China Crosses New Operational Thresholds Around Taiwan

China's gray zone campaign against Taiwan intensified in 2026 on two simultaneous tracks: honing military capabilities for a potential contingency while pressuring Taiwan's population toward accommodation. On the military track, China crossed new operational thresholds. From December 29–30, 2025, the PLA conducted a large-scale exercise named Justice Mission-2025 that focused on "blockading key ports and territory" and continued to encircle Taiwan, as seen in previous PLA Joint Sword exercises held in 2023 and 2024.[114] (For more on the PLA Justice Mission-2025 exercise, see Chapter 9, "Taiwan: A Crucial Window for a Critical Partner.") In January 2026, a PLA surveillance drone flew over Taiwan's Pratas Island in the South China Sea, marking the first known incursion of a PLA surveillance drone into Taiwan's airspace.[115] In addition to PLA activity, China demonstrated its capacity to mobilize civilian vessels at a scale that could support a blockade against Taiwan and complicate the maneuvering of other military forces in the region.[116] In December 2025, just days before the PLA's Justice Mission-2025 exercise, approximately 2,091 Chinese fishing vessels organized into

cordon formations in the East China Sea near Taiwan.[117] Chinese fishing vessels were observed conducting similarly large maritime formations on a near-monthly basis from December 2025 to August 2026.[118] (See Figure 3: Chinese Fishing Vessels Form Maritime Barriers in East China Sea.) The amassing of civilian vessel formations could pose challenges for the maneuverability of U.S. and allied forces, potentially obstructing access to Taiwan during a conflict and complicating rules of engagement.*[119]

Figure 3: Chinese Fishing Vessels Form Maritime Barriers in East China Sea



Note: The map on the left shows the formation of Chinese fishing vessels into two parallel reverse 'L' shapes stretching approximately 290 miles long on December 24–26, 2025. In subsequent months, Chinese fishing vessels conducted a series of formations: January 10–13, about 1,409 vessels formed a north-south (vertical) line; March 1–3, about 723 vessels formed almost two north-south (vertical) lines; April 2–4, about 983 vessels formed a north-south (vertical) line. The map on the right shows the formation of Chinese fishing vessels in an east-west (horizontal) line approximately 300 miles long on August 25–29. IngeniSPACE, which conducts daily monitoring of PLA irregular warfare activities, provided additional data on the loitering Chinese fishing vessels to the Commission. The *New York Times* reported that some fishing boats participated in previous maritime militia activities. However, "China does not publish the names of most vessels in its maritime militia, making it difficult to identify the status of the boats involved."

Source: ingeniSPACE; "Global Fishing Watch," *Global Fishing Watch*. Created for the U.S.-China Economic and Security Review Commission. Names and boundary representation are not necessarily authoritative.

In June 2026, China conducted an interagency "special maritime traffic enforcement operation" in international waters east of Taiwan, issuing direct commands to foreign commercial vessels and asserting a legal right to operate law enforcement vessels in the area as a part of Beijing's "offshore governance model."[120] Vessels also conducted activities beyond the scope of law enforcement, including seabed mapping.[121] These activities reflect Beijing's deliberate

*If coastal fishing vessels provide an "effective contribution to military action or directly participate in hostilities," they lose protected status under international law and become an auxiliary naval force. Under the Law of Armed Conflict, coastal fishing vessels supporting a Chinese blockade or other military operations against Taiwan would likely make them legitimate military targets. U.S. Army 8th Theater Sustainment Command, "Beijing's Maritime Militia Rehearsing Blockade Tactics, Analysts Say," *Indo-Pacific Defense Forum*, May 6, 2026; U.S. Judge Advocate General's Legal Center and School, *The Law of Armed Conflict*, §IX.D.

efforts to institutionalize a growing presence around Taiwan while rehearsing the operational concepts that a contingency would likely require. (For more on China's pressure campaign against Taiwan, see Chapter 9, "Taiwan: A Crucial Window for a Critical Partner.")

Beijing Intensifies Pressure Campaign and Gray Zone Activities Aimed at Japan

China escalated a multifaceted pressure campaign against Japan, combining diplomatic, economic, and gray zone tactics, following a November 2025 statement from Japan's newly elected Prime Minister Sanae Takaichi. In response to a question during a parliamentary session, Takaichi said an attack against Taiwan "could constitute a survival-threatening situation," which under Japanese security law could permit the use of Japan's Self Defense Forces in response to a Taiwan contingency.[122] Beijing called the statement "severely inconsistent" with the Japanese government's prior policies on regional defense engagement, seeing it as a potential escalation in Tokyo's willingness to provide military support.[123] Chinese government officials lodged diplomatic protests and directed personal attacks at Prime Minister Takaichi, including a notable X post by China's consul general in Osaka that reposted Takaichi's November speech with the caption "the dirty neck that stuck itself out must be cut off without a moment's hesitation."[124] Beijing also launched new export controls on 40 Japanese entities with ties to Japan's military, and it added 20 entities to the watch list.[125] The list includes major Japanese defense companies and contractors, aerospace entities, and institutions like Japan's National Defense Academy.[126]

China conducted aggressive gray zone activities directed at Japan over the past year. The CCG repeatedly carried out "rights-protection" patrols and maritime law enforcement activities around the Japanese-administered Senkaku Islands, which China and Taiwan also both claim. Other Chinese vessels engaged in unauthorized activities in Japan's exclusive economic zone (EEZ).*[127]

Many of Beijing's gray zone operations around Taiwan were also meant to send a signal to Japan. The December 2025 and January 2026 Chinese fishing boat blockade exercises discussed above, which demonstrated China's maritime abilities in a conflict with Taiwan, also served as a signal to Tokyo.[128] Beijing likely aimed to normalize its maritime presence east of Taiwan to reinforce both its contested regional claims and its strategic position around Taiwan. On July 4, China for the first time labeled its maritime activities east of Taiwan as "routine," an intentional rhetorical shift that Chinese state-run media explicitly highlighted and linked to Japan's criticism of Chinese activities near Taiwan and in the East China Sea.[129] By characterizing these activities as routine and lawful, Beijing aimed to challenge Japan's maritime jurisdiction in the area. Later that month, Chinese and Russian naval ships jointly sailed into Japan's EEZ near Okinotori Island, Japan's southernmost territory, where a Chinese destroyer fired its machine guns during an exercise—mark-

*The CCG has regularly challenged Japan's claimed contiguous zone and territorial waters around the Senkaku Islands, seeking to normalize its growing presence and aggressive activities. For more on CCG presence near the Senkaku Islands, see Takahashi Kosuke, "China Coast Guard Presence Near Senkaku/Diaoyu Islands Reaches Record High in 2025," *Diplomat*, January 6, 2026.

ing the first known case of a foreign live-fire exercise inside Japan's EEZ.[130] China argued the exercise was legal because it does not recognize Okinotori as anything more than a rock, not an island; under the UN Convention on the Law of the Sea (UNCLOS), a rock is not entitled to an EEZ—unlike an island.[131] Japan's Chief Cabinet Secretary Minoru Kihara also noted that the live-fire exercises posed serious risks to nearby vessels.[132]

China Sustains Its Aggressive South China Sea Gray Zone Campaign Against the Philippines

China continued its aggressive actions in the South China Sea toward the Philippines, a U.S. mutual defense treaty ally. From January to June, the Philippines filed 27 diplomatic complaints against China for its incursions in the West Philippine Sea.[133] On July 20, CCG crew and Philippine Navy personnel physically clashed at Second Thomas Shoal, with the two sides presenting conflicting accounts of who initiated the confrontation.[134] The U.S. Department of State condemned "China's dangerous and aggressive actions against Philippine navy personnel."[135] The two sides clashed again a few days later at Scarborough Shoal when 15 CCG and Chinese "maritime militia" boats patrolled and used water cannons to spray a Philippine vessel, which was reportedly bringing fuel and food to Filipino fishing boats.[136] The rapid escalation into physical confrontations of both encounters, as well as a third clash in the month of July, demonstrated the ongoing risk that China's attempts to intimidate the Philippines could trigger a broader crisis.

China also targeted the Philippines' maritime claims. In May 2026, China placed a "semi-permanent" structure at the disputed Scarborough Shoal.[137] Shortly after, Japan and the Philippines announced they would officially enter talks to delineate their EEZs and continental shelf.[138] China objected to the talks, calling them "completely illegal and void."[139] Beijing has consistently refused to recognize the 2016 South China Sea Arbitral Award, which found no legal basis under UNCLOS for major elements of China's South China Sea claims, including the "nine-dash line."[140] In July 2026, after the United States and 13 other countries reaffirmed the 2016 ruling in a joint statement, Beijing released its own statement reiterating its sovereignty claims over South China Sea islands, features, and waters.[141] Though the structure China placed at Scarborough Shoal measured only about 388 square feet, its placement marked a new step in China's assertion of claims over the Shoal and sparked concerns in the Philippines that China could attempt to establish a more permanent outpost, as it has on contested features in the Spratly Islands.[142]

Beijing Selectively Engages with New Delhi While Pressing Territorial Claims and Indian Ocean Influence

China sought to ease tensions with India in 2026 while continuing to press its territorial claims along the disputed border and expanding its strategic presence in the Indian Ocean. Beijing and New Delhi built on their 2024 and 2025 leader-level dialogues through confidence-building measures like reopening flights and pilgrimage travel, easing restrictions for Chinese investment in India, and

avoiding direct border confrontation.[143] Beijing simultaneously reinforced its sovereignty claims over contested areas—including most of India's state of Arunachal Pradesh—through political statements, dual-use infrastructure buildup near contested borders, and military activities.[144] China has also begun transposing its South China Sea playbook to the Indian Ocean by aiming to normalize its maritime presence through exploratory vessels and by asserting the right to rename sites with new Mandarin names. China seeks to expand its influence across the region to erode India's regional leadership and pave the way for future economic and military access.[145]

For India, significant distrust toward China endures, and stability at the border is still seen as a prerequisite for substantive cooperation with China.[146] In the wake of India and Pakistan's May 2025 conflict, during which China reportedly provided support to Pakistan on multiple fronts, the Indian government has continued taking measures to build up and recalibrate its military posture.[147] While cooperation between India and China will likely continue to expand in limited lanes of mutual interest, their territorial disputes will continue to hinder the growth of a true partnership. China's dual-track approach with India—pursuing economic normalization while pressing territorial claims and expanding into the Indian Ocean—applies the same coercive-but-controlled logic as discussed in a later chapter in this Report. Beijing uses one track to preserve productive engagement and another to advance contested interests. (For more on China's complex relationship with India, see Chapter 3, "China's Other Front: India and the Future of U.S. Strategy in the Indo-Pacific.")

Regional Diplomacy and Coercion Advance China's Security Agenda

China sought to strengthen its regional influence in 2026 by pairing diplomatic engagement with continued coercive pressure on neighboring states. As the Philippines assumed the ASEAN chairmanship, China sought to portray itself as a constructive partner on South China Sea issues, proclaiming an intent to support dialogue, regional cooperation, and progress toward developing a code of conduct for the South China Sea.[148] China's position was particularly ironic. As discussed in last year's Annual Report, China has repeatedly obstructed progress toward a Code of Conduct for years. (For more on China's activities in Southeast Asia, see U.S.-China Economic and Security Review Commission, Chapter 4, "Crossroads of Competition: China and Southeast Asia," in *2025 Annual Report to Congress*, November 2025, 210–211.) China has used partners such as Cambodia and Burma to thwart regional dialogue and cooperation that China views as opposed to its interests, and China has aimed some of its most aggressive gray zone coercion measures at the Philippines in the South China Sea.*

*China also sanctioned Philippine Defense Secretary Gilberto Teodoro Jr. Beijing took offense when the secretary reaffirmed the 2016 South China Sea arbitral ruling, which did not favor China's interests, and criticized China for disregarding it at the Shangri-La Dialogue in Singapore. For more, see Jim Gomez, "Philippines Protests China's Sanctions Against Its Defense Chief as 'an Unfriendly Act,'" *Associated Press*, June 12, 2026; China's Ministry of Foreign Affairs, 外交部发言人宣布中方对菲律宾国防部长特奥多罗及其亲属实施制裁 [Ministry of Foreign Affairs Spokesperson Announced That China Is Imposing Sanctions on Philippine Defense Secretary Teodoro and His Family], June 11, 2026. *https://web.archive.org/web/20260618144249/https://www.mfa.gov.cn/web/fyrbt_673021/202606/t20260611_11942746.shtml*; Gilberto Teodoro Jr., "23rd Asia Secu-

China Expands Overseas Basing with Joint Air Facility in Laos

In September 2026, China announced the inauguration of the China-Laos Joint Logistics and Training Center and the China-Laos Friendship Aviation Academy at Ban Keun Airport in Laos, marking its third overseas military base.*[149] China's Ministry of Defense stated that the facility will be jointly operated by both countries and will help strengthen the training of Laos' air force pilots.[150] The China-Laos base appears to be an air-oriented analogue to the China-Cambodia Joint Logistics and Training Center at Ream Naval Base, which China described in similar terms.[151] Each joint base followed an expansion of bilateral cooperation and technical assistance from China to the host country, ranging from defense and security support to trade, investment, and infrastructure development.[152] China likely funded construction of the Laos base through foreign assistance grants, as it did at Ream.[153] The similarities between the two facilities indicate a pattern in which Beijing provides training and other forms of capacity-building for host countries to expand its military footprint overseas.

China Continues to Compete for Influence and Infrastructure Access Across the Indo-Pacific

China continued competing for influence and strategic access across the broader Indo-Pacific in 2026, using infrastructure development to expand its access to the region while aiming to limit the strategic options of regional countries and U.S. allies and partners. Beijing further developed potential dual-use ports and connectivity projects, which could advance both its commercial and military interests.[154] Following Pakistani Prime Minister Shehbaz Sharif's May 2026 visit to Beijing, the two countries released a joint statement announcing a "new broad consensus" to develop Gwadar Port as a "regional connectivity hub."[155] During Xi's June 2026 meeting with Burmese President Min Aung Hlaing, the two similarly issued a joint statement stating their commitment to promoting cooperation and implementation on the Kyaukphyu Port and other China-Myanmar Economic Corridor initiatives.[156]

China directly competed for infrastructure development access and influence in the Pacific Islands region. In May 2026, Vanuatu approved a new strategic cooperation agreement with China—the "Namele Agreement"—while approving updates to the existing "Nakamal" security and development pact with Australia.[157] China closely mirrored Australia's agreement, then aimed to get Vanuatu's signature amid Australia-Vanuatu negotiations.[158] Australia also raised concerns over whether the new Chinese agreement might

rity Summit—The Shangri-La Dialogue," *International Institute for Strategic Studies*, Singapore, May 31, 2026.

*China's other overseas bases are the PLA Support Base in Djibouti, inaugurated in 2017, and the China-Cambodia Joint Logistics and Training Center at Ream Naval Base, inaugurated in 2025. This count does not include China's military outposts in the Paracel and Spratly Islands in the South China Sea, which sit on contested territory.

give China critical infrastructure access.[159] The original terms of the Australian pact would have required Vanuatu to seek Australian consultation on critical infrastructure projects, potentially constraining future opportunities for Chinese infrastructure investment and security access.[160] In the end, Vanuatu agreed to partnerships with both countries.[161] China has been directly competing with Australia in other Pacific Islands countries like the Solomon Islands, where Beijing and Canberra have competing police training programs.[162]

China Continues to Exploit the Spread of Scam Centers to Expand Its Overseas Security Influence

China-linked scam centers are spreading beyond Southeast Asia, opening new doors for Beijing to expand its overseas law enforcement presence. Chinese criminal organizations have responded to crackdowns in Southeast Asia by shifting operations into the Pacific Islands, South Asia, the Middle East, and West Africa.[163] As of March 2025, about 26 percent of individuals trafficked into scam centers were sent to compounds outside of Southeast Asia.[164] Beijing has previously exploited the spread of these criminal networks by pressing affected governments to deepen police and security cooperation with China.[165] Though framed as assistance against transnational crime, such arrangements can deepen Beijing's access to and influence over foreign security institutions through relationship building, training, equipment, surveillance technology, and joint law enforcement activities.[166]

The globalization of scam centers is allowing Beijing to expand this model into strategically important countries. In Palau, which officially recognizes Taiwan and hosts important U.S. military facilities, Chinese criminal networks established scam operations despite government efforts to suppress them.[167] Across Africa, China has used scam center investigations to propose deeper police cooperation, including increased law enforcement coordination with Angola, Namibia, Zambia, and Nigeria. This "inside out" strategy allows Beijing to expand its security influence to generate strategic access and leverage without the challenges that would result from an overt military presence. (For more on China's involvement in scam centers, see the 2025 Commission Spotlight, "China's Exploitation of Scam Centers in Southeast Asia" and the 2026 update, "Protecting Americans from China-Linked Scam Centers: An Update on Emerging Trends.")

China Uses a Wide-Ranging Toolkit to Project Power on the International Stage

In 2026, China continued its multifaceted strategy to reshape the international order according to its own interests through technology exports, multilateral organizations, diplomatic initiatives, and investment strategies. Across international institutions such as BRICS, the SCO, and the UN, Beijing sought to shape international norms and governance structures in ways that align with its vision of a multipolar world order. Importantly, Beijing pushed BRICS and

the SCO to take on new roles in areas such as security cooperation, development finance, and emerging technology.[168] Meanwhile, China expanded dual-use infrastructure across strategic regions, creating avenues for intelligence collection, disruption of U.S. supply chains, and potential future military access.

However, events this year also underscored the limits of Beijing's influence within these institutions, as member states resisted efforts to join initiatives that disproportionately benefit Beijing or are perceived as a counterweight to the United States. Chinese security partnerships likewise did not always translate into effective strategic support. In Venezuela, years of Chinese defense cooperation did not prevent the U.S. operation that captured Nicolás Maduro.

China Pushes BRICS and the SCO into New Roles Despite Member Resistance

China sought to use BRICS in 2026 to advance its vision of a more multipolar world order, but its efforts also exposed limits in the grouping's cohesion.[169] Building on the trilateral Maritime Security Belt exercises that China, Russia, and Iran have conducted since 2019, Beijing branded the Will for Peace naval exercise under BRICS Plus in January 2026, seeking to normalize security cooperation under the organization's banner and advance China's vision of an alternative security order.[170] Reflecting that objective, a senior Russian official said the exercise would "harness the potential of BRICS" to help establish a "multipolar world order on the oceans" as a counterweight to Western influence.[171] At the September 2026 BRICS Summit in India, Xi Jinping noted that "the trend towards a multipolar world is unstoppable" and called on the organization to "steer the international order in a direction that is more just."[172]

China's use of BRICS in 2026 revealed both Beijing's ambition and its limits. Despite Beijing's efforts to leverage the organization as a vehicle for legitimizing security cooperation with Russia and Iran, the Will for Peace exercise exposed longstanding divisions within BRICS, reinforcing the reality that the grouping remains far less cohesive than Beijing's messaging suggests.[173] South Africa's president reportedly downgraded Iran from a participant to an observer, while South Africa's Democratic Alliance Party raised concerns that the drill was being used to challenge the international rules-based order.[174] Meanwhile, founding member India refused to participate in the drill, framing it as an ad hoc "South African initiative" rather than an "institutionalized BRICS activity."[175] The episode mirrors a consistent pattern of division among BRICS members on efforts that are principally driven by China and Russia to position the bloc as a strategic counterweight to U.S.-led institutions.*

China is also broadening the SCO's traditional mandate of combating terrorism, separatism, and religious extremism toward emerging technology, development finance, and governance initiatives.[176] During the September 2025 SCO Summit in Tianjin, Xi

*BRICS countries have disagreed in the past on primarily Chinese- and Russian-led efforts, including de-dollarization, BRICS expansion, and Ukraine war UN votes. See Anjana Pasricha, "India Not Pursuing Shared BRICS Currency, Analysts Say," *Voice of America*, December 8, 2024; Carien du Plessis, Anait Miridzhanian, and Bhargav Acharya, "BRICS Welcomes New Members in Push to Reshuffle World Order," *Reuters*, August 24, 2023; Jordan McLean and Luanda Mpungose, "BRICS and the Russia-Ukraine War: A Global Rebalance?" *South African Institute of International Affairs*, September 19, 2022.

announced the establishment of the SCO Development Bank that would promote lending in regional currency—an initiative Russia had blocked for decades.[177] Russia's eventual support for the establishment of the bank marks Beijing's growing influence within the organization.[178] Xi announced a new Global Governance Initiative at the September 2025 "SCO Plus" meeting, calling on the organization to reform the global governance system and underscoring Beijing's intentions to promote an alternative international order.[179] The September 2026 SCO Summit in Bishkek, Kyrgyzstan, further reinforced China's influence within the grouping. Most notably, Xi pledged to implement 100 scientific and cooperation projects over the next three years.[180] Nevertheless, the SCO remains a loose, consensus-based forum and has had a limited record of providing meaningful support when members face acute security crises.[181] For example, a unified front in support of Russia's war in Ukraine did not emerge during recent SCO summits.[182] The SCO offers China a platform to advance its norms internationally, but it is not a cohesive alternative to Western multilateral institutions.

China leveraged its position at the UN in 2026 to deflect responsibility from Iran and portray the United States as a source of instability. On April 6, 2026, China and Russia jointly vetoed a UN Security Council resolution led by Bahrain and backed by the United States to reopen the Strait of Hormuz, blocking an international response to Iranian actions.[183] During a UN Security Council Emergency Meeting in May following a drone attack launched from Iraqi territory but suspected to have been carried out by Iranian proxies against the United Arab Emirates' Barakah nuclear power plant, China shifted responsibility away from Iran again while characterizing U.S. and Israeli military actions as the root cause of the conflict.[184] China also abstained from a UN resolution condemning Iran's attacks against multiple Gulf states, instead backing a Russian-proposed alternative that avoided assigning responsibility to Iran for the attacks it carried out.[185] These actions continue a well-documented pattern of China leveraging its veto power on the UN Security Council to help its partners evade accountability while shaping the international narrative according to Beijing's interests.*

China Embeds Military and Technology Networks Across Africa to Deepen Strategic Ties

China continued to leverage security cooperation and technology partnerships in 2026 to embed its presence across African states and position itself as an alternative to the United States. China is deepening security cooperation across Africa by expanding military education and operational engagement with the continent's armed forces. China's 2025–2027 Forum on China–Africa Cooperation plan aims to train 6,000 African military personnel, invite 500 junior officers to visit China, and train 1,000 police and law enforcement personnel by 2027.[186] During a high-level visit to South Africa in June 2026, Chinese Defense Minister Dong Jun agreed to strengthen cooperation through communication, training, and exchanges.[187]

*China has repeatedly coordinated its veto use with Russia on the UN Security Council, including joining Moscow in ten vetoes on Syria since 2011 and jointly vetoing a 2022 resolution on additional sanctions against North Korea. See Paul Romita, "Living with the Veto," *Security Council Report*, March 23, 2026.

China worked to normalize its military presence in Africa through exercises, defense cooperation, and port calls. In 2026, China led the Will for Peace naval exercise—hosted by South Africa—in January and the Eagles of Civilization joint air force exercise with Egypt between August and September. This adds to China's two large-scale exercises held with African nations in 2024 and 2025.[188] In December 2025, Egypt's state-owned Arab Organization for Industrialization and China's North Industries Corporation signed a memorandum of understanding (MOU) at the Egypt Defense Expo to produce tactical uncrewed aerial systems.[189] In October 2025, the PLA's 48th Navy Escort Task Group deployed to the Gulf of Aden and waters off of Somalia for escort operations.[190] China's guided missile destroyer *Baotou*, attached to the 47th Escort Task Group, made a five-day technical port call in Mombasa, Kenya, after which it conducted a passage-and-maneuver exercise with the Kenyan military.[191] This marked the first Chinese naval visit to Kenya in nearly six years and contributed to the estimated 15 port calls conducted by the PLA Navy to African countries between 2024 and 2025.[192] In addition, data published in March 2026 show that China was the largest supplier of major arms to Sub-Saharan Africa in 2021–2025, supplying 23 states during that period and accounting for 22 percent of the region's imports.[193] China's defense engagements in Africa create a more normalized PLA presence in the region while increasing the PLA's operational familiarity with African ports and partner militaries.

Chinese Technology Infrastructure Creates Military and Intelligence Risks Across Africa

China is expanding strategic space, digital, and telecommunications infrastructure across Africa, positioning Chinese firms inside critical information networks with potential intelligence and military significance. In the space sector, Algeria launched the Al-Sat-3A remote sensing satellite in January 2026, which was developed in partnership between the Algerian Space Agency and China Great Wall Industry Corporation. The satellite reportedly provides high-resolution observation for strengthening Algeria's geospatial intelligence capabilities.[194] In November 2025, Windhoek, Namibia, received a satellite ground station from China aimed at strengthening the country's space science capabilities.[195] The Windhoek facility is capable of receiving and processing remote sensing data from satellites.[196]

China is also increasing the sophistication of its existing satellite ground station network in Africa. Beijing is expanding Africa's space capabilities through the China-Africa Cooperation Centre on Satellite Remote Sensing Application group, which operates across 16 African nations and has built 14 cloud-based platform nodes across the continent.[197] The Chinese-operated ground station in Swakopmund, Namibia, first established in 2001 to support China's manned spaceflight program, continues to be operated by the satellite launch, tracking, and control department of China's PLA Aerospace Force.[198] Swakopmund is an important node that supports China's global network of telemetry, tracking, and command facilities.[199] Satellite imagery dated October 2025 from the Center

for Strategic and International Studies shows a new installation of an antenna at the Swakopmund facility.[200] Together with China's ground station in Windhoek, the expansion provides additional links to a distributed ground segment network capable of receiving data from satellites passing over southern Africa.[201] These capabilities help China close geographic gaps in its global telemetry, tracking, and command networks that can support both civilian and military operations.[202]

Chinese technology companies are expanding into African government cloud, AI, telecommunications, and surveillance systems, increasing intelligence and coercive risks for African nations. A March 2026 report by the Institute of Development Studies found that 11 African governments spent at least $2 billion on AI-enabled public-space surveillance technology, with Chinese companies accounting for the largest share of the contract value.[203] Researchers found that governments used some of these systems to monitor political opponents and journalists, showing how China is exporting its authoritarian governance model through commercial relationships.[204] U.S. officials continue to warn governments that Huawei poses national security risks because Chinese laws can require firms to cooperate with Beijing's intelligence and security services.[205] In 2026, Huawei deepened its penetration of the digital systems that process government, commercial, and citizens' data in Africa, potentially giving Beijing new intelligence and coercive advantages.[206] Huawei expanded its government and telecom partnerships across Africa in 2026, signing MOUs with the Smart Zambia Institute, MTN Group (Africa's largest mobile network operator), and the AXIAN Telecom conglomerate. Collectively, these MOUs focused on training information communication technology professionals, introducing AI-supported services in government systems, and pursuing co-investments in national AI data centers.[207]

China Pursues Strategic Influence in Latin America Through Commercial and Security Partnerships

China is expanding its influence in Latin America through overlapping economic, technological, political, and security relationships. Some of these relationships create long-term dependencies and give Beijing additional means to pressure governments when their policies conflict with Chinese interests. As in Africa, China is investing in ostensibly commercial infrastructure and technology in Latin America that it could leverage for political, military, and intelligence purposes. (This is detailed in Chapter 4, "China's Predatory Diplomacy in Latin America: Broken Promises, Harmful Practices.") China demonstrated its willingness to use political and economic pressure to maintain access to its Latin American ports. After Panama's Supreme Court annulled Hong Kong-based CK Hutchison's canal-adjacent port concessions in January 2026, Chinese authorities and state-owned firms reportedly responded with shipping disruptions, increased detentions of Panama-flagged vessels at Chinese ports, and an international political pressure campaign to persuade foreign firms operating Panama's ports to withdraw.[208] China's aggressive response to Panama's legal ruling indicates the importance it places on influence over strategic ports.

China's investments in strategic port and space infrastructure in Latin America, while primarily civilian, could also support Beijing's military and intelligence objectives. There are 37 ports in the region where Chinese state-owned enterprises and private firms have been the main investors or continue to be administrators, and the U.S. Southern Command has identified 23 Chinese port projects that could be leveraged by China's military during conflict to disrupt U.S. supply chains or military operations while serving as intelligence collection assets during peacetime.[209] In addition, China has established a network of 11 space facilities in Latin America that could enhance Beijing's space domain awareness by providing data links to its satellite networks.[210]

China is also leveraging the region's internal security challenges to expand its commercial and security footprint in Latin America. Chinese companies like Huawei, ZTE, and Dahua have supplied or donated surveillance technology equipment to at least 35 cities across the region.[211] Xi Jinping's 2025 China-Community of Latin American and Caribbean States (CELAC) speech, the 2025 Policy Paper, and the China-CELAC Action Plan call for expanded cooperation on addressing drug trafficking, money laundering, illegal mining, wildlife trafficking, human smuggling, and other forms of transnational crime.[212] Meanwhile, Beijing is deepening its influence in the region's police and security institutions through law enforcement cooperation programs under the Global Public Security Cooperation Forum, which brings the region's police officers to China.[213] Ironically, Beijing presents itself as a partner capable of addressing Latin America's security challenges despite the major role China-linked actors play in exacerbating organized crime, drug trafficking, and illegal resource extraction.*

Venezuela became an unplanned test case for China's security partnership model in Latin America. Despite years of defense cooperation, extensive Chinese arms sales, and political support, Beijing's partnership did not deter or disrupt the U.S. military's Operation Absolute Resolve, which resulted in the capture of former Venezuelan leader Nicolás Maduro.[214] Venezuela had become the largest recipient of Chinese military equipment in Latin America, accounting for 85.8 percent of China's regional arms transfers from 2010 to 2020.[215] Yet, Venezuela's air defense and radar systems,

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*Chinese companies remain the dominant suppliers of precursor chemicals used in synthetic drug production that supports Latin America's cartels, while Chinese money laundering organizations facilitate cartel finances through underground banking networks. Chinese state-owned enterprises are directly implicated in illegal, unreported, and unregulated fishing activity along the region's coasts, and other Chinese-linked activities in illegal mining and logging fuel environmental degradation and corruption. For further discussion of China's activities in Latin America in this Report, see Chapter 4, "China's Predatory Diplomacy in Latin America: Broken Promises, Harmful Practices;" U.S. House Select Committee on the Strategic Competition between the United States and Chinese Communist Party, *The CCP's Role in the Fentanyl Crisis*, April 2024, 25; Juan Delgado, "Peru Under Pressure: Illegal Mining, Illicit Exports, and China's Role in Expanding Criminal Supply Chains," *Diálogo Américas*, April 30, 2026; U.S. House Select Committee on Strategic Competition between the United States and the Chinese Communist Party, *China's Global Fishing Offensive*, January 15, 2026, 1, 5; Adam Rouselle, "China–Cartel Nexus: The Liquidity Architecture Transforming the Global Drug Economy," *New Lines Institute*, December 19, 2025; United States Treasury Financial Crimes Enforcement Network, *FinCEN Advisory on the Use of Chinese Money Laundering Networks by Mexico-Based Transnational Criminal Organizations to Launder Illicit Proceeds*, August 28, 2025; Leland Lazarus and Alexander Gocso, "Triads, Snakeheads, and Flying Money: The Underworld of Chinese Criminal Networks in Latin America and the Caribbean," *Florida International University Jack D. Gordon Institute for Public Policy*, 2023.

procured from China and Russia, apparently failed to provide effective warning during the operation, and none of the more than 150 U.S. aircraft involved were lost.[216] The raid also occurred only hours after a Chinese special envoy met with Maduro, suggesting Beijing's intelligence apparatus had little advance warning of the operation.[217] In the coming years, it will be worth watching if the episode causes other potential Chinese partners to question the operational effectiveness of Chinese defense systems, the value of Beijing's intelligence cooperation, and the practical security benefits that partners relying heavily on Chinese systems and cooperation may be able to expect in a crisis. (For further discussion of China's activities in Latin America, see Chapter 4, "China's Predatory Diplomacy in Latin America: Broken Promises, Harmful Practices.")

Beijing's Version of Constructive Strategic Stability in Action

China's actions in 2026 demonstrated what "constructive strategic stability" means to General Secretary Xi in practice. Despite reframing the bilateral relationship at the U.S.-China summit, Beijing showed no signs of slowing its efforts to undermine U.S. interests, instead aiming to manage risks while continuing to strengthen its position relative to the United States. Rather than signaling a desire to reduce bilateral competition, Beijing's emphasis on "stability" and willingness to engage with the United States likely signals its interest in avoiding a direct confrontation that could challenge China's rise.

Beijing employed military, technological, economic, diplomatic, and informational tools in mutually reinforcing ways. Beijing also showed its willingness to adjust its tactics based on circumstances. In the Western Pacific, China judged that its interests would be served by escalating its gray zone tactics, lawfare, and coercive actions. As a result, China expanded aggressive military and law enforcement activities near Japan and Taiwan and in contested waters in the South China Sea. In contrast, when China perceived that confrontation would interfere with broader objectives, it modified its approach. China sustained Iran without directly entering its conflict with the United States, managed friction with Washington ahead of the Trump-Xi summit, and expanded economic engagement with U.S. allies. In each case, Beijing moderated how it pursued its objectives to reflect its assessment of circumstances.

China's efforts were not always successful. Resistance within BRICS limited some of Beijing's ambitions, partners and competitors alike pushed back on Chinese pressure, and China's expanding security relationships did not always translate into meaningful security benefits for its partners. Beijing nevertheless appears willing to accept partial gains and setbacks while steadily building military capabilities, technological advantages, economic leverage, institutional influence, and strategic access. In this context, Beijing views "constructive strategic stability" not as a pause in competition with the United States but as a way of managing that competition so it can continue to apply pressure, exploit opportunities, accumulate influence, and seek long-term advantage. For Beijing, incremental gains still advance its longer-term effort to reshape the international order in its favor.

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PART II

CHINA'S EFFORTS TO EXPAND ITS GLOBAL POWER AND INFLUENCE

CHAPTER 3: CHINA'S OTHER FRONT: INDIA AND THE FUTURE OF U.S. STRATEGY IN THE INDO-PACIFIC

Executive Summary

India is one of the few powers outside the U.S. alliance system with the scale to materially affect the long-term competition with China. India is the world's most populous country and largest democracy. It is a nuclear power with one of the world's largest militaries. It shares a 2,100-mile contested border with China and occupies a commanding position along critical sea lanes in the Indian Ocean that carry much of China's energy and trade. While the Western Pacific remains the principal geographic theater of U.S.-China competition, New Delhi presents Beijing with another strategic challenge both on land and at sea. India's rivalry with China is driven by its own strategic interests, not by alignment with Washington. For the United States, a stronger India could contribute to a more favorable balance of power in Asia while providing an important alternative to Chinese manufacturing and supply chains.

China understands this, and it is actively working to suppress India's rise across multiple domains. Beijing is continuing its military buildup, asserting sovereignty claims along the disputed border, deepening military support for Pakistan, and expanding its naval and surveillance presence in the Indian Ocean. China's sharpest tool, however, is economic. Beijing is using its control over critical industrial inputs, technology, and expertise to preserve its manufacturing advantages and make it harder for India to build competing capacity. China has restricted exports of key inputs and products to India to exert economic pressure, recalled engineers and withheld equipment to slow India's electronics manufacturing, slashed pharmaceutical input prices to undercut new Indian plants, and imposed export controls on battery technology to impede the development of India's clean energy industry. More consequential for Washington, in 2025 Beijing began to require Indian firms to certify that certain Chinese-supplied inputs would not be re-exported to the United States. While China suspended this requirement as part of the broader Trump-Xi

trade détente, it is a lever that can turn India's dependence on China into a weapon aimed at U.S. supply chains.

India is responding to Chinese pressure while balancing security concerns against its economic development needs. New Delhi is modernizing its military, building domestic manufacturing capacity, restricting Chinese involvement in sensitive sectors, and expanding cooperation with the United States and other partners. However, India recently eased some restrictions on Chinese investment and equipment as the costs of limiting access to Chinese inputs, technology, and expertise have grown. Much of India's industrial expansion still runs on Chinese machinery, components, and technical know-how, and its dependence on Chinese components has deepened even as its de-risking measures multiplied.

These tensions create both opportunities and constraints for the United States. Washington and New Delhi have spent a quarter century building closer ties across defense, technology, and trade, but India will continue to guard its strategic autonomy rather than align automatically with U.S. objectives.

The two governments have established an ambitious foundation for cooperation. A ten-year defense framework, a bilateral trade agreement under negotiation, technology initiatives ranging from semiconductors to biomanufacturing, and a revitalized Quadrilateral Security Dialogue all point toward deeper ties. The legal and institutional architectures needed to support that cooperation have not changed as quickly, however. Export control regimes, procurement rules, and financing tools that were designed for a different era and a different strategic environment limit what these initiatives can deliver. The result is a growing gap between the ambitions of the partnership and what its underlying rules and institutions can deliver.

Key Findings:

- India is one of the few countries with the demographic, economic, military, and geographic scale to significantly affect the long-term balance of power with China. Beijing views India's rise as a strategic challenge and is applying military, economic, maritime, and other forms of pressure to constrain it. India has its own interests driving its rivalry with China and is committed to "strategic autonomy," so closer U.S.-India cooperation will not necessarily translate into alignment with broader U.S. objectives.
- The unresolved border remains the central fault line in China-India relations. The 2020 Galwan Valley clashes marked a major turning point, making India less willing to separate the territorial dispute from its wider relationship with China. Although New Delhi and Beijing have gradually rebuilt ties since late 2024, strategic distrust remains high and India continues to view peace along the border as necessary for broader normalization.
- China's evolving military partnership with Pakistan has made a two-front contingency an increasingly critical con-

cern for India. The May 2025 India-Pakistan conflict demonstrated how China could strengthen Pakistan during a crisis without Beijing entering the fighting directly, adding to India's concerns about how a future conflict with Pakistan could develop.

- China's expanding naval and surveillance presence is beginning to erode India's longstanding strategic advantages in the Indian Ocean and place additional demands on Indian forces. Beijing is building the infrastructure and logistical networks needed to sustain more persistent naval operations while Chinese naval, surveillance, and research vessels operate closer to India and critical sea lanes. China is also beginning to bring its South China Sea playbook to the Indian Ocean, invoking historic rights and renaming undersea features in ways that could lay the groundwork for more assertive activities and potential claims of jurisdiction.
- India's dependence on Chinese manufacturing has become an important source of leverage for Beijing—and a growing vulnerability for the United States. China has restricted industrial inputs, equipment, technology, and expertise to India and required some Indian firms to certify that Chinese-supplied goods would not be re-exported to the United States. Chinese pricing has also undercut new Indian pharmaceutical production, illustrating Beijing's intent to undermine Indian suppliers that can compete with established Chinese producers. These dependencies complicate U.S. efforts to diversify supply chains away from China by shifting production to India.
- India has reduced its exposure to China in some sensitive sectors, but its underlying industrial dependence has continued to grow. New Delhi has restricted Chinese investment, limited Chinese participation in strategic industries, and subsidized domestic manufacturing, yet India's industrial growth has increased demand for Chinese machinery, components, and technical expertise. India's efforts to build domestic supplier networks will require substantial capital, technology, and time, even as it progresses as a global China Plus One hub.
- U.S.-India cooperation has become more ambitious, but many of the rules and institutions governing it remain poorly suited to the partnership's current scope and strategic importance. New defense, technology, supply chain, and maritime initiatives have broadened the partnership, but export controls, procurement requirements, financing constraints, and fragmented bureaucratic processes continue to delay or limit implementation.

Introduction

India has the military power, the strategic location, and its own national interests to resist Chinese efforts to expand its power and

influence in the Indo-Pacific. At the same time, China realizes the threat India represents to its regional and global ambitions and is working to constrain India's emergence as a stronger strategic power. Beijing's support for Pakistan and military advantages along its disputed border with India place persistent demands on Indian forces. China's expanding presence in the Indian Ocean and South Asia challenges India in areas where it has traditionally held greater influence.

After deadly clashes with China in the Galwan Valley, India gained a new appreciation for the risks from its economic dependence on Chinese inputs and has spent six years trying to reduce this dependence. New Delhi has restricted Chinese investment and spent billions building domestic manufacturing, yet its factories continue to rely on Chinese machinery, components, and technical expertise. Beijing has sought to preserve and use this leverage, restricting some of the inputs and expertise India needs to develop competing industries.

Whether India can convert its enormous scale and strategic position into greater economic and military power has stakes well beyond India's borders. Few countries have comparable capacity to affect the long-term balance with China. China's manufacturing base now exceeds that of the United States, Japan, and Germany combined, and India is one of the few countries with the scale to materially narrow the gap. Whether Washington and New Delhi can build durable cooperation where their interests overlap—consistent with India's commitment to strategic autonomy—will affect not only India's ability to become a stronger counterweight to China but also the United States' ability to maintain a favorable balance of power across the Indo-Pacific.*

Why India Matters to U.S.-China Competition

India's strategic location and large military limit Beijing's ability to expand its power on land and at sea.[1] India and China are both major military powers and nuclear-armed states, with forces deployed opposite each other along their contested 2,100-mile border.[2] India's position along critical Indian Ocean sea lanes gives New Delhi an opportunity to monitor Chinese activity and potentially threaten critical trade and energy flows during a conflict.[3] The Western Pacific remains the principal theater of U.S.-China military competition, but a more capable India would require Beijing to devote resources and attention to a second front that it might otherwise dedicate to the Western Pacific, giving the United States greater flexibility elsewhere in the Indo-Pacific.

India's scale also gives it unusual potential to provide economic and technological alternatives to China. India had the world's sixth largest economy by nominal GDP in 2025, and it was the sixth largest producer of manufacturing value-added in 2024.[4] Its enormous domestic market and workforce, engineering talent, and growing industrial base give it the potential to become both a major alternative manufacturing location and a deeper source of supply in strategic in-

*This chapter's findings are based on the Commission's February 2026 hearing on "India, China, and the Balance of Power in the Indo-Pacific"; a fact-finding trip to India; meetings with government officials and business leaders; and open-source research.

dustries.[5] India is already expanding production in pharmaceuticals, electronics, biotechnology, defense, and other sectors while seeking to develop more of the upstream suppliers needed to support them.[6] Greater Indian capacity could give U.S. companies and consumers more alternatives to Chinese production and help diversify critical supply chains, while India's large market could provide greater scale for non-Chinese technologies competing in emerging markets.[7] India cannot readily replicate China's manufacturing ecosystem, but its scale means that successful industrialization there could materially reduce the concentration of global production in China.[8]

India's strategic importance does not depend on it becoming a U.S. ally, and its commitment to strategic autonomy sets limits on what Washington should expect from the partnership. Strategic autonomy has been a core feature of Indian foreign policy since independence. The concept is the modern evolution of "non-alignment," a foreign policy approach New Delhi helped lead during the Cold War among countries in the so-called "Third World" during a time when India was highly skeptical of great power imperialism.[9] India's contemporary strategic autonomy manifests in many ways. Though U.S.-India relations have improved markedly since, India does not have any formal security allies and remains reticent to enter formal alliances with any side or country.[10] New Delhi generally avoids taking sides between competing powers and participates in a range of international groupings like the Quad, BRICS,* and the Shanghai Cooperation Organization (SCO). The approach allows New Delhi to maintain relationships and even strategically important partnerships with various powers while preserving its freedom of action.[11] India's commitment to strategic autonomy will continue to limit how closely U.S. and Indian policies align and will produce disagreements on important issues. It has not, however, prevented closer defense, technology, maritime, and economic cooperation where the two countries' interests converge.[12]

Importantly, India's rivalry with China stems from its own territorial disputes, concern about Chinese influence in South Asia and the Indian Ocean, and interest in preventing Beijing from dominating the regional order.[13] India therefore has its own reasons to resist Chinese power, making its contribution to the regional balance less dependent on U.S. policy than that of many other partners.

The United States cannot determine India's trajectory, but it can affect whether areas of overlapping interest translate into greater Indian capacity. U.S. capital, technology, defense cooperation, intelligence sharing, and access to American firms and markets can accelerate or strengthen efforts India is already undertaking to expand its military, industrial, and technological capabilities.[14] A more capable India can therefore serve U.S. interests without becoming a formal ally, limiting China's freedom of action in Asia while providing greater alternatives to Chinese manufacturing, technology, and supply chains. Beijing views that prospect as a strategic challenge.

*BRICS originated as BRIC, an informal diplomatic grouping established in 2006 by Brazil, Russia, India, and China to promote cooperation among emerging economies and advocate for reforms to international institutions. South Africa joined in 2010, after which the group became known as BRICS. The group now also includes Egypt, Ethiopia, Indonesia, Iran, and the United Arab Emirates. Saudi Arabia has been invited, but it is not clear if it has joined.

China's Multi-Domain Campaign to Constrain India

Strategic competition shapes nearly every dimension of the India-China relationship as both sides continue to pursue clashing visions for the regional order. Despite selective cooperation, both countries have a deep distrust for one another. New Delhi sees Beijing's growing regional military power as its primary long-term security challenge and is grappling with its economic dependence on China in key manufacturing sectors. Beijing views India as a challenge to be managed, reflecting a growing threat perception as India bolsters its military posture and builds security partnerships.[15] Beijing warns that the Quad* might become an "Asian NATO," even as Chinese scholars conclude that India's desire for strategic autonomy will prevent the Quad from becoming one.[16] Some Chinese analysts view recent tensions in U.S.-India relations and perceived U.S. de-prioritization of the Indo-Pacific as an opportunity to improve ties with India in some areas while steering the regional geopolitical environment in China's favor.[17]

Across multiple domains, Beijing is pursuing policies that constrain India's regional influence and preserve Chinese strategic and industrial advantages. These actions increase the costs India faces in building its military, industrial, and regional power while preserving important advantages for Beijing. This section first discusses how Beijing combines military pressure, strategic partnerships with Pakistan and other neighbors, growing maritime and political influence across the Indian Ocean region, and non-traditional measures to shape India's behavior. It also addresses how China employs a complementary coercive economic toolkit that leverages India's dependence on Chinese supply chains and know-how in ways that both signal diplomatic displeasure and constrain the long-term development of manufacturing in India that could rival its own. Together, these efforts increase the costs of competition for New Delhi while complicating its ability to emerge as a long-term counterweight to China.

Security Tensions Are Anchored in an Unresolved Border and Beijing's Expanding Presence in the Region

China derives strategic leverage from the unresolved border with India. The 2,100-mile border dispute stems from competing interpretations of the boundaries drawn under British colonial rule, particularly in Aksai Chin in the west and Arunachal Pradesh in the east.[18] The People's Liberation Army (PLA) invaded Tibet in 1950, removing what many Indians viewed as the "buffer" between China and India.[19] Tensions mounted as both sides built up their military presence along the border and—after New Delhi granted asylum to the Dalai Lama and other Tibetan refugees in 1959—broke out into the Sino-Indian War in 1962.[20] The conflict left behind the contested

* The Quadrilateral Security Dialogue, known as the "Quad," is a diplomatic partnership consisting of the United States, Australia, India, and Japan. First convened in 2007, the grouping seeks to maintain a free and open Indo-Pacific through diplomatic coordination and security cooperation. Lisa Zhang, "Perspectives from Chinese Scholarship on India's Role in the Quad: The Prospect of an 'Asian NATO,'" *Swedish National China Centre*, October 3, 2025, 2; Patrick Gerard Buchan and Benjamin Rimland, "Defining the Diamond: The Past, Present, and Future of the Quadrilateral Security Dialogue," *Center for Strategic and International Studies*, March 16, 2020.

Line of Actual Control (LAC), a de facto military border that neither China nor India recognizes as the official border.[21] To the west, India claims China-controlled Aksai Chin as part of Ladakh; in the east, China rejects the British-drawn McMahon Line that India regards as the international boundary and claims most of the Indian state of Arunachal Pradesh as "South Tibet."[22] The map below highlights the competing territorial claims, the LAC in the western sector, and the McMahon Line in the east.

Figure 1: Map Highlighting Areas of Contention Along the India-China Border



*China does not claim all of the Indian state of Arunachal Pradesh and its claim includes a small portion of the state of Assam. The U.S. Government recognizes Arunachal Pradesh and Assam as part of India. U.S. Department of State, *Department Press Briefing*, March 20, 2024; *The Sino-Indian Boundary Question*, (Foreign Language Press, 1962), 8–9.

Source: Various[23] Created for the U.S.-China Economic and Security Review Commission. Names and boundary representation are not necessarily authoritative. There are additional claims/disputed areas that are not highlighted on this map.

The Galwan Valley crisis in 2020 marked a strategic turning point in bilateral relations, essentially rupturing relations for more than four years. This clash—the first deadly border conflict since 1975—shattered confidence on both sides, prompting India to strengthen military deployments along the border, harden its economic posture toward China, and suspend much of the broader bilateral relationship.[24] After the crisis, additional border clashes occurred between the two militaries as both countries bolstered their positions along the LAC.[25]

Although General Secretary of the Chinese Communist Party (CCP) Xi Jinping and Indian Prime Minister Narendra Modi held much-publicized dialogues in October 2024 and August 2025, yielding a successful border patrol schedule negotiation and some moderate steps toward renormalizing relations in select areas, the two sides continue to approach the border very differently.[26] There is a fundamental asymmetry in how China and India each prioritize the border issue. New Delhi views stability at the border as a pre-

requisite to forging productive bilateral relations, a position articulated by India's Minister of External Affairs Subrahmanyam Jaishankar after the 2020 clashes and echoed by other Indian officials who linked border resolution to broader cooperation across areas of mutual interest.[27] Unlike India, Beijing aims to compartmentalize the border dispute, keeping other lines of cooperation open as it strengthens its military positions at the border and advances its sovereignty claims.[28] The limited border patrol agreements reached since 2024 have reduced some immediate tensions but have not resolved the underlying dispute.[29]

China continues to improve its military position along the LAC, increasing its ability to rapidly escalate a future border crisis. China is expanding dual-use infrastructure, airfields, railways, and logistics networks across the Tibetan Plateau and neighboring provinces while conducting regular exercises through the PLA's Western Theater Command and Tibet Military District.[30] Analysts suggest these investments provide China with important advantages in mobilization and sustainment, which, combined with its growing long-range missile and rocket artillery forces, would strengthen Beijing's position in a border contingency.[31] Commission hearing witness Sameer Lalwani, a China-India military expert at the Special Competitive Studies Project and the German Marshall Fund, assessed that the border situation could result in "significant inadvertent conventional escalation if one side fails to anticipate the escalatory effects of a chosen action and crosses an unforeseen threshold."[32] China's infrastructure buildup and pre-positioned forces require India to divert resources from economic development and naval modernization simply to maintain the ability to respond quickly along the border.

China is doubling down on its sovereignty claims over India's state of Arunachal Pradesh, heightening concerns in India that a future confrontation at the border could escalate.[33] Beijing claims most of the state as a part of "South Tibet" *Zangnan* and rejects the McMahon Line established between British India and the Tibetan government during negotiations for the 1914 Simla Accord, which India regards as the current boundary.[34] China argued that since local residents paid taxes through Tawang Monastery to the Tibetan government in Lhasa until 1951, Beijing should have control of the area.[35] China has intensified efforts to legitimize those claims by constructing dual-use facilities near Tawang, publishing Mandarin names for locations inside the state, and refusing to recognize the Indian citizenship of people from the state.[36] Together, these activities represent a broader effort to normalize China's territorial claims while strengthening its ability to support future military operations.

China-Pakistan Security Cooperation Increases Risk of a Two-Front Conflict

China's growing power and longstanding support for Pakistan have magnified India's fears of a coordinated two-front threat. India and Pakistan have had an adversarial relationship since the 1947 partition of British India into Hindu-majority India and Muslim-majority Pakistan. The partition left India and Pakistan with competing territorial claims over Muslim-majority Kashmir and divided Pakistan into two geographically separated regions: West Pakistan

(present-day Pakistan) and East Bengal (present-day Bangladesh). Repeated conflicts, terrorist attacks, and nuclear signaling with Pakistan have fundamentally shaped India's security posture.[37]

Beijing, meanwhile, has deepened its ties with Islamabad to counterbalance India since the 1962 Sino-Indian War.[38] China formalized its border with Pakistan in 1963 and subsequently publicly supported Pakistan in the 1965 Indo-Pakistani war.[39] Today, China and Pakistan are strong partners, from economic and infrastructure cooperation through the China-Pakistan Economic Corridor (CPEC) to defense cooperation. China is Pakistan's main defense supplier—Beijing supplied 81 percent of Pakistan's arms imports in 2020–2024.[40] China's military support for Pakistan is exacerbating fears in New Delhi that a clash with one party could escalate into a challenge with both.[41]

The May 2025 India-Pakistan conflict underscored how China's military support for Pakistan has compounded the strategic challenges posed by India's longstanding rivalry with Islamabad. During the fighting, which followed India's launch of Operation Sindoor in response to a deadly April terrorist attack that New Delhi attributed to Pakistan-backed terrorists, Pakistan reportedly used advanced weaponry procured from China.[42] Additionally, hackers reportedly targeted India's critical infrastructure, attempting large-scale distributed denial-of-service (DDoS) cyberattacks with the goal of disrupting critical networks during the conflict, including government information technology (IT) infrastructure, telecommunications, and digital services.*[43] China also reportedly increased pressure on India by simultaneously deploying a survey vessel with advanced sensors around the waters of India's exclusive economic zone (EEZ).[44] After the conflict, Indian military officials asserted that Pakistan may have received real-time satellite imagery or other intelligence support from Beijing, which China's Ministry of Foreign Affairs neither confirmed nor overtly denied.[45] When asked in an interview with *The Hindu* whether China really provided Pakistan with "all possible support," as India's Deputy Chief of Army Staff claimed, China's Ambassador to India Xu Feihong simply stated that China-Pakistan security relations are not aimed at any particular third party and that "defense and security cooperation is part of the normal cooperation between China and Pakistan."[46] In May 2026, China's *CCTV* aired an interview of Zhang Heng, an engineer from the Aviation Industry Corporation (AVIC) of China's Chengdu Aircraft Design and Research Institute, a key developer of China's fighter aircraft and uncrewed autonomous vehicles.[47] Zhang confirmed that he and other Chinese AVIC personnel provided onsite technical support in Pakistan during the May 2025 conflict.[48] In sum, these activities demonstrated how China's support for Pakistan can magnify India's security challenges across multiple domains.[49] India took notice and has since committed to accelerating its military modernization efforts.[50]

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*While the Commission does not have the capacity to determine attribution, which is notoriously difficult for cyberattacks, Dr. Lalwani testified before the Commission that "the most sophisticated cyber-attacks on [India's] critical infrastructure—including coordinated large-scale DDoS attacks—were traced back to Chinese soil." Sameer Lalwani, written testimony for U.S.-China Economic and Security Review Commission, *Hearing on India, China, and the Balance of Power in the Indo-Pacific*, February 17, 2026, 14.

China's Expanding Naval Presence Is Changing the Balance in the Indian Ocean

China is systematically expanding its commercial and military presence across the Indian Ocean to reduce its vulnerability to potential disruptions at critical maritime chokepoints while eroding India's longstanding strategic advantages in the region. Roughly 80 percent of China's oil imports cross the Indian Ocean and pass through the Strait of Malacca before reaching Chinese ports.[51] This dependence underpins what former Chinese leader Hu Jintao termed the "Malacca dilemma"—the concern that the United States and its allies could disrupt China's trade and energy flows during a crisis—which has shaped Beijing's approach to the entire Indian Ocean.[52] To address this vulnerability, China has spent the past two decades building the commercial infrastructure, logistical networks, and military capabilities it needs to secure its maritime supply lines and sustain a long-term naval presence in the region.

Figure 2: Map of the Indian Ocean Region, Noting Ports/Bases with Substantial Chinese Investments or Access



Source: Various.[53] Created for the U.S.-China Economic and Security Review Commission. Names and boundary representation are not necessarily authoritative.

Beijing's primary tool for securing Indian Ocean access has been sustained investment in port infrastructure and transportation nodes across the region. These investments advance China's trade and economic development interests while also furthering its strategic objectives like securing maritime routes and increasing geopolitical influence. As demonstrated in the map above, China has invested in commercial development at strategically located ports, many of which are deep-sea ports that could provide the PLA Navy potential access to facilities from the Gulf of Aden to the Bay of Bengal.*[54] Through the Belt and Road Initiative (BRI) and bilateral

*A host country's degree of willingness to host and support PLA operations is more important than China's investment, though. Decades of U.S. experience have demonstrated that host coun-

partnerships, China has financed and developed ports, logistics facilities, and transportation corridors stretching from Djibouti—where it maintains an overseas military base—to Gwadar Port in Pakistan, Hambantota in Sri Lanka, and Chittagong in Bangladesh.[55] Chinese writings explicitly articulate the importance of securing these "strategic support points" for China's dual economic and security applications.[56] Whether these ports can be applied to PLA uses depends heavily on the interests of host countries, and some analysts have expressed doubt about the strategic importance of key port projects to American and Indian dominance in the Indian Ocean.[57] Still, China's growing network of Indian Ocean ports, which are sometimes described as a "String of Pearls," presents a growing strategic concern to India—though India does, itself, maintain a number of strategically placed bases and listening posts in the region.[58]

China is using this infrastructure to support a persistent naval presence that challenges India's traditional maritime advantage and heightens the risk of confrontation.[59] Since 2019, Chinese naval vessels, survey ships, and so-called research boats—widely viewed by Indian analysts as supporting PLA intelligence collection—have regularly operated near India's coastline and strategic facilities.[60] In May 2025, as India-Pakistan tensions were mounting, a Chinese survey vessel reportedly entered the Bay of Bengal, raising concerns that Beijing could surveil Indian forces and provide maritime intelligence to Pakistan during a crisis.[61]

Beijing is simultaneously applying some of the same tactics it used to normalize its expanding claims over the South China Sea. Beijing has been citing historic voyages to legitimize its Indian Ocean presence and has attempted to "rename" undersea geographic features with Mandarin names—tactics that India's former navy chief said may indicate that China is replicating its South China Sea playbook in the Indian Ocean.[62] Indian policymakers warn that "the South China Sea today could essentially be the Indian Ocean tomorrow" if China's activities continue to expand unchecked.[63] A more capable and persistent Chinese naval presence in the Indian Ocean could place additional demands on U.S. forces during a wider Indo-Pacific crisis, increasing the strategic importance of India's maritime capabilities.

China's Growing Footprint in South Asia Threatens to Undercut India's Position in the Region

China is using economic, diplomatic, and security engagement in South Asia to shift a regional order in which India has long viewed itself as the natural leader and been the dominant actor.[64] Xi views China's periphery as the foundation of China's "development and prosperity" and has thus expanded influence across the region through a mix of financing, security cooperation, and diplomacy to secure greater access to the region, including the Indian Ocean.[65] For their part, several South Asian governments have sought closer cooperation with China to advance their own development and security goals, often while simultaneously maintaining strong ties to

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tries can pose significant constraints, especially during periods of heightened global tensions. For more on China's port access investment strategy, see Chapter 4, "China's Predatory Diplomacy in Latin America: Broken Promises, Harmful Practices."

India. China's relationships with its southern neighbors have had varied outcomes as security and debt concerns, as well as political upheaval, constrain China's regional advancement. Regardless, China's overall satisfaction with its approach has cemented its ongoing efforts to deepen connectivity across its southern border, reinforcing perceptions in India that China is undercutting New Delhi's influence through its BRI financing and seeking to encircle India in the long term through security partnerships.[66] Commission hearing witness Tanvi Madan, a senior fellow in the Center for Asia Policy Studies at the Brookings Institution, testified that "India's wariness of BRI also reflects a broader concern: that Beijing seeks a unipolar Asia where it gets to set the terms. New Delhi . . . wants a multipolar Asia where countries have room to make decisions independently."[67]

China's greater financial resources have attracted South Asian countries that are interested in infrastructure and economic partnerships it can offer at a scale India would struggle to match.[68] South Asian countries often have more complex relationships with India, a longstanding regional actor. Modi's Neighborhood First policy, put forth in 2014, promised to strengthen regional stability through regional fora, development cooperation, and economic integration, but results have been mixed and differ from the type or scale of development financing aid projects China offers.[69] Reports indicate that negative perceptions of India's regional activities complicate relations in several countries and incentivize these governments to use China as a regional hedge to maintain strategic autonomy from either party.[70] In Bangladesh, for instance, relations with India tensed following India's hosting of now-deposed Bangladeshi leader Sheikh Hasina.[71] The interim government in Dhaka pursued deepened strategic security cooperation with Beijing and Islamabad, placing a large ammunition order with Pakistan and approving a plan to acquire Chinese J-10CE fighters.[72] In June 2025, a new trilateral cooperation mechanism was launched between the three capitals focused on economic and development issues.[73] This added to Indian concerns that China is using regional partnerships to both weaken India's influence and strengthen its position around India's periphery.[74]

Beijing is expanding its influence in Burma (Myanmar), where the ongoing civil war and armed ethnic insurgencies have had spillover effects in India's northeast region, increasing border instability.[75] India has long accused China of supplying weapons to armed militia groups operating near the India-Burma border and views Beijing's support for the military junta as complicating its efforts to stabilize conflict-affected states like Manipur.[76] For China, Burma provides a partial solution to its "Malacca dilemma" by giving China overland access to the Indian Ocean through oil and gas pipelines, rail and highways, and the planned Kyaukphyu deep-water port.[77]

Nepal and Bhutan are also cautiously deepening engagement with Beijing despite China's efforts to assert competing territorial claims and employ gray zone tactics along their borders.[78] Both countries pursue pragmatic engagement with China while trying to hedge, maintaining close ties with New Delhi while pursuing trade, infrastructure, and investment from China.[79] The Indian media's characterization of the September 2025 protestors as pro-monarchy or

Chinese-influenced sparked anger and criticism in Nepal.[80] In the year since the revolution, the new Nepalese government has proven to be hedging with both countries in some instances and accommodating Chinese pressure in others.[81] Bhutan is similarly hedging between China and India, negotiating with China to resolve their longstanding border dispute while also staying close to India.[82]

South Asian countries are aware of the risks of partnering with China but lack comparable alternative options for large-scale infrastructure financing. China's significant international financing gives it a tool to expand relationships with regional governments like Bangladesh, Nepal, and Sri Lanka.*[83] At the same time, Chinese projects carry significant risks, as demonstrated by high-profile cases like Sri Lanka's BRI-financed Hambantota Port, where Chinese state-owned enterprise China Merchants Port Holdings took the controlling equity stake in the port via a 99-year lease after Sri Lanka's debt crisis prompted the government to monetize the project.[84] Even Pakistan, China's closest regional security partner, has encountered difficulties ranging from CPEC project delays to a reported disagreement over Chinese military access to Pakistan's Gwadar Port.[85] Yet despite growing awareness of these risks, Beijing remains the region's principal provider of large-scale infrastructure financing, allowing it to expand its regional influence while continuing to challenge India's traditional leadership position.

China Sharpens Its Economic Coercion Toolkit Against India

China uses economic coercion not simply to influence India's behavior but also to constrain its emergence as a manufacturing and technological competitor. Beijing's primary method of coercion leverages India's dependence on Chinese industrial inputs, selectively tightening or relaxing the flow of goods, technology, and expertise to achieve distinct ends.† Some measures are punitive, imposing costs in response to Indian actions China opposes. Others are designed to elicit specific policy concessions. Still others reflect a longer-term competitive strategy: limit India's ability to build manufacturing capacity that would erode China's market share or press India to enforce Chinese export control preferences against third parties, including the United States. These objectives are not mutually exclusive, and the same tool may serve more than one purpose simultaneously.

Punitive Measures and Diplomatic Signaling: China has used restrictions on industrial inputs to signal displeasure and impose costs at moments of bilateral tension while selectively lifting them as inducements for engagement.

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*China has committed billions in BRI investments to these countries, though only a fraction has been disbursed thus far. Since Bangladesh signed on to BRI in 2016, for example, China has committed nearly $40 billion to Bangladesh in BRI financing. As of 2023, only $4.5 billion had been disbursed. Md. Himel Rahman, "China's Belt and Road Initiative in Bangladesh, 10 Years Later," *Diplomat*, April 28, 2026.

†Indian companies have minimal market presence or investment stakes in China, thus limiting the coercive utility of China taking punitive actions against them. Indian exports to China have been subject to various non-tariff market barriers for over a decade, including onerous testing requirements on pharmaceuticals and opaque phytosanitary restrictions on agricultural imports that in at least one case (rice) are not applied to neighboring countries like Pakistan and Myanmar. Shantanu Roy-Chaudhury, "The Indispensable Adversary: India's Approach to China," *War on the Rocks*, December 29, 2025; Sriparna Pathak, "India–China Trade Paradox: Dependency and Geopolitical Rivalry," *India Foundation*, July 1, 2025.

- *Chemical fertilizers and tunnel boring machines:* In spring 2025, China restricted sales of specialized fertilizers and delayed export of tunnel boring machines for the Mumbai-Ahmedabad bullet train project.[86] Though Chinese authorities cited technical reasons for export delays, the measures were seen as retaliation for India's post-Galwan restrictions and were lifted ahead of Prime Minister Modi's August 2025 visit to Beijing for the SCO summit as a gesture of goodwill.[87]
- *Rare earth permanent magnets:* China slow-walked approvals for Indian companies following its imposition of global rare earth export licensing requirements in April 2025.[88] Shipments to Indian automakers were held in Chinese ports even as those bound for German and U.S. automakers were approved, raising the risk of disruptions to production.[89] Among the requirements for licenses was a guarantee that materials would not be used for defense or dual-use purposes.[90] Beijing lifted the restrictions in August 2025, along with those for fertilizers and tunnel boring machines.
- *Customs slowdown:* Following the June 2020 Galwan Valley clash, Indian exporters complained to the Indian government that their shipments were being held up in port by Hong Kong and Chinese customs officials.[91]

Measures to Limit India's Manufacturing Competitiveness: Other measures target India's capacity to establish manufacturing industries that would compete with Chinese producers.

- *Manufacturing equipment and technical expertise:* Beginning in January 2025, China restricted the movement of specialized engineers and manufacturing equipment to Apple supplier Foxconn's Indian factories, impeding iPhone production.[92] By July 2025, Foxconn had recalled hundreds of Chinese engineers from its Indian facilities and flown in workers from Taiwan to fill key vacancies.[93]
- *Battery technology and manufacturing equipment:* Restrictions on exports of battery manufacturing technology and equipment threaten to hamper India's emerging clean energy industrial base.*[94] In October 2025, China announced new export controls on battery manufacturing equipment and technology as part of broader rare earth export controls.[95] Despite the suspension of the new export controls until November 10, 2026,† barriers to Chinese technology transfers continued to delay Indian produc-

*The controls released October 9, 2025, apply internationally and require permits for export of some lithium-ion batteries, components, and technology. Along with export controls on rare earths, they are intended to solidify China's manufacturing advantage in battery technology. Annie Lee, "China Flexing Battery Supply-Chain Clout with Fresh Export Curbs," *Bloomberg*, October 9, 2025; China's Ministry of Commerce, 商务部 海关总署公告2025年第58号 公布对锂电池和人造石墨负极材料相关物项实施出口管制的决定 [The Ministry of Commerce and the General Administration of Customs Announcement No. 58 of 2025, Announcing the Decision to Impose Export Controls on Items Related to Lithium Batteries and Artificial Graphite Anode Materials], October 9, 2025.

†Ahead of the September 2026 Trump-Xi summit, Washington and Beijing agreed to extend their existing trade truce by two months, until January 10, 2027, reportedly prolonging China's suspension of the expanded rare earth export controls announced in October 2025. As of October 8, 2026, China has not confirmed inclusion of the rare earth controls in that extension. Joshua Yang, "As Trump Meets Xi, Rare Earths Give China a Powerful Hand," *Washington Post*, September 24, 2026.

tion.[96] Reliance Industries, India's largest company, has reportedly struggled to secure access to Chinese technology needed for its battery gigafactory in Gujarat, while alternative suppliers in countries such as South Korea significantly increase costs.[97]

- *Pharmaceutical ingredient pricing:* In 2025, China slashed the prices of 41 active pharmaceutical ingredients (APIs) and key starting materials (KSMs) by 40–50 percent.[98] Indian media reported the price reductions were timed specifically to undercut new Indian API plants that had commenced production in November 2024 with support from India's Production Linked Incentive (PLI) program (see section below for more).[99]

Pressing India to Extraterritorially Enforce Chinese Export Preferences: Re-export certification demands are the most novel and strategically significant coercive tool China has employed, with direct implications for U.S.-India supply chain integration because the United States is the downstream target.

- *End-user verification certificates:* An October 2025 report indicated that China reportedly delayed exports of heavy rare earth magnets to India for several months, seeking certifications that the magnets would be used for domestic production and would not be re-exported to the United States or used for military purposes.[100] Following the Trump-Xi détente that month, Beijing approved shipments to several companies in India that provided the relevant certifications.[101] If China expanded these types of export controls to pharmaceuticals or other sectors where India is deeply embedded in U.S. supply chains, such demands could compromise U.S. efforts to reduce exposure to Chinese-controlled inputs through Indian sourcing.*

China Presents Growing Non-Traditional Security Challenges for India

China conducts a range of novel gray zone activities that present non-traditional, transnational security threats to advance its strategic objectives. These tools allow China to complicate India's security environment across multiple domains below the threshold of conflict. China conducts malign influence operations designed to shape India's information environment and uses cyber operations to target India's critical infrastructure and companies. As discussed in an August 2026 report by Michael Schiffer, adopted by the full Commission, "The Dalai Lama's Succession: Geopolitical Implications and Policy Recommendations for Congress," Beijing is already working to undermine the Dalai Lama's succession process, which will be centered in Dharamshala, India. Additionally, China's water infrastructure development poses downstream security challenges to South Asian countries that China could leverage. These tactics expand China's coercive toolkit while making it difficult for India to respond through traditional military or diplomatic means.

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*For more on U.S. exposure to China through Indian pharmaceutical production, see U.S.-China Economic and Security Review Commission, Chapter 9, "Chained to China: Beijing's Weaponization of Supply Chains," in *2025 Annual Report to Congress*, November 2025, 472–536.

China Uses Cyberattacks and Influence Operations to Expand Pressure on India

Beyond conventional military competition, China employs a range of tools, including cyber operations, information campaigns, and traditional United Front Work Department (UFWD) activities to exert pressure on India and shape its information environment, particularly during periods of heightened tensions.[102] Several studies indicate that China is now the primary source of cyberattacks against India, a trend that accelerated after the 2020 Galwan Valley clashes.[103] The head of Singapore-based cybersecurity firm Cyfirma said that Pakistan and Middle Eastern actors accounted for the majority of cyberattacks on India from 2015 to 2016, but as of 2023, Chinese-linked attacks accounted for 79 percent of cyberattacks.[104] Shortly after the 2020 clash, Chinese-linked hackers targeted critical infrastructure like Regional Load Dispatch Centers for India's power grids and two Indian seaports.[105] China reportedly provided the "technological backbone and resources" for many of the cyberattacks during the May 2025 conflict, reinforcing India's awareness of gaps in its cyber defenses—especially when facing a two-front challenge from Pakistan and China.[106]

China pairs these cyberattacks with influence operations calibrated to shape Indian public opinion during moments of tension. In 2025, Chinese-linked online actors actively participated in a disinformation campaign that sought to discredit the performance of India's French-made Rafale fighter jets and promote China's J-10 fighter jets.[107] China's state-run media outlets have a broad audience in India, with millions of followers across their Hindi, Bengali/Bangla, and Tamil-language accounts.[108] India is also the second-largest global user of China's DeepSeek AI platform, which manipulates responses to align with Chinese stances on politically sensitive topics, including Taiwan, Tibet, Hong Kong, and human rights issues.[109]

Beijing has applied its influence toolkit to advance its political objectives, including a 2023 campaign against the Dalai Lama. China used a coordinated, multi-platform campaign with state media amplification to portray the Dalai Lama in a negative light.[110] The Chinese government has also funded trips for Indian university students to travel to Tibetan regions, used its embassy in India to publish op-eds on Tibet, and backed the Shugden sect of Tibetan Buddhists who reject and compete with the Dalai Lama in India.[111]

The Dalai Lama's Succession Is Emerging as a Strategic Contest Between China and the Tibetan Exile Community in India

The succession of the 14th Dalai Lama is shaping into a direct legitimacy contest between Beijing and the Tibetan exile community that India cannot avoid since Dharamshala, the seat of that process, is on Indian soil. During his 90th birthday celebrations in July 2025, the 14th Dalai Lama, Tenzin Gyatso, made a much-anticipated announcement confirming that the institution of the Dalai Lama will continue after his passing and that the Gaden Phodrang Trust, his administrative office in Dharamshala, will have sole jurisdiction over the process.[112] Earlier in the year, he had also clarified that his

reincarnation will be found outside of Chinese control in the "free world," without external interference.[113] In response, Beijing reiterated the CCP's stance that the Dalai Lama succession process must happen under Chinese law, setting up a direct conflict over who has legitimate authority.[114]

For Beijing, control over the next Dalai Lama is not simply a religious issue but also a strategic objective central to reinforcing China's sovereignty claims over Tibet and weakening an enduring source of international support for the Tibetan cause.[115] For the Tibetan exile community, selecting and protecting the Dalai Lama's reincarnation is critical to maintaining the integrity of Tibetan Buddhist practices and religious institutions. This is because, by its very nature, a secular communist party has no legitimate role in determining religious or spiritual outcomes. The Dalai Lama also historically served as the political leader of the Tibetan people and continued to be a political leader over the government-in-exile until 2011, when the 14th Dalai Lama stepped down from his political role and created the democratic government-in-exile system.[116]

China has spent years preparing to put forth its own Dalai Lama through legal and policy measures, united front malign influence activities, and increased control over Tibetan Buddhist institutions and lama selection processes.[117] Beijing set the precedent for its interference in succession processes with the 1995 abduction and CCP-selected replacement of the 11th Panchen Lama, then–six-year-old Gedhun Choekyi Nyima. The role, which China now claims to control, has historically been a key figure in identifying new Dalai Lamas. In 2007, China's State Administration for Religious Affairs published Order No. 5 dictating that all Tibetan Buddhist reincarnation processes must be approved by the government.[118] The regulations stipulate that any search process for a reincarnated "living Buddha" who was previously selected by drawing lots from one specific golden urn—which Beijing now possesses—must seek Chinese government approval to conduct a search without the urn.[119] While most Tibetan Buddhists view the urn as nonessential to succession processes, since far more Dalai Lamas and other "living Buddhas" have been selected without the urn than with it, Beijing uses the law to try to legitimize its claim over these successions.[120]

Competing Dalai Lama succession claims could create both an immediate security challenge between China and India and a prolonged international contest over legitimacy and influence. In the short term, the Dalai Lama's passing could trigger protests and unrest in the Tibet Autonomous Region and among Tibetan communities on both sides of the border, including in Arunachal Pradesh. Many Chinese-built villages near the de facto borders are populated by ethnic Tibetans, so instability could yield unrest on the LAC, presenting potential border security risks.[121] In the longer term, Beijing and the Tibetan exile community are likely to promote rival successors. Beijing and Dharamshala may identify successors at the same time quickly or may take months to years to announce their selections. If one or both parties identify an infant or young child as their 15th Dalai Lama, there will be a delayed legitimacy contest while waiting for one or both successor candidates to mature to adulthood.

China is preparing to turn the Dalai Lama's succession into an international contest over legitimacy and will likely use coercive tools to shape its outcome. Beijing has employed economic coercion against Mongolia for hosting the Dalai Lama and targeted Tibetan communities in Nepal, India, and Europe through disinformation, surveillance, and intimidation.[122] In the United States, Beijing has surveilled Tibetan activists, and analysts anticipate that China will likely seek to "manipulate local politics and silence Tibetans inside the United States," in the lead up to or during the Dalai Lama's succession, testing Washington's ability to counter foreign interference and other hybrid threats.[123] Since the United States has enacted the Tibetan Policy and Support Act of 2020, which affirms that Tibetan Buddhist religious authorities should determine their own succession without Chinese interference, as well as the Resolve Tibet Act of 2024, competing succession claims could draw Washington into a broader contest over religious freedom, sovereignty, and international recognition.[124]

Commission Research Examines India's Central Role in Resisting China's Attempts to Control Tibetan Buddhism Through the Dalai Lama's Succession

The Commission published a report, "The Dalai Lama's Succession: Geopolitical Implications and Policy Recommendations for Congress," by Michael Schiffer in August 2026. Mr. Schiffer argued that the contest for the Dalai Lama's succession is already underway and India is the center of gravity in the contest. The Tibetan exile community and its institutions are based in India, and the Gaden Phodrang Trust's succession process will need political, territorial, and institutional space there to proceed. The report assessed, however, that India lacks the institutional preparation and structures to address the challenge. It identified, among other things, that India has no official Tibet doctrine or single governmental point of contact.[125] The one post dedicated to focusing on the relationship with the Tibetan community has sat vacant since 2018.[126]

The United States will be a key player in countering Beijing's efforts to legitimize a CCP-chosen successor on the international stage. Despite Washington having already passed legislation that declares intent to support the Tibetan-chosen successor, Mr. Schiffer assessed that "Washington, Delhi, and Dharamshala hold incomplete and partially inaccurate models of each other's succession positions. No mechanism or dialogue exists to correct them, and Chinese operations work to keep it that way. The result is a strategic vulnerability Beijing is positioned to exploit."[127] Across the potential succession scenarios identified in the report, Mr. Schiffer described the succession as a contest that could become a struggle over legitimacy for Beijing, a border and regional security concern for India, and a potential precedent-setter for how the international community will respond to Beijing's attempts to assert control over political and religious institutions beyond its borders.[128]

China's Expanding Water Infrastructure Creates New Sources of Strategic Leverage

China's control of the Tibetan Plateau is creating a new source of potential strategic leverage over India and other downstream states.[129] The Tibetan Plateau contains the headwaters of many of Asia's major river systems, including the Brahmaputra, Indus, and Sutlej, which support more than a billion people across South and Southeast Asia. According to the International Campaign for Tibet, since 2000, Beijing has constructed over 50 hydropower dams across six rivers in historical Tibet, with many more under construction or planned.[130] The Tibet Autonomous Region's 15th Five-Year Plan identifies several hydropower projects, including the Yarlung Tsangpo project, which is now under construction.[131] The projects already have posed ecological costs on downstream neighbors in South and Southeast Asia.[132]

China has demonstrated willingness to use water as a tool of coercion. During the 2017 China-India Doklam border standoff, Beijing suspended the sharing of hydrological data on the Yarlung Tsangpo (Brahmaputra) River.[133] As China increasingly controls water supplies across the Tibetan plateau and beyond, downstream states have growing concerns that Beijing could use water resources as a source of strategic leverage during future crises.

India's Policy Responses and Limitations

India's response to China's multi-domain pressure campaign reflects a balancing act between preserving strategic autonomy and strengthening national capabilities. Under this guiding principle, India prioritizes self-reliance, balancing its portfolio of foreign partners to mitigate the risk of overreliance in any relationship.[134] India engages in bilateral cooperation with the United States and multilateral fora like the Quad while also participating in the SCO alongside rivals China and Pakistan. Economically, India is using a combination of restrictions and support to pursue self-reliance while selectively re-engaging with China to access valuable knowledge and technologies in certain sectors it sees as critical to industrialization.[135] Although these efforts have accelerated since the 2020 Galwan Valley clashes, India's resource constraints, development priorities, and dependence on foreign technology continue to limit the pace of its response.[136]

India Is Reorienting Its Security Strategy Toward Long-Term Competition with China

China has become the principal driver of India's long-term defense planning, prompting New Delhi to shift from a Pakistan-centric military posture toward preparations for sustained competition with China in the face of the possibility of a two-front conflict. India has strengthened its military infrastructure along the LAC, expanded investments in naval modernization and maritime domain awareness, invested in cyber defenses, and rolled out initiatives to transform its domestic defense sector.[137]

India Is Adapting to China's Multi-Domain Pressure Campaign

Since May 2025, India has recalibrated its defense posture in response to growing concerns about China-Pakistan defense cooperation and the possibility of a two-front conflict scenario.[138] China's military support to Pakistan heightens India's fears of a coordinated or opportunistic two-front challenge, increasing the risk that localized India-Pakistan incidents such as another border conflict or a terrorist attack could escalate rapidly and across multiple domains. India is already taking steps to fill in the capability gaps it identified by building out its drone capacity and starting new defense initiatives.[139] One notable new initiative announced by Prime Minister Modi, Mission Sudarshan Chakra, aims to significantly strengthen India's defenses by 2035 through development of a multi-layered air and missile defense system that would combine both new and existing systems.[140] Through this initiative, India aims to build a nationwide drone, stealth fighter, and hypersonic missile shield.[141]

India is also shifting greater attention and resources toward improving its naval capabilities in recognition of China's expanding Indian Ocean maritime presence.[142] Although New Delhi has historically prioritized its army and continental defense requirements, India is increasing investments in naval modernization; maritime domain awareness; intelligence, surveillance, and reconnaissance (ISR); and unmanned systems. The Indian government is also heavily investing in infrastructure on the Andaman and Nicobar Islands, home to India's only theater command that integrates land, sea, and air forces.[143] The islands' strategic location in the Bay of Bengal near the Strait of Malacca positions India to monitor the critical chokepoint, protect India's undersea cables and other maritime interests, and monitor Chinese activities in waters of growing Chinese naval interest.

India has strengthened its cyber resilience and institutional architecture as China has emerged as the country's primary cyber threat. China-linked cyber intrusions targeting India's power grid amid the 2020 border crisis, which culminated in the Galwan Valley military confrontation, elevated India's concerns about cybersecurity.[144] In recent years, New Delhi has modernized its cybersecurity institutions, strengthened public-private cooperation, and drafted a new National Cybersecurity Strategy to improve coordination across lines of effort and resilience.[145] While these reforms represent significant progress, China continues to maintain important advantages in cyber capabilities and institutional integration.[146]

India has responded to China's growing regional influence by expanding security cooperation with like-minded partners while seeking to preserve its strategic autonomy. New Delhi has deepened defense cooperation with partners like the United States, France, Japan, Israel, and Indonesia through co-production, acquisitions, and technology transfers that benefit India's defense capabilities and industry buildup.[147] Bilaterally and collectively, New Delhi also continues engaging with the Quad members to conduct maritime security exercises, coordinate cybersecurity initiatives, strengthen maritime domain awareness, and support a free and open Indo-Pacific.[148] At the same time, New Delhi continues to participate in

organizations such as the SCO and ASEAN-led fora, reflecting its longstanding approach of maintaining diversified partnerships rather than aligning exclusively with any single bloc.

India Is Building Its Domestic Defense Industry to Reduce Reliance on Foreign Suppliers

New Delhi has made significant strides in expanding and strengthening its defense production ecosystem, seeking to reduce long-term dependence on foreign suppliers while expanding indigenous production, technology transfer, and defense exports. The government is strategically prioritizing investments in advanced manufacturing capabilities where domestic capacity remains limited—such as aerospace, semiconductors, and propulsion systems—to strengthen indigenous defense production.[149]

The Indian government's 2014 Make in India and 2020 Aatmanirbhar Bharat (Self-Reliant India) initiatives have accelerated the movement of the country's defense industry from import reliance toward increased domestic production and export capacity. These initiatives aim to expand indigenous production, incentivize innovation, and encourage technology transfer and co-production requirements through international defense acquisitions—and they have yielded some successful outcomes.[150] According to the Indian government, roughly 65 percent of the country's defense equipment is now produced domestically, reversing an earlier import dependence of 65–70 percent.[151] India's defense production reached a record high of 1.78 lakh crore ($18.74 billion) in fiscal year (FY) 2025–2026, a 15.6 percent increase from the prior year.*[152] Dozens of countries around the world now look to India as a defense supplier.[153] Defense exports have grown more than 50-fold in the past decade, surging from ₹686 crore ($72.21 million) from FY 2013–2014 to ₹38,424 crore ($4.04 billion) in FY 2025–2026.[154]

New Delhi is moving to address capacity gaps in its AI and indigenous emerging defense technologies through public-private partnerships amid persistent threats from Beijing.[155] India is integrating AI and emerging technologies into its defense systems and ramping up its defense technology development expenditure to enhance these capabilities. The Indian Army launched an AI incubation center in December 2024 to help researchers and private-sector leaders develop indigenous AI for multi-domain warfare.[156] The use of AI-enabled data fusion, target identification, and drones during Operation Sindoor was India's first publicly acknowledged use of AI in a conflict.[157]

India Recalibrates Economic Strategy Toward "Managed Interdependence"

India's economic relationship with China reflects a central tension: it is deeply dependent on China for its industrialization, even as it seeks to reduce the strategic vulnerabilities that dependence creates. Over the next decade, India has a window of opportunity†

*$1 = 95 rupees, exchange rate as of August 21, 2026, used throughout. "Lakh" means 100,000 and "crore" means 10 million.

†India's working-age population (age 15 to 64) is expected to peak at 69 percent of its total population sometime between 2025 and 2035, presenting a demographic "sweet spot" that will stay open longer than China's did during its development rise and will coincide with China's steady population decline. Sribala Vadlapatla, "India's Demographic 'Sweet Spot' to Span from 2025–35,

to lift large swaths of its population out of poverty through industrialization, introducing a sense of urgency that complicates economic engagement with China. On one hand, Chinese companies offer a faster path toward upgrading industry via technology and tacit knowledge transfer; on the other, deeper dependence on a systemic rival heightens India's geopolitical vulnerability. The tension between the expedience of Chinese inputs and know-how and the vulnerability they create is one India shares with other developing economies now navigating a more challenging U.S.-China trade environment. For the past decade, the Modi government's approach to economic development has been geared toward mitigating vulnerability, grounded in the central dictum of self-reliance.[158] However, an expanding bilateral trade deficit—especially for intermediary goods—despite increased investment and regulatory restrictions on Chinese companies has led India to reassess and reconfigure its approach.[159]

As Observer Research Foundation fellow Soumya Bhowmick observed in testimony before the Commission, India has settled into a posture of "managed interdependence under strategic competition" with China.[160] This means India maintains bilateral commercial ties that support its efforts to grow and upgrade its manufacturing sector while attempting to strengthen guardrails in areas where dependence on China could constrain New Delhi's policy options in a crisis.[161] In practice, this approach has resulted in India attempting to carve out slices of the value chain in target industries while deepening dependence on intermediate inputs from China—and therefore its exposure to Beijing's coercion.*[162] The success of this approach will depend on whether India is able to establish domestic supply networks that can both decrease import dependence and increase value added within India. Understanding the limits of this approach—and why India has not been able to strengthen vertically integrated production or mitigate exposure to China as quickly or fully as its policymakers intended—is essential to assessing opportunities for U.S. engagement.

India's Global Competitiveness Remains Limited by Market Barriers and Inefficiencies

India's high tariffs and protectionist trade posture impose costs on foreign firms that manufacture in the country.[163] Tariffs on products imported into India have historically been very high, burdening import-dependent manufacturing processes and reducing the efficiency of domestic companies compared to their global competitors.[164] In 2025, India's average most favored nation applied tariff rate was 15.8 percent, well down from over 50 per-

Says Bery," *Times of India*, October 1, 2025; Shan Li and Liyan Qi, "U.N. Confirms India's Population Is Overtaking China's," *Wall Street Journal*, April 24, 2023.

*The counterintuitive phenomenon whereby countries that increase their industrial output in pursuit of self-reliance become more reliant on inputs and capital goods is well documented in the economic literature. This paradox is often associated with the import substitution industrialization development model, which has a dismal track record of success among countries who pursued the strategy during the 20th century. Douglas A. Irwin, "The Rise and Fall of Import Substitution," *National Bureau of Economic Research Working Paper* 27919, 2020, 1; Anne O. Krueger, "The Effects of Trade Strategies on Growth," *Finance and Development* 20, no. 002 (June 1983): 7–8.

India's Global Competitiveness Remains Limited by Market Barriers and Inefficiencies—*Continued*

cent prior to the 1991 reform period but still one of the highest average tariff rates in the world.[165] While India has a relatively large internal market, as discussed in the next paragraph, that market faces many inefficiencies and does not have a history of dynamism, light touch regulation, or global leading innovation comparable to the United States.[166] India's protectionist proclivities and desire for self-reliance have also led it to shun major free trade agreements (FTAs). Though a founding participant in the initial negotiations for the Regional Comprehensive Economic Partnership (RCEP), India opted out of the trade agreement linking ASEAN with other trade partners due to concerns that lower tariffs on Chinese goods would exacerbate unbalanced trade with China and that lower tariffs in general would hurt small producers and farmers.[167] India's non-membership in RCEP and other regional FTAs places it at a disadvantage in regional value chain integration relative to countries like Vietnam and Malaysia, which face lower duties when exporting intermediate goods to factories in other FTA signatories.[168]

India has not attracted foreign direct investment (FDI) commensurate with its GDP, given challenges operating in the market. Beyond tariffs, foreign companies seeking to expand operations in India must contend with a complex regulatory environment, underdeveloped logistics networks, and weak intellectual property (IP) enforcement.[169] Indian bureaucracy can be notoriously onerous due to the breadth of regulations, including a patchwork of state rules on land, labor, power, and other key industrial inputs.[170] Though foreign companies have indicated that the ease of doing business in India has improved, many challenges remain, including underdeveloped infrastructure, decentralized governance under the federal system, and price-sensitive consumers.[171] Additionally, IP theft remains a top concern for U.S. companies in India.[172] The country remains on the Office of the U.S. Trade Representative's "Special 301" Priority Watch List, alongside China and Russia, despite some progress toward improving protection and enforcement of IP rights.[173]

Restrictions and Subsidies Reduce Chinese Influence but Not India's Industrial Dependence

India has responded to Chinese coercion with a two-pronged strategy of restricting Chinese capital and market access while subsidizing domestic manufacturing. Yet after six years of effort, India's dependence on Chinese industrial inputs has continued to grow. This divergence between India's policy objectives and economic outcomes illustrates its central economic security challenge and explains New Delhi's motivation for cautiously beginning to reopen channels to Chinese investment, even as underlying distrust of Beijing remains.

India has taken several policy steps to protect and support domestic industries. Soon after entering office in 2014, Prime Minister Modi released the Make in India initiative, which has served

as the basis for subsequent iterations of industrial policy like the PLI scheme. Alongside efforts to build out domestic manufacturing capacity, the government has moved to restrict Chinese capital and technology. When Chinese investment into private Indian companies surged at the onset of the COVID-19 pandemic in 2020, Indian regulators passed Press Note 3, an action to curb what they viewed as outsized ownership and influence by Chinese entities in the private sector.[174] The Galwan Valley border clash a few months later spurred India to further tighten these investment restrictions and implement additional measures, including a ban on Chinese apps and new screening requirements for Chinese firms seeking government-funded projects (see Table 1).[175]

The result has been a sharp decline in new Chinese investment and an unwinding of investment ties, though dependencies in trade and technical know-how have proven harder to sever. Annual flows of Chinese FDI into India declined from $174 million in 2019 to a mere $6.5 million in 2024 (see Figure 3).[176] In particular, the exit of Chinese venture capital from Indian startups reduced a significant channel of Chinese influence in India's digital economy, while the app bans produced rapid, visible results (e.g., TikTok had over 200 million Indian users before it was banned in June 2020).[177] However, while bans from public procurement tenders curbed new contracts for Chinese firms, compliant Indian bidders continued to rely on Chinese components because of few domestic alternatives.[178] For example, a shortage of axles brought Indian production of rail wheels to a halt in early 2025, causing the government to exempt the import of Chinese parts to supply the national rail company.[179] Even before this supply shortage, imports of railway goods from China were more than double their pre-Galwan peak.[180] Additionally, the decline in Chinese FDI, while dramatic in percentage terms, has also imposed less tangible costs: the accompanying reduction in Chinese technology and know-how in electric vehicles (EVs), renewable energy, and battery storage—where India had limited existing domestic know-how—has impeded innovation in sectors where India hopes to build competitive capacity.[181]

Table 1: India's Major Economic Restrictions on China (2020–2026)

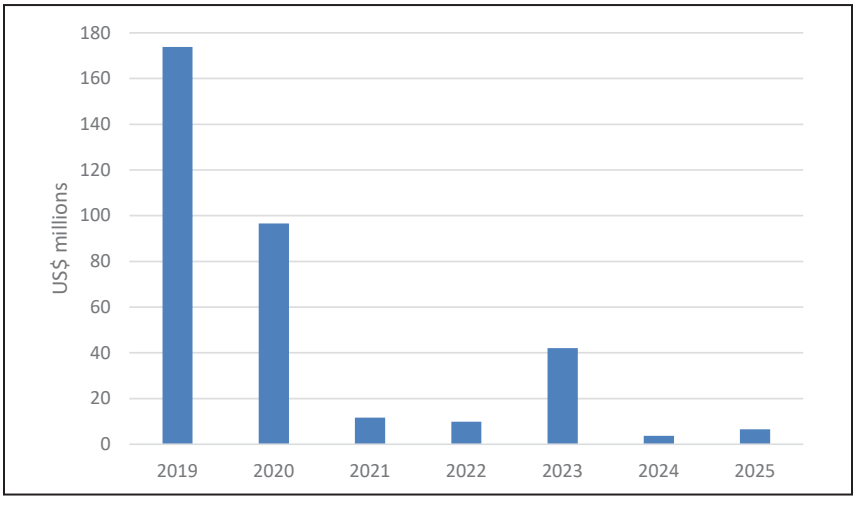
Date	Action	Rationale	Impact
April 2020	Press Note 3: government approval required for all FDI from land-border-sharing countries. Very restrictive regime for Chinese investment.	Curbing pandemic-era opportunistic takeovers; national security	New Chinese FDI fell from $174M (2019) to $6.5M (2025); also reduced technology and know-how transfer in EVs and clean energy.
June 2020 onward	Bans on 220 Chinese mobile apps, including TikTok and WeChat.	Data security and sovereignty	Altered India's consumer internet landscape; exit of Chinese venture capital from Indian startups; concerns about effective watering down via widespread DeepSeek adoption by startups.

Table 1: India's Major Economic Restrictions on China (2020–2026)—*Continued*

Date	Action	Rationale	Impact
2020	Stopped approving Chinese products under mandatory quality registration for Chinese electronics and machinery imports program that had been enacted in 2019.	Consumer safety, product standards	Moderate effect on import composition; did not reduce volume.
2021	Excluded Huawei and ZTE from 5G network buildout.	Trusted vendor security	Effective; India's 5G is effectively China free; Chinese vendors retain presence in legacy 4G infrastructure.
2023–present	Restrictions on Chinese components in military drones.	Defense supply chain security	Effective in defense procurement; limited broader industrial effect.
March 2026	Press Note 3 amendment: loosened restrictions on "non-controlling" Chinese investment (up to 10 percent).	Access to new technologies; industrialization	Tactical reengagement; signals recognition of development costs of FDI restrictions.
April 2026	Restrictions on makers of Chinese CCTV cameras (including Hikvision, Dahua, TP-link) from selling internet-connected equipment in Indian markets.	Telecom, data, and cybersecurity	Policy too recent to assess.

Source: Various.[182]

Figure 3: New Chinese FDI into India (2019–2025)



Source: India's Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade, *Country-Wise FDI Equity Inflow During Calendar Year 2025 from January 2025 to December 2025*, 2026; India's Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade, *Country-Wise/Year-Wise FDI Equity Inflow from January, 2000 to December, 2024*, 2025; India's Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade, *FDI Synopsis on Great Mekong Countries*, December 31, 2022.

Production Linked Incentives Have Expanded Manufacturing Capacity but Not Supply Chain Resilience

India's flagship industrial policy has expanded manufacturing capacity but has not yet substantially reduced dependence on Chinese imports. Launched in 2020, the PLI program had allocated over $20 billion in announced public funding across 14 strategic sectors by the end of 2025, driving $214.8 billion in production, according to government figures (see Table 2).[183] Complementing economic restrictions on China, the PLI program seeks to boost domestic production in key sectors.[184] PLI provides subsidies to Indian and multinational companies for incremental sales of domestically produced goods over a base year, with the intent of pulling manufacturing and supplier ecosystems onshore over time. Although reducing reliance on Chinese imports in target sectors is not explicitly referenced, Indian officials on background have acknowledged it as a core objective of Indian industrial policy.[185]

Table 2: PLI Program Announced Outlay and Key Outcomes (as of December 2025)

Metric	Value
Total announced outlay (14 sectors)	₹1,910 billion ($20.1 billion)
Actual investment realized	₹2,160 billion ($22.7 billion)
Production/sales generated	₹20,410 billion ($214.8 billion)
Exports generated	₹8,300 billion ($87.4 billion)
Incentives disbursed	₹287.5 billion ($3.0 billion)

Source: India's Ministry of Commerce and Industry, *Production Linked Incentive Scheme with ₹1.91 Lakh Crore Outlay Drives Strong Industry Participation Across 14 Strategic Sectors*, February 20, 2026.

While PLI outlays have been significant, reliance on Chinese industrial inputs has not meaningfully declined. Many companies have focused on final assembly rather than building upstream supplier ecosystems.[186] Moreover, top-line production volume targets may be misaligned with current domestic capabilities: government targets for battery cell production, for instance, are reportedly pushing companies to produce without proven manufacturing technology, raising the risk of financial loss as Chinese competitors continue to lead global competitiveness.[187] Recognizing persistent upstream dependency, the Indian government is redirecting subsidies to support intermediate goods and components, an acknowledgment that the assembly-first approach has deepened reliance on imported components. The Ministry of Electronics and Information Technology rolled out the Electronics Components Manufacturing Scheme in 2025, with $4.2 billion allocated in the 2026–2027 national budget for supporting domestic suppliers to the smartphone industry.[188]

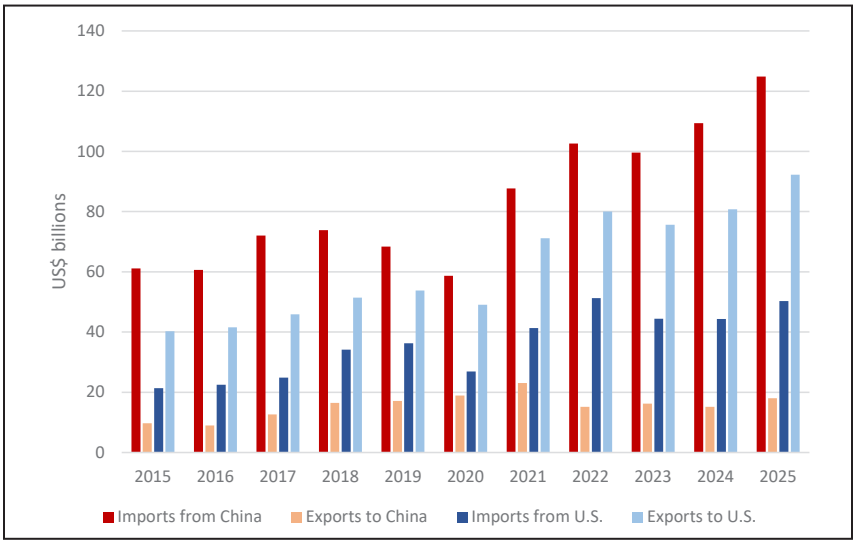
China Takes Aim at India's Fledgling Domestic Supply Networks at the WTO

China has responded to the PLI program's early signs of success by challenging it at the WTO in a sign Beijing sees Indian industrial policy as a credible enough threat to warrant formal legal action. China formally initiated two actions at the WTO centered on India's support for competitive industries using PLI programs.[189] The move is also noteworthy because it marks a shift from China primarily bringing cases against developed countries to targeting a fellow "Global South" country.[190]

In October 2025, China initiated its first-ever WTO consultations request against India, which pertained to PLI support for domestically sourced inputs for batteries and automotives.[191] In December 2025, China launched a second dispute targeting solar cells and modules as well as information and communications technology (ICT) products, with a similar legal argument that PLI support violates the Agreement on Subsidies and Countervailing Measures by making direct government subsidies "contingent upon the use of domestic over imported goods or that otherwise discriminate against goods of Chinese origin."[192] The timing of the cases suggests China is trying to hobble industries supported by PLI just as they are beginning to scale and before local content requirements can take hold, directly targeting the policy tool Indian officials consider central to building indigenous supplier networks.[193]

The extent to which India's industrial growth has deepened trade vulnerabilities with China is evident in the size and composition of its expanding goods trade deficit. China is India's largest trade partner overall, with a significant and expanding trade imbalance now accounting for over 41 percent of India's total trade deficit (see Figure 4).[194] In 2025, imports from China exceeded exports by more than five times, pushing the bilateral deficit to $106.8 billion, more than double its level in 2020 when India introduced a raft of economic restrictions on China.[195] After growing 12.7 percent in 2025, India's imports from China increased 21.6 percent year-over-year in the first half of 2026.[196] China accounts for 16 percent of India's total imports but 30.8 percent of industrial imports.[197] In the other direction, India's $18 billion in goods exports to China in 2025 account for 0.8 percent of China's total imports, with raw materials such as iron ore, hydrocarbon feedstocks, shrimp, and castor oil among the top categories.[198]

Figure 4: India's Bilateral Goods Trade with China and the United States (Annual, 2015–2025)



Source: India's Ministry of Commerce and Industry, via Haver Analytics.

India's trade deficit with China is highly concentrated in industrial goods. One estimate from the India-based Global Trade Research Initiative found that industrial products made up 98.5 percent of India's imports from China, about two-thirds of which are concentrated in four industrial sectors prioritized by the Indian government's development policies: electronics, machinery, computers, and chemicals (see Table 3).[199] In many cases, China is the primary global producer of the intermediate input needed for India's manufacturing, presenting added costs for Indian producers seeking to diversify (see below for more on India's efforts to build self-reliance in strategic sectors).[200]

Table 3: India's Import Dependency on China in Selected Sectors

Product Category	China's Share of Indian Imports	Next-Largest Alternative Supplier
Silicon wafers	97%	Thailand
Lithium-ion batteries	93%	Japan
Antibiotic ingredients (by value, 2024)	87%	European manufacturers
Active pharmaceutical ingredients	74%	European manufacturers
Solar cells	74%	Indonesia
Electric inverters	62%	Japan
Key starting materials (pharma)	>50%	Unknown

Table 3: India's Import Dependency on China in Selected Sectors—*Continued*

Product Category	China's Share of Indian Imports	Next-Largest Alternative Supplier
Memory chips	46%	South Korea
Industrial machinery	45%	United States

Note: HS codes used include silicon wafers (3818), solar cells (8541.42), lithium-ion batteries (8507.60), electric inverters (8504.40), memory chips (8542.32), and industrial machinery (8479).
Source: India's Ministry of Chemicals and Fertilizers, *India's Dependence on Imported APIs*, February 3, 2026; Chandresh Harjivan, written testimony for U.S.-China Economic and Security Review Commission, *Hearing on India, China, and the Balance of Power in the Indo-Pacific*, February 17, 2026, 4; U.S.-China Economic and Security Review Commission, *2025 Annual Report to Congress*, November 2025, 491–492; "Headwinds in Remission; Revenues of ICRA's Sample Set of Indian API Companies to Grow by 7.8% and Operating Profit Margin to Improve to 12–14% in FY2025," *ICRA Limited*, August 13, 2024; UN Comtrade.

Amid Growing Trade Deficit, India Shifts Strategy and Loosens Restrictions

Faced with the reality of its continued dependence, the Indian government has begun to modify its approach and now is seeking to attract Chinese investment—subject to tight controls—in select sectors. The Indian government's evolving thinking around how best to capitalize on China Plus One (China+1)* trade patterns was reflected in the Ministry of Finance's 2024 annual economic survey, which suggested that focusing on FDI from China seemed more promising for boosting India's exports. According to the survey, "As the US and Europe shift their immediate sourcing away from China, it is more effective to have Chinese companies invest in India and then export the products to these markets rather than importing from China, adding minimal value, and then re-exporting them."[201] In March 2026, the government amended Press Note 3 to loosen restrictions on inbound investment from companies with "non-controlling" ownership (defined as up to 10 percent) from neighboring countries, including China.[202] The government's press release specifically referenced access to new technologies as a benefit of the action.[203] While the change in policy indicates a tactical shift to selective economic re-engagement, India's structural distrust of China has not changed.[204]

Lessons for De-Risking from India's PLI Experience

India's policy support for strategic priority sectors has yielded varying degrees of success, but its experience in the pharmaceutical, clean energy, and consumer electronics sectors demonstrates the challenges of de-risking. Government industrial policies have accelerated growth in production and attracted investment, but China has its own tools to push back on India's efforts, and India remains dependent on Chinese inputs, technology, and industrial knowledge. India's experiences indicate that effective de-risking efforts require deep knowledge of supply chain dependencies and how they evolve over time; policy support to respond to China's efforts to prevent de-risking by distorting the market in its favor; and policy support

*China+1 refers to a company's business strategy to diversify supplier networks to at least one country beyond China to reduce reliance. "What Is China + 1?" *Massachusetts Institute of Technology Sloan School of Management*.

for the broader industrial ecosystem for a given product segment (i.e., development of indigenous supplier networks, technological upgrading, alternative sourcing for critical inputs, etc.), not just the targeted product or technology.

China Actively Undercuts India's Efforts to Break Upstream Dependency in Pharmaceutical Industry

India has had some success using PLI to reduce its dependence on Chinese supply chains in the pharmaceutical sector, but efforts have been hampered by limited supply chain visibility, difficulty achieving economies of scale, and Chinese market manipulation to undercut production of targeted ingredients. India is already a major global manufacturer of medications, accounting for 20 percent of generic drugs by volume and 60 percent of vaccines used worldwide.[205] For the U.S. market, India supplied 61 percent of generic doses in pill form and 21 percent of generic injectables in 2024.*[206] It is also a major producer of active pharmaceutical ingredients (APIs) and to a lesser extent key starting materials (KSMs), the midstream and upstream building blocks of the pharmaceutical supply chain.[207] India supplies 35 percent of the API volume used in U.S. generic drugs, including 47 percent of API volume used in drugs for chronic conditions.[208] Within these categories, API and KSM supply chains are even more highly concentrated for specific ingredients for certain drugs, often with single-country sourcing.[209]

Deeper examination of these figures reveals India's heavy reliance on China across various lifesaving and commonly prescribed medications. The risk of near-total reliance on upstream supply from China is clear in the supply chain for amoxicillin, the second-most common oral antibiotic in the United States.[210] Though the drug is formulated in a number of countries, about 90 percent of APIs used to make amoxicillin in India are sourced from China.[211] China holds effective control over one KSM in particular (6-aminopenicillanic acid) that is used in amoxicillin as well as other penicillin-based antibiotics, which if restricted would disrupt Indian-based manufacturing and cause acute antibiotic shortages in the United States.[212] The situation is similar for a number of other critical and widely used drugs (e.g., the tuberculosis medication ingredient rifampicin, metronidazole used to treat serious infections, cortisone, etc.).[213]

In recent years, India has been trying to reduce this dependence, but China has used its market clout to negate India's efforts. India established a PLI program for pharmaceutical inputs, targeting molecules for which Indian producers rely heavily on China.[214] As of September 2025, PLI has supported domestic production capacity for 38 critical APIs and 26 KSMs and drug intermediaries.[215] The government has approved 48 greenfield projects to increase production of specified products, backed by $455.8 million of committed investment.[216] Since the start of focused PLI support in 2020, India has established new API production clusters in various states, decreasing import dependency for several APIs for which it had been

*Generic drugs fill nine in ten prescriptions in the United States. U.S. Food and Drug Administration, *Generic Drugs*, October 1, 2026.

unable to compete with China on price.[217] While these efforts have had some success, achieving the scale necessary across all inputs remains challenging.[218]

China has responded to these diversification efforts by slashing prices and dumping upstream inputs in an apparent attempt to undercut new API and KSM production in India.[219] In September 2025, Indian media reported Chinese producers had cut prices 40–50 percent across 41 APIs and KSMs, for some dumping exports below the cost of production.[220] Price cuts to clavulanate potassium and penicillin-G, ingredients for antibiotics, specifically impacted the two largest factories that had received support under PLI, one in Himachal and the other in Telangana.[221] India has responded by restricting imports of and initiating antidumping investigations into some of these products.[222]

Indian producers' desire to capture higher-value segments of drug production is also undermining efforts to break upstream dependency on China. As India's capacity to manufacture drug inputs and intermediates has increased, so too have its exports of higher-value organic chemicals.[223] This indicates that many Indian producers are exporting the increased capacity for drug ingredients rather than using them in domestic value chains, opting instead to continue using cost-competitive Chinese imports for pharmaceutical-related production.[224] India's imports of APIs and intermediates from China rose between 2019–2020 and 2023–2024 despite the rollout of PLI support, indicating that along with China's cost advantage, India's efforts to vertically integrate drug supply chains may also be hampered by industry participants seeking higher returns in export markets.[225]

Furthermore, the extent of India's dependency on China is often opaque. A finished drug's label indicates its country of final manufacture, but the origin of its APIs and upstream KSMs is typically invisible to payers, providers, patients, and even governments. Accordingly, for many drugs, it is not clear how reliant Indian production is on KSMs and APIs from China. In last year's Annual Report, the Commission estimated that about half of the U.S. dependence on China for APIs in U.S. generic medicines comes indirectly via generic imports from India.[226] One layer up, the Commission estimated that anywhere from a quarter to nearly one-half of U.S. generic daily doses that use Indian APIs still rely on Chinese KSMs.* [227] Until both India and the United States obtain significantly more data on pharmaceutical, API, and KSM supply chains, the full depth of dependence on China will not be known. A country cannot address a dependency it does not fully understand.

*For more on how these figures were calculated, see U.S.-China Economic and Security Review Commission, Chapter 9, "Chained to China: Beijing's Weaponization of Supply Chains," in *2025 Annual Report to Congress*, November 2025, 491–492.

Beyond Generics: India's Biotechnology Innovation Landscape

India is quickly becoming a biotechnology innovator in its own right and is starting to rival China in a variety of applications beyond generic drug manufacturing. India supplies 60 percent of the world's vaccine supply, with the country's broader biotech sector set to reach $300 billion by 2030.[228] India's biologics contract development and manufacturing organizations (CDMOs) are experiencing increased demand as companies seek to diversify segments of their development pipelines away from Chinese CDMOs in line with China+1 strategies, a trend likely to expand in the wake of U.S. passage of the BIOSECURE Act in December 2025.[229] India is well positioned to capture a larger market segment for contract services at the clinical trial stage given its large eligible patient population, established site infrastructure that adheres to international standards, and English-speaking technical workforce.[230] Leading Indian biotech firms have increased investment in research and development (R&D), biosimilars, and novel formulations—activity augmented by a growing startup and venture capital ecosystem.[231] In February 2026, the Indian government committed another $1 billion over five years to support high-value biologics manufacturing and innovation.[232]

Government initiatives also seek to accelerate the shift toward higher-value biomanufacturing and expand India's success in innovation beyond pharmaceuticals to biomaterials and agriculture. Along with PLI support, the government launched the Biotechnology for Economy, Environment, and Employment (BioE3) policy in 2024, intended to support high-performance biomanufacturing from R&D to commercialization.[233] BioE3 includes programs to establish biotechnology-artificial intelligence (Bio-AI) hubs to scale research activity across academia and industry.[234] While not aimed at reducing India's dependence on China, AI could help India use biotechnology to enhance its capacity for production of APIs and biologics, which in turn could reduce dependence on Chinese producers.[235]

India's emergence as a biotech leader makes it a natural partner for the United States. Currently, both are members of the Bio-5 Consortium—along with South Korea, Japan, and the EU—which serves as a forum for API and KSM supply chain diversification.[236] The National Science Foundation and its Indian government counterpart signed a partnership for R&D funding in 2023, and the TRUST initiative between the United States and India includes a focus on collaboration in biotechnology, which aligns with India's BioE3 policy.[237]

India Becomes Second-Largest Mobile Phone Manufacturer, but Value Capture Remains Shallow

India's PLI program has helped transform the country into a major smartphone manufacturing hub, but much of the value-added components continue to be made in China. In 2014, there were only two factories in India manufacturing mobile handsets, none of

which were meant for export; by 2025, India was the second-largest mobile phone manufacturer behind China, and smartphones were the country's top export by value.[238] Foreign companies, including Apple supplier Foxconn, have been able to take advantage of PLI subsidies to expand production in India.[239] Despite higher production costs due to India's tariffs on components, in 2025 then–Apple CEO Tim Cook confirmed the majority of the more than 60 million iPhones it sells in the U.S. market now have India as the country of origin.[240]

The depth of this achievement, however, is shallower than headline numbers suggest. For example, local value added in India's iPhone manufacturing reportedly accounted for 15 to 20 percent of handset export values in early 2025, up from 5–8 percent at the start of Apple's PLI program in 2021 but still below the 25.4 percent estimated for the iPhone X in China.[241] For its India-based production, Foxconn still relies on rare earth magnets, automation equipment used in assembly lines, and highly skilled engineers from China. This dependency became abruptly evident in early 2025 when Chinese employees were recalled from Foxconn factories in India and exports of specialized manufacturing equipment for production of the iPhone 17 were halted, reportedly at Beijing's direction.[242]

India's mobile handset experience illustrates the challenges for an effective China+1 strategy. Lower-value-added assembly, even at scale, is much easier to transfer than a competitive base of suppliers. Absent a set of policies to address other key elements of the production ecosystem, China's industrial commons—its dense ecosystem of component suppliers, tool manufacturers, precision engineers, and know-how that supports China's electronics manufacturing clusters and other sectors—will continue to encourage reliance on China farther upstream.*[243] (For more on China's industrial commons, see U.S.-China Economic and Security Review Commission, Chapter 6, "Interlocking Innovation Flywheels: China's Manufacturing and Innovation Engine," in *2025 Annual Report to Congress*.)

India Sets Ambitious Targets in Clean Energy, but Upstream Dependence on China Persists

Seeing an opportunity to leapfrog traditional energy infrastructure buildout, India has made ambitious commitments to reduce carbon emissions† and prioritized support for domestic production of renewables. In 2025, India announced it had achieved the benchmark of 50 percent of its electrical capacity from non-fossil fuel power production and subsequently increased its commitment for 2035 to 60 percent.[244] India's rapid deployment of renewables has caused concern in the Indian government about overreliance on China in this sector, and it has established PLI programs for battery cells and solar modules to try to build self-reliance.[245]

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*Additionally, companies relocating to India may face higher tariff rates when they export to third country markets because of India's non-membership in RCEP. Prerna Prabhakar, Sanjay Kathuria, and TG Srinivasan, "Why Is India Struggling with Manufacturing Competitiveness?" *Centre for Social and Economic Progress Working Paper* no. 95, May 2025, 7–8, 22, 27.

†India's most recent nationally determined contribution (NDC) under UN climate frameworks includes commitment to reduce emissions intensity 47 percent below 2005 levels by 2035, with the goal of achieving net-zero emissions by 2070. India's Public Information Bureau, *Cabinet Approves India's Nationally Determined Contribution (2031–2035) to Be Communicated to the United Nations Framework Convention on Climate Change*, March 25, 2026.

India's efforts to establish a domestic battery manufacturing industry illustrate its challenge. Some of India's largest conglomerates are involved in battery production and joint ventures with Chinese companies.*[246] For example, in 2024, India's JSW Group, a steel and cement conglomerate, launched a joint venture with Chinese automaker SAIC to produce cars in India; its head argued that Chinese technology can help India's economic advancement, even encouraging employees to visit Chinese production lines.[247] Even though India is the third-largest global auto market (by volume) and third-largest passenger car producer in the world, it is still dependent on imports largely from China for battery technology and components.[248] As noted above, China's late 2025 export controls on battery technology and manufacturing equipment, though not aimed only at India, directly target this dependency by denying India access to the more value-added elements of battery production. While the Indian government has set goals for battery cell production volume to try to loosen India's dependence, at least for now, difficulty attaining critical equipment and know-how has raised concerns that companies are being pushed to produce without proven manufacturing technology, resulting in products that are expected to struggle to compete with Chinese competitors.[249]

Solar manufacturing in India presents a parallel dynamic. India coupled a PLI investment program with multiple rounds of tariffs on Chinese solar panels and cells intended to protect domestic producers. Despite the combination, 11 of the 12 winners of India's PLI scheme for high-efficiency solar photovoltaic modules list Chinese supply chain partners.[250] In 2022, China proposed restricting exports of core solar technologies to maintain its innovation lead as production moved to India and other Asian countries in response to U.S. tariffs, though ultimately it did not implement these measures.†[251] Chinese solar companies have pivoted from selling modules to selling inputs such as wafers and cells to sidestep higher tariffs, deepening India's upstream dependency.[252]

Further complicating India's goal to reduce reliance on China is the PRC's stranglehold over critical minerals and rare earth elements, necessary inputs into each of these clean energy technologies. While India has the third-largest reserves of rare earths behind China and Brazil, India—like the rest of the world—is heavily dependent on China for processed minerals and some downstream products, including 80–90 percent dependency for its 7,000 metric tons of annual rare earth magnet demand.[253] Indian companies and the government have taken steps in the aftermath of China's rare

*Indian companies have pursued joint ventures and other commercial partnerships with Chinese firms in the electric vehicle and battery sectors. Established joint ventures include Tata AutoComp's partnership with Gotion High-Tech and JSW Group's partnership with SAIC Motor, while Ashok Leyland entered a battery supply partnership with CALB in September 2025. Other Indian conglomerates, including Adani Group and JSW Group, have reportedly explored additional collaborations with Chinese battery and automobile manufacturers. "Gotion Green Energy Solutions," *Tata AutoComp*; "Ashok Leyland to Invest in the Battery Ecosystem for a Sustainable India," *Ashok Leyland*, September 1, 2025; Alisha Sachdev, "Adani, Ambani Hunt for Chinese Tech as Ties Warm on US Tariffs," *Bloomberg*, August 18, 2025; "SAIC Motor and JSW Group Announce a Strategic Joint Venture to Accelerate Growth with Focus on Green Mobility," *JSW MG Motor India*, November 30, 2023.

†As previously mentioned, China launched a complaint at the WTO against India's PLI subsidies for domestic solar producers in late 2025. World Trade Organization, *India—Measures Concerning Trade in Goods in the Solar Cell, Solar Module, and Information Technology Sectors: Request for Consultations by China*, WT/DS644/1, G/L/1622 (25-8835), December 23, 2025.

earth element export restrictions to enhance self-reliance, including establishing a ₹73 billion ($768 million) public-private rare earth permanent magnet manufacturing program in late 2025.[254] This program set a target of producing 6,000 metric tons of rare earth magnets per year by 2032, yet currently there is only one rare earth mine operational in India.[255] To achieve its goal, India requires processing technology and know-how best gained via foreign partnerships. In early 2026, India was reportedly in talks with Japan for joint exploration projects; it has been a member of the Minerals Security Partnership since 2023, is part of the Quad Critical Minerals Initiative Framework, joined Pax Silica in 2026, and established a Strategic Critical Minerals Cooperation Framework with the United States in 2026.[256] India faces persistent challenges, however, including high costs and long lead times for procuring equipment from non-Chinese companies, stringent regulations on mining, and lower-grade raw material in Indian rare earth deposits.[257]

U.S.-India Cooperation: From Strategic Alignment to Growing Operational Partnership

Over the past quarter century, the United States has steadily strengthened its relationship with India and made it a more important part of U.S. strategy in Asia. The relationship has had to overcome decades of mistrust—including India's close relationship with the Soviet Union during the Cold War and continuing ties to Russia, U.S. security ties with Pakistan, and U.S. sanctions imposed after India's 1998 nuclear tests.[258] Then–U.S. President Bill Clinton's 2000 visit was the first presidential visit to India in 22 years, marking a major improvement in relations, followed by the civil nuclear agreement announced in 2005 that ended decades of India's nuclear isolation and broadened the U.S.-India partnership to energy, space, and technology.[259] Over the last 20 years, successive Congresses and administrations led by both parties have supported growing cooperation in defense, technology, trade, and maritime security. Yet the ambition of the relationship has outpaced the rules and institutions governing it. Market barriers, export controls, procurement requirements, and other constraints on both sides that were less consequential in a more limited relationship now slow cooperative efforts. Additionally, India's labor standards have long been criticized for weak protections, poor enforcement, and the exclusion of large segments of the workforce.[260]

U.S.-India Initiatives Chart an Increasingly Ambitious Partnership

Recent U.S.-India initiatives reflect a strategic partnership that is broadening across several shared priorities: strengthening supply chain resilience, expanding trade and investment, accelerating technological and defense innovation, and building trusted networks for strategic industries. Across these areas, Washington and New Delhi have created a dense set of frameworks intended to translate their growing strategic alignment into practical cooperation. These initiatives have achieved success stories and meaningful progress in establishing new channels for government-to-government coordination and private-sector collaboration.

Currently, the United States and India have several cross-cutting mechanisms to coordinate across security and defense integration (i.e., Defense Framework, COMPACT, INDUS-X), technology and supply chain resilience (i.e., TRUST initiative, Pax Silica, INDUS-X), and economic integration (i.e., Trade Framework, TRUST initiative). Key initiatives include:

- *Framework for the U.S.-India defense relationship:* The United States and India signed their first ten-year framework for defense cooperation in 2005, initiating the foundation for bilateral defense cooperation including military exercises, information sharing, and defense industrial cooperation. The two countries most recently renewed the framework in October 2025 with another ten-year update designed to advance interoperability, defense industrial collaboration, and joint capability development.[261]
- *TRUST (Transforming the Relationship Utilizing Strategic Technology) initiative:* Announced in a joint statement during Prime Minister Modi's visit to the White House in February 2025, this framework for engagement covers a broad range of strategic industries. The TRUST initiative keeps intact the core structure of the Biden Administration's Initiative on Critical and Emerging Technology (iCET)—which focused on semiconductors, AI, and quantum computing—and broadens priority areas to include critical mineral supply chains, biotechnology, energy, and space.[262] The TRUST initiative includes a commitment to build trusted and resilient supply chains for semiconductors, critical minerals, advanced materials, and pharmaceuticals and encourage investment in Indian pharmaceutical manufacturing in both India and the United States.[263]
- *COMPACT (Catalyzing Opportunities for Military Partnership, Accelerated Commerce, and Technology):* In 2025, President Donald J. Trump and Prime Minister Modi announced the new COMPACT framework, which encompasses bilateral defense, technology, and economic cooperation.[264] The aforementioned defense framework and TRUST initiative both fall under this framework.
- *U.S.-India free trade framework:* The United States and India announced they had agreed to a trade agreement framework in a February 2026 joint statement, though subsequent events have stalled implementation.[265] Under the framework, India agreed to stop buying Russian oil, reduce its tariffs on U.S. industrial goods from 13.5 percent to zero, and purchase $500 billion of U.S. exports over a multi-year period.[266] In exchange, the United States agreed to lower the reciprocal tariff rate on imports from India from 25 percent to 18 percent and eliminate the separate 25 percent tariff threatened due to India's purchases of Russian oil.[267] The announcement preceded the Supreme Court's ruling on the International Emergency Economic Powers Act, which negated the underlying tariff authority that led to negotiations. The Administration has since used different authorities to impose or provide authority for tariffs, including Section 301 investigations regarding forced labor and overca-

pacity, with the former yielding an effective 10 percent tariff on India.[268] The first phase of the February deal appeared close to finalization after U.S. Trade Representative Jamieson Greer's visit to New Delhi in June, but in early July, Indian Commerce Minister Piyush Goyal cast doubt on finalization when he stated that the bilateral trade agreement would not progress without the United States offering India "competitive advantage" over terms offered to other countries in the region.[269]

- *Pax Silica:* In February 2026, India signed onto the U.S. Department of State's Pax Silica initiative, which seeks to build technology integration with trusted partners on critical minerals, AI infrastructure, talent and human resources, etc.[270] Pax Silica was launched in 2025 by seven founding members (the United States, the UK, Japan, South Korea, Singapore, Australia, and Israel) and has 25 signatories as of August 2026.[271] India and the United States also signed a bilateral Strategic Critical Minerals Cooperation Framework in May 2026.[272]
- *INDUS-X (India-U.S. Defense Acceleration Ecosystem):* INDUS-X is a joint U.S. Department of Defense and Indian Ministry of Defense coordination program to bring together government departments, startups, investors, academia, and industry to bolster U.S.-India defense innovation.[273]

While the two governments have been signing documents outlining partnerships and accelerating the pace of ambitious-sounding agreements, the underlying regulatory and institutional architecture remains a barrier to a more comprehensive and effective partnership. Recognizing that India will likely never be a full treaty ally, former U.S. National Security Council official Tarun Chhabra asserted in his testimony to the Commission that "the task for U.S. policymakers is to execute a steady rhythm of plays that make the U.S.-India partnership so commercially complementary, technologically indispensable, and strategically aligned that the gravitational pull of the relationship becomes self-sustaining."[274]

Priority Areas for Building a More Operational Partnership

Against this backdrop, several areas offer particularly strong opportunities for deeper U.S.-India cooperation because they combine shared strategic interests, existing policy frameworks, and identifiable needs. Together, these areas—which already reflect shared bilateral interests—illustrate where policy efforts and high-level political commitment could significantly improve the effectiveness of an already expanding partnership.

De-Risking from Chinese Supply Chain Leverage Is a Shared Priority

India and the United States both have a strong interest in de-risking from China's supply chain leverage. As discussed above, India has already taken numerous measures to do so, realized some of the practical challenges that result, and experienced Chinese efforts to stymie de-risking. In his testimony before the Commission, Mr. Chhabra highlighted the potential of building secure supply chains, saying, "[The United States has] a shared

interest with India in de-coupling from Chinese supply chain dependencies both to demonstrate to countries around the world that it can be done, including outside advanced, industrialized economies, and to help build a scaled market for U.S. and allied companies to offer enduring alternatives to CCP-controlled supply chains and CCP-controlled information and communications technologies and services."[275] India currently lacks the capital, technology, and fully developed supply chains to unlock the benefit of its comparative advantages. India has one of the world's largest technology workforces, with nearly six million software and IT professionals.[276] Beneficiaries born in India accounted for a staggering 71 percent of H-1B visa* recipients in the United States and over 80 percent of computer-related H-1B positions in FY 2024.[277]

At the same time, India's manufacturing competitiveness continues to face structural constraints, including high tariffs, regulatory complexity, infrastructure and logistics gaps, different economic environments across states, and limited integration into regional value chains.[278]

Given some of these challenges, experts like Mr. Chhabra have encouraged focused cooperation in areas where India has existing domestic capabilities and de-risking alignment between the two countries is strong, such as restricting access to Chinese technology platforms that pose a security risk.[279]

U.S.-India Cooperation on a Non-Chinese AI Technology Stack

As with broader de-risking efforts, India and the United States share an interest in expanding the deployment of AI and, specifically, a non-Chinese AI technology stack. The India AI Mission—a government initiative launched in 2023 by the Ministry of Electronics and Information Technology—seeks to support expansion of India's public, private, and academic research ecosystem and is augmented by the National AI Strategy, a plan to promote AI adoption in priority sectors like healthcare, agriculture, and education.[280] India's AI strategy has focused less on rapid scaling to secure commercial and military advantage and more on diffusing access and developing applications to meet its development goals.[281]

With China a leader in diffusion through its free, open-source AI models, India is seeking to capture the benefit of these relatively inexpensive applications while mitigating the risk. In January 2025, India announced that DeepSeek's open-source models could be hosted on Indian servers after undergoing security checks, an approach intended to allow Indian developers to utilize Chinese models while addressing data privacy risks.[282] This coincided with a restriction on finance ministry officials using AI models, a measure that included DeepSeek as well as U.S. models like ChatGPT.[283] It was reported at the time that the Indian Computer Emergency Response Team (CERT-In) under the Ministry of Electronics and Information Technology was scrutinizing security concerns—specifically with

*H-1B visas allow companies to hire foreign workers in specialized fields that require at least a bachelor's degree. This non-immigrant program is subject to an annual cap of 65,000 new visas, plus 20,000 for holders of U.S. advanced degrees, with some employers exempt. U.S. Citizenship and Immigration Services, *H-1B Specialty Occupations*.

DeepSeek—and was considering issuing a public advisory, though one never actualized.[284]

Despite interest, challenges persist in promoting integration with the U.S. tech ecosystem. First, cheap, reliable electricity is important to AI infrastructure growth, and India has long had challenges in this regard. India's electricity infrastructure requires substantial upgrades.[285] Second, Indian consumers' relative price sensitivity may make them more inclined toward inexpensive AI tools, a preference that could favor China's open models if U.S. AI companies are unable to sustain extensive discounts in the long term.[286] (For more on China's effort to grow global uptake of its AI via cheap open models, see Ngor Luong, "Two Loops: How China's Open AI Strategy Reinforces Its Industrial Dominance," *U.S.-China Economic and Security Review Commission*, March 23, 2026.) While the highest portion (13.5 percent) of ChatGPT's mobile app users came from India as of April 2025, Indian customers have also been top adopters of DeepSeek outside of China, given its cost competitiveness.[287] Compounding this challenge, the Indian government's focus on AI sovereignty may complicate efforts to build a trusted U.S.-India AI ecosystem, as India's goal of reducing dependence on foreign AI providers could conflict with full adoption of a U.S.-led AI tech stack.[288] Despite these frictions, U.S. tech companies made a slew of major investment announcements into India in 2025, including Microsoft ($17.5 billion), Amazon ($35 billion), and Google ($15 billion).[289] India has been working to facilitate this investment—the Indian government's 2026 budget includes a 20-year tax holiday for foreign companies providing global cloud services using data centers based in the country.[290]

Defense Cooperation Strengthens India's Capacity to Respond to China and Furthers U.S. Interests

The United States and India are already deepening operational cooperation in areas where both countries face growing challenges from China. The 2020 Galwan Valley clashes increased New Delhi's interest in deepening defense cooperation with Washington, including through information sharing, bilateral and multilateral joint exercises, and defense industrial cooperation.[291] Military exercises between the two countries have become more frequent and complex and take place in all domains. Annual exercises such as Yudh Abhyas have emphasized interoperability in high-altitude conditions that forces would likely experience in a potential China-India border contingency.[292] The United States and India have also signed an Underwater Domain Awareness Roadmap.[293] (For more on the salience of undersea domain awareness in the Indo-Pacific, see Chapter 5, "Active Intercept: China's Efforts to Narrow U.S. Undersea Advantage.") Multilateral initiatives through the Quad, like the Indo-Pacific Maritime Surveillance Collaboration initiative, also have created opportunities to better operationalize information sharing and regional surveillance.[294]

When it comes to defense industry production and cooperation, the drone sector is a particular area where both countries are prioritizing investment and development. The May 2025 conflict with Pakistan accelerated India's efforts to strengthen its drone and

counter-uncrewed aerial system (UAS) capabilities.[295] The United States and India cooperate through the Autonomous Systems Industry Alliance (ASIA), where Anduril and Mahindra are working together on counter-UAS and maritime systems, and through INDUS-X partnerships focused on drones and AI-enabled ISR.[296]

While there have been some success stories, slow bureaucratic processes can be a hindrance to getting projects off the ground. The proposed F414 engine project between U.S.-owned GE Aerospace and India's Hindustan Aeronautics Limited would transfer substantial engine production and technology to India, reportedly with up to 80 percent of the technology transferred in phases, giving Indian firms access to advanced U.S. manufacturing expertise.[297] However, commercial negotiations and technical reviews by both governments dragged finalization of the project, initially proposed and agreed upon in 2023, into 2026.[298]

India's Shipbuilding and Ship Servicing Industries Support U.S. Naval Activities in the Indo-Pacific

Under Maritime India Vision 2030 and related initiatives, India is investing heavily in domestic shipbuilding and ship repair and is seeking to expand its shipbuilding industry to build a more competitive maritime industrial base.[299] In September 2025, the Indian government committed ₹69,725 crore ($7.34 billion) to "revitalize India's shipbuilding and maritime ecosystem," providing funding to strengthen India's domestic capacity, shipyard development, and technical capabilities.[300] India is also using strategic cooperation with South Korea and Japan, which have more advanced shipbuilding industries, to close existing technological and capability gaps in its own shipbuilding sector.[301]

While U.S.-India ship repair partnerships are already underway, remaining bureaucratic hurdles block the path toward expanded cooperation. India is already providing the U.S. military with additional maintenance and repair capacity in the Indian Ocean through Master Ship Repair Agreements (MSRAs).[302] MSRAs are not contracts or blanket site approvals, though, so MSRA-approved shipyards still need to bid for contracts.[303] Specific repair projects can be subject to additional U.S. government approvals, and U.S. export controls governing which entities can access critical U.S. military equipment and technology continued to apply. On the Indian side, India still requires visas and passports for port access, which can create logistical complications for docking in Indian shipyards.

Space Industry Cooperation Is on the U.S.-India Shared Agenda

India's private aerospace ecosystem, cost-effective indigenous launch capabilities, and strategic location provide valuable opportunities to expand cooperation in a domain increasingly central to competition with China. India's space industry appears to be on a growth trajectory as the government and private sector strategically invest in developing indigenous capabilities across the value chain, including component manufacturing, satellite production, and launch services.[304] The Indian Space Research Organisation is expanding technology transfer opportunities to India's private sector to boost domestic satellite launch capabilities and production.[305]

The Indian Department of Space's National Space Promotion and Authorisation Centre has outlined an ambitious vision for increasing the Indian space economy's value from $8.4 billion in 2023 to $44 billion by 2033.[306] Recent space success stories demonstrate India's growing technological capabilities in the industry.[307] India successfully conducted the Chandrayaan-3 lunar landing using an indigenously built lander module, propulsion module, and rover for only about $74 million, demonstrating the country's ability to conduct missions at a relatively low cost, likely thanks to its domestic supply base.[308] Recent bilateral frameworks like TRUST, INDUS-X, and COMPACT have all further committed to and accelerated both civil and commercial space cooperation.[309] These areas of cooperation are still constrained by U.S. export controls and technology transfer limitations as well as by India's continued reliance on foreign componentry, as discussed below.

Underlying Regulatory and Institutional Architecture Constrains Potential of U.S.-India Partnership

The expanding scope of U.S.-India cooperation has exposed regulatory and institutional barriers that limit what the partnership can deliver. While these barriers have not prevented cooperation from advancing, the resulting friction can delay implementation of political agreements and complicate efforts to scale cooperation. Some of the most notable constraints fall into five broad categories:

Chinese Content in Indian Defense Supply Chains: For U.S. defense officials and U.S. defense and critical technology companies hoping to use Indian cooperation to de-risk from China, India's dependence on Chinese componentry means bilateral cooperation likely cannot fully eliminate U.S. exposure to Chinese supply chains. India does not yet have domestic advanced semiconductor supply chains that can fulfill demand for its defense sector, for example.[310] China continues to be India's primary semiconductor supplier.[311] U.S. policy and Department of Defense federal acquisition regulations ban certain covered magnets and materials from China and will soon include further procurement restrictions on certain Chinese semiconductor products and batteries.[312] At least one of these inputs, rare earth magnets, can be found in India's missiles, aerospace production, and radar systems.[313] India's 2023 ban on Chinese components in military drones and the 2026 draft drone security framework guidance show that New Delhi is treating this exposure as a national security risk, but ending reliance on Chinese inputs will be a long-term effort.[314] In the near term, then, these inputs will continue to be a constraint on deeper U.S.-India cooperation.

Indian Procurement and Production Requirements: India's requirements for domestic production and technology transfer serve New Delhi's objective of building greater defense self-reliance but may complicate projects.[315] India's bureaucratic procurement and regulatory processes can add time and uncertainty to projects. U.S. stakeholders have cited these requirements and the way they interact with U.S. defense export controls as obstacles to defense trade.[316] It is worth noting, though, that other countries with relatively strong defense industrial capabilities, including France and

Israel, have managed to secure defense production cooperation arrangements with India.[317]

Historically, India's defense architecture has privileged public-sector defense giants, like Hindustan Aeronautics Limited, that have been selected for government contracts without open competition and secured international partnerships.[318] Recently, that has begun to change. Newer U.S.-India mechanisms like INDUS-X promote cooperation between private firms and agile defense startups. This and other new initiatives have the potential to overcome some asymmetries between India's traditional state-backed companies and the U.S. private-sector-led defense industry.

U.S. Export Controls: Indian companies view U.S. weapons and technology transfer restrictions as a significant impediment to deeper integration. The United States' Arms Export Control Act (AECA) and the ITAR licensing requirements it created restrict transfers of defense articles and defense services to foreign countries.[319] U.S. dual-use export controls under the Export Control Reform Act of 2018 and the related Export Administration Regulations (EAR) also impose limits on transferring certain products and technologies to India and Indian companies.[320] Indian companies view U.S. legal requirements as roadblocks.[321]

India administers its own unilateral export controls and participates in multilateral controls, yet persistent concerns about its military links to Russia have held back efforts to loosen U.S. license requirements for controlled items. India has signed onto the Wassenaar Arrangement, the Australia Group, and the Missile Technology Control Regime and has applied to join the Nuclear Suppliers Group, the fourth major international export control regime.[322] India's own exports are regulated under the Special Chemicals, Organism, Material, Equipment, and Technologies list, which it contends is aligned with international standards.[323] However, India has not acceded to the U.S.-led Global Export Controls Coalition, the 39-country coalition denying Russia certain military and dual-use technology, instead continuing to allow companies to export sensitive goods such as microprocessors and computer numerical control (CNC) machines important to fueling its war effort in Ukraine.[324]

Both governments have acknowledged that export controls can hinder deeper cooperation. Through the INDUS-X program, the United States and India are exploring changes to ITAR and EAR, as well as Indian equivalents, to ensure they do not act as unnecessary barriers.[325] U.S. policymakers have a recent precedent for modernizing export control frameworks to reflect evolving U.S. strategic priorities and changing realities on the ground. Congress directed an FY 2024 AECA amendment to provide Australia and the UK with licensing exemptions—based on AUKUS*—in recognition of their relationship as Five Eyes partners and allies to the United States and shared commitment to "security standards on protecting defense technology and sensitive military know-how."[326] India, however, differs significantly from Australia and remains reliant on Russian defense systems.

*Announced in 2021, AUKUS is an enhanced trilateral security partnership between Australia, the United Kingdom, and the United States. U.S. Embassy in Canberra, *Joint Leaders Statement on AUKUS*, September 16, 2021.

Financing and Scaling Mismatch: The United States has significant public financing capacity, including the U.S. International Development Finance Corporation and the Export-Import Bank. However, these instruments were designed primarily for developing-country infrastructure deals rather than for co-investment with a large, middle-income partner. Though both agencies are increasingly prioritizing strategically important projects, they are each structured to provide narrow financing for specific projects that are assessed individually rather than to support industrial sectors.*[327] Effective funding would align with priority sectors in India's PLI program, filling gaps to the buildout of an industry ecosystem rather than one-off projects. There is no defined U.S. government financing instrument for the types of joint upstream manufacturing investment that would reduce Chinese leverage over both Indian and U.S. supply chains. The result is that cooperation is driven by what existing instruments can do in tandem with ad hoc funding from both public and private investors.

Fragmented Institutions and Siloed Initiatives: U.S.-India cooperation is spread across numerous initiatives and government agencies, making it difficult to coordinate priorities and resolve problems that cut across them. TRUST, INDUS-X, Pax Silica, and the bilateral defense framework each cover different parts of the relationship, while defense acquisitions, technology cooperation, supply chain resilience, and trade are managed by different agencies in both capitals. This fragmentation becomes particularly problematic when, in order to move forward or stay on track, a project requires decisions that cut across numerous departments and even non-government decision-makers—e.g., export licensing, financing approvals, procurement decisions and exceptions, and private-sector technology transfer.[328] Such problems can be compounded when timeframes cut across changes in U.S. executive branch administrations. Although the two countries have established mechanisms for high-level coordination, including TRUST and the bilateral defense framework, sustaining integrated cooperation across defense industrial development, strategic planning, interoperability, and operational coordination requires continued senior-level political direction and cross-government implementation.[329] iCET, for example, operated at the national security advisor level in both capitals, allowing efficient bilateral communication and sustained political pressure on the interagency.[330] Without a mechanism to coordinate these efforts and support by sustained commitment at very senior political levels in both countries, implementation will continue to lag behind the ambitions of the partnership.

*In June, the Development Finance Corporation announced its largest-ever outlay ($1.5 billion) to support buildout of energy infrastructure in the Indo-Pacific, indicating a growing propensity for large-scale, multifaceted projects. U.S. International Development Finance Corporation, *DFC Board Approves $2.5 Billion in New Strategic Investments Advancing Infrastructure, Energy, and Supply Chain Security*, June 3, 2026.

Implications for the United States

India has the scale to affect the long-term balance of power with China, but its emergence as a stronger counterweight is not assured. China gains a strategic advantage from an India that remains militarily preoccupied on its border, industrially dependent on Chinese inputs, constrained in its maritime neighborhood, and unable to convert its demographic and technological advantages into greater power. India is responding to these pressures, but its economic needs, competing security demands, and commitment to strategic autonomy will continue to shape its choices. The United States cannot determine India's path, and the two countries are likely to continue to disagree on a range of issues. **But U.S. policy can affect whether cooperation in areas where their interests already converge reinforces India's own efforts to build the economic, technological, and military power needed to balance China more effectively.**

India will remain an independent but important partner in U.S.-China competition. India's rivalry with China is driven by its own security and economic interests and does not depend on U.S. encouragement. New Delhi will continue to guard its strategic autonomy and will not automatically align with Washington on China or other issues. The partnership will, therefore, depend on institutionalizing cooperation around shared interests so it can endure even when Washington and New Delhi diverge elsewhere.

India can become an important alternative manufacturing base, but it does not yet provide an alternative to Chinese supply chains. New Delhi has restricted Chinese participation in sensitive sectors, invested heavily in domestic manufacturing, and sought to develop alternative suppliers. Yet many growing Indian industries still depend on Chinese machinery, components, technology, and expertise. Beijing's effort to condition access to some Chinese inputs on restrictions against re-export to the United States shows how these dependencies can extend into U.S. supply chains. U.S. de-risking efforts through India will therefore also require reducing dependence on the Chinese inputs that support Indian production.

The United States and India have complementary strengths in strategic industries where both are seeking to compete more effectively with China. India is investing heavily in semiconductors, pharmaceuticals, electronics, batteries, critical minerals, and other priority sectors. U.S. capital, frontier research, advanced technology, and established firms complement India's engineering talent, lower development costs, large market, and growing industrial base. Deeper cooperation could help alternative suppliers reach scale while expanding joint innovation in AI, autonomy, biotechnology, semiconductors, and advanced manufacturing. Yet joint research, investment, and commercialization remain modest relative to the opportunity, and existing U.S. financing tools generally support individual projects rather than the supplier networks needed to build alternative supply chains at scale. This leaves a gap between promising bilateral initiatives and the investment needed to turn them into broader industrial capacity.

Closer U.S.-India technology alignment could help shape the technology ecosystem available to much of the developing world. Together, the United States and India represent a market of nearly two billion consumers, while India maintains extensive economic and political relationships across developing economies. Greater alignment around trusted AI, cloud infrastructure, telecommunications, technical standards, and other digital technologies could provide the scale needed to compete with Chinese technology ecosystems across emerging markets. **Without that scale and alignment, lower-cost Chinese models, infrastructure, and standards will have more room to become the default in India and other emerging markets.**

China's support for Pakistan and continued pressure along the disputed border are heightening India's threat perception of its two-front security challenge. Beijing's extensive military support has strengthened Pakistan's capabilities, as the May 2025 conflict demonstrated. Along the China-India border, Beijing's infrastructure buildup and pre-positioned forces give the PLA greater ability to mobilize quickly, requiring India to maintain substantial forces and readiness along the frontier. New Delhi has long focused on securing its land borders, limiting its devotion to naval modernization and other capabilities that could strengthen its role in balancing China across the wider Indo-Pacific.

China's expanding Indian Ocean presence makes India's maritime capabilities more important to U.S. strategy. India is well positioned to monitor critical sea lanes and Chinese naval activity. New Delhi is investing in maritime awareness, naval modernization, and shipbuilding, even as substantial continental defense requirements compete for resources. Deeper U.S.-India cooperation on maritime domain awareness, undersea surveillance, and logistics could strengthen India's ability to manage China's growing presence while giving the United States greater flexibility in allocating its own forces during a wider Indo-Pacific crisis.

India's growing defense industrial base creates opportunities for deeper cooperation. India's defense production and exports have been on the rise for the past decade. The May 2025 India-Pakistan conflict highlighted the importance of drones, counter-UAS, ISR, resilient communications, and other capabilities relevant to both countries, pressing India to further recalibrate and prioritize defense industry development. Avenues already exist for the two countries to engage in joint exercises alongside other partnerships, such as INDUS-X and the Autonomous Systems Industry Alliance. Doing more in these areas could expand and improve the defense relationship—provided India takes steps to mitigate legitimate U.S. concerns about technology leakage and its defense ties with Russia.

The Dalai Lama's succession is emerging as a geostrategic as well as a religious contest among China, the Tibetan exile community, India, and the United States—one for which Beijing is already preparing, while Washington and New Delhi have yet to cohesively operationalize a plan. Washington has affirmed the Tibetan people's right to select their religious leaders without Chinese interference, while Beijing has spent years prepar-

ing the legal and political basis for recognizing its own successor. India will play a central role as long-time host and supporter of the Dalai Lama, the Tibetan refugee population, and the Tibetan institutions responsible for the succession process. A "two Dalai Lama" scenario with competing Chinese- and Tibetan-selected successors could test Beijing's claims over Tibet, present border and regional security concerns for India, and produce a years-long contest over international recognition—increasing the importance of resilient Tibetan institutions and a coordinated U.S.-India approach before succession occurs.

Recommendations

- The Federal Government has spent years building a wall against risky suppliers in strategic sectors. It now needs a purchasing strategy that makes trusted pharmaceutical production commercially viable. The central obstacle is commercial: manufacturers cannot justify investing in alternative sources of active pharmaceutical ingredients (APIs) and key starting materials (KSMs) without confidence that buyers will continue purchasing from them even when cheaper Chinese supply is available.

  To break China's leverage over the supply of essential medicines, Congress should establish a Comprehensive Critical Drug Diversification (C2D2) program built around U.S.-India cooperation. The program should:

  - Establish a pharmaceutical supply chain early warning mechanism for a list of essential medicines to identify APIs, KSMs, and critical intermediates and their production sites; identify single-country and single-facility dependencies; flag emerging disruptions; and direct purchasing and investment toward gaps.
  - Authorize the U.S. Department of Health and Human Services to establish a Federal Trusted Demand Program, including multiyear commitments for essential medicines made with qualifying U.S. or trusted partner APIs and KSMs. The U.S. government should buy finished medicines it needs while making verified sourcing of critical inputs a condition for participation. The U.S. government should also ensure consistent purchase pricing across agencies. The program should:
    - Coordinate how participating agencies verify suppliers and the origins of their critical inputs, including subpoena authority to demand documentation;
    - Have the ability to make multi-year purchase commitments for essential medicines; and
    - Direct the U.S. government to work with providers to address cost disparities of buying medicines under long-term contracts.
  - Include an initiative to support public and private investment in API and KSM production in India. For APIs, producers should be mandated to prove minimal and declining reliance on Chinese KSMs to receive the funding. The initiative

should, to the maximum extent practicable, require matching funds from India and coordination with Indian producers to withstand predatory Chinese pricing.

- As the 14th Dalai Lama advances in age, China is preparing to turn his succession into an international contest over legitimacy and will likely use coercive tools to shape its outcome. India, which hosts the Dalai Lama and the Tibetan government-in-exile and shares a longstanding disputed border with China, is the center of gravity in this dispute.

  Congress should make it the policy of the United States that the Gaden Phodrang Trust is the sole legitimate authority to identify and recognize the successor to the 14th Dalai Lama and that the United States will not recognize any successor selected or installed by the Government of the People's Republic of China. To carry out this policy and ensure U.S. government readiness for the Dalai Lama's succession, Congress should direct the Secretary of State to:

  - Lead an internal interagency tabletop exercise on succession scenarios, with participation by the National Security Advisor, the Director of National Intelligence, and the Secretary of Defense, and brief the appropriate congressional committees on its findings within 180 days.
  - Establish a senior-level channel with the Government of India for succession contingency planning, including intelligence sharing on Chinese influence operations, and report to the appropriate congressional committees on its status within 180 days.
  - Conduct Track 1.5 and Track 2 dialogues and tabletop exercises with Indian counterparts on the political and security implications of succession scenarios.
  - Coordinate with allies and partners on a diplomatic response that denies international legitimacy to any successor selected by the People's Republic of China.
  - Counter succession-related influence operations by strengthening the Central Tibetan Administration's cybersecurity and resilience against China's cyber and artificial intelligence (AI)-enabled disinformation campaigns.

  Congress should provide authorizations and appropriations to carry out these activities.

- China's efforts to constrain India's regional influence and expand its military presence in the Indian Ocean underscore the importance of a stronger U.S.-India strategic partnership. The United States should deepen operational defense cooperation and foster lasting relationships among the next generation of American and Indian leaders. Congress should:

  - Direct the Secretary of Defense and Chairman of the Joint Chiefs of Staff to engage with their Government of India counterparts to strengthen coordination on undersea and maritime domain awareness in the Indian Ocean.

- These efforts should prioritize moving beyond military exercises toward sustained operational cooperation, including systematic intelligence and surveillance information sharing, coordinated monitoring of Chinese naval and submarine activity, and improved procedures for responding to maritime threats.

- Create an Indo-American Strategic Leadership Exchange Program to forge generational ties among rising leaders in defense, government, business, and academia.

Appendix I: After Ignoring Early Warnings, India Excludes Huawei and ZTE from 5G

India has been forward-leaning in some aspects of economic statecraft against China, yet action often lagged behind early recognition of the risks. In 2010, Indian officials sounded the alarm on Huawei and ZTE in telecom networks, years before many governments in the West openly acknowledged the threat.[331] Despite these early warnings, as of 2020 India's state-owned Bharat Sanchar Nigam Limited had sourced 44 percent of mobile network equipment from ZTE and 9 percent from Huawei.[332] Mahanagar Telephone Nigam, another state-owned operator, had sourced 10 percent from Chinese vendors, while private network operators used Huawei or ZTE for 30 to 35 percent of their 4G equipment.[333] After the 2020 Galwan clash, India effectively excluded Huawei and ZTE from its 5G network launched in 2022, placing it among a relatively small group of countries to do so.[334]

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CHAPTER 4: CHINA'S PREDATORY DIPLOMACY IN LATIN AMERICA: BROKEN PROMISES, HARMFUL PRACTICES

Executive Summary

For two decades, China has presented itself to Latin America and the Caribbean as a provider of economic opportunity without political conditions, infrastructure without Western constraints, and respect for sovereignty without interference in domestic affairs—yet it has repeatedly failed to deliver. Its economic engagement has reinforced a neocolonial trade pattern in which the region ships raw materials and buys back finished goods. A "China Shock 2.0" export wave is undercutting local manufacturers and driving the region's trade deficit with China to a record high. Beijing's shift from financing toward ownership and control of ports, power grids, telecommunications, digital, and space infrastructure has converted commercial investment into political leverage and strategic vulnerabilities. Beneath its pledge of noninterference, Beijing works to influence regional institutions through subnational diplomacy, media and diaspora cultivation, coercion relating to Taiwan, and corruption. At the same time, Chinese-linked actors sustain a "Silk Road of Crime" supplying fentanyl precursors, laundering cartel proceeds, driving illicit resource extraction, and supporting other destabilizing illegal activities that Beijing only selectively addresses.

These trends unfold during a period of both vulnerability and opportunity. China's principal authoritarian partners are weakening: Nicolás Maduro has been removed in Venezuela, Cuba faces an acute crisis, and Nicaragua confronts intensifying U.S. pressure. The United States is contesting Chinese influence and finding receptive audiences among new pro-U.S. leaders moving to diversify trade, restrict Chinese technology, and reclaim strategic assets. Yet two decades of embedded relationships across the region's economies, infrastructure, and institutions have created dependencies that are costly to unwind, and China's successes in emerging sectors such as electric vehicles (EVs) and artificial intelligence (AI) ensure it will remain formidable.

Key Findings

- China has inconsistently delivered on promises to advance Latin American development, sovereignty, and security. Instead, its engagement has deepened regional dependence, constrained government autonomy, and aggravated governance challenges.

- The United States is pushing back against some instances of Chinese influence, including by pressuring Beijing's authoritarian partners in Venezuela, Cuba, and Nicaragua. China's muted response, along with growing skepticism among new pro-U.S. leaders, may constrain its near-term agenda. Nevertheless, its subnational networks, critical infrastructure presence, and strength in technologies such as EVs and AI will continue to give it influence in the region.
- The view that China's regional engagement centers on high-profile Belt and Road Initiative (BRI) projects is outdated. Beijing now uses national, subnational, and multilateral channels to create overlapping economic and political dependencies that endure across election cycles.
- Beijing's trade ties have hindered Latin American industrialization and diversification. The region exports raw materials and imports finished goods, while People's Republic of China (PRC) firms dominate higher-value refining. As exports to China have risen, regional manufacturing employment and value added have declined. China Shock 2.0 excess capacity exports threaten further economic harm to the region's manufacturers, contributing to a record $46.9 billion regional trade deficit with Beijing last year and prompting some governments to raise trade barriers.
- China's operational control of ports, telecommunications, energy, and digital networks creates strategic leverage over host governments and potential vulnerabilities for regional sovereignty and U.S. national security.
- Beijing frequently operates below the national level, cultivating governors, mayors, and provincial officials through commercial agreements, sister city partnerships, and Party contacts. These relationships survive elections, provide alternative channels when national governments resist Beijing, and create commitments that are difficult to unwind.
- China's selective law enforcement cooperation leaves gaps that China-linked actors exploit. A "Silk Road of Crime" supplies criminal syndicates with drug precursors, money laundering services, illicit extraction networks, and shell companies—activities Beijing often declines to address.

Introduction

In January 2026, Panama's Supreme Court annulled a Hong Kong-based company's concessions to operate ports at both ends of the Panama Canal after an audit found legal violations and almost $1 billion in lost government revenue. Chinese authorities and state-owned enterprises (SOEs) quickly retaliated: COSCO suspended operations at Balboa Port, while Chinese authorities reportedly detained hundreds of Panama-flagged vessels, prompting ships to abandon Panama's registry and threatening an important source of government revenue. The episode captured a central feature of China's engagement in Latin America: commercial relationships

that appear mutually beneficial can become instruments of coercion when a government asserts its sovereignty or challenges Beijing's interests.

Panama is not an isolated case. For two decades, Beijing has presented itself as offering economic opportunity without political conditions, infrastructure without Western constraints, respect for sovereignty without interference, and cooperation against rising security threats. Yet China has often failed to deliver on its promises. Instead, it has deepened Latin America's dependence on Beijing while in some instances threatening sovereignty.

This chapter first explains China's evolving interests and methods in Latin America. It then examines how the region's commodity-based trade with China has hindered industrialization while China Shock 2.0 threatens local manufacturers; how Chinese control of strategic infrastructure creates political leverage and security vulnerabilities; and how Beijing seeks influence through subnational diplomacy, media and diaspora outreach, political coercion, and corruption. The chapter also assesses China's growing security engagement and the "Silk Road of Crime" sustained by Chinese-linked criminal networks before considering the implications for the United States. Although shifting regional politics offer Washington new opportunities, China's deeply embedded relationships and growing strength in sectors such as EVs and AI ensure it will remain a formidable regional actor.

China's Interests in Latin America

China's interests in Latin America span economic and resource issues, its traditional diplomatic recognition agenda, and its broader efforts to increasingly influence the "Global South" to grow its geopolitical power.

From an economic and trade perspective, Latin America is an important source of food, energy, and raw materials for China; a growing export market; and an opportunity for China to grow its global leverage through infrastructure investment. The commodity boom of the 2000s made China a major buyer of South American exports, and Latin American countries continue to supply products China needs to sustain its large population and industrial economy—including soybeans, petroleum, iron ore, copper, lithium, and other energy-transition minerals.[1] The region also provides a growing market for Chinese exports. China-Latin America and the Caribbean trade grew from almost $12.6 billion in 2000 to $548 billion in 2025; China is now South America's largest trading partner and the second-largest trading partner with the whole region (after the United States), accounting for 13 percent of Latin America and the Caribbean's exports and 22 percent of its imports in 2024.[2]

In recent years, China has found strategic benefit from infrastructure investment in Latin America. During the 2010s, Beijing layered onto its trade ties large-scale lending, infrastructure construction, investment, and BRI. More recently, the composition of Chinese investment activity has changed: large sovereign loans have declined from their peak a decade ago, while Chinese investment is moving into renewable energy, EVs, energy-transition minerals, telecommunications, digital infrastructure, and other emerging sectors.[3]

China explicitly identifies the "One China principle" as a political foundation for its relations with Latin America. Latin America and the Caribbean contain seven of Taiwan's remaining formal diplomatic partners, making the region important to Beijing's campaign to isolate Taipei.

The region constitutes an important bloc within the "Global South" and in international institutions, where Beijing seeks support for its positions on Taiwan, global governance, development, and other issues. China has consequently institutionalized its engagement through mechanisms such as the China-Community of Latin American and Caribbean States (CELAC) Forum while expanding relationships with governments, political parties, local officials, and regional organizations.[4]

At the same time, Beijing has cultivated an image as a partner willing to expand trade and investment, deliver infrastructure on more flexible terms, and engage governments without challenging how they manage their internal affairs. More recently, China has broadened this appeal by offering assistance in confronting the region's mounting security problems. For governments grappling with persistent infrastructure deficits, limited access to capital, and rising public insecurity, that offer seemed to address genuine needs and provided an attractive alternative to traditional partners.

Beijing has built a diverse set of economic, institutional, technological, and political tools for pursuing its interests. China's May 2025 joint action plan and December 2025 policy paper for the region organize future engagement around five programs—"Solidarity," "Development," "Civilization," "Peace," and "People-to-People Connectivity"—encompassing political coordination, trade, investment, technology, culture, media, security, law enforcement, and societal ties.[5]

Despite China's deepening influence, new Latin American leaders recognize the gap between Beijing's promises and practices, as reflected in growing efforts to diversify trade, restrict Chinese technology, reclaim strategic infrastructure, and reconsider diplomatic alignments. Yet recognizing the problem is not the same as reversing it. China's influence has become embedded across the region's economies, infrastructure, institutions, and security relationships over many years.[6] The cost of reducing those dependencies will continue to grow over time if not addressed.

China's Authoritarian Partners Are Weakening

China remains an important external supporter of three of Latin America's most authoritarian governments—Cuba, Venezuela, and Nicaragua—providing diplomatic backing, trade, investment, development assistance, and political support against U.S. pressure. The relationships differ in age: Beijing's partnership with communist Cuba spans decades, its close relationship with Venezuela dates largely to the Chávez era, while its alignment with Nicaragua accelerated only after the Ortega government abandoned Taiwan and restored relations with the PRC in 2021. All three governments, however, now face growing vulnerabilities: Maduro has been removed from power, Cuba is experiencing an acute economic and energy crisis as the United States increases efforts to isolate the regime, and

Nicaragua faces intensifying U.S. economic pressure even as President Daniel Ortega and his wife and Co-President Rosario Murillo consolidate domestic political control.

In Venezuela, China developed an especially close relationship with the Chávez and Maduro governments, eventually designating Venezuela an "all-weather strategic partnership."[7] As recently as May 2025, General Secretary of the Chinese Communist Party (CCP) Xi Jinping promised Maduro continued Chinese support for Venezuela's sovereignty and social stability and deeper cooperation.[8] That partnership suffered an unprecedented setback in January 2026, when U.S. forces captured Maduro just a few hours after he had met with a Chinese envoy. Chinese-made anti-aircraft radars reportedly failed to help the Venezuelan military defend against the U.S. operation.[9] Beijing strongly condemned the operation as a violation of Venezuelan sovereignty and demanded Maduro's release.[10] Yet China did not intervene militarily or offer significant new assistance; instead, Chinese regulators reportedly began reviewing Chinese banks' exposure to Venezuela.[11] By June, Xi was communicating with acting President Delcy Rodríguez, suggesting Beijing was adapting pragmatically to Venezuela's post-Maduro political reality.[12] In August 2026, Rodríguez's government reportedly reassigned five oil fields from PRC firms to a Venezuelan company in which the U.S. Department of Defense intends to take an equity stake.[13]

Cuba remains Beijing's closest ideological partner in the region, with Xi describing China-Cuba relations as an "ironclad" friendship between authoritarian states.[14] In 2023, the White House confirmed that China has had a spy base in Cuba since at least 2019.[15] According to the *Wall Street Journal*, U.S. officials report that China runs three intelligence stations on the island,* and Chinese telecom employees also reportedly support Cuban signals intelligence facilities, enabling intelligence collection on U.S. Central Command (CENTCOM), U.S. Southern Command (SOUTHCOM), space launch sites, and maritime activities.[16] That relationship has become more valuable to Havana as the loss of Venezuelan oil and growing U.S. pressure have aggravated Cuba's severe economic and energy crisis. China has provided emergency food assistance and helped expand Cuba's solar generating capacity while repeatedly demanding that Washington end its sanctions and pressure on Havana.[17] Following new U.S. sanctions against President Miguel Díaz-Canel and other Cuban officials in June, Beijing pledged continued support for Cuban sovereignty and security.[18] Consistent with its broken promises throughout the region, however, even pledges based on an "ironclad" friendship have meant little practical assistance.

The most recent iteration of Beijing's relationship with Nicaragua has expanded remarkably quickly. Since Nicaragua broke diplomatic relations with Taiwan in 2021, Beijing and the Ortega-Murillo government have established a strategic partnership and free trade agreement.[19] These ties have deepened as Washington has moved in the opposite direction: the United States imposed new sanctions in 2025–2026 targeting corrupt officials, regime-linked companies, and members of the Ortega family.[20] Unlike Maduro, however, Ortega

*Some of these are jointly operated with Havana. Alexander Ward and Vera Bergengruen, "U.S. Warns of Growing Russian and Chinese Spying in Cuba," *Wall Street Journal*, May 22, 2026.

is still in control. His July 2026 declaration that Nicaragua would cease holding competitive elections underscored how thoroughly he and Murillo have consolidated domestic power, even as the United States continues to try to isolate Nicaragua internationally.[21]

China's Economic Ties to Latin America Produce Neocolonial Trade Dynamics

Beijing promised that its economic engagement with Latin America would be a partnership for shared development. In its *2025 Policy Paper on Latin America and the Caribbean*, the PRC's Ministry of Foreign Affairs pledged to share "Chinese-style modernization development opportunities" through its Global Development Initiative* and "high-quality" BRI collaboration.†[22] Contrasting its approach against a thinly veiled reference to U.S. "unilateral bullying," Beijing claimed its vision for the region will result in "common [mutual] development" and "inclusive economic globalization."[23] Chinese state-run media claims that PRC infrastructure projects have helped generate over one million jobs throughout the region, and Chinese EV brands like BYD, Great Wall Motors, and Chery have become seemingly ubiquitous on streets of many Latin American countries, reinforcing a narrative that Beijing is providing real benefits to everyday people.[24]

Instead, China's economic ties to Latin America resemble a neocolonial relationship: the PRC sources raw materials from the region and exports them back as finished goods.[25] As Latin American economies specialize in raw material exports, industrialization stalls.[26] Moreover, the recent surge in China's exports to developing countries threatens to cut off opportunities for regional exporters just getting a foothold in global markets while putting pressure on established manufacturing bases. In response, a number of countries in the region are moving to reduce trade exposure to the PRC, presenting an opportunity for deeper economic alignment with the United States.

China's Demand for Raw Materials Undermines Long-Term Growth and Creates Dependence

China's outsized demand for raw materials has deepened its trade and investment ties with resource-rich Latin America but stymied the region's industrial growth and locked it in a cycle of dependence on commodity exports. The PRC's post-2001 rise as a manufacturing powerhouse and its concurrent construction boom drove voracious demand for raw materials, including from Latin America (see Figure 1).[27] Beijing's international investment and lending portfolio has reinforced this trade dynamic, including funding mines to extract resources as well as ports and other transportation infrastructure to export ores and agricultural products to the PRC.[28] (For more on

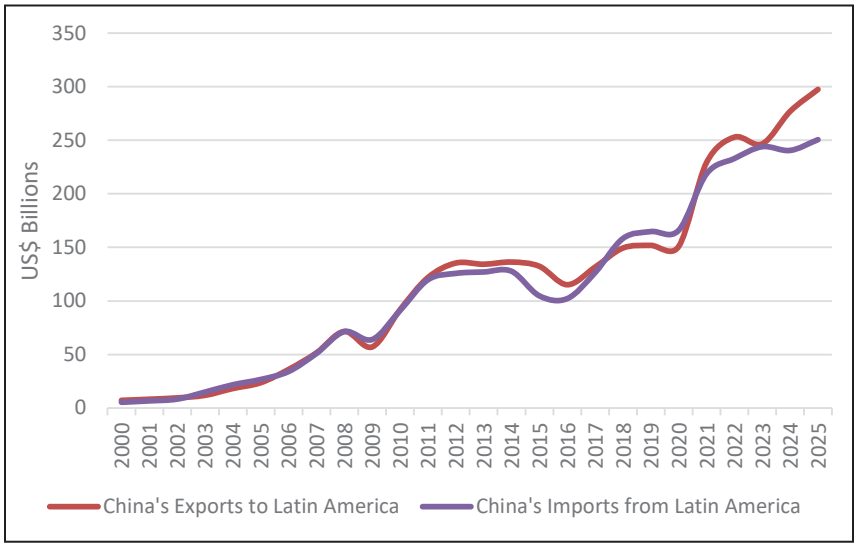
*The Global Development Initiative aims to promote China's leadership in the international development sphere. For more on the initiative, see U.S.-China Economic and Security Review Commission, *China 201: China's Three Global Initiatives*, March 31, 2026.

†The PRC started referring to "high-quality" BRI collaboration in response to criticism of early projects' negative impact on the environment, local communities, debt, and security. Beijing has shifted toward smaller investments that better align with its economic priorities, including low-carbon energy, EVs, and data centers. Francisco Bencosme, written testimony for U.S.-China Economic and Security Review Commission, *Hearing on China's Expanding Interests in Latin America: Development, Leverage, Coercion, and Crime*, March 19, 2026, 5–6.

international financial institutions' role in growing the China-Latin America trade relationship, see "The PRC Uses Multilateral Institutions to Build Local-Level Ties" later in this chapter.)

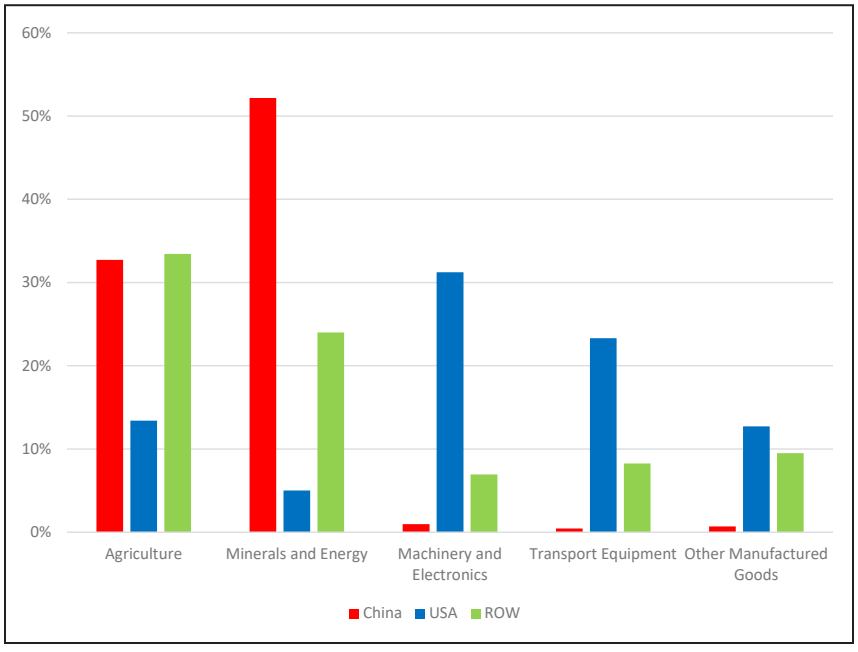
Two decades later, these trends continue unabated. Minerals, energy, agriculture, and food products made up 85 percent of Latin America's goods exports to China in 2024, up from 76 percent in 2017 (see Figure 2).[29] Extracted mineral and energy exports have more than doubled since 2017, while processed metal exports fell by 12 percent.[30] By contrast, U.S. imports from the region favor manufactured goods over commodities. Machinery, electronics, and transport equipment account for half of Latin American exports to the United States and have grown by 54 percent since 2017.[31] Those types of manufactured exports to the PRC fell 32 percent over the same period.[32]

Figure 1: China's Overall Goods Trade with Latin America, 2000–2025



Source: China's General Administration of Customs, via Haver Analytics, accessed February 24, 2026.

Figure 2: Select Sectors' Share of Latin America's Exports to China, United States, and Rest of World, 2024



Note: HS codes are grouped as follows: Agriculture (HS 01–24), Minerals and Energy (HS 25–27), Machinery and Electronics (HS 84–85), Transport Equipment (HS 86–89), and Other Manufactured Goods (HS 64–71 and 90–99).
Source: UN Comtrade, accessed June 10, 2026.

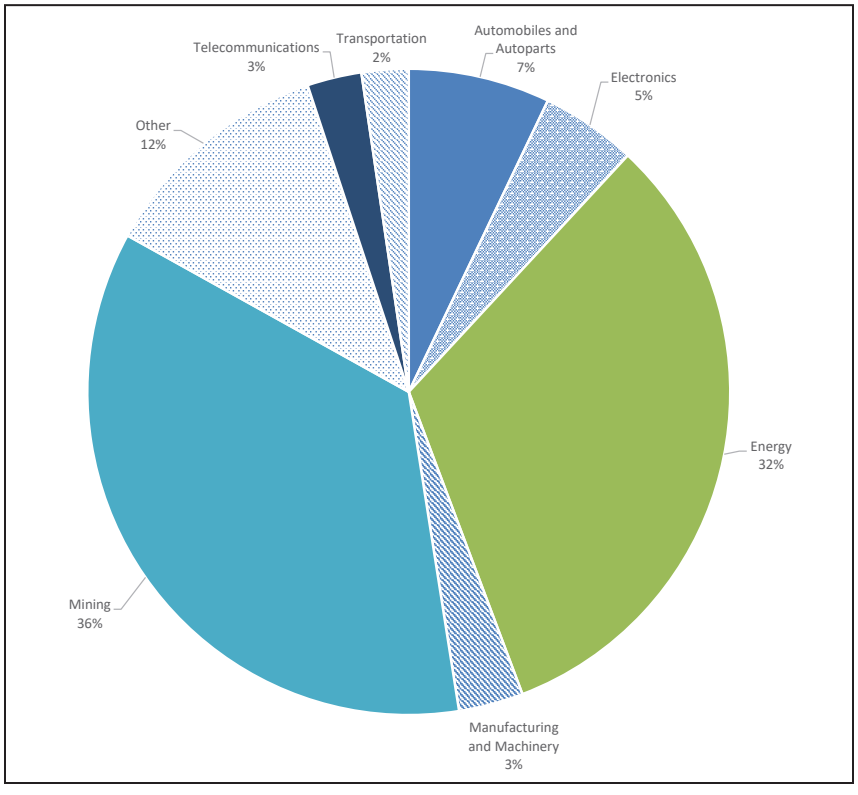
PRC investments in Latin America are similarly concentrated in mining and energy (see Figure 3). Although China's overall investment flows to the region have slowed since 2019, average annual investment in mining has increased from $3.5 billion in the 2010s to $4.2 billion in the 2020s, reflecting the PRC's continued demand for raw materials from the region.[33] Beijing's largest mining investments in the past few years include Tibet Summit Resources' 2022 greenfield* investment in two lithium extraction projects and a processing plant in Argentina ($1.7 billion); Jiangxi Copper's 2025 acquisition of SolGold in Ecuador ($1 billion), which included one of the largest undeveloped copper deposits in the world; and CMOC Group's 2026 announced greenfield investment in the Los Cangrejos gold-copper-molybdenum mine in Ecuador ($1.7 billion)—one of the Western Hemisphere's largest undeveloped gold projects.[34]

The region's growing reliance on commodity exports to China has coincided with a contraction in manufacturing's share of GDP, a pattern that leaves the region's economic growth more dependent on Beijing's continued appetite for its raw materials. Research from economists at the University of Lisbon shows that Latin America's manufacturing employment and value added have both declined as

*Since 2022, Chinese FDI in Latin America has predominantly been in the form of greenfield investment rather than mergers and acquisitions. "China Cross-Border Monitor," *Rhodium Group*.

exports to the PRC increased.*[35] Economists have long warned that developing economies undergoing this kind of manufacturing decline at low income levels face "premature deindustrialization," potentially cutting off the industry-led model that has historically driven sustained long-term growth.[36] The UN Industrial Development Organization warns that Latin America is at risk of this outcome, with value-added growth lagging behind the global average and the region maintaining a persistent manufacturing trade deficit.[37]

Figure 3: Chinese Foreign Direct Investment in Latin America by Sector, 2000–2025



Source: "2026 Monitor of Chinese OFDI in Latin America and the Caribbean," *Red ALC-China*.

China Shock 2.0 and Exports of Subsidized Production Threaten Local Businesses

The PRC's trade in manufactured goods and related investment are in part driven by the need to find new markets for the excess production resulting from the CCP's distorted economic model. Over the past five years, Latin America's trade deficit with China has

*This dynamic resembles the "Dutch disease," in which a commodity boom diverts capital and labor toward resource extraction and away from manufacturing, contributing to de-industrialization and weaker long-term growth. Arsham Reisinezhad, "The Dutch Disease Revisited: Consistency of Theory and Evidence," *Environmental and Resource Economics* 87 (December 2023): 553–557; Christine Ebrahimzadeh, "Dutch Disease: Wealth Managed Unwisely," *International Monetary Fund*, accessed September 10, 2026.

expanded (see Figure 1). In 2021, the region had a $10.5 billion trade deficit with the PRC, as Chinese production rebounded following COVID-19.[38] By 2025, that deficit had grown over four times to $46.9 billion, Latin America's largest-ever trade deficit with China.*[39] PRC exports have been driven by the same basket of advanced manufactured goods contributing to China Shock 2.0.† Automobiles, auto parts, and display modules accounted for over one-third of the growth in China's exports to the region since 2021.[40] During the Commission's May 2026 trip to Mexico, multiple interlocutors expressed concern that Chinese-branded internal combustion and electric light vehicles had rocketed from less than 1 percent of domestic sales in 2020 to 17 percent in H1 2026.‡[41] Although EVs only made up 13 percent of total sales in H1 2026, PRC firms have an outsized share of that market, with BYD alone accounting for 36 percent of those cars.[42] Low-technology industries like textiles have also seen increased imports of Chinese goods, leading some factories to shut down.[43]

In addition to increasing exports to the region, PRC firms are investing in Latin America's manufacturing sector, but they rely on Chinese supply chains, contribute relatively little to regional economies, and threaten domestic industries with deeper local supply chains. An Organisation for Economic Co-operation and Development (OECD) study found that while China expanded its foreign direct investment (FDI) in various sectors in Latin America between 2014 and 2024, "its presence in upstream, high-value activities remains limited" and marginal compared to U.S. and EU investment.[44] The same study noted that over the same time period, U.S. and EU investment dominated research and development (R&D)-related FDI in the region (combined at 72 percent), while the PRC accounted for only about 7–8 percent.[45]

Investment in the Mexican automotive sector illustrates this phenomenon. Most Chinese FDI in Mexico, Central America, and the Caribbean is in manufacturing, over half of which is in the automotive sector.[46] In Mexico, PRC vehicle manufacturers import mostly or fully assembled vehicles from China, often in the form of knocked-down kits—collections of parts that are exported for final assembly.§[47] Chinese truck manufacturer Shacman operates two plants that assemble vehicles from completely knocked-down kits, and Giant Motors buys partially assembled autos from JAC in the PRC that are then adjusted for the Mexican market.¶[48] According to

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*Four countries in Latin America run individual trade surpluses with China, all of which are metals exporters: Bolivia, Brazil, Chile, and Peru. Rebecca Ray and Enrique Dussel Peters, "China-Latin America and the Caribbean Economic Bulletin: 2025 Edition," *Boston University Global Development Policy Center*, November 2025, 8–9.

†For more on China Shock 2.0, see U.S.-China Economic and Security Review Commission, Chapter 8, "China Shock 2.0," in *2025 Annual Report to Congress*, November 2025, 429–471.

‡Chinese vehicle sales may decline as a result of tariffs that took effect in January 2026. Imports fell by 43 percent year-on-year from January to May 2026. Vehicle sales have not yet been affected because Chinese automakers front-loaded shipments ahead of the new tariffs. Emily Green, "Chinese Car Sales in Mexico Surge Despite New Tariffs," *Reuters*, July 20, 2026.

§Assembling a vehicle from kits does not qualify as a "substantial transformation," so these cars would likely be considered Chinese products if imported into the United States. David Coffin, Sharon Ford, and Edward Petronzio, "Chinese Automotive and Electronics Trade and Investment in Mexico," *U.S. International Trade Commission Office of Industry and Competitiveness Analysis*, November 2024, 6–7.

¶JAC México's CEO claims that 25 to 30 percent of the company's parts are sourced in Mexico. Teresa De Alba, "JAC Mexico Grows Output 30x Since 2017 to 30,000 Units," *Mexico Business News*, April 8, 2026.

its Mexican distributor, Chinese truck maker Foton chose one of its factory locations because the location would "facilitate the importation of parts from China."[49] This contrasts with U.S. manufacturers in Mexico, which tend to nurture local supply chains and send some parts back and forth across the border up to a dozen times as part of an integrated production process.[50] For example, Mexico is the second-largest source of auto parts for General Motors, which has approximately 650 tier-one suppliers in the country.[51]

PRC Investments near U.S.-Mexico Border Pose Tariff Evasion and Surveillance Risks

Manufacturing near the U.S. border accounts for a significant amount of China's FDI in Mexico. Since 2000, Nuevo León and Coahuila—two of the six border states—together received almost one-third of PRC firms' total investment in the country.[52] Those companies primarily invested in manufacturing: 70 percent in Nuevo León went to electronics, industrial machinery, the auto sector, and other manufacturing, and 82 percent in Coahuila went to autos.[53]

Evidence indicates that PRC firms invested along the border to avoid U.S. tariffs. Chinese investment in Mexico in key manufacturing sectors increased rapidly after U.S. tariffs on PRC products began rising, increasing about sevenfold between 2018 and 2024.[54] This was followed by "a parallel surge in Mexican imports from China in these same sectors."[55] According to the government of Nuevo León and news reporting, firms like Lingong Machinery Group and home appliance maker Hisense invested near the border to export to the United States.[56] Economists from the Federal Reserve estimated that, while there was little direct transshipment through Mexico, about $16.4 billion of the increase in Mexican exports to the United States between 2021 and 2024 came from Chinese companies using Mexico as a "backdoor" to access the U.S. market.[57]

Mexico's lack of effective foreign investment screening for national security also exposes the U.S.-Mexico border to surveillance. Mexico does not have an investment review mechanism focused on security threats similar to the U.S. Department of the Treasury's Committee on Foreign Investment in the United States (CFIUS) process.[58] In August 2026, over two years after signing a memorandum of intent to establish a bilateral working group on foreign investment review with the U.S. Treasury, Mexico introduced legislation to strengthen investment screening.[59] The bill would add three national security ministries—the Army, Navy, and Secretariat of Security and Citizen Protection—to the National Foreign Investment Commission.[60] However, it only mandates review when foreign entities would gain majority stakes in sensitive sectors,* likely leaving potential security risks from some types of Chinese investment unaddressed.[61]

*These sectors include critical infrastructure; critical technology like AI, energy, and defense; dual-use goods; and access to sensitive data. Henri Capin-Gally et al., "Mexico FDI: President Sheinbaum Proposes National Security Screening for Foreign Investment," *White and Case*, September 2, 2026.

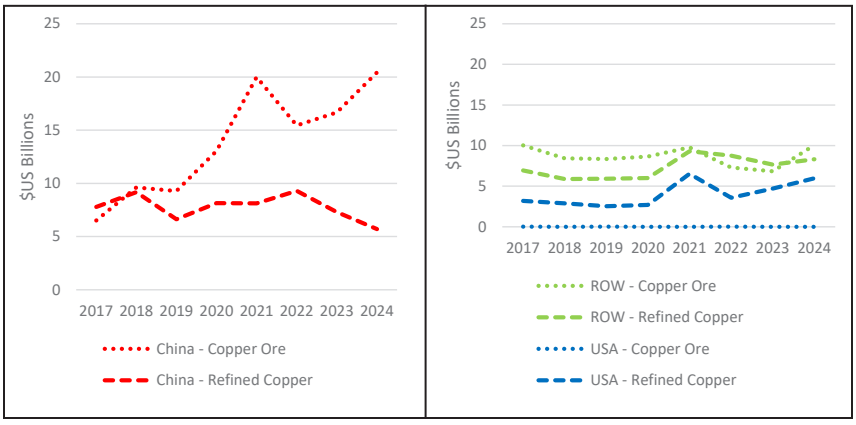
Critical Mineral Trade and Investment Illustrate China's Extractive Relationship with Latin America

China's investments in Latin American critical minerals follow a neocolonial trade dynamic in which developing markets export raw materials abroad, where higher-value processing and manufacturing are concentrated and finished goods are exported back to the developing market.[62] Since 2015, PRC investment in Latin American critical minerals related to energy has more than doubled from $10.1 billion in 2015–2019 to $21.7 billion in 2020–2024.[63] These investments are matched by accelerated exports of ores: since 2020, the region's unprocessed copper exports to China have nearly doubled, while unprocessed lithium exports have quintupled.[64] For example, a decade after China Minmetals acquired Las Bambas, one of Peru's most productive copper mines, Peru's unrefined copper exports increased and the PRC's share grew from 60 percent in 2017 to 75 percent in 2024.*[65] Exports to China account for 97 percent of that increase.[66] In contrast, refined copper exports (reflecting value-added processing in Peru) to the PRC remained flat, while exports of those products to the rest of the world more than doubled.[67]

Trade with Chile shows how PRC firms can erode value-added capacity, even without investment. Chile's copper mining industry is nationalized and smelting is dominated by state-owned firms, preventing Chinese investment despite longstanding PRC interest.[68] However, nationalization has not insulated the country's copper smelters from competition with Chinese refiners. The PRC has grown its capacity to domestically smelt or refine copper, and high-purity materials' contribution to Chinese copper imports has fallen for over a decade.[69] The PRC accounts for 85 percent of all new production of refined copper since 2019, and as of 2024 it accounted for 45 percent of total global production.[70] As Beijing's domestic smelting capacity expanded, PRC smelters competed aggressively for raw copper, even paying a premium to secure it.[71] Chilean miners exported more raw ore to China (see Figure 4), leaving Chile's value-added refiners struggling to compete for their own country's ore and reducing production by 15 percent since 2019.[72] The PRC plays such a big role in the market that this phenomenon has shifted the composition of Chile's total exports. In 2017, 24 percent of Chile's exports were copper ores and 26 percent were refined copper products.[73] In 2024, 31 percent of its exports were ores and only 20 percent were refined.[74] Over the same time period, the country's exports of high-purity copper to the United States increased by 87 percent.[75]

*Las Bambas's output is shipped overseas for processing, primarily to China. Lydia Vlasto and Katherine Walsh, "Las Bambas Copper Mine," *AidData*, January 2026, 8; "Las Bambas: Site Visit Presentation," *MMG*, April 2017, 19.

Figure 4: Chile's Copper Exports to China, United States, and Rest of World, 2017–2024



Note: Copper ore is HS 2603. Refined copper products are HS 7401–7419.
Source: UN Comtrade, accessed June 10, 2026.

The United States Has Taken Some Steps to Capitalize on Local Concerns About Chinese Trade and Investment

Growing concern about China's economic engagement in Latin America gives the United States an opportunity to counter PRC economic influence in the region through high-value investment and supply chain integration. Newly elected political leaders are re-evaluating their countries' relationships with Beijing. Bolivia's new president plans to review Chinese and Russian lithium contracts, make them public, and open up investment to the United States and other new partners.[76] In Honduras, new leadership is reevaluating its 2023 decision to break ties with Taiwan and establish relations with the PRC. Following that decision, Honduras's exports of shrimp products plummeted from $454 million in 2021 (9.1 percent of total exports) to $248 million in 2024 (3.6 percent of total exports).[77] Honduras and China inked an "early harvest" free trade agreement in 2024, which PRC state-run media promoted as opening up markets for shrimp, and Xi Jinping said Beijing would actively promote Honduran goods in PRC markets.[78] According to Honduras's aquaculture industry association, Honduras sold over twice as much shrimp to Taiwan than to China in 2025.[79] Moreover, Honduras's Congress recently passed a motion to supervise PRC businesses operating in Honduras, inspecting their imports, personnel immigration status, and tax compliance.[80]

Industrialized Latin American countries are especially concerned about the impact of surging Chinese exports on their domestic firms. Mexico and Brazil are the region's two most industrially competitive countries.[81] In December 2025, Mexico raised tariffs on over 1,400 products like apparel, autos, and steel from countries with which it does not have a free trade agreement.[82] Although these tariffs applied to dozens of countries, the Secretary of Economy explained that they were targeted at China, particularly its auto and steel imports.[83] Brazil introduced tariffs on EVs in January 2024, and in January 2026 it did not renew a tariff exemption for EV makers

that import most parts and components from the PRC for assembly in Brazil.[84] Brazil and Chile have both levied antidumping duties on Chinese steel.[85]

Some countries and companies would prefer to partner with the United States because U.S. trade and investment offer Latin America the opportunity to move up industrial value chains and bolster collective economic resilience through supply chain integration. U.S. investment in the region creates more value than PRC investment. The OECD found that the United States—not China—provides the highest-value-added greenfield FDI in Latin America, with nearly half of such investment related to R&D.[86] During the Commission's May 2026 trip to Mexico, several interlocutors supported this concept by pointing to the complementary relationship between U.S. and Mexican auto companies.[87] Automobile-related exports make up over 20 percent of Mexico's total exports to the United States, and the United States is the largest foreign investor in Mexico's auto sector, accounting for 32.5 percent of FDI stock in motor vehicle manufacturing and 25.5 percent in parts manufacturing.[88]

Washington is starting to take advantage of these opportunities to make new investments in Latin America. A Brazilian rare earth mining firm cut short offtake agreements with Chinese firms to receive financing from the U.S. International Development Finance Corporation (DFC).*[89] The DFC has also issued a letter of interest for a $550 million loan to a Brazilian nickel and cobalt mine.[90] These projects mutually reinforce economic security by reducing U.S. reliance on weaponized PRC supply chains† and providing a path to retain value-added processing and refining within the region. While these examples come from the mineral sector, U.S. companies in other fields, including manufacturing, strategic infrastructure, and AI, have opportunities to create true economic partnerships with Latin America.

China's Control of Strategic Infrastructure Creates Leverage and Security Vulnerabilities

China's extensive ownership and operation of Latin American logistics, telecommunications, energy, digital, and space infrastructure creates long-term dependencies and leverage over host governments as well as strategic risks for the United States (see Table 1). Initially driven by commercial ties, China's involvement in the region's infrastructure grew rapidly after the launch of BRI in 2013, even though BRI only formally extended to Latin America in 2018. Through policy and commercial banks, SOEs, and private firms, China has financed ports, power grids, mobile networks, mining projects, and logistics corridors across the region. Throughout, Beijing has presented itself as a reliable development partner helping the region fill the $150 billion annual infrastructure gap without jeopardizing sovereignty.[91]

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*The mine has agreed to sell 100 percent of its initial production with guaranteed price floors to a special purpose vehicle (SPV). That SPV is capitalized by the Department of Defense, other U.S. government agencies, and private investors. The U.S. government has agreed to buy at least $300 million of the SPV's rare earth products. Mie Dahl, "Brazil Rare-Earth Mine Shows Hurdles of Breaking Free from China," *Bloomberg*, August 31, 2026.

†For more on China's weaponization of supply chain dependencies, see U.S.-China Economic and Security Review Commission, Chapter 9, "Chained to China: Beijing's Weaponization of Supply Chains," in *2025 Annual Report to Congress*, November 2025, 472–536.

In practice, opaque contracts and onerous loan terms around these projects have forced local governments to bend to Beijing's preferences or risk economic coercion. As Chinese firms gain ownership, operational control, or privileged access to infrastructure assets, Beijing is positioned to expand its economic influence, shape regional standards, and create vulnerabilities that could be exploited during periods of geopolitical tension.

Table 1: China's Infrastructure Presence Throughout Latin America

Sector	Extent of Chinese Presence	Strategic Implications
Ports & Logistics	Chinese SOEs and private firms are the main investors or administrators of at least 37 ports out of 118 in the region, representing nearly a third of Latin America's ports.	Secures maritime trade routes, improves access to critical resources, reshapes regional trade patterns, and expands Beijing's commercial and geopolitical influence in Latin America.
Electric Power Infrastructure	Significant investments in generation, transmission, and distribution assets in Brazil, Chile, and Peru (see paragraph below for more information).	Creates potential leverage over critical energy systems and raises concerns regarding industrial control system access, surveillance, market concentration, and service disruption.
Telecommunications & Digital Networks	Huawei equipment supports up to 70 percent of the region's 4G-LTE networks; Huawei and ZTE remain significant suppliers as operators transition to 5G.	Increases technological dependence, expands opportunities for data collection, and allows China to shape regional technology standards.
AI Infrastructure	Expanding AI/cloud infrastructure, including five Huawei Cloud regions, new Alibaba data centers, and ByteDance's planned Brazil data center.	Positions Chinese firms to shape emerging AI ecosystems, technical standards, and future digital infrastructure.
Space Infrastructure	Network of 11 space facilities, ground stations, and associated space cooperation agreements across Latin America.	Enhances China's satellite operations, space domain awareness, and potential dual-use capabilities relevant to intelligence collection and military operations.
Subsea Cables	HMN Tech (formerly Huawei Marine) built the South Atlantic Inter Link connecting Brazil to Africa.	Reduces reliance on North American transit, increases Chinese proximity to regional data flows.

Source: Various.[92]

Chinese Firms Control or Have Built Critical Infrastructure Across the Region

Chinese entities have established substantial ownership positions across a variety of strategic infrastructure sectors in Latin America, including investments in electricity generation, transmission, and

distribution assets in several countries. In Lima, Peru, electricity to the city's ten million residents is controlled by two companies, China Southern Power Grid International and China Three Gorges Corporation.[93] In Brazil, State Grid Corporation of China holds a controlling stake in CPFL Energia, which operates generation and distribution assets and has become one of the country's largest owners of electricity transmission infrastructure through acquisitions and transmission line concessions.[94] In Chile, Chinese companies have acquired substantial stakes across the power sector. State Grid's acquisitions of CGE and Chilquinta gave the Chinese state-owned utility control of companies serving more than half of Chile's electricity distribution customers.[95]

Similarly, Chinese telecommunications firms have a significant footprint across Latin American mobile networks, often underbidding their competitors, sometimes at rates below economic cost.[96] Huawei has claimed that its equipment supports as much as 70 percent of the region's 4G-LTE connections.[97] Independent reporting and analysis also document Huawei's role in building six of Brazil's seven 4G mobile networks and supplying about 55 percent of Mexico's 4G network.[98] Huawei and ZTE now rank among the principal suppliers of 5G base stations and core network equipment in major markets, including Brazil, Mexico, Colombia, and Peru, where operators rely on their gear for both existing 4G systems and ongoing 5G rollouts.[99] Huawei has also competed aggressively on upfront price, although a 2025 bid in Costa Rica revealed that Huawei is not always the cheapest option, coming in at $138.9 million for radio access network (RAN) and core network equipment versus Samsung at $128.7 million.[100] Even when Huawei's bids are cheaper than its competitors, these initial savings may not reflect the full cost of its equipment, which can include recurring licensing, maintenance, per-user network fees, and support expenses.[101] Between 2017 and 2024, the internal auditor for Costa Rica's state-owned telecommunications provider issued over 23 reports, criminal complaints, and investigations related to Huawei procurements, including alleged irregularities.[102] During its May 2026 trip to Panama and Mexico, the Commission also heard complaints related to subpar cellular service and network connections.[103]

China has also concentrated investments in Latin America's logistics and trade infrastructure, particularly ports (see Figure 5). Between 2000 and 2025, China provided nearly $24 billion in financing for projects at 168 seaports worldwide.[104] A recent study by the Center for Strategic and International Studies found that Chinese firms helped finance, build, expand, or operate at least 37 of 118 ports in Latin America and the Caribbean.[105] Of these, ten are currently actively managed by Chinese companies, while as of the report publication date seven projects remained ongoing and the status of two others was uncertain.[106] As discussed below, Chinese involvement has often centered on ports that facilitate commodities trade as part of its effort to expand its influence over global commodity markets. (For more on China's efforts to grow its influence in commodities markets, see Chapter 6, "The Price of Everything: China's Bid to Reshape Global Commodities Markets.")

Figure 5: Map of Chinese-Linked Port Projects and Space Facilities in Latin America and the Caribbean



Note: Port locations include projects classified as "active," "in progress," or "unclear." Chinese involvement varies by project and may include ownership, operation, financing, or construction; inclusion does not necessarily indicate Chinese operational control. Balboa and Cristóbal are distinguished because Panama's Supreme Court declared their concession unconstitutional in January 2026, and the Panamanian government subsequently assumed control of the terminals and authorized temporary operating arrangements with other companies in February 2026. Chinese Space Facility includes facilities with a Chinese link. The Atacama Large Millimeter/submillimeter Array (ALMA) is not itself a Chinese facility; the Chinese connection concerns a separate China-Chile astronomical data center that processes data from ALMA.

Source: Various.[107] Created for the U.S.-China Economic and Security Review Commission. Names and boundary representation are not necessarily authoritative.

Chinese firms have also expanded their role in Latin America's undersea cable infrastructure. HMN Tech (formerly Huawei Marine), for example, has helped build or equip undersea cable systems in the region, including Chile's Fiber Optic Austral, Belize's Strategic Evolution Underwater Link, and the Suriname-Guyana Submarine Cable System.[108] A proposed Chile-China Express undersea cable that would connect Hong Kong to Valparaiso has drawn diplomatic tension between Chile and the United States, with Washington

urging Chile to reject the Chinese-backed project and sanctioning three Chilean officials over threats to regional security from the project.[109] The outgoing Boric administration initially approved the project but then quickly rescinded that approval.[110] The new Kast administration has stated that the project remains under review.[111]

These Chinese-built cables help improve connectivity for Latin American countries, but reliance on Chinese suppliers for undersea cable infrastructure can also create data security and network resilience risks. In August 2026, the United States announced a new Caribbean and Central America undersea cable initiative to expand trusted, high-speed connectivity and build more resilient and secure regional networks.[112] The initiative also provides legal and technical assistance to help regional governments adopt trusted-vendor requirements and protect critical infrastructure.[113] (For more on risks from China's role in the subsea cable industry, see Chapter 5, "Active Intercept: China's Efforts to Narrow U.S. Undersea Advantage.")

Financing Terms and Vendor Dependence Convert Investment into Leverage

Beyond the assets themselves, the terms on which China finances and supplies infrastructure give Beijing leverage over recipient governments and embed long-term dependencies. Chinese state-to-state financing arrangements often include broad confidentiality clauses that prevent borrowers from disclosing loan requirements, strong incentives to use Chinese firms and equipment, and resource-backed deals that can trap developing nations in cycles of heavy debt and economic instability.[114] In Venezuela and Ecuador, for instance, China's resource-backed loans tied the countries' debt service directly to volatile commodity exports, arrangements that gave Chinese lenders priority over important revenue streams and reduced borrowers' flexibility in managing financial distress.[115] Contracts also feature cross-default provisions, which can complicate efforts to investigate problematic projects, and, in practice, enable China to use veiled threats of retaliation because they link the fate of one project's financing to other strategically important loans.[116] For example, after Argentina reviewed environmental concerns surrounding a Chinese-financed hydropower project and considered canceling it, Chinese lenders warned that terminating the project could trigger cancelation of financing for a separate railway loan through a cross-default clause.[117] Argentina ultimately proceeded with the hydropower project in part to preserve financing for the railway, which the government considered central to its development goals.[118]

In the telecommunications sector, China's extensive infrastructure investments have created risks of technological dependence, vendor lock-in, and cybersecurity vulnerabilities. They also provide Beijing a potential point of leverage given its control over firms operating under its legal and regulatory framework.[119] China's 2017 National Intelligence Law requires all organizations and citizens to support, assist, and cooperate with the country's intelligence work.[120] As a result, companies such as Huawei and ZTE are legally obligated to provide information or access to Chinese authorities when lawfully requested under Chinese law, meaning that telecommunications networks built on their equipment are vulnerable to exploitation.

Chinese Space Ground Stations Embed Dual-Use Infrastructure Across Latin America

Through the Space Silk Road, China has established a global network of dual-use space infrastructure that supports both civilian activities and the People's Liberation Army's (PLA) growing space capabilities.* The Chinese Academy of Science's Sitian project seeks to establish space research and monitoring equipment around the world.[121] In addition, China's Thousand Sails (also known as SpaceSail) initiative, developed by Shanghai Spacecom Satellite Technology, aims to establish a worldwide network of satellites by 2030, an effort to rival Starlink.[122]

In Latin America, China has established a network of at least 11 space facilities—including satellite ground stations, radio telescopes, and satellite laser ranging stations—providing continuous command, control, and data links to its satellite network and enhancing its space domain awareness capabilities.[123] This network extends China's space domain awareness into the southern hemisphere; provides telemetry, tracking, and command links for Chinese satellites as they transit the region; and embeds those capabilities in a broader constellation of dual-use space facilities in countries such as Argentina, Venezuela, Bolivia, and Brazil.[124]

China's space program is deeply integrated with the PLA despite its efforts to emphasize the non-military use of its global ground stations for navigation, scientific research, and weather forecasting. For instance, the Espacio Lejano Station in Argentina's Neuquén Province is operated by the China Satellite Launch and Tracking Control General (CLTC), an organization with ties to the PLA.†[125] The site is China's first overseas deep-space ground station, equipped with a 35-meter antenna that could be used for signals intelligence and missile guidance.[126] Although China has agreed not to use the station for military purposes, the two countries' contract states that Buenos Aires may "not interfere [with] or interrupt" activities carried out at the station, and Argentine scientists are allocated only 10 percent of the antenna's operating time.[127]

As with other Chinese infrastructure projects in the region, agreements and practices governing these facilities have been criticized for granting Chinese entities broad operational roles while providing limited transparency to host governments. This

*The Space Silk Road refers to China's efforts to expand its global space infrastructure and technology ecosystem by providing partner countries with services such as access to the BeiDou satellite navigation system, low-cost satellite communications, and satellite launch capabilities while securing access to overseas ground infrastructure that expands the reach of China's space networks. For more on the Space Silk Road, see U.S.-China Economic and Security Review Commission, "The Final Frontier: China's Ambitions to Dominate Space," in *2025 Annual Report to Congress*, November 2025, 382–383.

†The China Satellite Launch and Tracking Control General (CLTC) is an ostensibly civilian state-owned entity with longstanding ties to the PLA. Prior to the PLA's April 2024 reorganization, CLTC was associated with the Strategic Support Force's Space Systems Department. Following the dissolution of the Strategic Support Force, the Space Systems Department was reorganized as the PLA Aerospace Force under the Central Military Commission. Jyh-Shyang Sheu, "Space Warfare: From Hybrid Operations to a First Strike," *China Trends*, no. 22 (February 2025): 21–22; U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China 2024*, December 18, 2024, 67–69; Peter Wood, Alex Stone, and Taylor A. Lee, "China's Ground Segment: Building the Pillars of a Great Space Power," *China Aerospace Studies Institute*, March 1, 2021, 21–23, 34–35.

Chinese Space Ground Stations Embed Dual-Use Infrastructure Across Latin America—*Continued*

has occurred most prominently in the case of Argentina's Espacio Lejano station but also in Chinese-backed satellite and ground control projects with Venezuela's Bolivarian Agency for Space Activities and Bolivia's Túpac Katari program, raising concerns about sovereignty and the potential military uses of ostensibly civilian infrastructure.[128] Recent developments signal growing pushback from governments in the region, including Argentina's decision to halt progress on the China-Argentina Radio Telescope and Chile's cancelation of the Cerro Ventarrones Astronomical Park.[129] Despite these setbacks, China is likely to continue its efforts to expand its space footprint in the region. Construction of a deep-space radio telescope in Brazil is still underway, while Chinese satellite companies are seeking to expand their commercial presence.[130] SpaceSail has partnered with Brazil's state-owned Telebras to provide satellite internet services and in 2026 received authorization to provide satellite services in Brazil.[131]

China's Port Investments Deepen Trade and Leverage

By acquiring long-term concessions and building dedicated terminals at key Latin American ports, China is not only investing in infrastructure but also securing operational influence over critical transportation nodes that underpin regional trade and give Beijing greater leverage over supply chains important to both Latin America and the United States. For example, China has invested in Brazil's Port of Santos—the largest seaport in Latin America—which handles nearly 30 percent of Brazil's foreign trade.[132] Investments in port infrastructure can promote economic development, expand trade, and improve regional connectivity. However, Beijing's port investments also advance broader strategic objectives, including securing maritime trade routes, facilitating access to critical resources, and expanding China's commercial and geopolitical influence in the region.[133] PLA writings stress the need to establish "strategic support points" around the world that China can use for both commercial and security purposes.[134] The PLA's reported Project 141 aims to set up various logistics support sites around the world by 2030.[135] As a result, Chinese port investments can present significant security risks for recipient countries, particularly where Chinese firms obtain ownership, operational control, or long-term concessions over strategically important infrastructure.

China's ports reshape regional trade patterns in ways that strengthen its economic ties. Chinese-operated ports are often integrated into broader commodity export corridors linking mines, farms, railways, highways, and logistics networks to Chinese markets.[136] Trade between host countries and China increased roughly 21 percent after Chinese firms secured terminal operating contracts, particularly as Chinese operating entities have facilitated the export of commodities Beijing needs, including minerals and agricultural products.[137] Chinese investments in Brazil have enabled its Port of Santos to handle significant agriculture exports to China.[138] At

the same time, research found that countries where Chinese firms became the sole terminal operators of at least one port saw a 19 percent decline in exports to the rest of the world.[139]

CCP Coercion on Global Display: Panama Shows How Far Beijing Will Go to Hold Strategic Assets

Beijing's actions in Panama typify how Beijing secures access through weak governance and wields economic coercion when its access is threatened. In 2017, Panama switched diplomatic recognition from Taiwan to the PRC after years of Chinese efforts. In the wake of the switch, allegations emerged that then–President Juan Carlos Varela received bribes linked to the decision.[140] In the years that followed, Chinese SOEs secured millions of dollars in infrastructure contracts, including a $1.42 billion contract to design and build a fourth bridge over the Panama Canal and a $165 million contract to develop a cruise terminal on Panama's Pacific coast.[141]

In 2021, Panama renewed a 25-year concession by Panama Ports Company, a subsidiary of Hong Kong-based CK Hutchison, to operate the key ports of Balboa and Cristóbal on either side of the canal through 2047. Rather than conducting a new competition or renegotiating the terms, the renewal extended the original concession awarded to a predecessor company in 1997, when Hong Kong was under British sovereignty.[142] Panamanian authorities certified that the company had met its obligations based on an audit finding "substantial compliance."[143] However, Panama's General Comptroller subsequently challenged that assessment, alleging that the renewal had not complied with all legal procedures, that there had been breaches of contract, and that the government had only obtained $483 million of the $1.3 billion it could have received.[144]

In the last two years, Panama has incurred China's ire. In 2025, CK Hutchison planned to sell its international port assets to a consortium that included U.S. asset manager Blackrock.[145] Although CK Hutchison is a Hong Kong company, Beijing intervened in the sale, seeking to block it outright or at least give Chinese state-owned shipping company COSCO a continuing role.[146] China's decision to take the extraordinary step to intervene in a private transaction of a Hong Kong company indicates the priority Beijing places on control over port infrastructure. Further complicating matters for China, in January 2026, Panama's Supreme Court declared unconstitutional the law authorizing the CK Hutchison subsidiary's 1997 concession as well as the concession's 2021 extension.[147] The ruling followed the government audit of the concession's renegotiated contract discussed above.[148] Panama's Maritime Authority reported that the ports showed "significant deterioration and fall short of internationally recognized best practices and standards."[149] CK Hutchison and its subsidiary are seeking billions of dollars in damages from Panama.[150]

After Panama moved to retake control of the ports, Chinese authorities and SOEs retaliated. In March 2026, COSCO suspended operations at Panama's Balboa Port, resulting in an 11.9 percent decrease in shipping containers passing through the port, although other port terminals in Panama eventually made up for the drop.[151] China also sharply increased inspections and detentions of Panama-

nian-flagged vessels visiting Chinese ports, with reports indicating that nearly 500 such vessels were detained following safety inspections.[152] Amid the resulting delays and higher operating costs, more than 80 ships re-flagged their vessels in April, followed by 150 ships in May, potentially undermining an important source of revenue and international influence for Panama, the world's second-largest ship registry.[153] Around the same time, the State Council's National Development and Reform Commission reportedly tried to persuade European firms temporarily operating Panama's ports to withdraw and not "engage in illegal activities that harm the interests of Chinese companies."[154] In July 2026, Panama's Ministry of Foreign Affairs announced a deal with China over port access and stated that inspections and detentions had fallen to more routine levels of less than 20 per month since May 2026.[155] Despite initially indicating it would renew an agreement that offers preferential tariffs and expedited procedures for Panamanian-flagged vessels in Chinese ports, Beijing reportedly let the deal expire while it goes through domestic "procedural issues," although the status is unclear.[156] One Panamanian lawmaker has interpreted this as a new form of reprisal for the termination of CK Hutchison's concessions.[157]

China Twists Peru's Arm at Chancay, Extracting 30-Year Concession

Chinese state-owned firm COSCO has also advanced Beijing's strategic interests in Latin America through the development of the Port of Chancay in Peru, the first major port in the region to be constructed, majority owned, and operated by a Chinese SOE. China intended for the port to serve as a key gateway for trade between South America and Asia and to strengthen its access to the region's mineral and agricultural exports.[158] And so far, it has been successful: since the port began operations, China has been the destination for the majority of exports moving through Chancay, including substantial agricultural and mineral shipments.[159] Reflecting the project's strategic significance, Xi Jinping personally inaugurated the port in November 2024, describing it as a starting point "of a new Asia-Latin America land-sea corridor."*[160] Chinese state-run media used the phrase "from Chancay to Shanghai" to stress this new maritime connectivity.[161]

The Chancay megaport also illustrates how large Chinese infrastructure investments can create tensions between economic objectives and rule of law in host countries. In 2024, Peru's National Port Authority determined that COSCO's concession violated Peruvian law and sought to annul a provision in a 2021 agreement granting COSCO exclusive operating rights.[162] In response, COSCO reportedly threatened arbitration and withdrawal from the project, which would leave Peru with a partially completed port and the loss of

*Chancay's initial phase includes four berths, with plans to expand the port to 15 berths. The port has achieved more rapid utilization than other Chinese-built greenfield ports, in part because COSCO functions as both Chancay's terminal operator and a major global container carrier, allowing it to channel existing shipping traffic through the facility. Trade flows through Chancay reached approximately $2.1 billion during its first year of operation. Omar Narrea, "Peru Bets on Chancay to Reshape Pacific Trade," *East Asia Forum*, February 28, 2026; Peru's Ministry of Transport and Communications, *MTC: Entró en Operaciones el Megapuerto de Chancay que Revolucionará el Comercio Entre Perú y Asia* [MTC: Chancay Megaport Begins Operations, Set to Revolutionize Trade Between Peru and Asia], November 15, 2024.

anticipated economic benefits.[163] Facing a dilemma, Peru amended its ports law to permit exclusive operating rights for private ports, preserving COSCO's concession.[164]

Chinese Ports Create Intelligence and Military Risks for the United States

China's growing influence over strategically located ports can generate economic leverage, intelligence advantages, and security risks. By increasing its influence over key commodities and regional logistics routes, China strengthens its supply chain security while reducing dependencies on transportation routes centered in North America. For example, the port of Chancay reduces North America's role in Chinese trade with South America by allowing the largest vessels to transit directly between Asia and South America rather than requiring routing through ports in the United States and Mexico.[165] The more direct route cuts shipping time from 35 to 25 days and reduces a touchpoint with North America in China's trade, which China might view as a vulnerability.[166] China has also sought to build ports in southern Argentina, which could strengthen its position along the Strait of Magellan—an important alternative maritime route to the Panama Canal—while improving logistical access to Antarctica.[167] Buenos Aires has shelved both projects, opting for U.S. and Argentine companies instead.[168]

Ports also provide access, information, and strategic influence that can generate advantages during periods of geopolitical competition or conflict. China is not likely to establish naval bases throughout Latin America, as Beijing is likely to avoid actions that would provoke a strong response from the United States. Instead, as mentioned, Beijing appears to favor arrangements that provide access, intelligence, logistics support, and coercive leverage during a future crisis through commercially operated infrastructure while avoiding the political costs associated with a formal military presence.[169]

The inherently dual-use nature of ports makes Chinese presence particularly concerning.[170] China's playbook in Djibouti and Cambodia's Ream Naval Base demonstrates how infrastructure initially presented as civilian or commercial later acquired military characteristics, expanding China's ability to support overseas military operations and project influence.[171] Access to strategically located ports could support the pre-positioning of fuel, supplies, and other materiel needed to sustain operations far from China, consistent with Beijing's broader efforts to improve overseas logistical support for the PLA.*[172]

Even short of direct military utility, Chinese influence over critical port infrastructure can create coercive leverage. China's response to Panama's efforts to retake control of canal-adjacent ports, discussed above, demonstrated a willingness to use commercial infrastructure for political purposes through operational disruptions, regulatory pressure, and economic retaliation. During a future crisis, similar

*Regardless of China's intent, host countries may be unwilling to allow the PLA to use ports over which the country has jurisdiction for such purposes. Longstanding U.S. experience demonstrates significant constraints imposed by host countries, particularly during times of increased global tensions. Stacie L. Pettyjohn and Jennifer Kavanagh, "Access Granted: Political Challenges to the U.S. Overseas Military Presence, 1945–2014," *RAND Corporation*, November 21, 2016, xiv–xvi.

tools could be employed to delay logistics, influence access decisions, or complicate the movement of military and commercial traffic.[173] This ability to operate in the gray zone could allow Beijing to gain some of the strategic benefits associated with a military presence while avoiding the political and diplomatic costs that establishing a formal Chinese naval base in Latin America would likely entail.[174]

In peacetime, ports represent a potent source of intelligence, providing opportunities to monitor the movements of U.S. military-linked vessels and map U.S. and allied supply chain vulnerabilities. Chinese digital systems and equipment are deployed at ports across Latin America and the Caribbean, including ZPMC ship-to-shore cranes and Nuctech cargo scanners that could possibly be used for espionage and collecting sensitive logistics data.[175] Of 37 China-influenced ports assessed by the Center for Strategic and International Studies, at least 17 had ZPMC cranes and nine had received Nuctech scanners.[176] Such technologies, together with platforms such as LOGINK, could provide Chinese entities visibility into cargo flows, vessel movements, and logistics bottlenecks.*[177] The Chinese government has sold or donated large amounts of this equipment, ensuring it is installed in ports throughout the region, including ones not owned or operated by Chinese companies.[178] The threats from potential disruption and intelligence gathering are particularly high at ports in close proximity to the United States, such as the port of Manzanillo in Mexico, which utilizes ZPMC cranes.[179]

China's AI Infrastructure Push Seeks to Shape Latin America's Digital Future

In its 2025 white paper on Latin America and the Caribbean, Beijing highlighted plans to deepen cooperation on the digital economy—including AI—through joint research, training, and technology partnerships, steps that would anchor Chinese firms and approaches in the region's emerging AI ecosystems.[180] Backed by state support, firms such as Huawei, Alibaba, and ByteDance are expanding cloud services, data centers, AI platforms, and technical training programs across the region.[181]

Chinese firms are positioning themselves to shape the development of Latin America's emerging AI infrastructure, creating new avenues for long-term technological dependence on Chinese ecosystems. Huawei has been particularly active in addressing a regional shortage of AI computing infrastructure by promoting a full AI stack that combines chips, cloud services, software, and computing capacity to countries like Brazil, Mexico, Chile, Argentina, and Peru.[182] Through data center investments and developer training programs, the company is seeking to position its technologies as a practical and accessible foundation for AI adoption.[183] A Huawei-linked laboratory at Universidad Iberoamericana in Mexico includes an Ascend 310-based development board, while a 2023 National Autonomous University of Mexico (UNAM)

*A Reuters article published on October 5, 2026, suggested LOGINK's role in global maritime logistics has been significantly curtailed. Joe Cash and John Geddie, "The US Said China Was Priming a Trade Superweapon. Then It Vanished," *Reuters*, October 5, 2026; U.S.-China Economic and Security Review Commission, *LOGINK: Risks from China's Promotion of a Global Logistics Management Platform*, September 20, 2022.

China's AI Infrastructure Push Seeks to Shape Latin America's Digital Future—*Continued*

presentation describes Ascend 910-based training cards and an Ascend 910- and Kunpeng 920-based training server at the UN-AM-Huawei laboratory.[184]

Brazil has emerged as a key hub for these efforts, hosting Huawei facilities and attracting additional Chinese investment, including ByteDance's planned AI-enabled data center project in Pecém to support TikTok's operations in the region.[185] In 2025, Huawei signed a deal with Dataprev—a Brazilian state-owned information technology (IT) firm that manages the country's social security system—to launch a virtual AI center.[186] Huawei Cloud's head for Latin America recently stated that Huawei is considering exporting Ascend chips to Brazil and Mexico in the near future.[187] However, analysts believe that Chinese companies cannot make enough advanced chips to meet the needs for China's domestic market, constraining the availability of China's most advanced chips for overseas deployment.[188]

Although U.S. firms currently lead in advanced semiconductors, frontier AI models, and computing, Latin America remains comparatively underdeveloped in the infrastructure and investment needed to build and deploy advanced AI systems at scale. The region accounts for just 1.12 percent of global AI investment, despite representing 6.6 percent of global GDP, and advanced computing capacity remains highly concentrated in a small number of countries.[189] Absent U.S. and allied financing and infrastructure partnerships, Chinese AI ecosystems may capture a growing share of the region's emerging AI market and gain outsized influence over the data, standards, and platforms that will underpin future economic and technological development in Latin America.

The United States Offers Opportunities for Prosperity and Partnerships That Reduce Dependency

The United States can continue to distinguish itself from China by promoting transparent procurement, strong oversight, and high standards in infrastructure development. China's rapid expansion into Latin America's critical infrastructure sectors has been enabled in part by the region's limited financing and alternative suppliers for large-scale projects. China has also taken advantage of the fact that its small membership contribution to the Inter-American Development Bank (IDB) has given its companies full access to bid on IDB projects and participate in the IDB's efforts to promote trade and investment. Recently, as local concerns about sovereignty, long-term prosperity, and overdependence on China have grown across the region, there is new demand for additional partners. (For more on China's involvement in the IDB, see "The PRC Uses Multilateral Institutions to Build Local-Level Ties" later in this chapter.)

In response, the United States has sought to strengthen its partnerships throughout Latin America. For example, the United States and Panama launched a U.S.-Panama joint framework to enhance canal security and address concerns related to Chinese influence

surrounding the Panama Canal, while the U.S. Embassy in Panama announced an $8 million U.S.-funded project to replace Huawei telecommunications equipment and add new towers to expand coverage for Panama's Ministry of Public Security.[190] In Guatemala, the U.S. Army Corps of Engineers has helped upgrade major roads and railways, offering credible alternatives to Chinese infrastructure proposals.[191] The U.S. International Development Finance Corporation and the Economic Defense Unit of the Department of Defense are also deploying financing to support strategic investments in the region, including critical mineral projects intended to reduce U.S. dependence on China.[192] Separately, in September 2025, the State Department introduced a visa restriction policy targeting Central American nationals who undermine rule of law while working on behalf of the CCP, aiming to penalize corrupt leaders and deter them from working with China.[193] The U.S. government also recently announced a multi-million-dollar plan to help fund critical infrastructure across the region, such as subsea cables.[194]

Noninterference in Name Only: How Beijing Seeks to Influence Latin American Institutions from Within

Using trade and investment as a stepping stone, China has built a dense network of relationships across Latin American governments and institutions to advance its interests, access, and preferred narratives. At subnational levels, Chinese organizations engage local officials, professors, and journalists through a variety of channels, from sister city initiatives to sponsored visits to China. Bilaterally, Beijing deepens ties through high-level visits, strategic partnership designations, and commercial agreements. Multilaterally, the China-CELAC Forum provides Beijing a "one-stop shop" to promote its initiatives across the region. This layered strategy has enabled China to adapt its influence efforts to local conditions and develop tools of influence that persist across electoral cycles.

One principle through which Beijing frames its engagement in the region is noninterference in each other's internal affairs.[195] Beijing also taps anti-U.S. sentiment through references to "unilateral bullying" and directly criticizing the Monroe Doctrine.[196] Yet despite promises that engagement would come without political conditions or intervention, Beijing has consistently taken actions that undermine host countries' sovereignty by exploiting the openness of predominantly democratic societies, pressuring government officials, and in some instances dealing in bribes to achieve favorable policy outcomes.[197] One case in point is Argentina. China and Argentina established a currency swap line in 2009.[198] When Buenos Aires nearly defaulted on an International Monetary Fund (IMF) loan in the summer leading up to its 2023 presidential election, the pro-PRC incumbent government drew on the currency swap and obtained additional Chinese lending to cover $2.8 billion of over $5 billion in IMF repayments.[199] Just before the October election, Beijing announced it would more than double the swap funds available for free and flexible use.[200] After President Javier Milei won with a campaign promise to "not make pacts with communists," China suspended the new swap line funds, returning the freely accessible line to its pre-election value.[201]

The gap between China's noninterference promise and the harmful operational reality of its engagement is evident across four arenas:

1. Subnational diplomacy that seeks to enlist local actors in support of China's interests;
2. Cultivation of academic, media, diaspora, and people-to-people ties to give Chinese propaganda and narratives a local voice;
3. Political coercion of countries that engage with Taiwan; and
4. Corruption and elite capture that degrades rule of law.

In many cases, China did not create the institutional weaknesses, corruption, or governance deficits it exploits. Yet by operating through them, Chinese actors exacerbate conditions that undermine accountable governance, strengthening their ability to operate outside legal constraints.

Building Subnational and Multilateral Partnerships

China's local "ground game" establishes access and sometimes leverage outside of national-level politics. By engaging with governors, mayors, and provincial officials and establishing Chinese commercial presence in countries across Latin America, Beijing attempts to shape decisions on infrastructure investment, public procurement, and access to natural resources. These relationships enable China to build enduring political influence across election cycles, complementing its national-level engagement. When national political conditions are unfavorable, these relationships allow China to advance its objectives through alternative channels. Subnational partnerships and projects often receive lower levels of scrutiny than national initiatives, as they remain below the threshold of visibility that draws the attention of the United States or even Latin American federal governments.[202] Local governments also can face more resource constraints and often lack the legal expertise, institutional capacity, and leverage to negotiate on equal terms.

Argentina's Jujuy Province demonstrates how China uses subnational diplomacy to establish long-term relationships with state-level governments that advance Beijing's economic and strategic interests. Home to significant lithium reserves, Jujuy signed a sister province agreement with Guizhou in 2018.[203] The partnership has since expanded to cooperation on tourism, education, and cultural programs as well as technical training, research, and mining.[204] Last year, a Jujuy firm formed a joint venture with Chinese mining conglomerate Tsingshan to explore Argentine lithium reserves, and in April 2026 the governor of Jujuy announced the proposed expansion of a lithium plant and a joint laboratory with the Guizhou-based company CNGR Advanced Material.[205]

China's subnational influence activities operate through a network of institutions designed to expand and sustain relationships with local governments across Latin America. As with the Jujuy example, sister city and sister province partnerships provide channels for local leaders to negotiate directly with Chinese companies. Direct outreach at the subnational level also facilitates Chinese commercial engagement. Following separate China visits by the governors of Coahuila and São Paulo, Coahuila negotiated a $30 million contract with Chinese telecommunications provider Dahua, while São Paulo negotiated a proposed $800 million Huawei smartphone

factory investment.[206] Other key mechanisms include various fora, such as an event that brings together Chinese and Latin American local government officials, as well as 283 meetings with 74 political parties from 2002 to 2017 held by China's International Liaison Department (ILD).[207] In past instances, the ILD has also provided an avenue through which the Chinese government could engage indirectly with Latin American governments before they switched diplomatic recognition from Taiwan.[208] In 2023, Governor Esteban Villegas traveled to Shenzhen, Wuhu, Dongguan, and Shanghai to promote investment in Durango state; reporting at the time described an agreement for a Huawei R&D center at a technological university, but Huawei only appears to have established ICT Academy programs that offer professional certifications.[209] China also consistently tries to woo local politicians, journalists, and business leaders with all-expenses-paid trips to China, including those in countries that still maintain diplomatic ties with Taiwan.[210]

Chinese companies serve as vehicles through which Beijing secures long-term influence over critical infrastructure and strategically important sectors and influences local governments and populations. The Jujuy example cited above demonstrates how Chinese companies can help expand connections with regional governments and local business interests. Huawei and the PRC government have worked together to deepen relationships with regional and local officials and businesses through the firm's significant investments in Latin America. Huawei delegations have included commercial representatives alongside PRC diplomats, securing meetings to pitch 5G technology across all levels of government from heads of state to governors' offices, and in some instances, Huawei even acts as the de facto Chinese embassy in countries that still maintain ties with Taiwan.[211] In 2021, when Brazil considered banning Huawei's 5G networks over security concerns, Huawei hired former Brazilian President Michel Temer as a company advisor and used Temer's institutional network to counter efforts to restrict Chinese technology.[212]

Together, these mechanisms enable China to become deeply embedded in the channels outside national-level bilateral engagement, including provincial governments. The cumulative effect is to create a web of commitments that is difficult to unwind, even when national governments, regional institutions, or civil society begin to push back.

The PRC Uses Multilateral Institutions to Build Local-Level Ties

Until recently, China has leveraged the IDB as an alternative channel to open doors for Chinese businesses in Latin America, giving Beijing a key inroad in the region. China's 2009 accession to the IDB provided Beijing with an additional channel to deepen its economic engagement in Latin America and the Caribbean.[213] China joined as a non-borrowing member and contributed $350 million to the IDB Group, later establishing a $2 billion co-financing fund with the bank to support public- and private-sector development projects in the region.[214] Despite holding just 0.004

The PRC Uses Multilateral Institutions to Build Local-Level Ties—*Continued*

percent of IDB voting shares, Chinese companies have secured an outsized share of IDB-funded contracts relative to firms from other non-borrowing member countries.[215] Between 2010 and 2020, Chinese suppliers won over $1.7 billion in IDB-awarded contracts, making it the fourth-largest recipient of deals, compared with just $249 million awarded to U.S. companies over the same period.[216]

For several years, China deepened ties with the bank's leadership through a series of cooperation agreements, including an agreement with the Export-Import Bank of China (Eximbank) to establish infrastructure investment arrangements and a fund envisaged to use renminbi (RMB) and other currencies.[217] The IDB also offered Chinese firms introductions to Latin American stakeholders through annual business summits that generated an estimated 10,000 business-to-business meetings between Chinese and Latin American firms over six years.[218] The 2012 summit, co-hosted with the Chinese government, brought together 390 Latin American and 735 Chinese firms to Hangzhou, where the IDB facilitated matchmaking sessions between Chinese and Latin American businesses to connect potential investment partners.[219] The IDB also co-sponsored the 11th and 12th China-Latin American and Caribbean business summits in 2017 and 2018, facilitating over a thousand business matchmaking meetings.[220] In 2013, the People's Bank of China established the $2 billion China Co-Financing Fund for Latin America and the Caribbean, administered by the IDB and the first of its kind between China and a multilateral development bank.[221] As of 2018, the IDB used the Co-Financing Fund to back 54 projects worth $1.34 billion in total, including a $50 million loan for electrical grid improvement in Ecuador and an additional $50 million for co-financing Colombia's Hidroituango dam.[222]

The election of the IDB's first U.S. president in 2020 marked a turning point, as he advocated for the United States to support a capital increase to offset China's influence in the region, supported Taiwan's participation in the bank, and refocused the institution on nearshoring—to take advantage of companies looking to move manufacturing out of China—and mobilizing private capital.[223] The example demonstrates that while Chinese influence can become deeply embedded in regional institutions, sustained U.S. leadership can shift this trajectory and reorient regional investment toward initiatives grounded in long-term development outcomes.

Engaging with Media and Diaspora to Shape Narratives and with Academia to Further Science and Technology Ambitions

China leverages people-to-people networks in media, the Chinese diaspora, and academia as part of its broader overseas influence activities. Through content-sharing agreements and journalist ex-

changes, Beijing seeks to amplify Chinese narratives and shape public opinion, while university partnerships expand access to regional talent and research in priority areas.

Media Outreach to Support Pro-China Narratives

China uses its state media to establish relationships with local media and advance its interests in Latin America. In the media sector, CCTV and its international arm CGTN have signed cooperation agreements with major outlets across Brazil, Peru, Venezuela, and Argentina.[224] Days after Beijing established formal diplomatic relations with Honduras in 2023, Chinese state media opened offices in Tegucigalpa and signed a cooperation agreement with Honduran media covering content sharing and training exchanges.[225] Since agreeing to increased media cooperation, large Honduran news outlets such as *El Libertador* have published op-eds written by the Chinese ambassador to Honduras that call for Sino-Honduran cooperation under the basis of the One China principle.[226]

Through a strategy called "borrowing a boat to reach the sea," Chinese state media organizations provide PRC-produced content to established local outlets, allowing it to reach broader audiences through trusted channels that may not always identify the Chinese origin of the contents.[227] This gives China a direct line to Latin American civil society, priming public opinion to be more receptive to Chinese interests and laying the groundwork for deeper political and economic influence over time.

China reinforces these ties through exchange programs, fora, and training. In November 2016, Xi Jinping announced that China would establish a China-Latin America media exchange center and train 500 media professionals from the region over the following five years.[228] COVID-19 travel restrictions disrupted the program, but pre-pandemic reporting suggests China was training fewer than two dozen journalists each year.[229] However, the PRC seems to have accelerated its media training programs, with an April 2025 exchange program bringing 247 journalists from 23 Latin American countries to China.[230] That trip was followed by the publication of pro-China articles and videos.[231]

Cultivating the Diaspora Through the United Front

China continues to enlist parts of the Chinese diaspora in the region to advocate for Taiwan "reunification," China's development initiatives, and China's political and economic objectives. The CCP's United Front system formally identifies overseas Chinese as a target for political mobilization, and in July 2026, Xi Jinping explicitly instructed overseas Chinese to pool their strength for national rejuvenation and support reunification.[232]

The United Front Work Department, the Overseas Chinese Affairs Office, Chinese embassies, and state-linked federations cultivate diaspora leaders through hometown associations, chambers of commerce, and Councils for the Promotion of Peaceful National Reunification. "Friendship associations" and business councils can be especially useful because they appear to represent civil society or commercial interests while providing access to politicians, journalists, academics, and strategic industries. They can sponsor official

visits, promote Beijing's narratives, lobby for Chinese projects, and mobilize local opposition to policies—particularly support for Taiwan—that the CCP considers hostile.

For example, in October 2024, China's ambassador to Argentina convened 300 representatives of reunification councils and diaspora organizations from 16 Latin American and Caribbean countries and China's Taiwan Affairs Office, the All-China Federation of Returned Overseas Chinese, and the Fujian United Front Work Department. The ambassador urged the organizations to act as a "vanguard," expand support for unification, and promote Beijing's preferred account of Taiwan.[233]

Most concerning are the pro-China diaspora associations based in Taiwan's formal diplomatic partners—such as the Association of China-Paraguay Friendly Exchange—that China leverages as "white glove" representatives to influence local stakeholders.[234] Chinese diplomats periodically visit those partners from neighboring countries, ostensibly to meet with the diaspora community but also to carry out influence operations. One example includes the Chinese ambassador of Costa Rica frequently visiting nearby Guatemala.[235]

Of course, not all Chinese diaspora organizations are affiliated with the United Front, but China has become ever more astute at co-opting members within these organizations to serve its strategic goals. Moreover, China's new Ethnic Unity and Progress Promotion Law, which went into effect on July 1, 2026, bans any domestic or overseas organization that undermines ethnic unity or division. Experts have expressed concern that China could use this law to exert even more pressure on the Chinese diaspora in the future.[236]

University Partnerships

In academia, China is moving beyond language and cultural outreach toward science and technology collaboration in strategic, often dual-use sectors. As of 2024, China operates 44 Confucius Institutes across the region.[237] These are public educational and cultural programs launched by China's Ministry of Education in 2004 to teach the Mandarin language and promote Chinese culture abroad. But in recent years, the United States and other Western countries have shut down Confucius Institutes due to national security concerns regarding their CCP ties and the way Confucius Institute teachers often suppressed discussions on sensitive topics like Taiwan or human rights. Such a trend has yet to happen in Latin America.

However, Confucius Institutes represent only the most visible layer of a broader academic engagement strategy spanning biotechnology and space, among other fields.[238] Scientific exchange and research in dual-use technologies pose technology transfer risks, given that partners like the Chinese Academy of Sciences (CAS) are involved in military-civil fusion research and PLA modernization efforts.[239] The University of Chile's relationship with CAS illustrates this trend. The agreement with the university from 2013 established one of CAS's first overseas research centers to tap the university's astronomy capabilities, and a 2024 discussion expanded proposed areas of cooperation to include biosecurity, AI, mining, and robotics

as well as a jointly funded astronomy* postdoc.[240] Institutional ties also create channels for technology exchange. In 2023, UNAM became a strategic partner of the China-Latin America and Caribbean Technology Transfer Center, joining its advisory structure.[241] A 2025 letter of intent signed by the Center aims to "consolidate consensus on technology transfer and innovation cooperation between China and Mexico."[242] Beijing complements institutional connections with study abroad programs and scholarships: at a 2021 China-CELAC meeting, China committed to granting 5,000 scholarships to Latin American students between 2022 and 2024, a majority of whom aim to pursue government jobs.[243] The Commission was unable to determine if China fulfilled this commitment.†

Chinese firms extend this academic strategy to commercial ends, using university partnerships to build talent pipelines aligned with their own technologies. As previously mentioned, Huawei established AI labs at UNAM and Universidad Iberoamericana in Mexico as well as the University of San Martín de Porres in Peru.[244] In 2024, Huawei committed to training more than 20,000 young Peruvians over the following five years in AI, big data, and 5G at its inaugural training center at the Universidad Nacional Mayor de San Marcos.[245] Through its Seeds for the Future programs, Huawei aims to train the next generation of computer engineers and establish even more academic and industry partnerships across the region.[246] Beyond Huawei, Latin American universities have built partnerships with other PRC educational institutions, including the University of the West Indies (UWI) and Global Institute of Software Technology's UWI-China Institute for Information Technology.[247]

Political Coercion over Taiwan Contradicts Noninterference Rhetoric

Where other modes of influence operate quietly, China's pressure over Taiwan is the most overt contradiction of its noninterference pledge. Over the last ten years, Beijing succeeded in convincing five Latin American countries to switch diplomatic recognition from Taiwan to China.[248] As mentioned previously, Panama's then–President Juan Carlos Varela allegedly received bribes as part of his administration's decision to switch diplomatic recognition from Taiwan to the PRC.[249] Beijing's methods have drawn pushback. In December 2024, Paraguay's Ministry of Foreign Affairs revoked diplomat Xu Wei's visa after he urged lawmakers to reconsider the country's diplomatic relations with Taiwan.[250] In November 2025, members of

*Mexico's National Institute of Astrophysics, Optics, and Electronics also engages in astronomical research with China. It is developing a mid-infrared Earth-observation instrument intended for the Chinese space station. In 2025, the institute reported that CAS had invited members of the project team to a space-science workshop in China, funded by CAS's international cooperation office. "INAOE Student Receives a Specialization from Samara University, Russia, in Satellite Development," *Mexico's National Institute of Astrophysics, Optics and Electronics*, July 7, 2025.

†China's Foreign Minister Wang Yi claimed that the government scholarships "have all been implemented." However, data are released on individual embassy websites and usually list the number of scholarships offered, not the number awarded. For example, 25 scholarships were offered to Argentinian students for the 2023–2024 academic year, but only 17 were awarded. China's Ministry of Foreign Affairs, *Wang Yi on the Achievements of the China-CELAC Forum in the Past Decade*, May 13, 2025; China's Embassy in Argentina, *Se Anuncian los Resultados de la Beca de Gobierno Chino 2023/24* [The Results of the 2023/24 Chinese Government Scholarship Have Been Announced], July 7, 2023; China's Embassy in Argentina, *Convocatoria de la Beca del Gobierno Chino para el Año 2023/2024* [Call for Applications for the Chinese Government Scholarship for the Year 2023/2024], October 20, 2022.

Panama's National Assembly planning a visit to Taiwan reportedly received WhatsApp messages from the Chinese ambassador warning the trip would violate the One China principle.[251] On November 19, Panama's Ministry of Foreign Affairs issued a statement rejecting attempts at interference in internal affairs.[252] Two more delegations have occurred since, and in September 2026, almost two-thirds of Panama's lawmakers established a multiparty exchange group to deepen cooperation with Taiwan.[253]

Honduras's switch of diplomatic recognition from Taiwan to China shows Beijing's toolkit and its downsides. After securing diplomatic recognition in 2023 with 22 agreements and a prospective free trade deal, in 2025 China promised to fund $100 million for health and education projects in the country.[254] Promised economic benefits, however, fell short of expectations, as the switch from Taiwan to China hurt key industries after Chinese buyers failed to purchase Honduran goods at the same level Taiwan purchasers had. Shrimp exports fell 67 percent, forcing 60 company closures and causing 14,000 job losses.[255] In 2025, the leading opposition presidential candidates pledged to review the relationship with China; now–President Nasry Asfura argued that Honduras was "100 times better off" when it had relations with Taiwan.[256] Two weeks before the election, the Chinese embassy in Honduras warned the "political forces" in the country not to "send any wrong signal[s] to the secessionist forces for 'Taiwan independence'" and to "strictly observe the one-China principle [and] act prudently on the Taiwan issue."[257]

Beijing also wields trade and investment leverage to retaliate against perceived slights to its One China principle. Following Guatemala's decision to reaffirm diplomatic relations with Taiwan in 2024, China imposed an undeclared embargo on Guatemalan macadamia nuts and blockaded Guatemalan containers in Ningbo.[258] China uses its observer status in the Central American Parliament to send its ambassador to Costa Rica to neighboring Guatemala to engage local politicians.[259]

Other countries that maintain diplomatic recognition of Taiwan have been subject to Chinese pressure. In 2024 and 2025, Chinese diplomats were accused of bribing top Paraguayan politicians, inviting lawmakers to Beijing, and warning Paraguay to "make a correct decision as soon as possible."[260] Beijing appears to condition multi-million-dollar investments, loans, and aid packages on the non-recognition of Taiwan. When Costa Rica switched recognition from Taiwan to the PRC in 2007, the two governments' memorandum of understanding included a $300 million loan and a requirement to sever official ties with Taipei.[261] More recently, large investment and loan packages tend to follow these switches in recognition, suggesting their use as economic "inducements" in Beijing's statecraft.[262] However, exceptions exist, including $300 million in financing from the Industrial and Commercial Bank of China for state-owned PowerChina to build a hydropower dam in Honduras in 2013, ten years before it switched recognition.[263] PRC state media noted how unusual this project was—"it is the first project China has financed in a country that has not established diplomatic relations."[264]

This coercion is not limited to bilateral diplomacy. China has also sought to leverage regional multilateral institutions such as the IDB—where it has cultivated significant influence—to advance its strategic objectives. In March 2022, Chinese Ambassador Qin Gang formally protested the appearance of "Chinese Taipei" in the countries section of IDB annual meeting materials, demanding that the bank remove the mention and reaffirm adherence to the One China principle.*[265] In May of 2022, the Chinese governor to the IDB, who also serves as governor of the People's Bank of China, protested an IDB project agreement involving Taiwan, warning that such cooperation "may divert China's financing to the region through alternative channels."†[266] These episodes illustrate how Beijing is willing to weaponize its position within the IDB to advance political objectives unrelated to the bank's development mandate.

Chinese Entities Leverage Corruption and Undermine the Rule of Law

Corruption is the mode of Chinese influence where the gap between its noninterference claim and the reality of Chinese presence in the region is starkest. While bribery and other forms of corruption are inherently difficult to find data on, there is substantial evidence that Chinese firms view these as tools to achieve regional goals. At the level of individual contracts, reporting and investigations have repeatedly implicated Chinese firms in bribery to win infrastructure contracts and investment deals. Groups like the Andrés Bello Foundation, International Republican Institute, and Transparency International chapter Transparencia Venezuela have documented cases of corruption linked to Chinese SOEs in the Andrean region (e.g., Bolivia, Ecuador), Chinese firms in Panama, and especially Venezuela.[267] In Peru, the so-called "Chinese Construction Club" scandal exposed collusion between public officials and construction firms, including Chinese SOEs, to structure tenders in ways that limited competition.[268] In Venezuela, Chinese companies paid senior Venezuelan officials at least $100 million in bribes to secure a contract for a rice processing facility and at least four other agricultural projects awarded to China's state-owned CAMC Engineering Co.[269] In 2019, nine years after the contract was signed, Venezuela's agriculture minister "inaugurated" the project.[270] However, the processing plant was only partially built and the rice sacks embossed with Venezuelan and Chinese flags were being packed by hand with imported rice.[271]

Ecuador's Coca Codo Sinclair hydropower project shows corruption running through a single deal at multiple levels. Former President Lenín Moreno was convicted by an Ecuadorian court in 2026 for steering contracts toward Chinese state-owned company Sinohydro in exchange for $76 million in bribes.[272] Ecuador's National Court also found former Chinese Ambassador Cai Runguo guilty of participating in the scheme while serving as a Sinohydro executive.[273]

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*The Commission could not confirm whether the IDB has removed "Chinese Taipei" from the "Countries" section in the list of Annual Meeting observers.

†The financing arrangements with the IDB and Taiwan's International Cooperation and Development Fund were executed in 2021 and 2023. "Annual Report 2024," *Development Finance Corporation (Belize)*, August 4, 2025, 77.

Another example occurred in Peru. The Peruvian Congress ousted President José Jerí after just four months in office following revelations that he held undisclosed meetings with Chinese businessman Zhihua Yang, who often facilitated deals for various Chinese companies, including state-owned scanner equipment provider Nuctech.[274] The scandal—dubbed "Chifagate"—made Jerí the third consecutive Peruvian president to be removed from office.[275]

These cases—covering a wide range of countries and sectors across a period of years—suggest corruption is not an incidental byproduct of Chinese engagement but a recurring means of securing strategic access. And it is unfortunately an approach that compounds: bribery wins contracts, opaque investment entrenches local patrons, and resource-backed lending ties the national budget to Beijing. The non-adherence to international anticorruption standards by Chinese companies enables them to gain an advantage through bribes and corruption over companies from other countries that comply with anticorruption laws.

China is Leveraging Latin America's Internal Security Challenges to Expand its Influence

Mirroring tactics discussed in the Commission's 2025 Southeast Asia chapter and Scam Center reports, China is using Latin America's internal security challenges as an avenue for expanding its geopolitical influence. Latin America faces persistent challenges from organized crime, drug trafficking, corruption, illegal resource extraction, and weak governance. Despite the role of Chinese-linked entities in perpetuating the region's most prominent security challenges, Beijing is positioning itself as a partner in addressing these problems through the Global Security Initiative (GSI), law enforcement cooperation, police training, surveillance technologies, and public security exchanges.

Two important caveats frame this analysis. First, Latin America's organized crime and governance challenges long predate China's emergence as a major regional actor and are rooted in longstanding structural weaknesses. Second, there is scant evidence that Chinese-linked actors discussed in this section—including chemical suppliers, money laundering networks, and participants in illicit resource extraction—are directed by the Chinese government.

China's Growing Influence in Latin America's Security Institutions

The GSI—China's umbrella framework for reshaping global security governance—allows Beijing to expand influence over Latin America's internal security institutions without establishing a traditional military presence.[276] Rather than emphasizing typical military-to-military cooperation, the GSI places law enforcement, public security, and internal stability at the center of China's security engagement with the region. Xi Jinping's 2025 China-CELAC speech, the 2025 Policy Paper, and the China-CELAC Action Plan all place unprecedented emphasis on law enforcement cooperation and internal security, calling for expanded cooperation on drug trafficking, money laundering, illegal mining, wildlife trafficking, and other forms of transnational crime.[277] Notably, these documents do not

acknowledge the significant role Chinese-linked criminal actors play in facilitating what China-Latin America expert Leland Lazarus called the "Silk Road of Crime" in his December 2025 congressional testimony.[278]

China is implementing this strategy by cultivating relationships with Latin America's public security institutions, although these relationships remain less robust than in other regions. The Ministry of Public Security (MPS) uses the Global Public Security Cooperation Forum and other bilateral police training programs to expand avenues for law enforcement cooperation. The Forum brings police officers to China in order to shape norms, encourage the adoption of Chinese technology, and cultivate relationships with the region's security forces that could be leveraged for influence and intelligence gathering.[279] Latin American official participation in the Forum grew from no countries in 2022 to seven in 2024, when Argentina, Brazil, Ecuador, Guyana, Nicaragua, Panama, and Suriname attended.[280] Between 2000 and 2025, Mexico, Peru, Venezuela, Cuba, Jamaica, and others participated in bilateral or multilateral Chinese foreign police training programs.[281]

Chinese technology companies reinforce this strategy by embedding surveillance and public security systems within Latin American governments. Huawei, ZTE, Dahua, and other firms have supplied or donated safe or "smart" city surveillance technology equipment to at least 35 cities across the region, promoting China's state-centric model of public security while creating long-term dependence on Chinese technology, technical support, and data systems.[282] In Argentina's Jujuy Province, ZTE signed a nearly $30 million surveillance contract in 2019.[283] Ecuador's ECU-911, a nationwide emergency response and video surveillance system, and Venezuela's ZTE-developed Carnet de la Patria (Fatherland Card) biometric identification and social monitoring system illustrate how these technologies can strengthen state monitoring capabilities while creating data security and civil liberty concerns.[284]

Unlike military-to-military engagement, relationships with police, customs, prosecutors, and public security agencies provide Beijing with routine access to the institutions responsible for internal governance, information collection, and law enforcement. These organizations are often deeply embedded in daily government operations, making them attractive channels for long-term influence.

China's Military Engagement in Latin America Remains Limited but Is Expanding

China is gradually expanding its military engagement in Latin America without establishing a visible military footprint. Rather than pursuing large-scale deployments, Beijing relies on defense diplomacy, military education, selective arms transfers, equipment donations, and occasional PLA Navy port visits to cultivate long-term relationships while minimizing political backlash.

China emphasizes high-level defense dialogues through fora such as the China-CELAC Defense Forum and Xiangshan Forum, complemented by a growing program of military exchanges. Between 2022 and 2025, China conducted 97 military exchanges

China's Military Engagement in Latin America Remains Limited but Is Expanding—*Continued*

with 18 countries in Latin America and the Caribbean, including all three military services in Brazil and Argentina.[285]

China's arms exports have mostly gone to Venezuela, Bolivia, and Ecuador, while other countries have received donated equipment.[286] These transfers create enduring relationships through training, maintenance, and follow-on support, embedding Chinese firms and personnel within defense institutions without appearing strategically threatening. The mixed response to the PLA Navy hospital ship *Silk Road Ark*'s 2025–2026 port visits—including canceled stops in Mexico and Peru and restrictions in Chile—illustrates both China's growing interest in military engagement and Latin American governments' continued sensitivity to an overt PLA presence.[287]

Although these activities have limited impact on the regional military balance, they reflect Beijing's broader strategy of gradually expanding defense relationships and institutional familiarity in the region.

Chinese-Linked Criminal Networks Facilitate Transnational Crime in Latin America

Although Latin America's crime crisis predates China's rise as a major regional actor, Chinese-linked commercial and criminal actors have become important enablers of several illicit economies, particularly synthetic drugs, money laundering, illegal resource extraction, wildlife trafficking, and illegal fishing (see Figure 6). Non-governmental organizations such as Earth League International have identified dozens of Chinese-linked criminal networks operating in the region. By enabling the operations of criminal actors and driving demand in the region's underground economies, Chinese actors—including companies, Transnational Criminal Organizations, and even government-linked entities—contribute to natural resource degradation, drug trafficking, corruption, and violence. These activities not only undermine governance and stability in Latin America but also contribute to narcotics flows and displacement of populations.

Chinese Chemical Supply Chains Sustain the Synthetic Drug Economy

Chinese chemical suppliers have become a critical upstream enabler of the synthetic drug economy that fuels Latin America's most powerful criminal organizations. The House Select Committee on the CCP identified more than 2,000 Chinese companies advertising precursor chemicals and other substances on the U.S. Drug Enforcement Administration's Special Surveillance List and documented extensive Chinese involvement in the supply chains that sustain fentanyl production.[288] After years of diplomatic pressure, China agreed to designate all fentanyl analogues as controlled substances in 2019 and has subsequently scheduled several key fentanyl precursors and selectively cooperated with U.S. counternarcotics efforts.[289] However, these actions left the export of many precursors

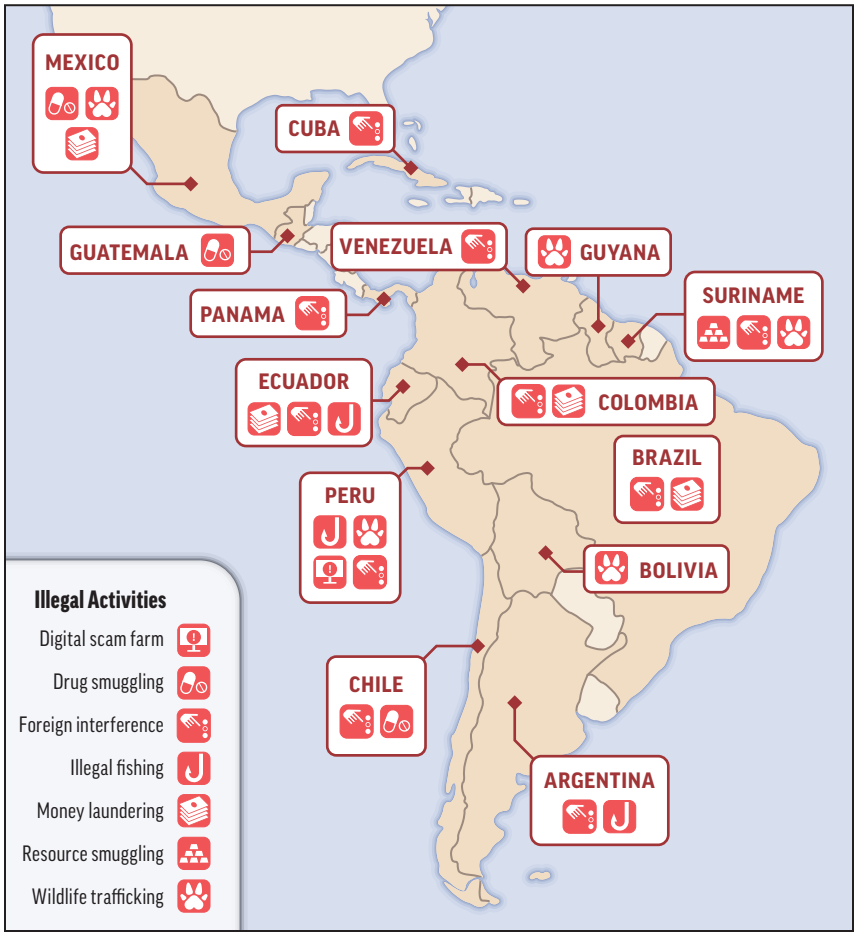
and "pre-precursors" untouched, and these can easily be synthesized into illegal substances by cartels.[290] Beijing has failed to keep pace with traffickers and chemical suppliers, which adapt by shifting to less regulated compounds that remain outside the existing control regimes and diversify their supply chains.[291]

As a result, China remains the dominant foreign source of high-risk precursor chemical shipments in Mexico. In a University of Virginia study of selected high-risk suppliers, facilities in mainland China accounted for 1,032 of 1,248 potentially fentanyl- or methamphetamine-related shipments to Mexico (about 83 percent) between January 2020 and September 2025.[292] InSight Crime estimates that Mexican criminal organizations produce between three and 4.5 tons of pure fentanyl annually, relying heavily on imports of precursor and pre-precursor chemicals from China.[293] Chinese precursor chemical exports sustain criminal networks that fuel violence and damage populations in Mexico, where criminal activity fueled at least in part by methamphetamine trafficking has contributed to violence and the displacement of hundreds of thousands of people.[294]

Despite the severe effects of Chinese-linked chemical precursors in the region, a 2024 investigation by the House Select Committee on the CCP alleged that Chinese government policies benefited and promoted their export. Beijing's export tax rebate system subsidized the export of fentanyl analogues, precursor chemicals, and other synthetic narcotics, including substances that are illegal under Chinese law.[295] The subsidy program dates back to at least 2018 and continued even as U.S.-China diplomatic tensions over fentanyl intensified.[296] After the program was publicly exposed in 2019, rather than discontinuing it, the Chinese government expanded the subsidies to cover other fentanyl analogues and precursors.[297] The Select Committee report found limited evidence of Chinese prosecutions against exporters of these illegal substances.[298] The current status of these subsidies is unclear. China took steps to make the online tax rebate information intermittently inaccessible to foreigners, and the Commission was unable to verify whether they still exist.[299]

A key structural reason for the pattern of inaction is the economic stake that Chinese provincial governments have in the chemical and pharmaceutical sectors. The Select Committee noted that Chinese customs and trade officials in certain provinces either participated in or encouraged capital investment and reduced inspections for companies exporting fentanyl precursors.[300] In her congressional testimony, Vanda Felbab-Brown of the Brookings Institution explained that China's law enforcement operations appear to be geared toward Beijing's own priorities, including "minimizing drug consumption in China; minimizing capital flight from China; monitoring Chinese expatriates; suppressing Chinese dissidents; and repatriating Chinese fugitives" rather than fostering "equitable peer-to-peer law enforcement relations."[301]

Figure 6: China-Linked Criminal Groups Engage in a Wide Range of Illicit Activities Across Latin America and the Caribbean



Note: Many marks represent allegations or ongoing investigations, not confirmed criminal activity. The incidents documented here fall into seven categories. Digital scam farms are compounds where trafficked workers are held captive and forced to run online and phone scams targeting victims worldwide. Drug smuggling covers the trafficking of narcotics by Chinese-linked criminal networks, often in partnership with cartels such as Sinaloa and CJNG. Foreign interference encompasses PRC-linked activity aimed at influencing or pressuring people and institutions abroad, including undeclared overseas police stations. Illegal fishing describes fishing by Chinese-affiliated fleets that violates national or international rules. Money laundering refers to schemes that disguise the origins of illicit funds, often through Chinese underground banking, trade-based laundering, front companies, or cryptocurrency, and frequently on behalf of Latin American drug cartels. Resource smuggling refers to the theft or illegal extraction and export of natural resources such as gold. Wildlife trafficking involves the illegal trade in protected species and animal parts.

Source: Data from Lazarus Consulting. Created for the U.S.-China Economic and Security Review Commission. Names and boundary representation are not necessarily authoritative.

Chinese Money Laundering Networks Enable Criminal Organizations to Hide their Money and Expand their Profits

In addition to supplying Latin American drug cartels with precursor chemicals, Chinese actors enable these organizations by serving as their most important money launderers. Chinese money laundering networks (CMLNs) operate as underground banks connecting Latin American criminal groups to Chinese citizens seeking to circumvent China's capital controls and move funds overseas.[302] This mirror exchange technique, known as "flying money," avoids scrutiny by not requiring traditional wire transfers.[303] Some CMLNs also facilitate connections between cartels and Chinese chemical suppliers.[304] The case of Zhi Dong Zhang ("Brother Wang") illustrates this nexus. U.S. officials allege he acted on behalf of the Sinaloa Cartel and the Cartel Jalisco Nueva Generacion and operated a large-scale drug trafficking and money laundering organization in Mexico and the United States before his arrest in Mexico in 2024 and extradition to the United States the following year.[305]

While data on the full scale of Chinese-linked money laundering in Latin America are limited, U.S. reporting illustrates the substantial value involved. The Treasury Department identified CMLNs as prominent players supporting groups like the Jalisco New Generation and Sinaloa cartels to funnel profits from drug sales. FinCEN identified approximately $312 billion in reported suspicious activity potentially associated with CMLNs in Bank Secrecy Act reports filed during 2020–2024.[306] CMLNs became the dominant money laundering partners to cartels by dramatically undercutting competitors on cost while offering greater security, including by guaranteeing payment even when law enforcement seized cartel funds.[307]

The China-based components of these transnational networks can pose jurisdictional and cooperation obstacles for U.S. law enforcement. Further complicating U.S. law enforcement efforts, many activities have moved to Chinese apps like WeChat and other encrypted communications platforms for coordination. These platforms can restrict authorities' visibility into laundering activity, particularly when communications involve foreign-based users, although they are not categorically out of reach of U.S. law enforcement operations.[308]

Chinese-Linked Illicit Resource Networks Fuel Corruption, Weak Governance, and Sovereignty Risks

Beyond organized crime, Chinese entities are involved in illegal resource extraction activities in Latin America across large-scale fishing, logging, and mining. These entities exploit weak governance environments, promote environmental degradation, and threaten state sovereignty over natural resources across the region.

Chinese demand for gold, timber, and commodities and the participation of some Chinese-linked firms and intermediaries help sustain illegal extraction networks in Latin America. Skyrocketing demand for gold in China is fueling prohibited mining. Peruvian prosecutors found that more than 62,000 tons of unlawfully extracted mining tailings were ultimately shipped to Chinese ports in 2023 and 2024; Chinese state-controlled conglomerate Wuchan Zhongda Interna-

tional Group purchased some of these tailings.[309] In Guyana, Chinese company Bai Shan Lin was ultimately expelled after being implicated in illegal timber exports.[310] According to testimony before the House Natural Resources Committee, these activities contribute to severe environmental degradation, including river contamination and deforestation.[311] Chinese-linked entities are also helping scale up these activities by supplying chemicals, equipment, and logistics support to illegal mines.[312]

Chinese-linked illegal natural resource extraction may also reinforce corruption and weak governance. Reportedly, some Chinese-linked entities involved in unlawful resource extraction operate alongside groups like the National Liberation Army (ELN), the oldest and among the most powerful insurgent groups in Colombia.[313] In Peru, local governor Luis Hidalgo Okimura was investigated in 2021 for allegedly taking bribes to issue prohibited logging concessions, with one of the beneficiaries of the alleged improper concessions being Xiadong Ji Wu, a Chinese businessman operating multiple companies in Peru.[314] According to congressional testimony in January 2026 by R. Evan Ellis, a professor at the U.S. Army War College, Chinese wildlife trafficking in Latin America depends on "de facto control of substantial territories by non-Chinese criminal entities," and revenue produced by these activities "arguably reinforces the weakness of the local government and thus the control of these zones by other criminal groups."[315]

Similar patterns of Chinese-linked criminal behavior appear around the world. Chinese-linked criminal activities like wildlife trafficking in Africa and illegal marijuana farms in parts of the United States have surfaced in some Latin American countries, according to research by Mr. Lazarus.[316]

Chinese State Entities Involved in Illegal Fishing

In addition to logging and mining, Chinese-linked illegal, unreported, and unregulated (IUU) fishing activity imposes significant sovereignty, environmental, and economic costs on Latin American countries. China operates the world's largest distant-water fishing fleet, with vessels operating around Argentina, Peru, Chile, and Ecuador, often near or within countries' exclusive economic zones.[317] The region loses more than $1 billion annually in combined wages and tax revenue from IUU fishing practices, with total economic losses estimated at $2.3 billion each year, and China is the world's leading offender.[318]

China's IUU fishing directly conflicts with Beijing's efforts to portray itself as a reliable economic and security partner in Latin America. The persistent presence of predominantly Chinese fishing fleets prompted Chile, Colombia, Ecuador, and Peru to issue a joint statement expressing "concern about the recurring presence of foreign-flagged fishing vessel fleets" in the region in 2020—although the countries did not choose to call out China by name.[319] In January 2025, Argentina deployed its military to surveil a massive flotilla of fishing vessels consisting mostly of Chinese-flagged fishing vessels operating off the country's southern coast, underscoring the security implications of China's distant-water fishing fleet.[320]

Rather than restricting IUU fishing, the Chinese government directly benefits from and supports these activities. The Outlaw Ocean Project's investigation identified at least 63 Chinese state-operated vessels tied to illegal fishing or human rights violations.[321] The Chinese government heavily subsidizes fishing, spending roughly $7.2 billion based on a 2018 estimate—the largest subsidy regime in the world.[322] While this figure is an estimate for China's fishing industry overall, the practice has likely contributed to the wide scope of China's distant-water and illegal fishing operations.[323] Together, state ownership and subsidies reinforce the economic incentives driving IUU fishing, despite growing regional opposition.

Chinese-Linked Criminal Groups Advance CCP Priorities

Similar to examples from Chinese-linked criminal enterprises in Southeast Asia discussed in the Commission's *Protecting Americans from China-Linked Scam Centers* report, some Chinese-linked criminals leverage their illicit business ties to help support CCP goals like advocating for Taiwan reunification. Such was the case of Dizi Shi, an alleged operator of illegal crypto-mining who used his position as president of a local China-Paraguay business chamber to establish links with local political figures and host events where "Xi Jinping thought" is promoted.[324] The allegations against Dizi Shi in Paraguay are part of a pattern where some Chinese diaspora criminal networks promote PRC political messaging, particularly around unification with Taiwan.*

Beijing Selectively Takes Enforcement Actions Against Illicit Activity to Advance Its Own Interests

Beijing's selective enforcement reflects broader political and strategic priorities rather than a consistent effort to combat transnational crime. As Dr. Felbab-Brown explained in her testimony, Beijing "expands or withholds law enforcement cooperation" depending on its geopolitical aims, while gaps in Chinese law—including the absence of conspiracy, racketeering, and material support statutes—allow many suppliers of non-scheduled precursor chemicals to operate without criminal liability.[325] The Chinese government has also declined to provide information to support investigations and has even denounced them, criticizing the extradition of Chinese nationals on drug trafficking charges in January 2025 as "long-arm jurisdiction and bullyism."[326] Selective enforcement is therefore not simply a law enforcement issue but also a mechanism through which Beijing aligns security cooperation with broader political and strategic objectives.

Implications for the United States

In some ways, the United States is vigorously pushing back against China's regional influence. It is actively working to reduce

*In Taiwan, the CCP has co-opted organized crime groups to mobilize grassroots support for its pro-unification messaging. In Asia and Africa, the World Hongmen History and Culture association—a group that self-describes as an ethnic Chinese fraternal association but which the U.S. Treasury identifies as a front for one of China's largest organized crime groups—also routinely supported Beijing's political propaganda on Taiwan unification. Martin Purbrick, "Criminal Organizations as Vectors of Influence in Taiwan," *China Brief* 25, no. 16 (September 2025); Rebecca Tan and Pei-Lin Wu, "Chinese Association Accused of Mixing Crime and Patriotism as it Serves Beijing," *Washington Post*, June 24, 2025.

China's influence in Venezuela. The United States also continues to exert pressure on Cuba, China's longest-standing partner in the region, and China's limited response likely causes other countries in the region to question the long-term benefits of deep engagement with China. The United States has also ramped up criticism of and pressure on Nicaragua's pro-China dictator Daniel Ortega. As previously mentioned, the U.S. government recently announced a multi-million-dollar plan to help fund critical infrastructure across the region, including subsea cables.

However, China has succeeded at least in part due to the absence of sustained U.S. financing, infrastructure contractors, mining (until recently), and other partnerships.

China's expanding trade and infrastructure engagement in Latin America creates economic and national security risks for the United States that will become harder to reverse if present trends continue. The region's increased commodity exports to the PRC have deepened dependencies on extractive sectors. Stagnating manufacturing, caused by both increased commodity exports and China Shock 2.0 imports of manufactured goods, further reduces options for Latin American economies. This may make them even more receptive to Beijing's economic influence, including through infrastructure contracts that could vest PRC firms with operational control over decades. At the same time, the rise of new Latin American leaders who favor the United States and are more skeptical of China gives Washington an opportunity to capitalize on its potential to be the region's partner of choice.

China's commodity-centered trade model could undermine U.S. efforts to build resilient regional supply chains and increase Beijing's economic influence over Latin America. If Chinese firms consolidate control over the extraction of lithium, copper, and rare earth elements through investment, offtake agreements, control over ports and other key logistics nodes, and commodities markets, it will make it harder for the United States to reduce dependence on Chinese-controlled supply chains for materials essential to its defense industrial base and a wide variety of industries.

China's security cooperation in the region might exacerbate instability and export China's authoritarian model. Selective enforcement against China-linked criminal activity creates a self-reinforcing dynamic: by declining to act against Chinese-linked networks that destabilize Latin American governance through the "Silk Road of Crime," Beijing indirectly perpetuates the insecurity that makes governments receptive to the security partnerships it offers. If present trends continue, several U.S. security, counternarcotics, law enforcement, and intelligence partners in the region might deepen ties with their Chinese counterparts, receive training based on Chinese law enforcement ideology, and use Chinese surveillance systems, potentially undermining the rule of law and democratic institutions.

The greatest strategic risk lies not in any single Chinese activity but in the interaction among them. No single Chinese investment, infrastructure project, or security partnership is likely to determine Latin America's strategic orientation. Rather, a

country that depends on Chinese commodity demand, relies on Chinese-built infrastructure, has allowed Chinese institutions to drive media narratives and shape academic leaders, has deep connections with China in regional and local governments, and has cultivated public security partnerships with China is a country that has had its strategic autonomy constrained. As dependencies and Chinese engagement successes accumulate across the region, U.S. influence will inherently decline. The costs of shaping these trends now are far lower than the costs of contesting deeply embedded dependencies later.

Recommendations

- To enhance the capacity of Latin American countries to screen investments for economic and national security risks, Congress should:
  - Direct the Secretary of the Treasury, in coordination with other members of the Committee on Foreign Investment in the United States (CFIUS), to establish a Foreign Investment Rapid Screening Team (FIRST) that trains and embeds in partner governments in Latin America. FIRST assistance should include:
    - Sending delegations to Latin America to develop screening mechanisms for investment and infrastructure projects as well as to train and work alongside procurement officers, auditors, and investment authorities on anticorruption, contract law, and corporate control structures;
    - Extending technical assistance to subnational governments, which often negotiate major investment and infrastructure projects but have limited capacity to assess national security implications;
    - Coordinating with the U.S. International Development Finance Corporation, Export-Import Bank of the United States, Millennium Challenge Corporation, and U.S. Trade and Development Agency to employ investment and technical assistance resources to incentivize partner countries in Latin America to develop investment screening mechanisms and mobilize U.S. and trusted capital as alternatives to untrusted investors;
    - Coordinating with the Secretary of State and organizations such as the National Endowment for Democracy to utilize their core institutes to strengthen the capacity of government and non-governmental organizations to support investment screening and related good governance initiatives.
  - Appropriate funds for the U.S. Department of Commerce's Commercial Law Development Program (CLDP) to develop model legislation and regulations for strategic investment and infrastructure reviews.
- The Chinese government has steadily expanded its influence in the multilateral development banks (MDBs), raising its shareholding and voting power, increasing its contributions, and

positioning itself to shape lending priorities and institutional governance. The United States has not used its position as a top shareholder, including its unique veto power over certain governance decisions at the World Bank, to effectively advance U.S. interests and hold these institutions accountable. In particular, the United States has a strong interest in ensuring that MDB funds do not disproportionately benefit Chinese firms, yet there is no comprehensive, regularly updated strategy or public accounting of procurement awards to Chinese and U.S. firms across all MDBs.

To focus engagement with international organizations—including international financial institutions (IFIs) and other multilateral institutions—on U.S. strategic interests and ensure adequate U.S. voice and representation at IFIs, Congress should:

- Direct the Secretary of the Treasury, as Chair of the National Advisory Council on International Monetary and Financial Policies, to:
  - Submit to Congress a strategy within 180 days to leverage the U.S. voice and vote at the MDBs—the World Bank Group, the Inter-American Development Bank (IDB) and IDB Invest, the Asian Development Bank, the African Development Bank, and the European Bank for Reconstruction and Development—to counter China's action at IFIs and other multilateral institutions and to advance U.S. and democratic economic priorities, including responding to foreign adversaries' exploitation of IFIs. The strategy shall address, at a minimum:
    - The development of programs to expand participation by U.S. and allied suppliers, and U.S. technology alternatives to Chinese options, in MDB-financed projects and procurements, coordinated with existing commercial advocacy mechanisms, including the U.S. and Foreign Commercial Service and the Advocacy Center;
    - Supplier eligibility criteria grounded in security and technology provenance, together with an assessment of whether such criteria are required under each institution's existing procurement policy or would require action by its Board;
    - A plan to counter exploitation of these institutions by China and other foreign adversaries, addressed by category, including continued borrowing by countries eligible for graduation, concentration of procurement awards, bilateral co-financing vehicles, secondment and staffing, and incorporation of China's technical standards into project specifications; and
    - Measures to ensure transparency around beneficial ownership information for suppliers awarded financed contracts.
  - Meet at least once a quarter with the Secretaries of State and Commerce to discuss U.S. priorities for IFI engagement.

- Amend the annual report required by Section 1701 of the International Financial Institutions Act on International Monetary and Financial Policies (22 U.S.C. §262r) to require for each MDB disclosure of: (a) the value and number of contracts awarded to suppliers registered in the People's Republic of China (PRC) and to suppliers identified as controlled subsidiaries of PRC-domiciled parents, with Hong Kong and Macau reported separately; (b) contracts awarded under section (a) reported as a share of internationally completed procurement and disaggregated by sector and borrower country; and (c) a description of actions taken to heighten scrutiny of state-owned enterprise participation in MDB-financed procurement.
- Restrict travel funding for relevant offices to non-essential expenditures, for example, limiting premium-class travel, reception and event expenses, large delegations, conferences, and new discretionary initiatives, until the Administration nominates senior director positions.

• Congress should authorize and appropriate dedicated funding, through the Secretary of State, Secretary of Homeland Security, or Secretary of Commerce, to expand the "Rip and Replace" initiative beyond domestic networks to key strategic partner nations and key regions of strategic competition, beginning with Latin America and the Indo-Pacific. The initiative should utilize novel methods and technology from across frontier labs to identify, expose, and harden against weaknesses in Chinese-origin technology and software. It should work with nations to modernize equipment either by replacing certain critical assets within network infrastructure or software to ensure trusted standards are established. Specifically, the initiative should include the following provisions:

- Replace covered equipment. Building on the $8 million Panama pilot, fund the replacement of non-trusted telecommunications equipment in host nation infrastructure. Assistance should be conditioned on:
  - Host nation operational control of replacement systems and host government concurrence in public announcements;
  - A commitment not to reintroduce non-trusted equipment into assisted networks; and
  - Sustainment included in each project.
- Assess, harden, and monitor software at scale. Direct the Secretaries of State and Homeland Security, drawing on the Defense Advanced Research Projects Agency (DARPA) and National Security Agency (NSA), to apply artificial intelligence (AI)-enabled vulnerability discovery and patching to:
  - Triage host nation exposure through analysis of Chinese-origin firmware and software, producing a prioritized queue;
  - Identify and remediate vulnerabilities in the software on which replacement networks run, including AI-assisted re-

writing of legacy code into memory-safe languages where source code is available; and

- Provide interim detection and monitoring of covered equipment awaiting replacement. Analysis of equipment originating in China should inform prioritization and monitoring.

Congress should authorize and appropriate the multiyear initiative to execute country-level projects and require annual reporting to the committees of jurisdiction on sites remediated, conditions enforced, partner cost-share, and any reintroduction of covered equipment.

- Congress should make it U.S. policy that China's systematic use of Port State Control inspections and detentions of Panamanian-flagged vessels is economic coercion and authorize the President to take all necessary and appropriate economic actions to counter China and support the Government of Panama in this dispute, including leveraging existing sanctions authorities and initiating referrals to the International Maritime Organization to establish a record of China's weaponization of port access as a tool of geopolitical punishment.

  Congress should further direct the Federal Maritime Commission, which has already flagged the surge in detentions, to investigate the pattern and report findings within 90 days.

- Congress should provide authorization and the necessary resources to the Secretaries of State, the Treasury, Defense, and Commerce to provide technical assistance to parliaments in Latin America to help draft and pass legislation to increase transparency and cybersecurity related to critical infrastructure through reforms to oversight, information security, and public contracting.

  To expose the cybersecurity risks, lack of investment, and other hazards in infrastructure facilities with Chinese technology and ownership, Congress should:

  - Direct the Director of National Intelligence to produce an annual unclassified assessment of, and brief other nations on, Chinese infrastructure presence across ports, energy, telecommunications, space, and other critical infrastructure sectors in the Western Hemisphere, including:
    - The security and economic risks associated with Chinese ports and equipment in the United States and countries in Latin America, including cybersecurity vulnerabilities, all potential vectors of military use and access, potential for economic lock-in effects and upcharges, and lack of capital investment.
  - Direct the Secretary of State, in coordination with the Secretary of Defense, Secretary of Homeland Security, and U.S. Department of Transportation's Maritime Administration, to provide technical assistance to conduct inspections and establish a regional baseline for identifying and remediating vulnerabilities linked to China at strategic maritime chokepoints.

- Where possible, the Secretary should seek cooperation with host countries for security audits of Chinese equipment and presence, identify highest-risk facilities, and recommend actions to ameliorate risk.

- Across Latin America and the Caribbean, Chinese-linked criminal networks—money launderers servicing the region's cartels, illicit resource-extraction operations, and other currency channels that move value outside the correspondent banking system—have converged with an expanding PRC law enforcement presence that complicates, rather than supports, partner-nation cooperation with the United States.

  Congress should direct the President to establish and appoint an executive agent to identify, expose, and disrupt Chinese-linked illicit narcotics suppliers, money laundering organizations, cryptocurrency networks, resource extraction networks, and other criminal facilitators in Latin America and the Caribbean. The executive agent should address risks associated with Chinese police and law enforcement cooperation in the region and should focus on the following activities:

  - Disrupting Chinese money laundering networks.
  - Strengthening partner capacity.
  - Addressing risks from Chinese police training and security cooperation in the region.
  - Improving information sharing.

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CHAPTER 5: ACTIVE INTERCEPT: CHINA'S EFFORTS TO NARROW U.S. UNDERSEA ADVANTAGE

Executive Summary

For decades, the United States has enjoyed a military advantage beneath the sea. China is systematically seeking to erode that advantage. Even as it modernizes and expands its submarine force, Beijing is pursuing multiple means to constrain U.S. submarine operations, particularly by improving its ability to detect them inside the first island chain through a layered sensing architecture and a growing portfolio of autonomous underwater systems. These efforts could be consequential in a Taiwan contingency, where U.S. submarines would pose a significant threat to People's Liberation Army (PLA) forces crossing the Taiwan Strait.

China treats the undersea domain as a single arena of strategic competition. Beijing is integrating military modernization, scientific research, commercial industries, and emerging technologies into a mutually reinforcing ecosystem that allows capabilities and knowledge developed for one purpose to support others. Military-civil fusion provides institutional channels for scientific and commercial capabilities to support national and defense priorities. Submarine modernization, undersea sensing, autonomous systems, and subsea telecommunications infrastructure provide Beijing multiple ways to improve its ability to understand, operate in, and ultimately contest the undersea environment. Regardless of whether commercial seabed mining becomes economically viable, China's oceanographic research and seabed exploration have produced environmental data, seafloor knowledge, and deep-sea technologies with applications for submarine operations, undersea sensing, and anti-submarine warfare.

China remains well short of displacing the United States as the dominant undersea military power. Its sensing networks remain fragmented, autonomous systems face substantial technical barriers, and many of its more ambitious concepts remain developmental. However, China does not need to eliminate the U.S. advantage to constrain U.S. operations. Continued gains in sensing, autonomous systems, submarines, and dual-use technologies could narrow that advantage enough to make U.S. operations in the Western Pacific—especially within the first island chain—more difficult, more costly, and more uncertain.

Key Findings

- China is seeking to erode the U.S. undersea advantage through multiple lines of effort that extend well beyond

traditional naval modernization. Beijing's investments in submarines, sensing networks, autonomous systems, oceanographic research, subsea infrastructure, and seabed technologies give it several avenues to narrow the U.S. advantage, with institutional links that allow capabilities and knowledge developed in one area to support others.

- China does not need to match the United States submarine-for-submarine to alter the military balance in the Indo-Pacific. China's most immediate undersea objective is not destroying U.S. submarines but rather making them easier to detect. Even intermittent detection of U.S. submarines inside the first island chain could force changes in how they are routed and employed, increase the effort required to preserve stealth, and raise the risks of U.S. intervention in a Taiwan contingency.
- China is developing a layered sensing architecture that could make strategically important waters less permissive for U.S. submarines. Satellites, autonomous systems, seabed sensors, and oceanographic mapping are expanding China's ability to collect undersea data, but integrating these systems into a reliable operational picture remains a major challenge.
- The PLA has a growing portfolio of uncrewed underwater vehicles (UUVs) that conduct a range of missions, but its ability to employ large numbers of them effectively remains unproven. UUVs already support oceanographic collection, sensing, and surveillance, while China is developing systems for mine warfare and other combat missions. If China overcomes persistent communications and coordination challenges, its manufacturing capacity could become an important advantage in fielding autonomous systems at scale.
- China's submarine modernization will place additional demands on U.S. forces charged with preserving the undersea advantage. A larger, quieter, and increasingly nuclear-powered Chinese submarine force will be more difficult to monitor and track, extend the PLA Navy's operational reach, and improve the survivability of China's sea-based nuclear deterrent.
- China's role across the subsea cable industry gives Beijing access to critical infrastructure and strategically important waterways with military and intelligence value. Chinese firms manufacture, own, install, and repair cables supporting global communications, creating opportunities for intelligence collection and maritime surveillance as well as coercion or disruption during a crisis. U.S. actions have constrained Chinese participation in some projects but have not eliminated Beijing's presence across the global cable ecosystem.
- China is gaining military value from seabed exploration and oceanographic research, driving investments well beyond seabed mining's commercial viability. Seafloor mapping

and environmental data can improve understanding of the acoustic environment and inform submarine operations, anti-submarine warfare, and sensor placement, while deep-sea exploration advances relevant robotics and engineering capabilities. China's investments could also position its firms to play a leading role if seabed minerals become commercially important.

Introduction

China is systematically seeking to erode the U.S. advantage in the undersea domain, a theater where the United States has traditionally enjoyed dominance over its rivals. In a Taiwan invasion scenario, China would need to move tens of thousands of troops, trucks, and tanks across roughly 110 miles of open water.[1] Lurking beneath the surface would be one of the most potent threats to such an operation: nuclear-powered U.S. attack submarines. As Chinese forces crossed the Strait, U.S. submarines could launch salvos of torpedoes and anti-ship missiles to "wreak havoc" on China's invasion force.[2] U.S. submarines could also be used to track and, if necessary, attack Chinese naval vessels that could potentially threaten U.S. or other allied assets.[3] After expending their weapons, they could transit to regional ports, reload, and return to the fight.[4] China's relatively weak anti-submarine capabilities have made U.S. submarines one of Washington's most consequential military advantages in the Indo-Pacific and a critical pillar of deterrence.[5]

The PLA is investing in layered sensing networks to make U.S. submarines easier to find, autonomous systems that could expand surveillance and eventually strike at scale, and a larger and more capable submarine force of its own. At the same time, Beijing is drawing on oceanographic research, commercial subsea infrastructure, and emerging seabed industries to gain knowledge, access, and capabilities with military value. China treats these military, scientific, and commercial activities as part of a single arena of strategic competition, using each to narrow U.S. advantages and expand its own influence beneath the sea.

Strategic Competition Under the Sea

China approaches undersea competition across traditional military and civilian boundaries, using scientific research, commercial industries, and technological development to reinforce its military capabilities and strategic position.[6] Advances in sensing, autonomous systems, seabed engineering, and undersea exploration are expanding states' ability to access, monitor, and exploit the oceans, creating new opportunities to generate both military power and economic leverage.[7] Activities once constrained by the ocean's depth, pressure, and remoteness are becoming more feasible, elevating the strategic importance of the undersea domain. Alongside the polar regions, space, and cyberspace, China has identified the deep-sea domain as a "strategic new frontier."[8] High-level policymakers appear to be paying more attention to these frontiers, articulating more specific and operational technological goals for several of them, in-

cluding the deep sea, in the 15th Five-Year Plan (2026–2030).*[9] This reflects Beijing's view that access to, understanding of, and control over the undersea environment will be an important determinant of future great-power competition.[10]

China treats the undersea domain as a single arena of strategic competition. Through its military-civil fusion strategy, Beijing creates a mutually reinforcing ecosystem that links scientific research and commercial industries to PLA defense priorities.[11] By leveraging advancements in these sectors, China can translate ostensibly scientific or commercial projects into military capabilities that could, for example, improve undersea awareness, degrade the effectiveness of U.S. submarine operations, and strengthen the PLA's position beneath the seas.[12] In contrast, the United States often pursues undersea activities through separate institutions and policy communities, reflecting a more decentralized approach to undersea competition.[13]

China does not need to achieve parity with the United States in the undersea domain to significantly alter the balance of power, especially within the first island chain.[14] Even partial success in eroding U.S. advantages could complicate military operations, undermine deterrence, and reduce the effectiveness of U.S. intervention in a regional conflict.[15]

China Seeks to Erode U.S. Undersea Military Advantages

China's undersea military strategy serves three related objectives: denying U.S. forces freedom of action in China's near seas, protecting China's sea-based nuclear deterrent, and extending the PLA Navy's ability to operate farther from China's shores. PLA Navy officers have identified U.S. undersea superiority as a significant obstacle to achieving these objectives.[16] The PLA's *Science of Military Strategy* emphasizes that control of the sea is a goal of deep-sea military conflict.[17] Advantage in the undersea domain is an important component for effective anti-access/area denial (A2/AD) operations against U.S. military actions in a regional conflict.[18] China could also improve the survivability of its sea-based nuclear deterrent by creating secure operating areas in the South China Sea for its ballistic missile submarines.[19] PLA Navy officers warn that China's surface and submarine forces are highly exposed to U.S. undersea surveillance and anti-submarine warfare and argue that developing undersea capabilities to counter U.S. undersea forces is essential if China is to gain initiative in the undersea domain within the waters around Taiwan and throughout the Western Pacific.[20]

The shift in China's naval strategy with the addition of "far seas protection" to "near seas defense" reflects an expansion in both the geographic scope and ambition of the PLA Navy.[21] In the undersea domain, this requires more capable submarines, improved undersea awareness, and the ability to operate undetected over greater distances. China's expanding nuclear submarine force supports these goals by extending the PLA Navy's operational reach while

*The deep-sea technologies named in the 15th Five-Year Plan include deep-sea mineral exploitation, deep-sea uncrewed "intelligent" technology development, and support systems for deep-sea and polar research. China's National Development and Reform Commission, 中华人民共和国国民经济和社会发展第十五个五年规划纲要 [Outline of the 15th Five-Year Plan for National Economic and Social Development of the People's Republic of China], March 2026, 28, 75.

strengthening the credibility and survivability of its sea-based nuclear deterrent.[22]

By limiting China's ability to maneuver freely within its near seas, U.S. undersea superiority remains a foundational pillar of the regional military balance. U.S. submarines provide a unique combination of stealth, survivability, intelligence collection, and strike capabilities that strengthen deterrence and complicate PLA planning. Vice Admiral Richard Seif, commander of U.S. Navy Submarine Forces, testified that the United States operates in the undersea domain with "stealth, persistence, and survivability" that cannot easily be replicated by surface or air forces.[23] This advantage is particularly consequential in a Taiwan contingency, where U.S. submarines are regarded as among the most effective capabilities for disrupting PLA maritime operations by targeting amphibious forces crossing the Taiwan Strait.[24] As China's undersea capabilities mature, Beijing's ability to contest U.S. submarines in its near seas and along key maritime corridors will increase the risks for the United States as it projects power into the Western Pacific.

China Is Building an Integrated Undersea Sensing Architecture to Detect U.S. Submarines

China's most immediate undersea priority is not destroying U.S. submarines—it is finding them. The PLA appears to view the ability to expose U.S. submarines operating within the first island chain as a practical near-term path to achieving its strategic objectives. The PLA recognizes that the effectiveness of U.S. submarines depends on their ability to operate undetected.[25] Because U.S. submarines are central to the U.S. response to any Taiwan contingency, reducing their effectiveness would be a high undersea priority for the PLA.[26] If China can reliably detect—or credibly threaten to detect—U.S. submarines, it can constrain their freedom of maneuver, disrupt their missions, and force U.S. commanders to devote greater effort to preserving stealth.[27] That, in turn, could lead to changes in operational planning, routing, and employment before combat begins and weaken a core pillar of U.S. military power in the Indo-Pacific.[28]

Rather than relying on any single technology, China is pursuing multiple, overlapping approaches to detecting and tracking U.S. submarines operating within the first island chain. China does not need to make the entire Pacific Ocean transparent. The shallow waters, chokepoints, and constrained operating areas of the first island chain create opportunities for dense undersea surveillance and sensor coverage that may be less effective to replicate in the open ocean.[29] The PLA is integrating military, civilian, and commercial sensors from space to the seabed with elements across the water column* to improve its ability to detect, track, and monitor undersea activity.[30] Within the first island chain lie many areas—including Miyako Strait, Luzon Strait, and approaches to the South China Sea—that are strategic waterways through which U.S. submarines would likely operate during a regional conflict.[31]

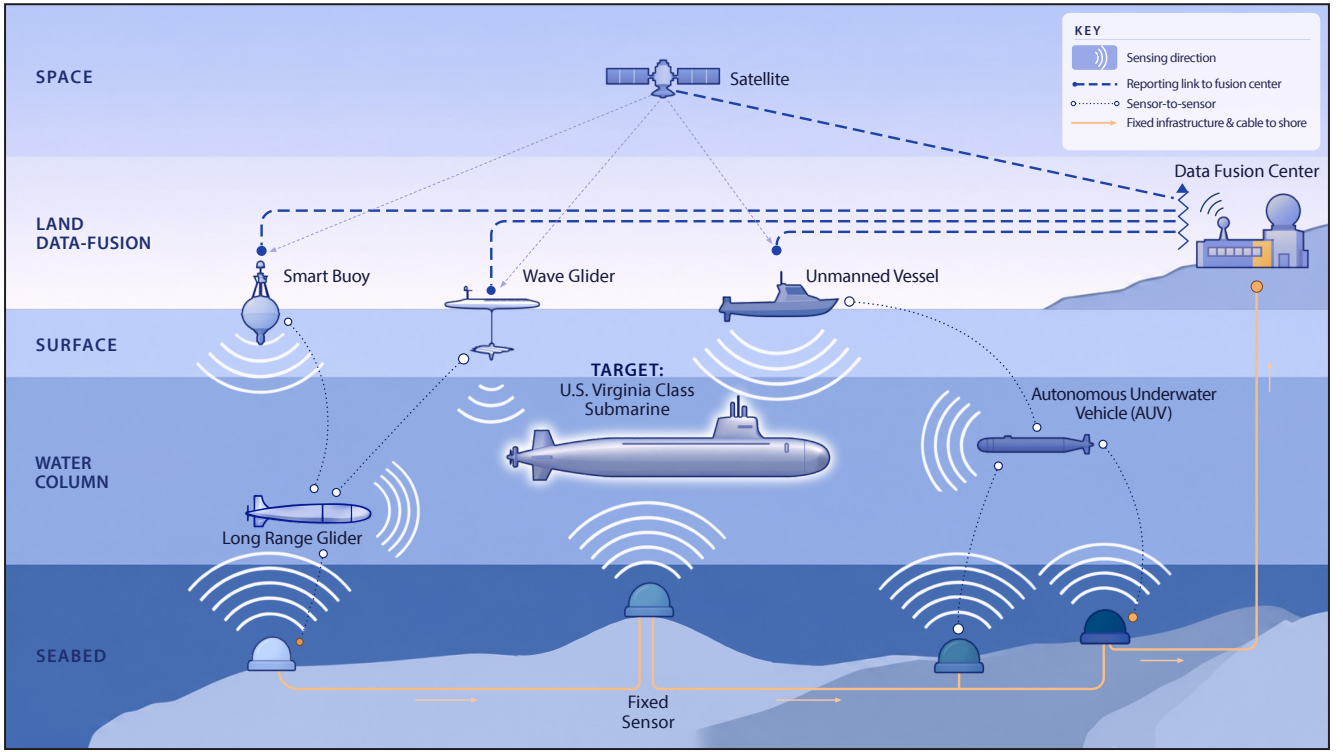
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*The water column is defined as a vertical section of water from the surface to the bottom of a body of water. It includes all physical, chemical, and biological conditions throughout the water body. Christopher R. Kelble et al., "Water Column," *U.S. Department of Commerce National Oceanic and Atmospheric Administration*, September 13, 2013; "Depth Zones," *University of Hawai'i at Manoa College of Education*.

China's long-term vision for this effort is commonly described as "Transparent Ocean."[32] Rather than a single system, Transparent Ocean is best understood as a system-of-systems concept intended to integrate sensors, platforms, and data across multiple domains into a unified architecture suitable for conducting anti-submarine warfare (see Figure 1).[33] Chinese writings envision five interconnected layers: space-based surveillance using satellite constellations; air-sea interface systems such as maritime patrol aircraft and uncrewed aerial vehicles (UAVs); surface-based sensors including smart buoys, wave gliders, and uncrewed surface vessels (USVs); water column sensors including autonomous underwater vehicles (AUVs), deep-water floats, and gliders; seabed observatories and passive acoustic arrays; and an additional data fusion layer that integrates information from all sources into a common operational picture.[34] Western analyses of Transparent Ocean emphasize China's objective to develop an automated kill web that uses the information from the sensor systems to persistently detect, track, and monitor activity above and beneath the water's surface.[35] The military value lies in the sensors' integration across domains that could collect near-real-time data in an adaptive network that could rapidly cue and relay targeting information to combat networks.[36] In practical terms, Transparent Ocean seeks to reduce the ability of U.S. submarines to approach, operate, and maneuver undetected in strategically important waters around China.

China's military-civil fusion strategy supports the PLA's pursuit to gain mastery of the ocean battlespace environment.[37] Rear Admiral Michael Brookes, commander of the Office of Naval Intelligence, testified that oceanographic research can improve understanding of seabed topography, temperature gradients, currents, and salinity—all factors that influence sonar performance and submarine detection.[38] To better understand this environment, the PLA benefits from access to China's large fleet of research vessels, government ministries, scientific institutions, and academic institutions.[39] Many of the research vessels China uses to conduct surveys are owned and operated by state-affiliated organizations that have close ties to Beijing's military.[40] (For more on China's use of research vessels for PLA purposes, see below, "China Is Using Integrated Seabed Mining Ecosystem to Ensure Military Benefits.") In its hope of acquiring more oceanographic data and expertise, the PLA Navy signed an agreement with the Ministry of Land and Resources (the predecessor of the Ministry of Natural Resources) on Strengthening Geologic Surveying and Marine Mapping.[41] In 2017, China's State Oceanic Administration signed a cooperative agreement with the PLA Navy to "further promote civil-military integrated development in the maritime realm, and support the construction of a world-class navy."[42] Government-affiliated scientific institutions, such as the Third Institute of Oceanography, have reportedly been asked to conduct different "national defense construction" projects and "military oceanography."[43] The Chinese Academy of Sciences has also signed cooperation agreements with the PLA.[44] These institutional links give the PLA access to scientific expertise, oceanographic data, and technologies developed outside the military research system.

Figure 1: China's "Transparent Ocean" Concept Integrates Multiple Layers of Undersea Surveillance



Note: Conceptual illustration. Not to scale.
Source: Various.[45] Created for the U.S.-China Economic and Security Review Commission.

The value of China's growing sensor network depends on whether it can turn data from disparate systems into a coherent picture of undersea activity. The Blue Ocean Information Network (BOIN) is one example of a system that could support China's broader Transparent Ocean concept, though its direct relationship is unclear.[46] Led by the China Electronics Technology Group Corporation (CETC), BOIN seeks to integrate seabed sensors, buoys, ships, aircraft, satellites, and communications networks into a unified maritime awareness architecture capable of providing "full-time" and "full ocean area" surveillance.[47] Between 2016 and 2019, CETC built a demonstration sensor and communications architecture connecting Hainan Island and the Paracel Islands in the South China Sea.[48] However, the extent to which BOIN currently provides operationally useful, real-time awareness remains unclear, and open source reporting provides only limited evidence regarding its performance, scale, and level of integration.[49]

China is pursuing multiple mutually reinforcing programs to build the layered sensing architecture envisioned by its Transparent Ocean concept. While significant technical challenges remain, China is developing and prototyping capabilities across different layers of the concept.[50] Key programs include:

- **"Ocean Star Cluster"** seeks to detect undersea activity from space. Chinese universities are developing Guanlan satellites, space-based LiDAR (light detection and ranging) remote sensing, and radar interferometry to monitor the upper ocean in wider swaths and shorter repeat cycles.[51] Concept design specifications of the Guanlan space-based LiDAR in 2020 described maximum penetration depths of 300 meters (984 feet) at low orbit and 240 meters (787 feet) at high orbit.[52] While Guanlan satellite technology is still in the research and development (R&D) stages, Ocean Star Cluster is part of China's ambition to achieve space-based anti-submarine warfare capabilities whereby, if successfully developed, a satellite could detect movement near the surface and cue lower-level sensors to focus their search for targets.[53]

- **"Air-Sea Interface"** is China's attempt to build a network of drones, buoys, gliders, and submersibles that feed underwater data to satellites above or to stations ashore. China has made real progress on important elements of this architecture. The oceanographic research vessel *Zhu Hai Yun* can reportedly operate as a mothership for more than 50 uncrewed vehicles across a 160-kilometer-wide (99-mile) area.[54] Additionally, Chinese research vessels have deployed large-scale* observation buoy systems in the northwestern Pacific and developed a heavy-duty hybrid wave glider (XF-3) that uses wave and solar power to conduct marine observation activities over long peri-

*Under Qingdao National Laboratory for Marine Science and Technology's Transparent Ocean program, the Ocean University of China has "deployed and retrieved over 400 deep-sea floating and submerged buoy observation systems" in the South China Sea, Western Pacific Ocean, and Kuroshio Current extension near the eastern coast of Japan. "'透明海洋'观测体系建设跨越式推进—'两洋一海'观测网实现实时化" [The Construction of the "Transparent Ocean" Observation System Has Made Leapfrog Progress—The "Two Oceans and One Sea" Observation Network Has Achieved Real-Time Monitoring], *Ocean University of China Key Laboratory of Physical Oceanography*, September 20, 2019.

ods of time.[55] Despite these advances, China continues to face important constraints. Chinese scientists have acknowledged that cross-domain "drone swarm" concepts remain hindered by underwater communication, data fragmentation, low bandwidths, and synchronization challenges.[56] Despite the Air-Sea Interface's integration issues and supply chain vulnerabilities, the presence of thousands of "eyes" underwater may still provide sufficient maritime domain awareness to complicate U.S. undersea activity.

- Through **"Starry Deep Sea,"** China aims to map the ocean's physical characteristics to both track foreign targets in areas of denial and move Chinese underwater assets more safely, according to PLA Navy officials.[57] China has developed AUVs, deep-water floats, and manned submersibles capable of diving up to 10,000 meters (32,808 feet).[58] China's uncrewed gliders can travel thousands of miles over several months while transmitting oceanographic data, including a military variant of the *Haiyan* glider with acoustic sensors and a magnetometer that could be used for submarine detection.[59] Chinese-marked UUVs have been recovered in contested waters. In September 2025, Philippine fishermen recovered one near Palawan.[60] Philippine authorities reported that the UUV carried a device that collected data on the salinity, temperature, and depth of the water column, information that could identify areas where submarines might potentially hide undetected.[61] The environmental data these systems collect have enduring military value. Because sound travels differently through water depending on temperature, salinity, and depth, environmental data collected today are valuable for future operations and could help China map out where U.S. submarines hide or help China better hide its own undersea vehicles.[62]
- The **"Undersea Perspective,"** sometimes known as the **"Underwater Great Wall,"** is China's effort to create a persistent seabed sensing network capable of detecting and tracking submarines in strategically important waters. The concept will require integrating seabed observation networks, underwater communication, navigation positioning, seabed docking, intelligent charging, and other technologies to construct an undersea detection network.[63] Scientists at the Chinese Academy of Sciences' Institute of Acoustics claim to have already demonstrated elements of this capability using an acoustic detection system that can be deployed at a depth of 1,000 meters (3,281 feet) and detect an aircraft flying 5,000 meters (16,404 feet) overhead.[64] Chinese research vessels conducted bathymetric and oceanographic surveys in strategic waters near Japan, Guam, and the Philippines, which could have potential military utility.[65] More specifically, in September 2025, a Chinese research vessel was reportedly dropping buoys within Japan's exclusive economic zone (EEZ)* near both the Senkaku and Daito Islands.[66] In March 2026, that same research vessel again was reportedly

*For a definition of maritime boundaries, see "Appendix I: Maritime Zone Definitions" later in this chapter.

dropping buoys in Japan's EEZ near Uotsuri Island in the Senkakus.[67] Conducted without Japan's consent, China's activities were inconsistent with UN Convention on the Law of the Sea (UNCLOS) provisions that govern research in another state's EEZ.[68] According to Japan, China's activity is part of an effort aimed at collecting acoustic and hydrological data to support anti-submarine warfare, submarine operations, and seabed surveillance across the first island chain.[69] In the future, by leveraging projects such as Tongji University's Seafloor Observation Network (launched in 2017 and scheduled to be operational in 2026), China aims to monitor the first island chain and provide docking and navigation for UUVs.[70] The "Underwater Great Wall" is likely years away from being fully realized because it requires layers of interconnected sensors, processing nodes, and communication networks, along with detailed data on the foreign vessels it is meant to detect.

- Via **"Deep Blue Brain,"** China intends to fuse data from its growing network of undersea sensors into a single operational picture. The program could be conceived as the command and control layer of Transparent Ocean, with the goal of using artificial intelligence (AI) to integrate data from satellites, aircraft, surface vessels, seabed sensors, and autonomous underwater systems.[71] China's long-term objective is to identify patterns across multiple sensor networks, improve target tracking, support autonomous decision-making, and ultimately increase the PLA's ability to detect and monitor submarines.
  - China has made some incremental progress implementing the Deep Blue Brain.[72] The *PLA Daily* reported that a Southern Theater Command Navy detachment established a data-driven center that combines acoustic, hydrological, meteorological, operational, and personnel-performance data to support anti-submarine warfare training, among other functions.[73] China is also constructing ocean models that simulate changes in ocean temperature, currents, and other conditions that affect the underwater acoustic environment.[74] However, there is little public evidence that China can integrate these models with data from its disparate sensor networks to produce a real-time operational picture. In addition, China announced plans to build a deep-sea research station 2,000 meters (6,562 feet) below the surface by 2030.[75] Although a Chinese research paper published in a peer-reviewed journal claimed AI-supported sensors could reduce enemy submarine survivability to 5 percent, Chinese scientists acknowledged as recently as May 2026 that much current marine observation equipment has yet to incorporate AI-driven data processing.[76] The "notoriously difficult" nature of undersea communications suggests inherent challenges in visions of AI-enabled transparency based on real-time integration of undersea sensors.[77] As a result, the PLA's ability to fuse these diverse data streams into a real-time operational picture remains uncertain. Beijing continues to invest heavily in overcoming this challenge because data integration is essential to realizing its broader Transparent Ocean vision.

China Pursues AI and Quantum Technologies to Improve Its Undersea Awareness

Rear Admiral Brookes noted that the PLA likely views AI as a potential pathway to closing capability gaps with the U.S. Navy.[78] As discussed above, China is actively using AI in an attempt to fuse data across its Transparent Ocean sensing architecture and developing AI-enabled systems to process sonar imagery, which could be used to support the identification of targets in the undersea domain such as seafloor infrastructure and submarine vehicles.[79]

China is also researching quantum sensing for submarine detection and navigation underwater. Quantum sensors could potentially detect the small magnetic anomalies produced by submerged objects or provide critical position, navigation, and timing (PNT) for submerged platforms operating without GPS. In 2025, researchers at the Quantum Engineering Research Centre of the state-owned China Aerospace Science and Technology Corporation reportedly tested a drone-mounted quantum sensor designed to detect magnetic anomalies associated with submarines and other underwater vehicles.[80] Although the system reportedly demonstrated sensitivity comparable to similar NATO capabilities, testing occurred under controlled conditions and would likely require the sensor to pass within several hundred meters to approximately one kilometer (0.3 to 0.6 miles) of a submarine.[81] Quantum sensing therefore remains a prospective capability, but China's investment in it reflects a broader effort to pursue new ways of narrowing the U.S. undersea advantage.

To realize its Transparent Ocean vision, China will have to overcome some of the most difficult technical challenges in undersea warfare. Detecting a possible submarine is not the same as being able to classify, localize, and continuously track it over time.[82] The undersea environment remains inherently difficult to monitor due to ocean noise, changing environmental conditions, and the limitations of underwater communications.[83] Integrating large volumes of data from diverse types of sensors into a coherent operational picture also presents substantial data fusion challenges.[84] Localizing and continuously tracking a submarine—as opposed to simply detecting it momentarily—remains the most operationally demanding and least solved problem in the entire architecture. Moreover, many of the sensing concepts envisioned by Chinese researchers remain under development and have yet to be publicly demonstrated at operational scale, particularly in complex wartime environments where sensors and communications networks could be disrupted or degraded.[85] Nevertheless, these efforts collectively reflect a sustained, long-term campaign to make the waters inside the first island chain progressively more transparent to the PLA and less permissive for U.S. submarines.

Importantly, China does not need to overcome all of these challenges or build a fully effective network for these efforts to be strategically consequential. Even incremental improvements in detection, localization, and undersea awareness can increase uncertainty for

U.S. commanders, force submarines to operate more cautiously, and narrow the U.S. stealth advantage. As new systems come online and emerging technologies such as AI improve the processing and integration of data, the cumulative effect may be to gradually transform waters where U.S. submarines have traditionally operated with relative freedom into a more contested battlespace.[86]

UUVs Expand China's Surveillance Network and Undersea Operations

UUVs could become an important enabler of China's broader effort to erode U.S. undersea advantages. Chinese military planners and scholars view uncrewed operations to be the next evolution of warfare in the underwater battlefield and critical to enhancing the PLA's capabilities in the undersea domain.[87] Although discussions of UUVs often focus on future strike missions, their most immediate military value is likely to come from surveillance, reconnaissance, communications, and sensor deployment. In the near term, UUVs are best understood as extensions of China's sensing architecture rather than replacements for traditional submarines. In peacetime, UUVs play an important role in supporting intelligence preparation of the battlespace, which contributes to up-to-date models of the ocean environment to maximize the operational effectiveness of undersea systems.[88] China's pursuit of UUVs is also linked to its broader Transparent Ocean initiative to track and defeat U.S. undersea capabilities.[89] By deploying autonomous systems across strategically important waters, the PLA can increase the density and persistence of its surveillance network without relying solely on manned platforms or fixed seabed systems.[90] Over time, however, these platforms could support a broader range of missions, including mine warfare, counter-mine warfare, communications relay, electronic warfare, deception, and kinetic operations.[91]

China appears to be drawing lessons from the growing role of uncrewed systems in modern warfare.*[92] The widespread use of UAVs and USVs in Ukraine has demonstrated how large numbers of relatively inexpensive uncrewed systems can impose costs on more sophisticated platforms.[93] Chinese reporting noted similar uses of low-cost aerial suicide drones used by Iran during conflict in March 2026.[94] The analogy to the undersea domain is imperfect. Unlike aerial and surface drones, UUVs operate in an environment where communications, navigation, and command and control are constrained by physics. Radio frequency signals do not travel effectively underwater, GPS is unavailable, and transmitting data over long distances remains difficult.[95] These limitations make autonomous undersea operations substantially more challenging than comparable operations in the air domain. Nevertheless, the broader lesson of Ukraine—that large numbers of relatively inexpensive autonomous systems can impose disproportionate operational costs on more sophisticated platforms—may still apply beneath the sea.

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*Chinese state media also noted the U.S. military's use of UUVs to conduct mine-clearing operations in the Strait of Hormuz. Bonny Lin and Brian Hart, "Assessing the Ambitions and Realities of China's Uncrewed Underwater Vehicle Capabilities," *Center for Strategic and International Studies* (prepared for the U.S.-China Economic and Security Review Commission), 2026, Forthcoming.

China could deploy UUVs to create a dense maritime surveillance network at low cost and strengthen the PLA's anti-submarine warfare capabilities in contested waters. Linked to its broader Transparent Ocean initiative, large numbers of attritable UUVs and USVs serving as mobile sensing nodes would fill gaps between fixed sensors, relay information, and extend the reach of its surveillance network.[96] This approach would allow China to generate greater sensing density at lower cost than relying exclusively on submarines, aircraft, or large surface combatants.[97] China's leading state-owned defense and commercial shipbuilding company, China State Shipbuilding Corporation (CSSC), has made UUVs a major research priority focused on autonomy, AI, and cross-domain capability.[98] If China succeeds in fielding UUVs at scale as part of its layered undersea surveillance architecture, it could form part of an anti-submarine warfare system-of-systems that constrains U.S. submarine operations in strategically important waters.[99]

China could have important advantages in scaling this approach. Its integrated manufacturing ecosystem links state-owned enterprises (SOEs), private technology firms, research institutions, and defense contractors into a network capable of rapidly translating technological advances into production.[100] The Commission's 2025 Annual Report described this ecosystem as an "interlocking innovation flywheel" in which advances in manufacturing, supply chains, research, and commercial production reinforce one another.[101] Similar dynamics enabled China's rapid advances in areas such as commercial drones, anti-ship ballistic missiles, and shipbuilding. China's Northwestern Polytechnical University, a leading defense university, established an Unmanned Systems Research Institute as far back as 2017 to conduct cross-domain research on uncrewed systems while maintaining partnership with PLA units.[102] These partnerships establish channels for universities, industry, and PLA communities to exchange knowledge, personnel, and technologies.[103] If applied to undersea systems, this industrial capacity could allow China to mass produce autonomous platforms and expand its surveillance network at a pace that is difficult for the United States to match.[104]

China's growing portfolio of UUVs suggests the PLA is preparing for missions that extend beyond sensing and surveillance. However, the PLA's most mature and observable UUV capabilities remain concentrated in oceanographic data collection; intelligence preparation of the battlespace; intelligence, surveillance, and reconnaissance (ISR); and selected mine warfare missions.[105] The PLA Navy appears focused on integrating UUVs into its operational force and developing larger systems capable of carrying more sophisticated payloads and conducting a broader range of missions.[106] Long-endurance autonomous systems could enable China to sustain surveillance in contested waters and enhance its ability to threaten surface forces at a lower cost than through the use of crewed submarines.[107] In September 2025, China unveiled two extra large UUVs: the HSU-100, capable of long-duration ISR and attack missions and the AJX-002, capable of mine-laying.[108] As noted by Rear Admiral Brookes, China is also developing modular platforms like the UUV300, which could carry smaller UUVs, sensors, mines, torpedoes, or missiles.[109] At the 2026 Chengdu Defense Technology

Industry Expo, China unveiled an AI-enabled UUV that could be launched from torpedo tubes and is "designed to conduct high-precision deep-ocean surveys and seabed mapping."[110] Chinese state media claimed the UUV could also be fitted with specialized modules to detect and "neutralize underwater targets."[111] Many of these concepts remain developmental, and there is limited public evidence that the PLA can currently employ large numbers of autonomous underwater systems in coordinated operations.[112] Underwater communications, navigation, endurance, and command and control remain significant technical challenges, particularly for complex missions conducted far from shore.[113] Nevertheless, the direction of China's investments suggests the PLA is seeking to overcome these constraints and expand the role of autonomous systems in future undersea operations.

China's military-linked institutions are conducting research into attritable UUV swarms that could expand PLA sensing and targeting, though technical challenges limit their operational capacity.[114] Because small UUVs could be produced and operated at a lower cost than crewed submarines, China may be willing to accept losses that would be unacceptable for higher-value platforms. Chinese experts have noted that attritable UUVs potentially enable low-cost attacks that could overwhelm the defenses of high-value vessels.[115] Recent Chinese academic research indicates interest in the potential for UUV swarms to be a component of distributed undersea warfare, however much of the work remains conceptual.[116]

Despite the research, challenges associated with communication latency, limited underwater sensing, and coordination remain significant barriers to fielding effective swarms in undersea combat.[117] Chinese researchers have examined a method to improve the performance of multi-AUV swarms in cooperative hunting tasks and validated it through simulations.[118] However, limitations in underwater communication remain a major barrier in operationalizing UUV swarming tactics.[119]

Former Deputy Assistant Secretary of Defense for Force Development and Emerging Capabilities Dr. Michael C. Horowitz testified before the Commission that China may be developing more ambitious UUV concepts than the U.S. Navy.[120] He assessed that China could lead in the development and fielding of new generations of UUVs at rapid pace over the next ten to 15 years.[121] If China succeeds in combining a layered sensing architecture with large numbers of autonomous platforms, the result could be a more persistent and contested undersea battlespace that erodes one of the United States' most important military advantages in the Indo-Pacific.

Can the U.S. Defense Industrial Base Scale UUV Production?

The United States has advanced UUV technology, but its ability to field autonomous undersea systems quickly and at scale remains uncertain.[122] The broader U.S. maritime industrial base illustrates some of the challenges the United States could face in scaling UUV production. U.S. ship and submarine building capacity is constrained by limited industrial capacity with long acquisi-

Can the U.S. Defense Industrial Base Scale UUV Production?—*Continued*

tion timelines and difficulties integrating commercial innovation into defense procurement.[123] U.S. shipyards have a shipbuilding capacity of less than 100,000 tons.[124] By comparison, China has made significant investments in its maritime industry over the past two decades and now has an estimated shipbuilding capacity of 23 million tons—roughly 230 times that of the United States—although estimates of its capacity to build complex combat system equipment for warships are far less.[125] Shipbuilding capacity does not translate directly into UUV production capacity, but the disparity illustrates the much larger manufacturing base China could draw on if autonomous systems must be fielded rapidly and in large numbers.

The U.S. industrial base for uncrewed systems faces a different set of constraints. RAND's 2023 assessment of the sector found it to be fragile, citing financial risks, demand uncertainty in the maritime sector, a small number of firms in the sector, and foreign dependence on selected components (such as lithium-ion batteries).[126] Still, RAND assessed that these risks did not appear sufficient to jeopardize the industrial base's ability to meet U.S. military demand.[127] However, the assessment pointed out that the fragility risks would be exacerbated in a shift to wartime production.[128] That distinction could become more important as the U.S. Navy seeks to rapidly prototype and field more uncrewed systems.[129] In testimony before the Commission, Dr. Horowitz argued that the United States should accelerate prototyping and experimentation while expanding manufacturing through non-traditional producers, including commercial shipyards and yacht builders.[130]

Allies and partners could provide another source of technology and production capacity. Dr. Horowitz emphasized their potential role to aid in the production of autonomous systems.[131] Australia's Ghost Shark program, an extra-large AUV that can conduct persistent and disruptive ISR and strike operations, illustrates an effective model.[132] Developed through a partnership between government and industry, Ghost Shark moved from concept to operational testing faster than traditional defense acquisition programs.[133] AUKUS* Pillar II provides an existing mechanism for Australia, the UK, and the United States to extend cooperation in autonomous undersea systems, AI, and advanced sensing technologies.[134] The first AUKUS Pillar II signature project will deliver "UUV payloads and enabling systems that can be used across each country's UUVs."[135] Australian officials identified Ghost Shark as a platform that could enable interchangeable payloads for AUKUS Pillar II cooperation.[136]

*AUKUS is a trilateral security partnership between Australia, the UK, and the United States announced in September 2021 to strengthen the ability of each government to support one another's security and defense interests. In a joint leaders statement, the three countries highlighted that the partnership "promotes deeper information and technology sharing," including "deeper integration of defense-related science, technology, industrial bases, and supply chains." U.S. Embassy in Canberra, *Joint Leaders Statement on AUKUS*, September 16, 2021.

Can the U.S. Defense Industrial Base Scale UUV Production?—*Continued*

As autonomous systems assume a larger role in undersea warfare, production capacity and acquisition speed could become as consequential as technological sophistication. The U.S. Department of Defense is pursuing initiatives to "procure, integrate, and train using low-cost, high-performing drones" that include uncrewed and autonomous systems across all domains.[137] The U.S. Navy's Next-Generation Undersea Security Initiative further calls for rapid prototype solutions from industry and not-for-profit organizations to "sustain and expand strategic superiority within broadly stated submersible operations."[138] Dr. Horowitz has described the current age of warfare as one that is "collapsing the binary between mass and precision, scale and sophistication."[139] These initiatives could shorten the path from experimentation to operational deployment, but the larger question remains whether the United States can build the production capacity and supplier base needed to field autonomous undersea systems in large numbers, particularly under wartime conditions.[140]

China Expands and Modernizes Its Nuclear Submarine Force to Strengthen Deterrence and Project Power

China's submarine modernization adds another challenge to the U.S. undersea advantage as Beijing works to make U.S. submarines easier to find while making its own more difficult to track. China is modernizing its nuclear-powered and conventional submarine force to improve its survivability, endurance, and strike capacity, all of which would make a U.S. military response to conflict in the Indo-Pacific more costly.[141] Rear Admiral Brookes noted that the PLA Navy currently operates over 60 submarines but is shifting its composition from diesel-electric to all-nuclear construction.[142] The current fleet is composed of "six nuclear-powered attack submarines (SSNs) providing the offensive backbone, at least two nuclear-powered guided missile submarines (SSGNs) for precision strike, six nuclear-powered ballistic missile submarines (SSBNs), and more than 50 diesel-electric submarines."[143] Rear Admiral Brookes described China's new SHANG III SSGN as the PLA's most capable nuclear-powered attack submarine for precision strike, with a 24-cell vertical launch system for anti-ship and land-attack cruise missiles.[144] Vice Admiral Seif acknowledged that its "significant advances in capabilities" featured improved stealth, endurance, propulsion, and armaments, including the capability to launch from a submerged position.[145] The PLA Navy's JIN-class SSBN presents a long-range threat to the United States, with 12 vertical launch cells that can launch a 5,400-nautical-mile-range submarine-launched ballistic missile (SLBM) like the JL-3 that could reach the continental United States from China's littoral waters.[146] In July 2026, China conducted a SLBM test launch from its near seas into the South Pacific, demonstrating the credibility of China's long-range second-strike nuclear capability, with China's state-owned media speculating the JL-3 was tested.[147] Rear Admiral Brookes said that over the next decade, China is prepared

to enter into service next-generation platforms that will feature "substantial advancements in nuclear reactor design, sensor performance, weapons integration, and noise quieting technologies."[148] The United States is contending with a PLA submarine force that could be approaching the propulsion, quieting, sensor, and weapons capabilities of Russia's submarines.[149]

China has expanded the industrial capacity needed to sustain long-term submarine growth, increasing its domestic submarine production capacity.[150] A U.S. Naval War College China Maritime Studies Institute report by Sarah Kirchberger assessed that China's three submarine building shipyards—Bohai, Wuchang, and Jiangnan—have upgraded their production infrastructure.[151] Over the past decade, China has expanded the Bohai shipyard, which builds nuclear-powered submarines, by reclaiming additional land and constructing a new harbor, indicating preparations for increased submarine production.[152] Rear Admiral Brookes projected that China's submarine force will reach about 70 submarines by 2027 and expand to about 80 by 2035, half of which would be nuclear powered.[153] He said that China has "tripled construction hall capacity," which has enabled "higher production rates for conventional submarines" with upgraded infrastructure that supports construction of "large diameter, advanced submarines across all three facilities."[154] Supported by China's decades of investments, the United States can expect the PLA Navy to sustain its submarine force expansion through the 2030s and beyond.[155]

China's Undersea Modernization Is Reinforced by, but Not Dependent on, Cooperation with Russia

China's pursuit of undersea advantage has drawn on cooperation with Russia, which has more advanced submarine technology than China. While Russia has generally withheld its best technology from China, it played a pivotal role in accelerating China's submarine modernization after the Cold War when it sold China KILO-class diesel submarines beginning in 1994 along with anti-ship cruise missile systems.[156] In the assessment of the commander of the Office of Naval Intelligence, these sales helped jumpstart China's submarine construction program and advance its work on quieting, propulsion, and sensors.[157]

Sino-Russian research cooperation on undersea technologies has been ongoing for years. Rear Admiral Michael Studeman, USN (Ret.), noted reports of possible Russian assistance on a number of PLA submarine programs, including the SHANG SSN and JIN SSBN, though such assistance has not been confirmed.*[158] Reporting from the *Financial Times* in 2024 cited U.S. naval researchers who claimed that "China's new Type 096 nuclear ballistic missile submarine was also developed with support from Russian technology to make its propulsion system more silent."[159] In addition to submarine technology, Rear Admiral Studeman noted current cooperative efforts on underwater robotics, communications, sensors,

*The SHANG SSN, referred to as the Type 093, is the newest SSN class. The JIN-class SSBN is referred to as the Type 094 and is the newest operational SSBN class. "Fact Sheet: China Submarine Capabilities," *Nuclear Threat Initiative*, November 19, 2025; Ronald O'Rourke, "China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress," *Congressional Research Service* (Report No. RL33153), April 24, 2025, 24.

and networks.[160] Cooperation occurs through the Association of Sino-Russian Technical Universities, recurring China-Russia polar acoustic symposia, and military-to-military exchanges of technical advisors.[161]

Russia and China have also cooperated on submarine-related exercises. The two navies have conducted repeated joint anti-submarine warfare exercises in the Western Pacific.[162] In August 2025, they reportedly carried out the first publicly confirmed joint submarine patrol in the Sea of Japan and East China Sea, following the Joint Sea 2025 exercise near Vladivostok.[163]

A series of cable incidents has also raised questions about possible Sino-Russian coordination in gray zone undersea activity and the possibility that the two countries are sharing tactics, intelligence, and operational assets.[164] In testimony before the Commission, Jason Hsu, a former member of Taiwan's Legislative Yuan, discussed numerous incidents near Taiwan or in the Baltic Sea suggesting such cooperation in 2023, 2024, and 2025.[165] In one such incident from December 2024 through mid-January 2025, a Russian-operated commercial vessel "spent nearly four weeks… in commercially nonsensical movements near Taiwan's Fangshan undersea cable landing stations."[166] In at least two instances, one in 2023 and another one in 2024, Chinese commercial vessels with Russian crewmembers severed undersea cables in the Baltic Sea.[167]

The strategic significance of Russia-China cooperation in this sphere lies as much in its potential as in its present substance. Rear Admiral Brookes assessed that the "no limits" partnership has not yet produced clearly identifiable changes in the types of undersea technology Russia is willing to transfer to China, attributing China's recent progress to its own testing and innovation.[168] Analysts suspect Russia and China are cooperating on the construction, quieting, and propulsion of China's next-generation SSGN and SSBN, which Rear Admiral Studeman said are assessed to be "world-class" with "large munition capacity, higher speeds, stronger steel hulls, greater stealth, and longer… endurance."[169] But the open question is whether Russia will share its most advanced undersea technology and operational knowledge in exchange for the economic and industrial lifeline Beijing provides to sustain Moscow's war in Ukraine—or whether mutual suspicion will continue to limit transfers to systems a generation or two behind Russia's best.[170] If China succeeds in obtaining Russia's most advanced undersea technology, it would substantially accelerate the timeline under which China can narrow the undersea gap with the United States.

AUKUS Seeks to Preserve the Allied Undersea Advantage

AUKUS is the most significant long-term allied effort to preserve undersea superiority as China expands and modernizes its submarine force.[171] The partnership was established in 2021 in response to a deteriorating Indo-Pacific security environment. "Pillar I" of AUKUS seeks to expand allied nuclear-powered submarine capacity through rotational deployments of U.S. and UK submarines in Australia, the transfer of Virginia-class submarines to Australia beginning in the early 2030s, and the even-

AUKUS Seeks to Preserve the Allied Undersea Advantage—*Continued*

tual production of the SSN-AUKUS class in both the UK and Australia.[172] The strategic value of AUKUS extends beyond the submarines themselves. The initiative is accompanied by significant investments in the U.S., UK, and Australian submarine industrial bases intended to increase shipyard capacity, workforce development, and supply chain resilience.[173] Over time, AUKUS could increase the number of allied nuclear-powered submarines operating in the Indo-Pacific, improve the sustainability of undersea operations, and strengthen deterrence by complicating Chinese military planning and increasing the costs of aggression against U.S. allies and partners.[174] However, AUKUS faces real implementation challenges, and success will depend not only on delivering new submarines but also on whether the United States and its allies can rebuild the industrial capacity needed to sustain their longstanding undersea advantage.

The cumulative effect of China's submarine modernization will be felt less in any single platform than in the compounding pressure it places on U.S. surveillance, tracking, and anti-submarine warfare resources across the Indo-Pacific. Vice Admiral Seif testified that even incremental improvements in Chinese submarine platforms, sensors, weapons, endurance, and operational proficiency can alter the dynamics of undersea competition by demanding greater U.S. resources to monitor and counter them.[175] As China fields quieter and more capable submarines, U.S. and allied forces will likely face a more complex operational environment.

China Uses Commercial Subsea Cable Infrastructure to Advance Military and Strategic Objectives

Subsea cables are among the most consequential yet least visible elements of the global information infrastructure. In the information age, influence over the infrastructure carrying global data can translate into military, economic, intelligence, and geopolitical benefits. More than 95 percent of intercontinental data—including intercontinental financial transactions, cloud computing, military communications, and internet traffic—travels through fiber-optic cables on the ocean floor, and there are no practical alternatives capable of replacing them at scale.[176] While satellite networks can provide some level of connectivity if the ground infrastructure is in place, a single modern subsea cable can transmit more data per second than the entire Starlink constellation.[177] Subsea cable infrastructure therefore implicates risks of surveillance and intelligence collection on the one hand and sabotage on the other.

Recognizing both the opportunities and risks associated with undersea cables, China treats them as another arena of strategic competition. Chinese military writings go so far as to characterize the defense, exploitation, and disruption of undersea cables as part of "seabed warfare," recognizing their importance for military communications, intelligence collection, and strategic competition.[178]

Beijing has used industrial policy and state financing to build a cable industry to compete with U.S. and allied suppliers, while its commercial presence creates opportunities to support intelligence collection, gray zone coercion, and maritime surveillance as Chinese researchers explore ways to incorporate cable infrastructure into broader undersea sensing architectures.

Chinese Firms Across the Subsea Cable Industry Raise Risk of Surveillance by Design

Chinese firms' presence across all segments of the subsea cable industry* provides Beijing opportunities to surveil global communications. China supported the rise of its domestic cable manufacturing and installation champion with subsidies and policy bank loans.[179] There are four companies that manufacture and install almost all subsea cables: SubCom (United States), ASN (France), NEC (Japan), and Huawei spinoff HMN Tech (China).[180] HMN Tech (formerly Huawei Marine Networks) entered the market in 2008, reportedly offering heavily subsidized, "almost free" subsea cable installation to developing economies.[181] As recently as 2023, HMN Tech submitted bids for international cable projects that undercut competitors by 20 to 30 percent on price.[182] The People's Republic of China (PRC) also supported HMN Tech by financing cable projects with China Eximbank and other state-owned bank loans, in some cases covering 85 to 96 percent of the total costs.[183] These cables include Papua New Guinea's 2019–2020† Kumul Domestic Submarine Cable System, the 2020 Cameroon-Brazil South Atlantic Inter Link (SAIL) cable, the 2022 internationally owned France-to-Singapore PEACE cable, and Cambodia's forthcoming Sihanoukville-Hong Kong cable.[184] These efforts caused HMN Tech's share of cable laid around the world to rise to 18 percent between 2019 and 2023.[185] Following considerable U.S.-led pushback due to concerns that Chinese cable manufacturers could install remote surveillance equipment along cables, HMN Tech's share of cable length under development is now 8 percent, with only six projects coming online in 2026 and 2027.‡[186]

Chinese state-owned and partially state-owned telecommunications firms have invested in 32 subsea cable projects worldwide. Most of these cables land in China, but one-third are cables with no landing point in China.[187] Cable ownership by Chinese state-owned companies creates opportunities for data access, storage, and disruption—either directly by allowing or facilitating access by PRC security services or indirectly by looking the other way.[188] In accordance with China's 2017 National Intelligence Law, PRC organizations and individuals are required to assist the security services in carrying out intelligence work, including by lending their "communications tools, premises, and buildings."[189] Chinese owners have recently invested in consortium-owned cables connecting China to

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*For more on the subsea cable industry, see "Appendix II: Subsea Cables 101" later in this chapter.

†Years denote when the cable was ready for service.

‡These projects are: two cables with Chinese telecom investment connecting countries including China, the Philippines, Singapore, and Thailand; two intra-Indonesian cables; a Cambodia-Hong Kong cable; and the first submarine cable connecting Indonesia and Papua New Guinea. "Submarine Cable Map: HMN Tech (2026–2027)," *TeleGeography*, accessed July 13, 2026; "Telkom Group Unveils Pukpuk Cable Linking Indonesia and Papua New Guinea," *Subsea Cables by Telecom Review*, May 11, 2026.

countries including Japan, the Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam.[190]

China's participation in subsea cable repair creates another security vulnerability in the Indo-Pacific cable ecosystem. China's repair firm holds a contract covering the most important trans-Pacific corridor, exposing cables that are critical to the U.S. economy and military to an untrusted vendor.*[191] Cables are frequently damaged by fishing and anchoring activities, and repairs are carried out by companies with contracts for regional repair zones.[192] Chinese firm S.B. Submarine Systems (SBSS) owns China's only cable ship that provides maintenance services, and it works in the Yokohama consortium zone in the northwestern Pacific.[193] The Yokohama Zone covers waters off the coast of China, Taiwan, Japan, and South Korea and extends out to the mid-Pacific, including Guam.[194] The Yokohama Zone thus potentially encompasses most trans-Pacific cable infrastructure; 14 of the 18 U.S. trans-Pacific† cables land in China, Taiwan, Japan, South Korea, or Guam.‡[195] There are only two other ships (one from Japan and one from South Korea) that also work in the Yokohama Zone.§[196] This means that repairs for trans-Pacific cables can be carried out by an untrusted Chinese vendor.[197] Due to the presence of cable owner representatives during the repair process, it would be difficult for repair ships to install new surveillance devices without the owners' permission.[198] A more plausible risk runs through the supply chain: cable components stored in Chinese maintenance facilities under SBSS's control could be tampered with before they are deployed.[199]

U.S. Initiatives Constrain China's Cable Industry

U.S. efforts to secure subsea cables have reduced PRC involvement in new projects. Team Telecom has restricted Chinese involvement in cables that land in the United States.[200] Team Telecom is a U.S. Department of Justice-led interagency committee that helps the U.S. Federal Communications Commission (FCC) conduct national security reviews as part of the cable licensing process.[201] Since its formalization in 2020, the committee has

*Untrusted vendors can repair U.S. cables. In July 2026, the U.S. Federal Communications Commission (FCC) adopted rules prohibiting cable landing licensees from contracting with third-party service providers owned by, controlled by, or subject to the jurisdiction of foreign adversaries. However, underwater cable repair and maintenance is exempt from this prohibition; instead, licensees only need to notify the FCC where, when, and how such a service provider accessed the cable. These rules have been delayed indefinitely. U.S. Federal Communications Commission, "Review of Submarine Cable Landing License Rules and Procedures to Assess Evolving National Security, Law Enforcement, Foreign Policy, and Trade Policy Risks," 91 Fed. Reg. 46844 (July 27, 2026).

†The cables that cross the Pacific from the mainland United States are Asia-America Gateway, Bifrost, CHI, Echo, FASTER, Hawaiki, JUNO, JUPITER, New Cross Pacific, Pacific Crossing-1, Pacific Light Cable Network, SEA-US, Southern Cross Cable Network, Southern Cross NEXT, Tata TGN-Pacific, TPU, Trans-Pacific Express, and Unity. The four trans-Pacific cables that do not pass through the Yokohama Zone connect the United States with Hawaii, Australia, New Zealand, and several Pacific islands. They are CHI, Hawaiki, Southern Cross Cable Network, and Southern Cross NEXT. "Submarine Cable Map," *TeleGeography*, accessed August 18, 2026.

‡Since repair zones operate through private arrangements, all 15 cable owners may not necessarily contract with the Yokohama Zone. Georgia Bafoutsou, Maria Papaphilippou, and Marnix Dekker, "Subsea Cables—What Is at Stake?" *European Union Agency for Cybersecurity*, July 2023, 13–14.

§While a Taiwan company recently began providing cable installation services, it has not yet entered into the Yokohama Zone Maintenance Agreement. Dolphine Chen, *Taiwan Plus*, "Taiwanese Firm Lays Undersea Cable for First Time amid Frequent Cuts," Video, 0:40–0:50, February 25, 2026; "Ship/ROV Operators," *Yokohama Zone*.

U.S. Initiatives Constrain China's Cable Industry—*Continued*

blocked at least four projects that would have directly connected the United States and Hong Kong.[202] In October 2025 and July 2026, the FCC issued rules streamlining licensing for trusted applicants and presumptively blocking Chinese and other foreign adversary-controlled cables, equipment, and most services* from U.S.-connected undersea cables.[203]

The United States has also intervened in at least six undersea cable deals in the Asia Pacific region to ensure that Chinese cable companies were not awarded contracts.[204] One notable example was the SeaMeWe-6 cable connecting Singapore to France. The U.S. Department of State and the U.S. Trade and Development Agency offered grants to countries connected by the cable and warned about impending sanctions on HMN Tech.[205] In the end, the consortium building the cable switched installers from HMN Tech to SubCom, and two Chinese SOEs pulled out of the project.[206]

Cable Disruptions Provide China a Gray Zone Pressure Tool with Plausible Deniability

As noted previously, PLA writings discuss the disruption of subsea cables as part of "seabed warfare," and a series of suspicious disruptions involving China-linked vessels has demonstrated how cable damage could create a low-cost, plausibly deniable form of pressure, particularly against Taiwan. PRC discussions of cables' role in warfare are couched in defensive terms. For example, the PLA's *Science of Military Strategy* discusses the need to resist adversaries' attempts to attack and damage underwater communication infrastructure, and an article in a journal published by China's Ministry of Foreign Affairs describes reported U.S. cable-cutting capabilities.[207] PLA institutions have filed patent applications for cable-cutting devices, and a Chinese naval SOE's research centers developed a device capable of cutting steel-reinforced cables at 4,000-meter (13,123 feet) depths that is designed to be integrated with manned and uncrewed underwater vehicles.[208] Cable-cutting devices are regularly used in cable repair operations.[209] However, given the military focus of PLA research—as well as cable cuts attributed to PRC-linked vessels around Taiwan and in the Baltic Sea that appear to be intentional (see Table 1)—these developments suggest China is investing in both offensive and defensive cable capabilities.

Taiwan has endured both accidental cable disruptions and damage authorities attributed to China-linked vessels.[210] As an economy made up of islands, Taiwan relies heavily on just 25 undersea cables for internal and external communications and data transfers despite efforts to improve resilience through satellite communications and network redundancy.† [211] These cables experience relatively fre-

*Foreign adversaries may still provide repair and maintenance services to the underwater segment of U.S.-connected cables. U.S. Federal Communications Commission, "Review of Submarine Cable Landing License Rules and Procedures to Assess Evolving National Security, Law Enforcement, Foreign Policy, and Trade Policy Risks," 91 Fed. Reg. 46844 (July 27, 2026).

†Other measures Taiwan has taken to protect subsea cable infrastructure include 24-hour coast guard patrols, automatic identification system (AIS)-based and other monitoring systems,

quent damage due to high ship traffic and shallow waters in the Taiwan Strait.[212] From 2022 to 2025, Taiwan's Ministry of Digital Affairs recorded an annual average of 8.5 disruptions to Taiwan-connected cables in waters under its jurisdiction* and, in 2025 alone, 25 disruptions in waters outside its jurisdiction.†[213] At least four disruptions since 2023 have been attributed to Chinese vessels suspected of sabotage.[214]

Taiwan has a particular vulnerability in its outlying islands, where there is less redundancy. The cables connecting the Matsu Islands with Taiwan's main island have been damaged at least 20 times in the past five years.[215] This included at least two cuts by ships from China that isolated the residents with degraded internet service for long periods at low cost and little risk to Beijing.[216] Mr. Hsu testified before the Commission that repeated cable incidents allow Beijing to exert psychological pressure on Taiwan and undermine the island's willingness to resist coercion while maintaining plausible deniability due to the difficulty of attribution.[217] Most cable damage is unintentional, but despite the deniability of these attacks, China has both the motive and the means by which to sabotage undersea infrastructure.[218] As Mr. Hsu stated, "[The] targeting pattern confirms that the saboteurs possess detailed knowledge of cable routes and are deliberately selecting vulnerable links to maximize disruption while minimizing the risk of a decisive international response."[219]

Table 1: Suspected Incidents of Chinese-Linked Vessel Undersea Infrastructure Sabotage

Date	Affected Infrastructure	Vessel Information
February 2023	Taiwan-Matsu No. 2 Cable (Taiwan-Matsu Islands)	Chinese-flagged fishing boat
February 2023	Taiwan-Matsu No. 3 Cable (Taiwan-Matsu Islands)	Chinese-flagged cargo ship
October 2023	Balticconnector Gas Pipeline (Estonia-Finland), EE-S1 Cable (Estonia-Sweden), and Finland Estonia Connection Cable (Estonia-Finland)	Hong Kong-flagged *Newnew Polar Bear*
November 2024	BCS East-West Interlink Cable (Lithuania-Sweden) and C-Lion1 Cable (Finland-Germany)	Chinese-flagged, Chinese-owned, Chinese-crewed *Yi Peng 3*

and tougher legal penalties for damaging cables. Jacob Stokes and Ryan Claffey, "Thwarting Communications Blackout: Protecting Taiwan's Information and Communication Networks from China's Attempts to Cut Them Off," *Center for a New American Security*, May 28, 2026, 5–6; Taiwan's Legislative Yuan, 立法院公报 [Legislative Yuan Gazette] 114, no. 22 (February 18, 2025): 288.

*This refers to jurisdiction for "necessary [law enforcement] control" allowed within the 24-nautical-mile contiguous zone. For a definition of maritime boundaries, see "Appendix I: Maritime Zone Definitions" later in this chapter. Taiwan's Ministry of Digital Affairs, 114年度臺灣海底通訊電纜損害原因分析及策進報告 [2025 Report Analyzing Causes of Damage to Taiwan's Seabed Telecommunications Cables and Policy Recommendations], March 2026, 8.

†In 2025, 53.1 percent of disruptions under and outside Taiwan's jurisdiction were due to human causes like anchoring and fishing accidents, 40.6 percent were due to natural causes like earthquakes, and 6.3 percent were undetermined as of March 2026. Taiwan's Ministry of Digital Affairs, 114年度臺灣海底通訊電纜損害原因分析及策進報告 [2025 Report Analyzing Causes of Damage to Taiwan's Seabed Telecommunications Cables and Policy Recommendations], March 2026, 9–10.

Table 1: Suspected Incidents of Chinese-Linked Vessel Undersea Infrastructure Sabotage—*Continued*

Date	Affected Infrastructure	Vessel Information
January 2025	Trans-Pacific Express Cable System (China-Japan-South Korea-Taiwan-United States)	Cameroon- and Tanzania-flagged, Hong Kong-owned, Chinese-crewed *Xing Shun 39*
February 2025	Taiwan-Penghu No. 3 Cable (Taiwan-Penghu Islands)	Togo-flagged, Chinese-crewed *Hong Tai 58*

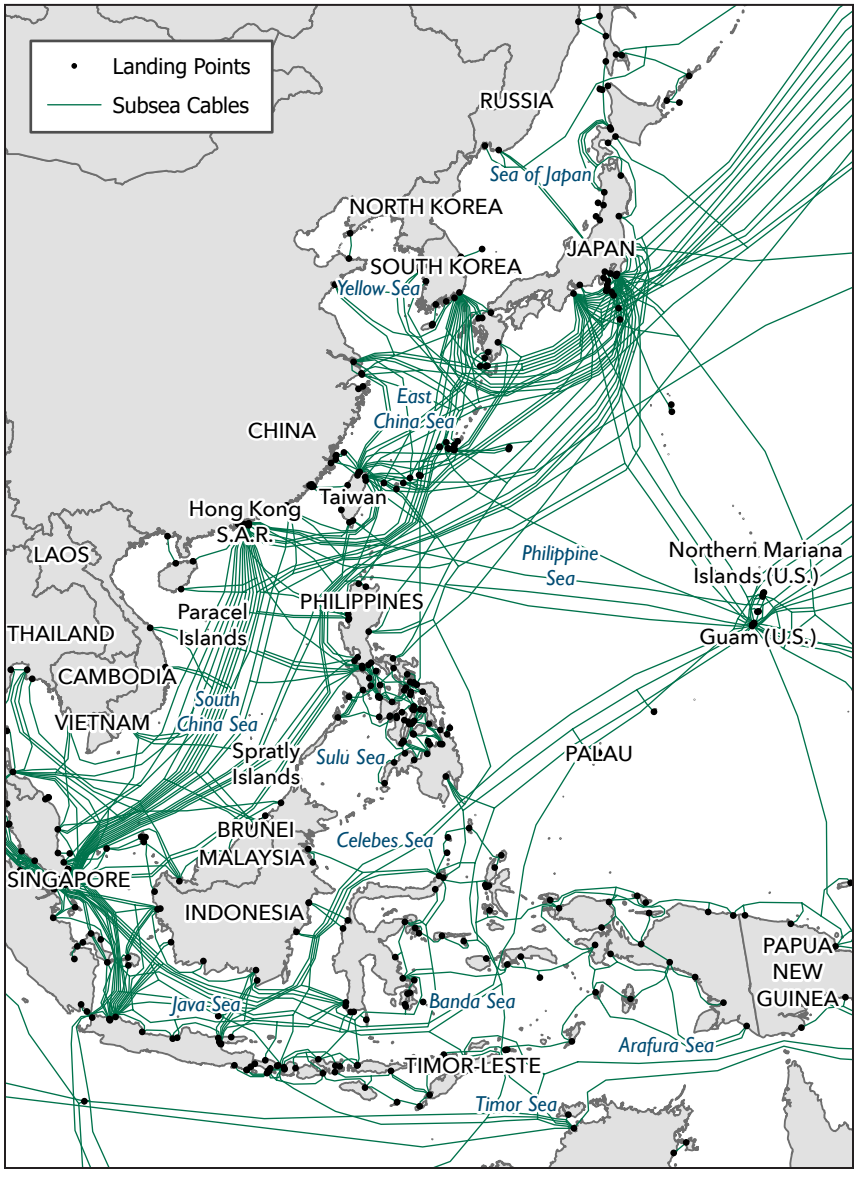
Note: Taiwan has determined that some disruptions initially suspected to be incidents of sabotage were accidents. These disruptions include Chinese fishing boat *Min Lian Yu 60138's* October 2025 damage to the Taiwan-Matsu No. 2 Cable and Chinese-flagged barge *Hai Hong Gong 66*'s March 2026 damage to the Taiwan-Matsu No. 3 Cable. Pan Hsin-tung and Lee Chieh-yu, "Chinese Barge Captain Not Prosecuted over Dongyin Subsea Cable Damage," *Focus Taiwan*, July 15, 2026; Taiwan's Overseas Community Affairs Council, *Chinese Captain Convicted of Damaging Undersea Cable Deported*, January 11, 2026.
Source: Various.[220]

Repeated disruptions strain Taiwan's cable repair capacity during peacetime, and repair would be effectively impossible during a contingency. In peacetime, the strategic importance of cable disruptions stems less from individual incidents than from their cumulative effect. Repeated disruptions can impose economic costs, complicate crisis response, and create uncertainty regarding the reliability of critical communications infrastructure.[221] Compounding the problem is a limited maintenance capacity, with repairs already averaging more than 40 days during peacetime.[222] A Taiwan company acquired the island's first domestic cable ship in 2026, but it has not yet performed maintenance operations.*[223] During a contingency, loss of access to telecommunications and the internet—including, to some extent, internal communications—would erode Taiwan's security situation. In a blockade or conflict scenario, repair would be effectively impossible, meaning a cut imposed before or during a crisis could persist precisely when connectivity matters most.[224]

Whether or not China contributed to a cable cut, Beijing exercises another coercive tool by imposing permit requirements on repairs that can compound the effects of cable disruptions and prolong outages. Under UNCLOS, states may regulate certain activities involving submarine cables within their maritime zones. China has interpreted these authorities broadly, requiring permits for cable installation and repair activities in waters it claims as part of its EEZ, including much of the South China Sea.[225] These requirements have contributed to repair delays.[226] In this way, China uses its purported regulatory authority in disputed waters as a force multiplier for physical disruption of cables within the first island chain (see Figure 2)—a gray zone tactic that requires no ships, no sailors, and no risk of attribution.

*In September 2026, Taiwan company Dong Fang Offshore completed installation of a subsea telecommunications cable and plans to offer post-installation maintenance as well. Sean Lin, "New Taiwan-Matsu Cable Boosts Communications Resilience: Premier," *Focus Taiwan*, September 18, 2026; "Submarine Cables," *Dong Fang Offshore*, accessed July 6, 2026; Dolphine Chen, *Taiwan Plus*, "Taiwanese Firm Lays Undersea Cable for First Time amid Frequent Cuts," Video, 0:40–0:50, February 25, 2026.

Figure 2: Subsea Cables Within the First and Second Island Chains



Source: TeleGeography, U.S. Department of State, and Natural Earth Data, via Library of Congress, October 9, 2026. Created for the U.S.-China Economic and Security Review Commission. Names and boundary representation are not necessarily authoritative.

China Trying to Leverage Subsea Cable Infrastructure for Maritime-Related Intelligence Collection and Maritime Awareness

China is exploring ways to incorporate cable infrastructure into its broader undersea sensing architecture. The light signals in op-

tical fibers interact with external signals (e.g., temperature, pressure), enabling cables to not only transmit information but also sense their environment.[227] One such fiber sensing technology is distributed acoustic sensing (DAS). DAS uses devices called interrogators—which can be installed in cable landing stations—to send laser pulses into optical fiber and use the reflected light to sense external signals, enabling detection of approaching vessels or natural disasters.[228] Australian and European firms claim their DAS systems can be used on subsea cables to sense 100–250 kilometers (62–155 miles) out from a landing station; identify vessel size, location, and direction of travel; and in some cases, fingerprint specific vessels—all without interfering with communications.[229] Researchers at the militarization-linked Chinese Academy of Sciences' South China Sea Institute of Oceanology* installed a DAS interrogator at an onshore control center to demonstrate the use of DAS on fiber-optic cables owned by state-owned Datang Shantou New Energy, suggesting how communications and energy infrastructure can be repurposed for ocean observation and vessel detection.[230] Researchers at China's National University of Defense Technology have also conducted research on using DAS to simultaneously sense and communicate with fiber-optic cables.[231] While there is no public evidence that China has deployed a large-scale operational DAS surveillance network using telecommunications cables,† the PRC claims to have deployed the technology on land border and PLA systems that may be specifically built for sensing, showing the potential for commercial infrastructure to generate military-relevant data.[232]

The significance of DAS lies not in its ability to replace dedicated military sensors but in its potential to repurpose commercial systems to complement purpose-built sensing architectures. DAS systems remain limited by their fixed locations, data processing requirements, and difficulty distinguishing among multiple signal sources in complex maritime environments.[233] However, DAS can provide cost savings; all it takes is an interrogator installed at a cable landing station to turn existing infrastructure into miles of sensing equipment.[234] If integrated with purpose-built sensing net-

*The South China Sea Institute of Oceanology has supported China's unfounded territorial claims and militarization of the South China Sea, including researching artificial island construction, supplying a marine research vessel to "safeguard China's… maritime rights and interests," and establishing a floating research facility at Scarborough Shoal, where China has claimed to set up a "nature reserve." Feng Fan, "Philippines' Renewed Hype over Huangyan Dao Research Platform Shows Frustration, Diverts Attention from Domestic Problems: Experts," *Global Times*, June 15, 2026; "China's Latest Scientific Research Ship Launched on S. China Sea Doorstep," *Global Times*, July 19, 2020; "'海洋生物产业绿色发展与生态安全研讨会'与'南海人工岛生态安全保障与可持续发展研讨会'在海南保亭召开" ["Seminar on the Green Development and Ecological Security of the Ocean Bio-Industry" and "Seminar on the Protection of Ecological Security and Sustainable Development of South China Sea Artificial Islands" Took Place in Baoting, Hainan], *Chinese Academy of Sciences South China Sea Institute of Oceanology*, April 3, 2015.

†There have been attempts to deploy DAS on both terrestrial and subsea telecommunications cables across China. For example, in 2026, an SOE in Jiangxi issued a tender for R&D related to using communication infrastructure to monitor highway traffic. Some scientists have claimed to create a "China-Wide Fiber-Optic Seismology Network" that uses DAS on existing terrestrial and subsea communication cables for seismic observation. It is experimental in scope, aggregating data from 14 far-flung cables that range in length from 0.3 to 25 miles (0.5 to 40 km) and cover 147 miles (237 km) total. "基于分布式光纤多维感知的道路全域感控一体化技术的研发项目(第2次招标)招标公告" [Tender Announcement for the All-Area Road Sensing and Control Integration Technology R&D Project Based on Distributed Fiber Optic Multi-Dimensional Sensing (Second Tender)], *Jiangxi Communications Investment Group Tendering and Procurement Trading Platform*, August 5, 2026; Ao Xie et al., "China-Wide Fiber-Optic Seismology Network (CFOSN): Distributed Acoustic Sensing Observation of the 28 March 2025 Myanmar M 7.7 and M 6.7 Earthquake," *Earthquake Research Advances* (July 2026).

works, telecommunications cables could contribute additional information to efforts such as China's Transparent Ocean concept, improving maritime awareness in strategically important waters. The South China Sea Institute of Oceanology's use of Datang's commercial cables illustrates how a scientific institute that supports the PRC's militarization of the South China Sea is repurposing commercial and scientific infrastructure to strengthen maritime awareness and, in the future, could do so in pursuit of military and geopolitical goals.

China's Seabed Mining and Oceanographic Research Are Part of Its Broader Undersea Competition Strategy

The deep seabed holds strategic significance both for the economic and traditional security domains. Seabed mineral deposits in the Pacific alone contain quantities of cobalt, nickel, and manganese that dwarf what is economically recoverable on land. If commercial-scale extraction becomes viable, it could transform global supply chains for the critical minerals that underpin many important technologies, including semiconductors, advanced manufacturing, energy technology, and many military systems. China has recognized the potential of this industry, and it has organized its seabed mining program in ways that allow it to generate military advantages alongside economic ones.

China's seabed mining efforts do not only advance Beijing's objectives around critical mineral supply chains; they simultaneously improve the PLA Navy's ability to operate in, and contest, the deep-sea domain. The capabilities and technologies used in seabed mining—seafloor mapping, oceanographic surveying, acoustic data collection, and deep-sea robotics—are the same as those that support submarine navigation, undersea sensing, and anti-submarine warfare. China has developed its seabed mining program through state-owned entities and research institutions with military-civil fusion ties, creating pathways for technologies and expertise developed for seabed exploration to support military applications. Even if commercial mining never becomes economically viable, Beijing is already using seabed exploration to collect data on strategically important waters and build expertise that strengthens future military operations.

China Views Seabed Mining as a Path to Mineral Independence and Supply Chain Dominance

China views seabed mining as a potential means of reducing its dependence on foreign sources of raw materials while extending its dominance across critical mineral supply chains. Although China has a leading position in mineral processing and refining, it depends heavily on imported raw ores. Over three-quarters of its copper demand, 90 percent of its nickel demand, and 96 percent of its manganese demand are satisfied with imports.[235] To meet this demand, China has stakes in global mining operations, sourcing cobalt from the Democratic Republic of Congo (DRC) and nickel from Indonesia.[236] However, the chair of China's National Development and Reform Commission has expressed concerns about the growth

of resource nationalism—policies in mining countries that seek to retain more mineral value chains domestically.*[237] Social unrest can also cut China off from its mineral suppliers, as when October 2025 protests in Tanzania temporarily closed the port through which two-thirds of African copper shipments (including from the DRC and Zambia) are exported to China.[238] Seabed mining could help China reduce its dependence on third countries with unpredictable resource policies and business environments.

In addition to bolstering its resource security, China's control of seabed mineral extraction could extend its dominance of critical mineral supply chains beyond processing and manufacturing into mining itself. The seabed holds vast mineral deposits. The Pacific Ocean's Clarion-Clipperton Zone alone contains six times as much cobalt, 2.7 times as much nickel, and 3.5 times as much manganese as is economically recoverable from terrestrial deposits.†[239] RAND estimated that if just ten seabed mining vehicles begin global operations, their output could lower cobalt prices by 19 to 54 percent.[240] China is positioning itself to lead this emerging industry by investing in R&D, supporting seabed exploration licensing and activities, and building global influence through international ocean governance organizations and bilateral partnerships. Development and effective control over the output from seabed mining would enhance Beijing's leverage over every stage of critical mineral supply chains, from extraction to refining, and further extend its global chokehold on critical mineral supply chains. (For more on China's control over global mineral supply chains, see U.S.-China Economic and Security Review Commission, Chapter 9, "Chained to China: Beijing's Weaponization of Supply Chains," in *2025 Annual Report to Congress*, November 2025, 472–521.)

Whether seabed mineral deposits can be extracted at commercial scale remains uncertain because of regulatory and technological challenges, and most of the existing facilities with the ability to capitalize on this emerging industry are in the PRC or owned by Chinese firms. The primary regulatory challenge is that the UN's International Seabed Authority (ISA)—the international body created by UNCLOS to regulate seabed mining—has not developed a mining code for commercial extraction.[241] Governments and private companies can carry out test operations according to the ISA's exploration regulations, but commercial mining cannot happen at scale until the ISA adopts regulations or a national government authorizes operations in its EEZ. (For more on the ISA, see "China Seeks to Shape Nascent Seabed Mining Regulation and Standards" later in this section.) On the technological side, nodule collection systems are in relatively early stages of pilot testing, and more experience is needed to demonstrate that equipment is reliable at scale and over extended periods of time.[242] As for processing, commercial technology to separate and refine the unique combination of ores present in seabed mineral formations has not yet been developed.[243] The most

*For example, the DRC has limited cobalt ore exports to incentivize domestic processing and refining. This has sometimes left Chinese mining companies working in the country with more ore than they can export. Annie Lee and William Clowes, "Battery Metal Curbs Sting Chinese Miners Who Spent Big in Africa," *Bloomberg*, March 24, 2026.

†Copper and rare earth elements have also been identified as promising seabed minerals. For more on the minerals that could be extracted from the seabed, see "Appendix III: Seabed Mining 101" later in this chapter.

commercially promising approach is based on nickel processing and refining, and most of the facilities with the ability to pivot from mine-based to nodule-based output in the short or medium term are located in the PRC or owned by Chinese firms.[244]

Although the economics of seabed mining are uncertain at this juncture, China's commitment to the industry is likely based more on its perceived contribution to national security than revenue. As discussed above, the scale of the potential resource is large enough that even partial exploitation would constitute a major shift in global critical mineral availability. Two factors operate in China's favor in terms of the challenging economics of the seabed mining industry. First, China's state-directed economic model enables firms in government-supported industries to continue investment and production in situations where a firm subject to market discipline would have to cease operations. Even as cost pressures have forced nickel processors out of business, China remains the second-largest nickel processor* and largest nickel refiner by capacity, and its firms have actively reached out to seabed mining companies to provide processing solutions.[245] Second, China understands the strategic implications of seabed mining for both its resource security and its leverage over critical mineral supply chains, so its evaluation of success or failure in the sector might depend more on reducing dependence on other countries, not economic efficiency.[246]

China Seeks to Shape Nascent Seabed Mining Regulation and Standards

China seeks to shape seabed mining regulation and technological standards while the industry is still developing. By being a first mover in the seabed mining industry, Beijing hopes to influence global rulemaking in its favor and develop cutting-edge technology that enables its firms to set international standards, making Chinese equipment more widely adopted and facilitating the extension of its scientists' research beyond its EEZ.[247] The regulatory environment is in early stages of development. National governments regulate seabed mining on their extended continental shelves, and the ISA regulates seabed mining in areas beyond national jurisdiction.†[248] The ISA has not developed commercial seabed mining regulations, and there are currently no commercial mining operations on any country's continental shelf.‡[249] However, the ISA and some national governments have developed exploration regulations to permit scientific research and perform trial operations.[250] (For more on seabed governance, see "Appendix III: Seabed Mining 101" later in this chapter.) Through the China Ocean Mineral Resources Research and Development Association (COMRA)—now under China's Ministry of Natural Resources—the PRC was one of the first seven contractors to gain an ISA exploration contract in 2001, allowing it to

*Indonesia has the largest nickel processing capacity, but Chinese firm Tsingshan alone controls almost 55 percent of that capacity. Rifat Jabbar et al., "Polymetallic Nodules and the Critical Minerals Supply Chain: A North American Approach," *Wilson Center*, March 6, 2024, 7.

†For a definition of maritime boundaries, see "Appendix I: Maritime Zone Definitions" later in this chapter.

‡For a definition of maritime boundaries, see "Appendix I: Maritime Zone Definitions" later in this chapter.

China Seeks to Shape Nascent Seabed Mining Regulation and Standards—*Continued*

survey its assigned areas and test mining equipment.[251] Chinese entities now hold more ISA exploration contracts than any other country or company.[252]

China is seeking to influence ISA regulations to secure access to untapped mineral resources and shape future industry practices and rulemaking. Chinese delegates have advocated for timely adoption of mining regulations and opposed measures they viewed as impeding development, including a proposed independent commission to monitor compliance with environmental regulations.[253] Chinese nationals occupy multiple positions across the ISA's senior staff and its principal oversight bodies, including the Principal Policy Officer, the Programme Manager for Marine Environment, the Director of the Office of Contract Management and Capacity-Building (the office that processes applications to explore and exploit seabed minerals), a member of the Finance Committee, and a member of the Legal and Technical Commission, which reviews plans of work and develops environmental management plans.*[254] The PRC also funds ISA programs and hosts joint training programs, cultivating the next generation of global maritime experts.†[255]

PRC technical experts—including some with PLA connections—are also writing the international standards for technologies used to survey the seabed. China is involved in all three worldwide standards organizations: a PLA Navy supplier has led hydrophone standards development at the International Electrotechnical Commission (IEC), PRC telecommunications firms have been involved in cable sensing standards at the International Telecommunication Union (ITU),‡ and the International Organization for Standardization (ISO) recently adopted AUV standards developed by working groups chaired by PRC technical experts.[256] China's position at the ISO is particularly strong. Its Standardization Administration serves as the secretariat§ for the technical committee that develops standards for ships and marine technology as well as the subcommittee responsible for submersibles, AUVs,

*The Commission's tracking of PRC representation in international organizations documents a broader pattern in which Beijing expands its presence in the committee-level, technical, and administrative roles that shape rulemaking, even in bodies where it holds no top leadership position. U.S.-China Economic and Security Review Commission, *People's Republic of China (PRC) Representation in International Organizations*, April 2026.

†These include a joint technical training facility in Qingdao and ISA support for the Zheng He Academy of International Oceans Law and Policy, sponsored by Dalian Maritime University and Xiamen University. Lily Kuo, "China Is Set to Dominate the Deep Sea and Its Wealth of Rare Metals," *Washington Post*, October 19, 2023; Alyssa Chen, "Why China Struggles as US Plunges into Deep-Sea Mining for Valuable Metals and Rare Earths," *South China Morning Post*, October 1, 2025; "Deep-Sea Minerals: The Next Arena of U.S.-China Competition," *Baron*, March 2024, 14.

‡Huawei also holds a vice-chair position in the ITU study group responsible for optical fibers and cables. For more on China's involvement in the ITU, see Eric Hundman, "China's Management of Electromagnetic Spectrum Resources," *BluePath Labs* (prepared for the U.S.-China Economic and Security Review Commission), March 2026, 27–31; "About Study Group 15," *International Telecommunication Union*, accessed September 3, 2026; "SG15–Management Team (Study Period 2025–2028)," *International Telecommunication Union*, accessed September 3, 2026.

§ISO secretariats provide administrative support to technical committees and subcommittees. They also designate committee managers who assume responsibility for all committee administration and oversee the committee's activities. They are supposed to remain neutral and not actively support their countries' positions. "My ISO Job: What Delegates and Experts Need to Know," *International Organization for Standardization*, April 2024, 15.

China Seeks to Shape Nascent Seabed Mining Regulation and Standards—*Continued*

ocean sensors, and marine environment impact assessments.[257] In February 2026, the ISO adopted its first standard for AUVs—covering components influencing a vehicle's "digital mission" like sensors and communication devices—and in May 2026, it adopted a standard for seafloor mapping with UUVs and USVs—including technical design, survey procedures, and data processing.[258] The working groups that developed those standards are chaired by PRC nationals—the deputy director of state-owned China State Shipbuilding Corporation's PLA-connected 702 Research Institute* and a researcher in China's Ministry of Natural Resources' Second Institute of Oceanography.[259] The Second Institute of Oceanography claimed that it led the seafloor mapping standard's development and called it a "Chinese solution," noting that unnamed PRC entities were also involved in writing it.[260] These likely include the groups that drafted China's domestic standard on seabed surveys, like PLA Unit 92859.[261]

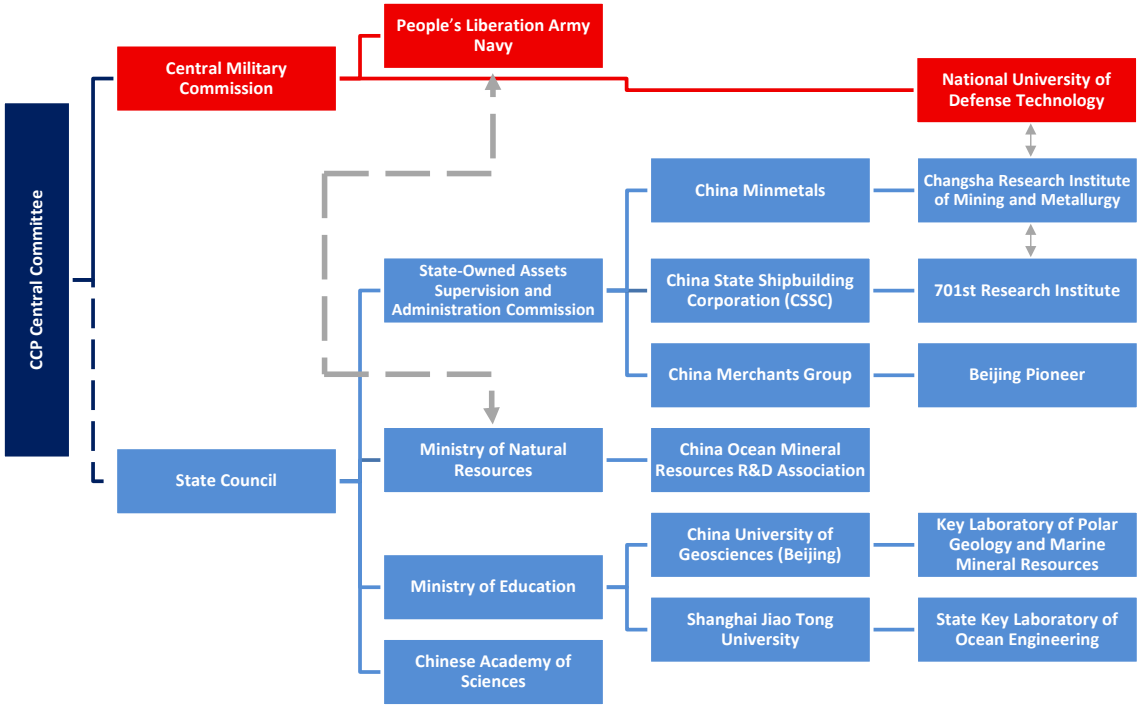
China Is Using Integrated Seabed Mining Ecosystem to Ensure Military Benefits

China is already deriving military-relevant benefits from seabed exploration even though commercial mining is not yet viable. China has organized seabed mining around an integrated ecosystem that links SOEs, research institutes, universities, and commercial firms. The sector is led by state-owned entities holding ISA exploration contracts—Beijing Pioneer Hi-Tech Development Corporation, China Minmetals Corporation, and COMRA—but relies on a broader network of academic, research, government, and industry organizations (see Figure 3).

This ecosystem is highly integrated and flexible, with personnel, equipment, and institutions often shifting roles, including between civilian and military roles.[262] Beijing Pioneer evolved from a service provider for COMRA and other marine research institutes into an ISA contract holder and prospective seabed miner in 2019.[263] China's oceanographic research vessel fleet—the largest in the world—is also shared between China's seabed mining firms and over a dozen of other government units, research institutes, and universities.[264] This appears to include military units; the Survey Vessel Coordination Committee has included representatives from the Central Military Commission's Joint Operations and Support Bureau and the PLA's Marine Environmental Protection Office.[265] Before it was absorbed

*The 702 Research Institute was added to the Entity List in December 2020 for "acquiring or attempting to acquire U.S.-origin items in support of programs for the People's Liberation Army." It supports the development of Chinese warships, helped develop the *Jiaolong* and *Fendouzhe* submersibles, and also produces remotely operated vehicles for use in marine scientific surveys, infrastructure inspection, and military patrols. "单位简介" [About the Unit], *China Ship Scientific Research Center*, accessed August 22, 2026; "科学研究 水下工程" [Scientific Research: Underwater Engineering], *China Ship Scientific Research Center*, accessed August 22, 2026; Supplement No. 4 to Part 744—Entity List, 15 C.F.R. §744, 2025; U.S. Department of Commerce, Bureau of Industry and Security, "Addition of Entities to the Entity List, Revision of Entry on the Entity List, and Removal of Entities from the Entity List," 85 Fed. Reg. 83416 (December 22, 2020).

Figure 3: Select Organizations in China's Seabed Mineral Program (Left to Right)



Note: This is a representative sample of China's seabed mining organizations. Central Committee–State Council: The State Council does not report to the Central Committee but must implement its policies. PLA Navy–Ministry of Natural Resources (MNR): The State Oceanic Administration, absorbed into MNR in 2018, signed cooperation agreements with the PLA Navy. Changsha Research Institute of Mining and Metallurgy–National University of Defense Technology–701 Research Institute: R&D collaboration.

Source: Various.[266]

into China's Ministry of Natural Resources in 2018, the State Oceanic Administration—which oversaw the PRC seabed mining program through COMRA—had signed two cooperation agreements with the PLA Navy that included joint marine surveys, equipment and resource sharing, and personnel exchanges, and a researcher at the Chinese Academy of Sciences' Institute of Oceanology said that his team's findings were shared with the Chinese military and other government entities.[267]

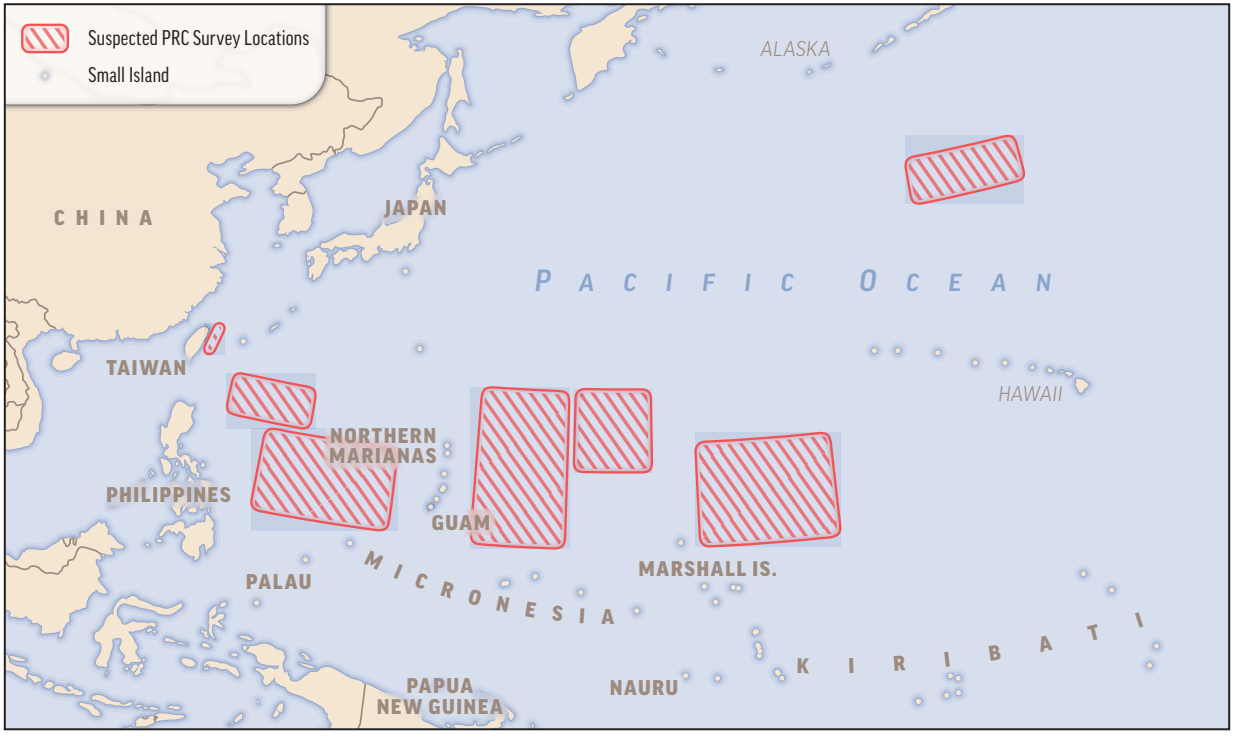
Chinese Survey Vessels Systematically Map the Waters U.S. Submarines Transit

Chinese oceanographic research vessels have concentrated their activities in strategically important submarine operating areas rather than those important to commercial resource exploration alone, illustrating how activities associated with seabed exploration can also serve PLA requirements. China's fleet has conducted repeated surveys to map the terrain of the seafloor and its features, such as ocean trenches and underwater mountains.[268] Analysis of Chinese research vessel routes from May 2020 to December 2025, tracked via Starboard Maritime Intelligence, shows sustained interest in three areas of strategic significance: the Hawaii-Guam corridor, a primary transit route for U.S. military logistics and naval vessels; the approach to the Luzon Strait between the Philippines and Taiwan, a critical chokepoint for submarine entry into the South China Sea; and the waters west of Guam, near major U.S. submarine bases and transit routes (see Figure 4).[269] According to naval experts and U.S. Navy officials cited by Reuters, the deep-sea data being collected could provide the environmental and bathymetric information needed to improve submarine navigation, anti-submarine warfare, and ISR operations.[270] The concentration of these surveys near key submarine operating areas and maritime chokepoints suggests Beijing is using ostensibly commercial and scientific activities to systematically improve its understanding of the undersea battlespace.

China has made agreements with some Pacific Island countries to facilitate access to seabed resources, creating opportunities to collect military-relevant oceanographic data along strategically important U.S. naval routes.[271] These include arrangements with the Cook Islands and Tonga that seek to develop "ocean cooperation," including conducting oceanographic surveys and developing the "blue economy."[272] The PRC is exploring potential "deep ocean resource" collaboration with Kiribati.[273] Beijing's agreement with the Cook Islands is its most comprehensive, including a five-year agreement on marine mineral exploration with technology transfer, logistics support, and ecosystem research components; continued scholarships for graduate work in marine science; and a nine-day joint scientific expedition* that included seabed mapping and marine life observations.[274] The Cook Islands sit in the central Pacific along routes

*Just prior to the China-Cook Islands expedition, the United States supported an authorized three-week survey of the Cook Islands' EEZ. The United States also carried out a four-week survey in the Cook Islands in July and August 2026. Cook Islands' Seabed Mineral Authority, *Cook Islands Welcomes Okeanos Explorer as Deep-Ocean Research Builds National Knowledge*, August 19, 2026; U.S. Department of Commerce National Oceanic and Atmospheric Administration, *NOAA Scientists and Partners to Map Deep Waters, Seabed in the Cook Islands*, May 19, 2026; Laura Zhou, "China and Cook Islands Team Up on Sea Survey as Rare Earths Race Expands to Oceans," *South China Morning Post*, November 12, 2025.

Figure 4: Map of Select Chinese Oceanographic Survey Activities in the Western Pacific



Note: China has also conducted extensive oceanographic surveys in the South China Sea and Indian Ocean as well as maintained ocean sensors off the east coast of Japan. Zhang Tong, "Chinese Team Maps South China Sea Floor with 'Twice the Resolution' of Western Models," *South China Morning Post*, August 31, 2026; Pete McKenzie, "China Is Mapping the Ocean Floor as It Prepares for Submarine Warfare with the US," *Reuters*, March 30, 2026.
Source: Various.[275] Created for the U.S.-China Economic and Security Review Commission. Names and boundary representation are not necessarily authoritative.

relevant to U.S. military logistics and naval movement—meaning that Chinese seabed mapping conducted as part of mineral exploration can generate military-relevant data whether or not commercial mining ever follows.[276]

Although UNCLOS requires the consent of coastal states to conduct marine scientific research in their EEZs, Beijing has illegally surveyed the EEZs of other countries to acquire this information.[277] In 2015, a Chinese research ship collected samples from part of Papua New Guinea's (PNG) EEZ that had been licensed to a seabed mining company.[278] That ship was "chased out" after PNG requested the Australian military's help enforcing its rights under international law.[279] Since at least 2021, multiple PRC vessels have conducted unauthorized surveys in the EEZs of Japan, Malaysia, Palau, the Philippines, Taiwan, and Vietnam.[280] Chinese research ships have also spent time in the U.S. EEZ, but it is unclear whether they have conducted illegal surveys.*[281] Most recently, Beijing has expanded its research activities around Taiwan.[282] In June 2026, after Japan and the Philippines announced maritime boundary talks, China carried out hydrographic surveys and subsea cable inspections in waters east of Taiwan, including its EEZ, characterizing these as maritime patrol and law enforcement activities.†[283] State-affiliated social media account Yuyuan Tantian announced that the PRC would begin more regular surveys of natural resources and underwater infrastructure off the coast of Taiwan.[284] (For more on China's June 2026 operation, see Chapter 9, "Taiwan: A Crucial Window for a Critical Partner.")

Beyond mapping the seafloor, Chinese research and survey vessels are likely collecting acoustic and oceanographic data—water temperature, salinity, and sound velocity profiles—that determine how sonar performs in specific operating environments and directly affects the ability to detect submarines.[285] For example, Shiyan 1, a Chinese scientific research vessel operated by the Chinese Academy of Sciences that supports research on marine science and hydroacoustics, has operated in India's EEZ near a major Indian naval base—activity Indian officials reportedly assessed could support monitoring of Indian Navy underwater and surface vessels.[286] China could also use collected undersea acoustic and environmental data to enhance its undersea sensing architecture and anti-submarine warfare capabilities, since ocean conditions such as temperature, salinity, and seabed terrain can affect sonar performance.[287] As Rear Admiral Brookes testified, detailed knowledge of the seabed can improve not only submarine navigation but also decisions about where to place sensors, cables, and other undersea infrastructure that could support future military operations.[288]

*The U.S. Coast Guard is concerned that China may be engaged in unauthorized scientific research of mineral resources or military activities. Gwladys Fouche, "US Watching Chinese Marine Presence Off Alaska, Arctic Coast Guard Chief Says," *Reuters*, September 21, 2026; U.S. Department of Defense, *Coast Guard Monitors Chinese Vessels in the Arctic*, July 20, 2026.

†These activities established a framework for Chinese law enforcement vessels to rehearse maneuvers for a quarantine or blockade. Yian Lee, "China Presses Taiwan by Querying Foreign Ships for First Time," *Bloomberg*, June 11, 2026.

China Is Building Military-Relevant Undersea Knowledge in the Arctic

Chinese scientific surveys in the Arctic are expanding Beijing's understanding of a region that Chinese military writings identify as strategically important for natural resources and future submarine operations. The PRC has established a Key Laboratory of Polar Geology and Marine Mineral Resources to explore and develop Arctic minerals to "address major national needs," and scientists at institutions under China's Ministry of Natural Resources have advocated for commercial exploitation of the Arctic.[289] The PLA's Science of Military Strategy describes the Arctic as both a source of natural resources and also a potentially advantageous operating environment for strategic nuclear submarines, and China's expanding research presence there is systematically building the environmental knowledge and operational experience that future deployments would require.[290] In 2025 and 2026, the U.S. Coast Guard reported responding to multiple Chinese research vessels operating in or near the U.S. extended continental shelf* in the Arctic—part of a growing trend of Chinese presence over the previous three years.†[291]

In a statement for the record, Andrew Erickson, professor at the China Maritime Studies Institute, U.S. Naval War College, assessed that Chinese scientists are already laying the "technological and operational foundations" for future Arctic operations.[292] The most concrete demonstration of that foundation building came in 2025, when Chinese scientists conducted their first manned deep-sea dives along the eastern Gakkel Ridge—a largely unexplored stretch of seafloor between Greenland and Siberia—using the *Fendouzhe* and *Jiaolong* submersibles,‡ reaching depths exceeding 5,200 meters (17,060 feet) and collecting rocks, sediment cores, seawater samples, and detailed sonar mapping data.[293] In 2026, four Chinese research vessels returned to the Gakkel Ridge for further geological research.[294] A Chinese manned submersible charting frontier stretches of the Arctic seafloor illustrates Beijing's broader approach to the undersea domain: using scientific research to generate knowledge that can be exploited for economic gain (e.g., characterizing geological and mineral resources) and to strengthen future military capabilities.

*For a definition of maritime boundaries, see "Appendix I: Maritime Zone Definitions" later in this chapter.

†In August 2024, the deep-sea research vessel *Ke Xue* transited the U.S. EEZ in Alaska three times, but the Commission did not find evidence that the U.S. Coast Guard publicly responded. Kara Fox et al., "China's Growing Influence in the Pacific Is 5,000 Meters Deep," *CNN*, March 24, 2026.

‡Both *Fendouzhe* and *Jiaolong* had previously been used in seabed mineral exploration. Sun Zifa, "中国最新完成7次'奋斗者'号载人深潜作业 最深达7735.9米" [China Recently Completed Seven Manned Deep-Sea Dives Aboard Its "Fendouzhe" Submersible, Reaching a Depth of 7,735.9 Meters], *CCTV*, May 6, 2024; "蛟龙号试验性应用航次再起航 富钴结壳勘探成焦点" [Jiaolong Submersible's Experimental Application Voyage Sets Sail Again. Exploration of Cobalt-Rich Crusts Has Become the Focus], *China Ocean Mineral Resources Research and Development Association*, July 4, 2014.

Undersea Robotics and AUVs Developed for Seabed Mining Could Also Support Undersea Military Operations

Technologies developed for deep-sea mining, including AUV technology and underwater robotics, can also be used in undersea military operations. Rear Admiral Brookes and analysts from the United States, Taiwan, and the PLA have noted the synergy between technologies developed for deep-sea mining and undersea warfare.* [295] As a result, seabed mining firms and navies sometimes share technology providers. For example, Canadian Ocean Floor Geophysics expanded from providing sensing technology for seabed minerals firms to supplying Canada's Department of National Defense, and Norwegian defense company Kongsberg has sold technology designed for seabed warfare, like its HUGIN AUV, to Norway's Offshore Directorate and seabed mining firms to locate mineral deposits.[296] To develop mineral extraction technology, China Minmetals' Changsha Research Institute of Mining and Metallurgy collaborated with China's National University of Defense Technology and a naval research institute under state-owned China Shipbuilding Industry Corporation: the 701 Research Institute (China Shipbuilding Research and Design Center).† [297] The Chinese Academy of Sciences' Institute of Acoustics, which develops equipment to "safeguard national maritime security and resource development" like anti-frogman sonar, provided acoustic systems for the *Jiaolong* and *Fendouzhe* manned submersibles, which have been used in seabed mineral exploration.[298]

China's increasing development of undersea robotics and systems will help expand its capacity to conduct more undersea surveys that contribute to China's anti-submarine warfare capabilities.[299] Alongside China's Ministry of Science and Technology and the Chinese Academy of Sciences, COMRA has been one of the main supporters of underwater robotics research.[300] COMRA uses AUVs to survey seabed minerals, including the Qianlong IV, a 6,000-meter-rated (19,685 feet) AUV which carried out its first oceanographic survey mission in 2020.[301] Researchers at the PLA's Naval Research Institute and Northwestern Polytechnical University‡ both highlight the Qianlong series when discussing AUV technologies with military applications.[302]

Underwater robotics developed to manipulate and extract seabed minerals could also be used for military purposes. There is no public evidence that Beijing has "armed" these mining vehicles, but experts note that even commercial operations can damage undersea infrastructure.[303] The ISA has published two technical studies that discuss the threat that both accidental and deliberate damage from

*These technologies are also being deployed in the subsea cable industry. For example, Dalian Jiaotong University has equipped robots with sonar and electromagnetic sensors to enable them to locate buried cables. These robots have also been used to bury cables during optical fiber and power cable installations. Holly Chik, "China Offers Sea Cable Detection Tech to Clients in Middle East, Europe and Asia," *South China Morning Post*, July 5, 2026.

†At the time of its collaboration with China Minmetals, the 701 Research Institute was described by China's State Administration of Science, Technology, and Industry of National Defense as "the core unit taking responsibility for the overall research and design of China's warships [naval vessels]." China's State Administration of Science, Technology, and Industry of National Defense, 中国船舶重工集团公司第七〇一研究所 [China Shipbuilding Industry Corporation's 701 Research Institute], June 7, 2016.

‡Northwestern Polytechnical University is one of the Seven Sons of National Defense, a group of universities under China's Ministry of Industry and Information Technology with deep ties to the PLA. "The China Defence University Tracker," *Australian Strategic Policy Institute*, November 25, 2019.

seabed mining poses to subsea cables.[304] Chinese mining vehicles appear to have movement capabilities that are desirable for counter-mine warfare as well as tools that would enable them to manipulate seabed environments and potentially cut cables. For example, Kaituo-2 (Pioneer II), developed by Shanghai Jiao Tong University, is a deep-sea mining remotely operated vehicle (ROV) that can maneuver across complex seabed terrain at depths exceeding 4,000 meters (13,123 feet) by autonomously* adjusting its tracks.[305] The Department of Defense's Small Business Innovation Research Program awarded grants in 2025 for firms to develop ROV bottom crawlers with the ability to operate on different types of seabed terrain below 600 meters (1,969 feet), stating that this technology could be used in counter-mine operations.†[306] Kaituo-2 can also extract multiple kinds of seabed minerals, including cobalt-rich crusts, which requires the ability to not only pick up objects but also excavate and crush ores.[307] Since it operates at depths far below where cables are typically armored and buried, undersea infrastructure would be vulnerable to weaponization of this mining technology.[308]

The United States Has Begun Responding to China's Seabed Strategy—But Gaps Remain

Current U.S. policy views seabed research and mineral exploitation as a way to reduce both its own and its allies' reliance on foreign suppliers of critical minerals.[309] In April 2025, Executive Order 14285 directed the Secretary of Commerce, in consultation with the Secretary of the Interior and Secretary of State, to streamline permitting for seabed mining; develop a plan to map priority areas of the seabed; and, in coordination with the Secretary of State, Secretary of the Interior, and Secretary of Energy, engage key partners and allies to support mineral exploration, extraction, and processing.[310] Since then, federal agencies have streamlined licensing processes, encouraged applications to explore and mine in both U.S. waters and areas beyond national jurisdiction, and mapped critical mineral resources in both the U.S. and Cook Islands' EEZs.‡[311] The Department of Defense has also offered a loan to a U.S. firm that has agreements to process polymetallic nodules and sell processed material to a rare earth element magnet manufacturer.[312]

*Although some reports suggest that Kaituo-2, a mineral extraction vehicle, is autonomous, the vehicle has an umbilical cable connecting it to a research vessel, suggesting it is remotely operated. Its "autonomous" capabilities are its ability to sense and adjust the position of its tracks as it moves along the seabed. "五次探采取'宝', 上海交大'开拓二号'创我国深海采矿多项纪录" [Five Explorations Yielded "Treasures": Shanghai Jiao Tong University's "Kaituo-2" Deep-Sea Mining Vessel Set Multiple Records for My Country], *Shanghai Jiao Tong University*, July 9, 2024.

†One firm that received an award—Greensea Systems—previously adapted its Bayonet autonomous underwater ground vehicles for military use under a Defense Innovation Unit program. These vehicles have been deployed in the Strait of Hormuz and can be used for seabed survey, infrastructure inspection, unexploded ordnance detection, and mine countermeasures in depths up to 100 meters (328 feet). U.S. Department of Defense Innovation Unit, *Greensea Systems, Inc.—Autonomous Amphibious Response Vehicle (A2RV)*, accessed August 22, 2026; U.S. Small Business Administration Small Business Innovation Research and Small Business Technology Transfer, *Bayonet Maritime Expeditionary Response Crawler*, accessed August 22, 2026; Robert Billard, "Marines Field Underwater Robots to Hunt Explosives Before Troops Hit the Beach," *Military.com*, August 20, 2026; "Clearing the Strait: How Autonomous Systems Are Redefining Mine Countermeasure Operations," *gCaptain*, June 8, 2026.

‡For a definition of maritime boundaries, see "Appendix I: Maritime Zone Definitions" later in this chapter.

The United States Has Begun Responding to China's Seabed Strategy—But Gaps Remain—*Continued*

U.S. efforts to engage allies and partners have been mixed, since these countries hold diverging views on the value of seabed mining, but the United States provides greater value to its partners than China does. The Cook Islands, Japan, and Tonga have each agreed to separate bilateral cooperation on seabed mineral exploration with the United States.[313] Others—including the three Pacific Island countries belonging to the Compact of Free Association (COFA) agreements—support a moratorium pending stronger environmental safeguards.[314] For those countries that have accepted U.S. support, the United States has been a more robust partner than the PRC. Although China supported mineral exploration in the Cook Islands with a nine-day survey in 2025, the United States supported the Cook Islands with a three-week survey that year and a four-week survey in 2026, providing a more sustained scientific presence.[315] Building on a U.S.-Cook Islands framework signed in February 2026, the United States has also announced that it will work with New Zealand to upgrade the Cook Islands' Penrhyn Port, likely closely tied with other seabed mining-related research support and technical assistance.[316]

Implications for the United States

China's undersea strategy threatens to erode one of the United States' key military advantages in the Indo-Pacific. Rather than matching U.S. capabilities, Beijing's near-term priority is to reduce the effectiveness of U.S. undersea operations, particularly through improvements in its sensing capabilities. Success by Beijing would be particularly significant in a Taiwan contingency, where U.S. submarines are widely regarded as among the most effective capabilities for disrupting PLA maritime operations. Even partial success in strategically important waterways would expand operational risks, increase uncertainty, complicate U.S. operations and decision-making, and erode U.S. undersea military advantage. Given the risks, the United States will need to adjust its approach to a Taiwan contingency to account for greater threats to submarine stealth while investing in technologies and operational approaches that preserve this advantage as China's sensing capabilities improve.

China's expanding submarine force and growing blue water capabilities will create new and demanding anti-submarine warfare requirements for the United States. The United States has not historically had to devote substantial forces to tracking Chinese submarines or defending U.S. naval assets and the homeland from them. As Beijing fields quieter nuclear-powered submarines with greater range and endurance, U.S. forces will need to detect and track them across a much larger operating area, creating tradeoffs among homeland defense, force protection, and offensive operations in the Indo-Pacific. Meeting this requirement without weakening U.S. combat power in the region will require additional anti-submarine warfare forces and capabilities.

The military role for UUVs is still evolving, but their widespread adoption could change the economics and scale of undersea warfare. China is using UUVs to extend the reach and persistence of its sensing architecture while developing more ambitious concepts for mine warfare, strike, and coordinated operations. If UUVs follow the trajectory of uncrewed aerial systems, the ability to develop and field autonomous systems rapidly at scale could become an important aspect of naval power. China's much larger shipbuilding industry does not translate directly into UUV production capacity, but it could confer an important advantage if manufacturing scale becomes central to undersea competition. This places a premium on expanding U.S. UUV production beyond the traditional defense industrial base—including through commercial shipyards and other non-traditional producers—and shortening acquisition timelines before a crisis requires production at scale.

Beijing's approach to undersea competition draws together military modernization, scientific research, commercial industries, and emerging technologies in ways that allow capabilities developed in one area to support others.

- **Beijing uses subsea cables as an instrument of strategic competition.** China has embedded itself across the subsea cable lifecycle—manufacturing, laying, owning, and repairing cables—especially in the Indo-Pacific's most consequential maritime corridors. That presence creates persistent opportunities for China to engage in intelligence collection and gray zone coercion over communications links that connect Taiwan, Japan, the Philippines, and U.S. forces in the region. Without more resilient networks, redundant pathways, adequate repair capacity, and effective mechanisms to monitor, attribute, and deter disruptions, undersea cables will remain a potential means for China to impose operational and economic costs while maintaining plausible deniability.
- **China invests in seabed exploration based on its strategic, as well as commercial, potential.** China's seabed mining activities have mapped the seafloor along U.S. naval transit routes, such as the Hawaii-Guam corridor and key approaches to the first island chain, generating detailed environmental knowledge, acoustic baselines, and operational experience relevant to anti-submarine warfare, sensor placement, and autonomous system operations. China also hopes a lead in seabed mining will further cement its control over critical minerals. The United States and allies have not approached seabed exploration with the same breadth, either by investing commensurate with its strategic rather than purely commercial value or by working with regional partners to limit China's collection of military-relevant seabed data in strategically important waters.
- **China's military-civil fusion system gives Beijing established channels for turning advances in commercial and scientific sectors into military capabilities.** Beijing's system allows it to more readily repurpose technologies, data, infrastructure, and expertise developed in commercial and scientific sectors to support military objectives, allowing progress

in one area to contribute to capabilities in others. By contrast, the United States approaches undersea issues through separate policy, institutional, and funding channels: military, infrastructure, scientific research, commercial, and industrial policy. The challenge is to connect these efforts sufficiently to address a competition that does not fall neatly within traditional military, commercial, or scientific boundaries.

Recommendations

- The Submarine Cable Act of 1888 only allows the United States to prosecute damage to subsea cables that occurs within U.S. territorial waters (i.e., within 12 nautical miles of its coastline) or damage caused by U.S.-flagged vessels wherever they operate. Current law limits the United States' ability to address other intentional damage to subsea cables landing in the United States or owned by U.S. entities. The United States must also address its limited repair ship capacity, which has led regulators to allow foreign adversaries to maintain U.S. cables that connect to the United States from a third country. This means provisions that would expand a trusted repair fleet and would ensure reinsurance for cable repair surge capacity during a crisis.

  To address adversarial attacks on critical U.S. telecommunications infrastructure in international waters, Congress should:

  - Amend the Submarine Cable Act to expand jurisdiction to prosecute acts of intentional sabotage against any critical undersea infrastructure landing in the United States or having any ownership stakes from U.S. entities.
  - Strengthen undersea cable repair capacity by:
    - Barring the use of foreign adversaries' repair ships on U.S. cables and directing regulators to take associated action;
    - In a manner consistent with current law, establishing a Pacific Allied Cable Repair Fleet, under which the Secretary of Transportation may enter operating agreements with qualified cable vessels flagged in the United States, and, where necessary, Japan, South Korea, and Taiwan; and
    - Directing the Secretary of Transportation to provide insurance or reinsurance against war risks for foreign vessels engaged in cable installation and repair, in coordination with allied countries when possible.
- To combat the People's Republic of China's "Transparent Ocean" and undersea modernization efforts, Congress should:
  - Direct the Secretary of Defense, in consultation with the Director of National Intelligence and other relevant departments and agencies, to submit to the congressional defense committees a report, in both unclassified and classified versions, on China's "Transparent Ocean" efforts and associated programs. The reports should assess China's progress toward developing a persistent undersea surveillance architecture

enabled by data fusion that integrates sensors and autonomous systems across domains from the seabed to space.

To ensure the United States maintains its advantage over China in cutting-edge autonomous and semi-autonomous undersea systems, Congress should:

- Direct the Secretary of Defense to submit to the congressional defense committees a classified report and briefing on its acquisition and program strategy for autonomous/semi-autonomous undersea systems. The report should address U.S. Department of Defense (DOD) capacity to surge production of these systems and detail how these platforms support U.S. Indo-Pacific Command's strategy in a Taiwan contingency.
- Appropriate funds for DOD to conduct a competitive, multi-supplier uncrewed underwater vehicle (UUV) hull-manufacturing qualification pilot that expands the industrial base beyond established defense contractors.
- Appropriate funds to expand DOD and other U.S. government agencies' procurement of UUVs. These agencies could include those falling under the U.S. Department of Commerce, U.S. Department of Homeland Security, U.S. Department of the Interior, and U.S. Environmental Protection Agency.

- To maintain U.S. advantage in undersea surveying and seabed mapping, Congress should authorize and appropriate additional funds to the U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) to expand seabed surveys and mapping operations in the Pacific, with a focus on working with the governments of the Pacific Island countries to conduct surveys in their exclusive economic zones (EEZs).
  - An agreement with a country under this initiative should condition cooperation on prohibiting Chinese research vessel exploratory activity, seabed mapping, and seabed mining in its waters to the maximum extent permitted.

Appendix I: Maritime Zone Definitions

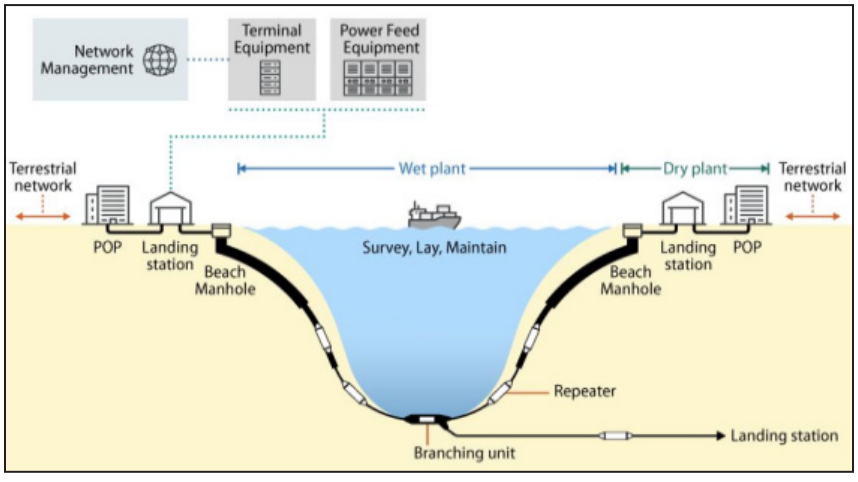
There are a number of maritime zones recognized under international law, and coastal countries have distinct rights in each of those zones. The terms that appear in this chapter are:

- *Territorial sea:* Territorial seas extend 12 nautical miles (nm) from a country's baseline.[317] A coastal country exercises sovereignty over the sea, its airspace, and its seabed.[318] Foreign-flagged vessels may peacefully transit the sea subject to coastal countries' laws and regulations.[319]
- *Contiguous zone:* Contiguous zones are between 12 nm and 24 nm from a country's baseline.[320] A coastal country may exercise control over the sea and seabed in its contiguous zone to prevent or punish infringement of customs, fiscal, immigration, and sanitary law and regulations in its territory and territorial sea.[321]
- *Exclusive economic zone (EEZ):* EEZs extend 200 nm from a country's baseline.[322] A coastal country exercises sovereignty over natural resources and has jurisdiction over artificial islands, installations, and structures; scientific research; and environmental protection in its EEZ.[323]
- *Continental shelf:* Continental shelves extend 200 nm from a country's baseline or to the outer edge of where the seabed slopes down to meet the abyssal ocean floor, whichever is longer.[324] Coastal countries have sovereignty over natural resources in the continental shelf.[325]
- *Extended continental shelf:* Extended continental shelves are the portion of a country's continental shelf that extends beyond 200 nm.[326] Coastal countries have sovereignty over natural resources in the extended continental shelf.[327]
- *Areas beyond national jurisdiction:* Also known as "the Area," it includes the seabed beyond countries' continental shelves.[328] Under UNCLOS, no country has sovereignty over the Area or its natural resources.[329] The Area is managed by the ISA.[330]

Appendix II: Subsea Cables 101

Subsea cables are vital for global communications, finance, and trade. They transmit over 95 percent of intercontinental communications and over $12 trillion in daily financial transactions.[331] Almost 600 of these garden hose-sized cables send information across fiber-optics in the form of light.[332] The United States is connected to 96 of them.[333] Specialized equipment at cable landing stations and data centers processes this information and connects cables to a country's telecommunications network (see Figure 5).

Figure 5: Subsea Cable System Diagram



Source: Nicole T. Carter et al., "Protection of Undersea Telecommunication Cables: Issues for Congress," *Congressional Research Service* (Report No. R47648), August 7, 2023, 2.

Subsea cable ownership, manufacturing, installation, and repair are dominated by a handful of companies.

- *Ownership:* Cable owners provide the funding for new cables, maintain the cable after it is built, and sell capacity to users like internet service providers (ISPs) and telecom carriers.[334] Traditionally, consortia of telecommunications companies funded, owned, and maintained cables to pool resources and share the financial risk for building this expensive infrastructure.[335] Since 2017, "hyperscalers" like Amazon, Google, Meta, and Microsoft have outpaced telecom providers in international bandwidth used, prompting them to develop cable projects for their own bandwidth needs and to lease out to other users.[336] As hyperscalers use over two-thirds of international bandwidth to provide their broad range of services,* they are more likely to finance cables on their own—desiring reliable and redundant routes and confident that the expanded capacity will pay for itself as demand for AI, cloud, and other new applications grows.[337]

*For example, Google and Microsoft provide digital services including search, video streaming, mapping, cloud, and email. "The State of the Networks: 2023 Edition," *TeleGeography*, 7; Yousef Khalidi, "How Microsoft Builds Its Fast and Reliable Global Network," *Microsoft*, March 15, 2017.

- *Manufacturing and installation:* There are four companies that manufacture and install almost all subsea cables—SubCom (United States), ASN (France), NEC (Japan), and Huawei spinoff HMN Tech (China).[338] Other important players include submarine line terminal equipment (SLTE) companies that produce the equipment installed at cable landing stations. The SLTE market is led by Ciena (United States), which holds an estimated 60 percent market share, according to Dell'Oro Group; Nokia (Finland), ASN, and NEC are among the other major players.[339]
- *Repair:* On average, there are 190 cable repairs annually, mostly in response to "breaks" caused by fishing and anchoring activities that do not always cut the optical fibers themselves; damaging cable insulation is enough to cause a cable to short circuit.[340] Cables have also been attacked as a form of gray zone pressure tactic. (For more on cable breaks as gray zone behavior, see "China Uses Commercial Subsea Cable Infrastructure to Advance Military and Strategic Objectives" earlier in this section.) In 2024, repairs took an average of 51 days, with time influenced by work permit timelines, ship availability, weather conditions, and depth and distance of the cable break.[341] Cable repairs are carried out by companies that contract with private, regional consortia called "consortium zones" or "private maintenance agreements."[342] Rear Admiral Brookes testified that out of approximately 65 cable ships globally, approximately 20 are primarily used for subsea cable repairs.*[343]

*Cable installation ships can also be used for maintenance. A June 2025 industry report found that in addition to the roughly 20 dedicated repair ships, there are 12 ships used for both installation and maintenance. Mike Constable, Lane Burdette, and Alan Mauldin, "The Future of Submarine Cable Maintenance: Trends, Challenges, and Strategies," *Infra-Analytics* and *TeleGeography*, June 2025, 123–124.

Appendix III: Seabed Mining 101

Seabed minerals occur in various formations. These include polymetallic nodules (potato-sized rocks), polymetallic sulfides (chimneys, mounds), and cobalt-rich crusts.[344] Most prospective seabed miners are interested in polymetallic nodules—found in high concentrations in the Clarion-Clipperton Zone (CCZ) between Hawaii, Kiribati, and Mexico—for the following mineral content:

- *Cobalt:* Used in batteries and extreme temperature alloys. CCZ nodules are estimated to contain more cobalt than global terrestrial reserves.[345] China domestically controls less than 1 percent of mined output, but Benchmark Minerals estimates that Chinese companies in third countries will control 46 percent of global land-based cobalt mining by 2030.[346]
- *Copper:* Used throughout energy and digital infrastructure. S&P Global projects a structural shortage of copper.[347] Chinese SOEs are spending billions to boost production at their existing global copper mines and targeting acquisitions of more mines.[348]
- *Manganese:* Used in steel production and batteries. CCZ nodules are estimated to contain more manganese than global terrestrial reserves.[349]
- *Nickel:* Used in steel production and batteries. CCZ nodules are estimated to contain more nickel than global terrestrial reserves.[350] The PRC domestically accounts for 3 percent of mined output, but Baron estimates that when combined with Chinese companies operating in Indonesia, PRC firms account for 48 percent of global nickel mining.[351]
- *Rare earth elements (REEs):* Used in many products (e.g., magnets, lasers, displays, optical glass). REEs are the seabed mineral for which China domestically controls the greatest amount of global mined output (69 percent) and refining capacity (91 percent), ultimately accounting for 71 percent of U.S. imports.[352] There is some debate about the prospects of obtaining REEs from polymetallic nodules, but they are consistently reported as "potentially valuable trace elements" and a few cooperative agreements have been signed between prospective nodule operators and processors related to REE production from nodules.[353]

Seabed mining is regulated by both national governments and the ISA. Seabed mining within a national jurisdiction (i.e., on continental shelves*) is regulated by national governments. Seabed mining beyond national jurisdiction is regulated by the ISA. The ISA was established under UNCLOS† to manage mineral resources beyond national jurisdiction—approximately 54 percent of the

*For a definition of maritime boundaries, see "Appendix I: Maritime Zone Definitions" earlier in this chapter.

†UNCLOS covers ocean activities including naval power, maritime commerce, environment protection, scientific research, and international dispute settlement. One hundred seventy-two countries have ratified the convention. Only 155—including China—are parties to the 1994 agreement that amended UNCLOS's seabed mining provisions. The United States has signed but not ratified the convention and observes some portions of UNCLOS (like EEZ definitions) as customary international law. "Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982," *United Nations Treaty Collection*, July 1, 2026; "United Nations Convention on the Law of the Sea," *United Nations Treaty Collection*, July 1, 2026; Caitlin Keating-Bitonti, "United Nations Convention on the Law

ocean floor.[354] This includes approving exploration plans, monitoring compliance with approved plans (i.e., contracts), and developing rules for exploitation.[355] ISA regulations seek to ensure that activities related to seabed minerals (e.g., exploration, extraction) are conducted in line with marine environmental protection, environmental sustainability, and the "benefit of mankind as a whole."* [356] Parties to UNCLOS are responsible for ensuring their nationals', corporations', and flagged vessels comply with UNCLOS obligations and ISA regulations and contracts.[357] The United States has not ratified UNCLOS, so while it has an observer status that allows participation in ISA deliberations, it is not entitled to participate in decision-making votes.[358] However, the United States has a domestic regulatory framework for regulating seabed mining beyond its national jurisdiction, allowing it to issue exploration licenses and commercial recovery permits in international waters.† [359]

The ISA and some national governments, including the United States, have developed exploration regulations.[360] The ISA has issued 32 exploration contracts to 22 contractors.[361] Exploration contracts allow approved government agencies and private companies—sponsored by member states—to test mining technology and carry out oceanographic and biological surveys.[362] Over half of these contracts have been issued for polymetallic nodule resources in the CCZ.[363] The ISA has also issued contracts to explore polymetallic sulfide and cobalt-rich crust resources in the Western Pacific, Indian, and Atlantic Oceans.[364]

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of the Sea (UNCLOS): Living Resources Provisions," *Congressional Research Service* (Report No. R47744), January 20, 2026, 1.

*The requirement to benefit "mankind as a whole" includes developing a mechanism for the equitable sharing of financial and other economic benefits derived from activities in ISA-regulated areas, especially for landlocked and developing countries. "A Collective Vision of a Shared Future," *International Seabed Authority*, accessed May 28, 2026; UN Convention on the Law of the Sea, 1982.

†Under the Deep Seabed Hard Mineral Resources Act, the United States can issue exploration licenses and commercial recovery permits in international waters. Currently, Lockheed Martin holds two exploration permits issued under this framework. Part of Lockheed Martin's licensed area overlaps with an ISA Area of Particular Environmental Interest—a designation that prohibits mineral exploitation. As of September 18, 2026, the National Oceanic and Atmospheric Administration is reviewing applications from The Metals Company (for exploration licenses in waters that overlap with its subsidiaries' ISA contract areas) as well as from American Metal Resources and American Deep Sea Minerals. U.S. Department of Commerce, National Ocean Service, *Deep Seabed Hard Minerals Mining*, accessed September 18, 2026; "Environmental Management Plan for the Clarion-Clipperton Zone," *International Seabed Authority*, accessed May 28, 2026; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, "Deep Seabed Mining: Notice of Receipt of Applications for Deep Seabed Mining Exploration Licenses and Announcement of Public Comment Period and Virtual Public Hearings," 91 Fed. Reg. 13822 (March 23, 2026); Emma Kaboli and Caitlin Keating-Bitonti, "Seabed Mining in the Clarion-Clipperton Zone," *Congressional Research Service* (Report No. IG10053), February 4, 2026.

ENDNOTES FOR CHAPTER 5

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CHAPTER 6: THE PRICE OF EVERYTHING: CHINA'S BID TO RESHAPE GLOBAL COMMODITIES MARKETS

Executive Summary

U.S. Ambassador to China David Perdue recently warned that Beijing had "weaponized" its dominant position in critical minerals against the world. China's licensing regime and new regulations could expose individuals trying to diversify supply chains away from China to arrest, criminal prosecution, and asset seizures. While critical minerals are the most urgent chokepoint, China is working to exert greater influence over global commodities markets, pursuing numerous policies that expand its leverage over production and refining, supply chains, and pricing. China has expanded its production and processing of core commodities and become a major force in many segments of agricultural, metals, and energy markets. It has also spent the last three decades developing domestic futures exchanges as a further avenue to exert influence.

The United States and its allies in the UK and elsewhere have long dominated global financial markets, governing the process by which prices of key commodities are negotiated. These deep, liquid markets reduce volatility and let buyers and sellers agree on a fair price—not one dictated by the government of a non-market economy. China views this status quo as a vulnerability, and its 15th Five-Year Plan signals that it will continue to step up efforts to develop its futures markets and optimize domestic commodity supply chains.

China's influence has already transformed established markets. China has significant reach into the physical infrastructure that transports bulk commodities around the world, vertically integrating mineral extraction, transportation and logistics, refining, and manufacturing of end goods. In 2012, Hong Kong Exchanges and Clearing (HKEX) acquired the London Metal Exchange (LME), which has since approved more Chinese exchange and clearinghouse members, added the renminbi (RMB) as an acceptable currency for margin, and deepened its ties with China's metals industry.

Chinese domestic commodity exchanges are some of the world's largest by trading volume, and they are opening more trading to foreign participants. At the start of 2020, China allowed foreign investors access to only six futures contracts and no options contracts; today it allows foreign access to over 100 combined. Contracts for lithium traded on the Guangzhou Futures Exchange have achieved global benchmark status over similar contracts in-

troduced by exchanges in the United States and the UK. China has used the China Mineral Resources Group (CMRG), a state-owned consolidated purchaser of iron ore, to compel producers to use its preferred benchmarks and settle more trade in RMB. Even in crude oil, one of the largest and most liquid markets long based on U.S. dollar pricing, China has fostered a regional benchmark for medium sour crude denominated in RMB. This benchmark not only expands China's influence over crude pricing but also could be used to further facilitate sanctions evasion.

As Chinese benchmarks become more widely adopted, China could set the parameters of contracts that global buyers and producers must meet and encourage use of Chinese firms and exchanges. China's success in broader commodities markets has, heretofore, been hampered by the network effects enjoyed by existing exchanges and hesitation from international producers and consumers to use China's financial markets, which are subject to currency and capital controls, are not protected by the rule of law, and have a high potential for opaque regulatory intervention. However, as a witness noted in written testimony for the Commission, "China's approach is gradual and strategic. It is not attempting to replace existing benchmarks overnight. Instead, it is building parallel systems that may, over time, reshape the global landscape."

Key Findings

- China is moving to translate its physical presence in markets into an alternate network of price benchmarks and futures contracts to give it leverage in key commodities. China has the largest physical presence in commodities markets but has nowhere near commensurate influence or leverage over prices under the current system, partly due to the financialization of commodities markets and the critical role of the U.S. dollar as the dominant currency of exchange.
- China is the world's largest buyer, producer, importer, or refiner of many key commodities. Reliance on imported raw materials led China to take numerous measures to vertically integrate access and operations, including by purchasing the rights to overseas mines, building transport and logistics infrastructure to transport raw materials from overseas to China, and becoming a global leader in refining capacity.
- Beijing is using its physical presence in markets to displace established price benchmarks. In 2022, China consolidated its market power by establishing CMRG to manage purchases of iron ore on behalf of the country's steelmakers. China has since compelled sellers to shift to preferred pricing benchmarks. A state-owned entity, CMRG's political heft has allowed it to issue directives to steel mills to boycott certain suppliers and obtain the support of Chinese government agencies in enhancing its negotiating leverage, including more stringent cargo inspections and higher port storage fees.

- China is leveraging its dominant position in extraction and refining to make rapid progress in expanding domestic commodity futures trading. It is also making progress improving the quality of price signals generated by trading activity. Chinese commodity futures are mostly "in China, for China," a common approach by the Chinese Communist Party (CCP) to establish an initial market at home before expanding abroad. Still, China has limited influence over global commodity prices, which are largely set by markets, are denominated in U.S. dollars, and are tied to financial exchanges in the United States and other countries.
- To build greater sway in international commodities markets, China is pursuing a multipart strategy that has already influenced pricing and governance:
  - China is leveraging its position in certain newer markets where it has a dominant position in numerous segments of the supply chain, particularly those relating to critical minerals for renewable energy and batteries—for example, lithium. China's dominance of refining and downstream manufacturing limits the capacity for alternative benchmarks to form.
  - China is expanding its network of warehouses for physical delivery in Hong Kong, Shanghai, and abroad to support futures contract settlement. Warehouses linked to commodity exchanges provide the essential infrastructure for storing, managing, and delivering raw materials when futures contracts expire. China's moves increase the appeal of using Chinese futures, expand China's role in price discovery, and grow offshore access to physically delivered Chinese futures.
  - As China shifted its purchases of soybeans from the United States to Latin America, the market is fragmenting between a CME Group (CME) exchange and China's competing soybean futures contracts traded on the Dalian Commodity Exchange (DCE). U.S. farmers are exposed to further volatility from trade frictions as China substitutes U.S. soybeans for imports from Latin America. China's state-owned agricultural giants are investing in overseas grain storage, port terminals, and soybean crushing capacity that afford them greater insight into pricing dynamics at each stage of production.
  - The conflict in Iran has demonstrated how China has reduced its reliance on global oil markets. Although China's onshore oil benchmark still lags behind major Western benchmarks, it has become an important regional price discovery tool. The existence of an RMB-denominated and locally relevant price discovery tool could allow China's independent refiners to better hedge price risk associated with purchases of sanctioned oil.

Introduction

General Secretary of the CCP Xi Jinping prioritizes control and predictability. In this regard, global commodities markets are a source of frustration for the CCP. They play a significant role in China's prized manufacturing sector, yet for the most part, prices, financial transactions, and terms of trade are concentrated in financial exchanges outside of China. While China is the world's dominant manufacturer and largest global purchaser of raw materials and industrial inputs, it lacks commensurate sway in global financial markets where trading by hedgers, arbitragers, and speculators determines commodity prices. For an economy where intervention to stabilize prices is commonplace, overseas commodities markets introduce market-driven price discovery and product delivery beyond Beijing's control.

In response to this perceived vulnerability, China is building alternative global commodity exchanges, financial instruments, benchmarks, and physical delivery infrastructure. Beijing aims to enhance its influence over global prices and markets while reducing reliance on U.S. exchanges and dollar-denominated contracts. Some alternatives are already regionally competitive, while in other sectors China is leveraging its buying power to force suppliers off Western benchmarks. Even if it only partially succeeds, China's strategy to strengthen influence over global commodity prices risks fragmenting markets, diminishing U.S. financial influence, and potentially inhibiting price discovery. As evidenced by China's restrictions on rare earth exports, its efforts to control key commodities also present broader risks related to U.S. access.

China's Playbook for Influence in Global Commodities Markets

China is the world's largest producer, consumer, importer, and/or refiner of many commodities—the building blocks of the global economy.[1] Commodities include raw materials like iron ore that becomes steel in skyscrapers, soybeans that feed people and livestock, critical minerals in products from defense articles to smartphones, and crude oil refined into fuels and plastics.[2] Goods classified as commodities have undergone minimal processing; their value is derived from extraction or harvesting.[3] Following its entry into the WTO in 2001, China's manufacturing and construction boom, combined with rising standards of living, gave it a voracious appetite for raw materials, generating a traders' adage that China consumes "half of everything."[4] China's domestic production of energy, metals, and agricultural goods could not keep pace, and its surging imports triggered a commodity "supercycle," a prolonged period of rising prices due to expanding demand outstripping available supply.*[5] As demand for inputs rose, extended lead times for mines and oil field development delayed the ramp-up of supply, contributing to a sharp acceleration in prices compared with the period prior to China's entry into the WTO.[6]

*While development in emerging markets more broadly drove increasing demand for agricultural goods, China was by far the largest impetus for new demand in metals and energy. Bahattin Büyükşahin, Kun Mo, and Konrad Zmitrowicz, "Commodity Price Supercycles: What Are They and What Lies Ahead?" *Bank of Canada Review* (Autumn 2016): 38–41.

Table 1: China's Role in the Global Market for Select Commodities

	Share of Global Production/Mining	Share of Global Refining/Smelting	Share of Global Raw Material Imports (2024)
Aluminum	20%	60%	87%
Iron Ore	11%	66%	74%
Soybeans	5%	n/a	65%
Copper	8%	47%	63%
Nickel	3%	31%	61%
Lithium	21%	75%	44%
Oil	5%	18%	24%
Coal	52%	n/a	23%
Natural Gas	6%	n/a	19%
Corn	23%	n/a	8%
Wheat	17%	n/a	6%
Cobalt	1%	76%	4%

Note: For commodities where refining/smelting data are not comparable, consumption data shed light on China's position as a buyer in the global market. For example, China accounts for 56 percent of global coal consumption and 11 percent of natural gas consumption. In agricultural goods, China consumes about 25 percent, 19 percent, and 31 percent of global corn, wheat, and soybeans, respectively. Share of global smelting for iron ore refers to percentage of global pig iron production. Data are the most recent available for each commodity. Units for all commodities' share of production were calculated in metric tons except crude oil and natural gas, which were calculated in barrels per day and terajoules, respectively.
Source: Various.[7]

China is a large domestic producer and refiner of commodities, but it relies on imports of raw ore, agricultural products, and energy to make up the domestic supply deficit. China's coal production and renewable buildout have made it 85 percent energy self-sufficient.[8] However, China still relies on imported crude oil for fuel and petrochemicals.[9] In agriculture, China has prioritized self-sufficiency in staples like rice and wheat but buys over 100 million metric tons of soybeans every year from around the world to feed livestock.[10] China is a major refiner of base metals and critical minerals, but it imports most of the raw ore it refines.[11]

China's state planning underscores the priority it places on securing access to commodities. The 15th Five-Year Plan, released in March 2026, lays out a sweeping economic agenda emphasizing self-sufficiency and supply chain leverage, including deepening China's control over rare earths and strengthening food security.[12] It calls for the construction of commodity storage and transportation infrastructure to reduce logistics costs.[13] In 2023, Xi Jinping introduced the goal of making China into a "strong financial country."[14] Behind this stated aim is the Party's commitment to maintaining control over markets and ensuring they serve the real economy, a euphemism for manufacturing and other favored industries, even at the expense of financial sector profits.[15] The 15th Five-Year Plan also nods to this goal by pledging to further develop futures and derivatives products.[16] In May 2026,

Chinese Premier Li Qiang reinforced the importance of ensuring reliable access to commodity supply chains and stockpiles during his visit to trading hubs in eastern China.[17] Hong Kong's first Five-Year Plan, released in September 2026, laid out a roadmap to become a world commodities trading hub, starting with gold delivery, settlement, and clearing.*[18] (For more on Hong Kong's role in China's financial ambitions, see Chapter 10, "Hong Kong: Enabler of China's Global Finance and Technology Ambitions.")

U.S.-Led Financial Markets Constrain China's Ability to Influence Commodity Prices

The financialization of commodities markets has weakened the role of physical trading in price discovery, stymieing China's ability to transform its unrivaled presence in many supply chains into market power. Global commodities trade has expanded beyond the needs of physical producers and consumers looking to hedge their price risk to include investors speculating across a complex range of financial instruments.[19] Financial institutions, including banks, hedge funds, asset managers, and individual retail traders, now dominate exchange-based price discovery, trading a volume of commodity futures that often far exceeds transactions of the underlying physical product.†[20] Their buying and selling activity incorporates price signals from largely unrelated asset classes, beyond underlying supply and demand dynamics.[21] Movements in futures prices on exchanges impact not only the prices paid for commodities but also decisions around physical production, stockpiling, prices for upstream and downstream products, and physical trading flows around the world.

Commodity Futures: Benchmarks Traded on Financial Exchanges Underpin Global Trade

Futures contracts traded on commodity exchanges like the CME‡ and Hong Kong-owned LME underpin pricing for commodities trade. A futures contract is a standardized agreement to exchange a set quality and quantity of a good at an agreed-upon price at a future date.[22] Futures prices constitute a vital signal

*Hong Kong plays a central part in China's commodity ambitions given its role as a global financial center. In July 2026, Hong Kong launched a new government-owned gold clearing and settlement system and HKEX waived trading fees on its recently re-launched gold futures contracts for one year. Enoch Yiu, Julie Zhang, and Wynna Wong, "Hong Kong Inaugurates Trial Operation of Gold Clearing and Settlement System," *South China Morning Post*, July 7, 2026; Selena Li and Jiaxing Li, "Beijing Bolsters Hong Kong Bond, Gold Trading in Global Yuan Push," *Reuters*, July 7, 2026.

†For example, daily trading of major Brent and WTI oil futures exceeds daily consumption of oil by a factor of 20–25 times, with quantitative and algorithmic trading accounting for up to 70 percent. The U.S. Commodity Futures Trading Commission compiles Commitment of Traders (COT) reports detailing the trading positions of commercial and non-commercial entities over a reportable threshold. Generally, positions held by non-commercial traders are equal to or exceed those of commercial traders (i.e., producers and merchants). However, the COT report is an imperfect measure of total trading behavior because it only tracks exchange-traded metrics, while many commercial entities hedge in over-the-counter markets. Additionally, the clients of swap dealers included in the non-commercial trading category may be commercial entities hedging risk associated with physical commodities. Ilia Bouchouev, "Energy Quantamentals: Who Is Who in Financial Barrels?" *Oxford Institute for Energy Studies*, January 2024, 2–3, 5; Ing-Haw Cheng and Wei Xiong, "Financialization of Commodity Markets," *Annual Review of Financial Economics* 6 (2014): 425; U.S. Commodity Futures Trading Commission, *Commitments of Traders*; U.S. Commodity Futures Trading Commission, *Disaggregated Commitments of Traders Report: Explanatory Notes*.

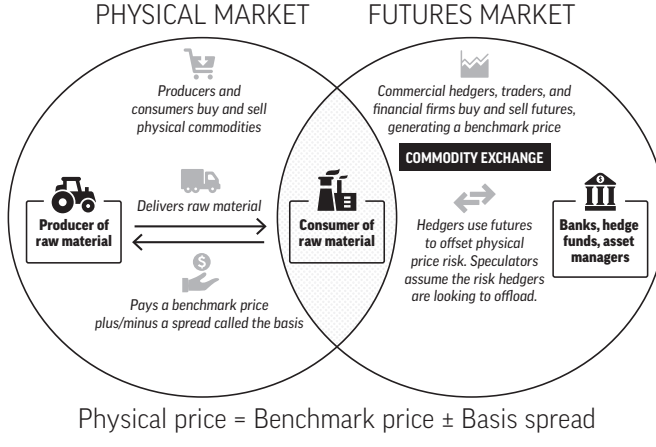
‡ CME Group owns four major commodity exchanges: the Chicago Mercantile Exchange, the Chicago Board of Trade, the Commodity Exchange, and the New York Mercantile Exchange. This text uses CME interchangeably with CME Group and its exchanges.

Commodity Futures: Benchmarks Traded on Financial Exchanges Underpin Global Trade—*Continued*

informing production and consumption decisions, and they provide a transparent and widely accepted price against which buyers and sellers can negotiate aspects of deals like proximity to transportation infrastructure, physical quality of the commodity, or local supply and demand conditions.[23] Many countries host their own futures exchanges, although the United States and the UK have the most influential markets from a global price discovery standpoint.[24] Exchange participants include commercial hedgers looking to reduce the risk of price fluctuations and speculators seeking profit from risk-taking behavior.[25]

For physically settled contracts, the purchaser of the commodity receives the actual goods upon contract expiration into a network of approved warehouses.[26] This warehousing system ensures standardization across the underlying commodities and helps prevent prices in cash and futures markets from diverging, a key factor for maintaining credibility of the contract.[27] Some contracts are settled on a cash basis instead, meaning that on the day the contract expires, the two sides settle against a recognized fair market price rather than through delivery of the physical good.[28] This financialization adds significant flexibility, making hedging and speculation easier. It also means vastly more participants can be involved in the market than one limited in scale by the actual underlying commodity assets.

Figure 1: Commodity Prices Are Tied to Futures



Note: This figure is meant to illustrate how benchmarks are incorporated in international trade. It is a highly simplified picture of the entire commodity exchange ecosystem. In reality, commodity derivatives trading includes a wide variety of financial instruments (swaps, options, and futures) traded on exchanges and over the counter, and participants on both sides of the trade are often hedging exposure on multiple forums. See Appendix II for a more complete description of futures trading.

Source: Ben Brown, "Commodity Futures and Options Terminology," *University of Missouri Extension*, January 2026; Alex Kuznetsov, "Financial Futures," in *The Complete Guide to Capital Markets for Quantitative Professionals*, November 2006, 6–7. Created for the U.S.-China Economic and Security Review Commission.

Reliance on Foreign Futures Limits China's Ability to Influence Prices and Related Policy Outcomes

China seeks to enhance its own position in commodity exchanges to bring price discovery under its jurisdiction, both to better reflect local supply and demand conditions and to provide the Chinese government more direct influence over commodity prices and related economic policy levers. Currently, China's commodity imports are tied to benchmarks determined on foreign exchanges, limiting its ability to intervene in prices or fully reflect its preferred price-based economic policies.[29] According to testimony before the Commission by Johannes Petry, senior researcher at Goethe University Frankfurt, "This dependence not only exposes them to externally driven volatility but can also result in systematic under- or over-pricing relative to domestic market conditions and limits their ability to use pricing infrastructures as instruments of economic policy."[30] Global price fluctuations can hurt Chinese consumers and producers, even when unrelated to China's own economy: when import prices rise, industrial margins are squeezed, consumer inflation rises, and policy must adapt.[31] For example, profit margins in furniture fell over two percentage points and in garment manufacturing by three-quarters of a point year-on-year through July 2026 as oil prices rose following the conflict in Iran.[32]

China has become a growing participant in commodities markets, but its role in price discovery lags behind Western traders and financial firms. China faces four major challenges in its effort to grow its role in this ecosystem:

1. *Infrastructure and network effects:* The largest exchanges, located in the United States and the UK, host the key benchmarks—widely used price references for a standardized quality, like Brent for crude oil. Markets have known network effects, and traders face operational costs in establishing hedging facilities across different exchanges, both of which drive a winner-take-all dynamic. Liquidity tends to concentrate in a few locations, giving them outsized influence over which institutions can trade, which benchmarks are used, which prices are referenced for cash-settled derivatives, and how physical delivery must take place.[33] China's efforts must overcome the entrenched advantage of the incumbent markets.
2. *Regulation:* Exchange and clearinghouse rules determine who bears costs during heightened price volatility, while rule-of-law systems provide predictable dispute resolution. With most global benchmarks concentrated in Chicago, London, and New York, U.S. and UK regulators effectively set the global rulebook for commodity futures trading. Though exchanges and regulators have limited direct influence on prices themselves, they play a pivotal role in ensuring transparency, standardizing trading terms, resolving disputes, and managing crises.[34]
3. *Traders:* Commodities markets have evolved into a complex range of financial instruments extending well beyond the underlying physical assets, a financialization led by traders in the United States and the UK.[35] As non-commercial traders, hedge funds, and investment banks have come to far surpass commer-

cial traders (farmers, producers, and consumers) in transaction volume for some futures, pricing has grown more responsive to a broader set of information and assumptions than merely physical supply and demand.[36] Despite China's dominant role as a buyer, the Chinese government historically limited access to foreign exchanges to SOEs.[37]

4. *Currency:* Most futures contracts are priced and settled in U.S. dollars, reinforcing the dollar's role as the default unit of account for global commodities trading and the centrality of the U.S. financial system.[38] The entrenched dominance of the U.S. dollar has its own separate network effect in financial markets, making it hard for China to grow its role in pricing commodities. For China, this challenge is compounded by its capital and currency controls, which create additional risks for foreign participants in China's commodity exchanges.[39]

Chinese concern over this dependence dates to a 2004 episode known as the "battle of the beans," when Chinese soybean processors hedging on the CME-owned Chicago Board of Trade were caught in a speculative price surge and crash, overpaying by around $1.5 billion.[40] The fallout triggered widespread bankruptcies as well as the acquisition of much of China's soybean processing sector by foreign commodities traders, which exacerbated CCP concerns about the nation's food security.[41] Chinese traders also suspected they received unfair prices due to overt intervention or less sophisticated trading strategies than their Western counterparts.[42] The episode remains a touchstone in Chinese policy debates.[43] In 2013, Xi Jinping, presiding over his first conference on rural issues, called for enhancing China's pricing power in grain markets.[44] The issue remains relevant as food security has been a core goal of the past two five-year plans.[45]

China views this status quo as being at odds with its dominance in physical markets, leading to a growing chorus among policy leaders and market participants calling for greater "pricing power."[46] Behind that rhetoric, China is primarily concerned with controlling the infrastructure underpinning physical and financial commodities markets. In this framing, "pricing power" means the convergence of market infrastructure, regulation, the composition of market participants, and the currency of denomination—a definition that differs from traditional usage.[47] Even formal producer alliances like the Organization of the Petroleum Exporting Countries (OPEC) lack unconstrained power to set prices due to supply and demand conditions or political pressures, and any single participant's influence on a financial exchange where prices are set by hedgers, arbitragers, and speculators is typically weak.[48] What China seeks instead is a policy instrument that aligns market infrastructure with its dominant physical position, thereby increasing its ability to steer the direction of global commodity prices.

Petrodollar Envy: China's Lessons from Dollar Supremacy

Global U.S. dollar dominance highlights the fundamental disconnect between China's role as a consumer of physical commodities and its lack of influence over the pricing of those commodities. The dollar's position as the world's dominant currency was built in part on a circular, mutually reinforcing system in which oil was purchased in dollars and the proceeds recycled into dollar-denominated assets. In the 1970s, Middle Eastern oil-producing countries committed to pricing oil sales in U.S. dollars and investing the proceeds in U.S. dollar assets, primarily Treasuries and bank deposits.[49] The volume of transactions underpinning this system helped cement the dollar as the dominant global reserve currency and the preferred currency for pricing and settling international trade.[50] Even as the recycling of oil proceeds into dollar assets has slowed, it remains the world's dominant currency for reserve holdings, equity investment, and the pricing and hedging of international trade.[51]

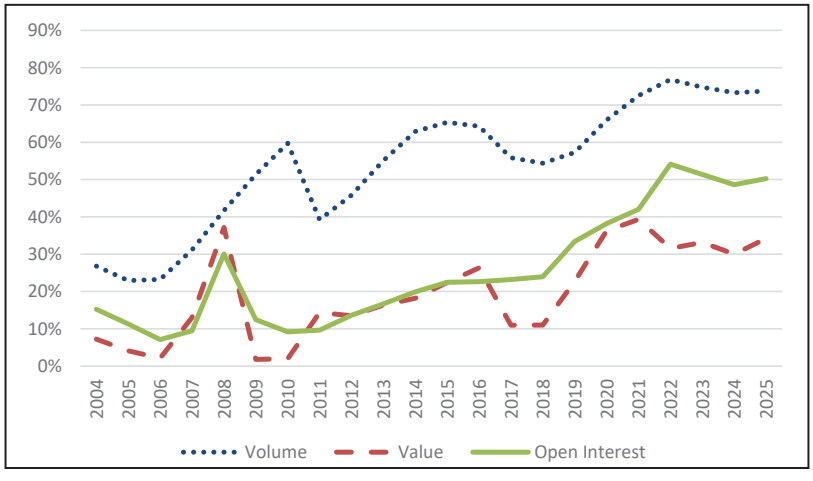
China's efforts to promote the RMB in its commodities trade are, at this stage, primarily about payments rather than reserves. By settling commodity purchases in RMB, China reduces the share of its trade that must pass through the dollar-based payments system—and with it, its vulnerability to U.S. sanctions.[52] China has pressed trading partners such as Saudi Arabia, Russia, and Brazil to accept RMB as a settlement currency, and countries already subject to dollar sanctions, notably Russia, have embraced RMB-denominated trade as a lifeline.[53] RMB usage has even expanded beyond bilateral transactions involving China: Indian refiners have reportedly used RMB to pay for Iranian and Russian oil.[54] Critically, however, at least some of this trade is still priced in dollars and merely settled in RMB.[55] Settlement is a specific transactional choice made bilaterally and deal by deal; it insulates individual transactions from sanctions but poses no challenge to the dollar's role as the currency in which the world stores its wealth.

Displacing the dollar as a reserve and pricing currency is a far more demanding project. A true "petroyuan" system would require oil to be priced in RMB—not just settled in RMB at dollar-based prices—and pricing of that kind depends on foreigners' willingness to hold RMB, not merely to accept it in payment. That, in turn, requires attractive RMB-denominated investments and greater liberalization of China's currency, a gap that Chinese researchers quoted in the state-run *China Daily* have publicly acknowledged.[56] Without broader offshore RMB investment opportunities or access to China's onshore financial markets (see the discussion of China's capital and currency controls below), holders of RMB have few ways to earn a return on RMB holdings and every incentive to convert their RMB back into dollars.[57] Until that changes, RMB internationalization will remain a sanctions mitigation strategy operating at the level of payments—useful to Beijing and countries that seek to evade U.S. sanctions but not a real challenge to the dollar's reserve status.

China's Derivatives Markets Serve Price Discovery Function for Domestic Commodities Circulation

Despite a tumultuous start, China's commodity derivatives markets have grown rapidly in scale and now play a major role in price discovery within China. Although Chinese commodity futures have existed since 1990, the initial years of their existence was marked by speculative investment and wild price fluctuations.[58] Government officials intervened and in 1998 raised the status of the China Securities Regulatory Commission (CSRC)—the Chinese equivalent of the U.S. Securities and Exchange Commission (SEC) and the U.S. Commodity Futures Trading Commission (CFTC)—to a ministry under the State Council to oversee the industry.[59] After the "battle of the beans" in 2004 (discussed above in "Reliance on Foreign Futures Limits China's Ability to Influence Prices and Related Policy Outcomes"), Chinese commodity exchanges entered a new phase of growth as regulators encouraged the creation of alternate pricing mechanisms to help insulate the domestic commodities market from global price shocks and support domestic development.[60] Between 2005 and 2024, the number of commodity derivatives in China increased from 10 to 119 contracts, primarily listed across five state-owned exchanges (see Figure 3 for a map of China's largest commodity exchanges).[61] Chinese exchanges, all of which are state owned, now make up more than 70 percent of the world's commodity futures trading by volume and over 30 percent by value (see Figure 2).*

Figure 2: Shanghai Futures Exchange, Dalian Commodity Exchange, and Zhengzhou Commodity Exchange Annual Share of Global Commodity Futures Trading, 2004–2025



Note: Volume refers to the number of individual transactions where a contract changed hands. Open interest refers to the number of contracts outstanding at a point in time. Notional value reflects the total value of contracts traded in the year. For the purposes of this analysis, commodity options are excluded. Options provide the holder the right, but not the obligation, to buy or sell the product. Trading of options was very limited in China between 2004 and 2015, although it has gained much greater popularity over the last five years.
Source: World Federation of Exchanges, *Statistics Portal*, accessed June 4, 2026.

*Volume in this context refers to each transaction where a contract changes hands. It is unrelated to the amount of the commodity linked to that contract.

Making Progress on Challenges with Speculative Trading

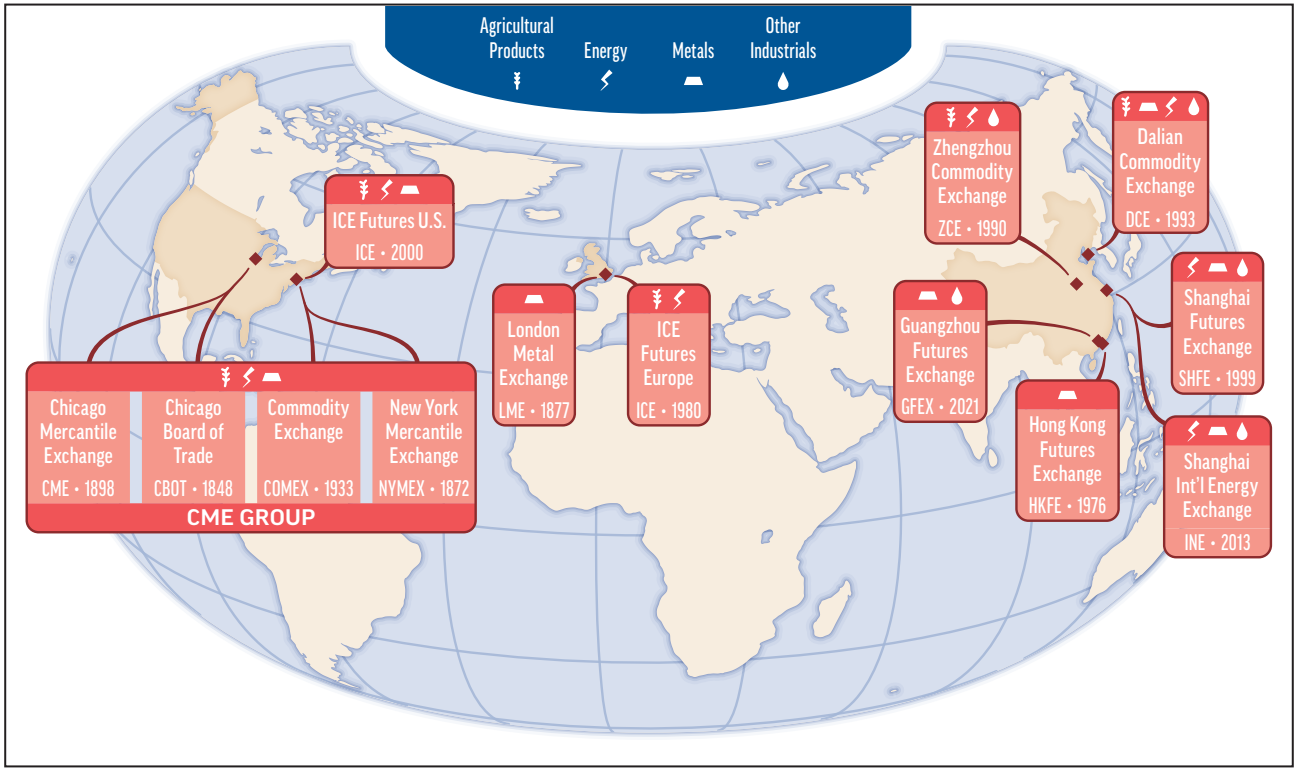
Chinese markets still have a reputation for excessive speculative trading by retail investors, which traders believe can cause undue price volatility. The domestic price discovery utility of China's futures contracts has increased as trading has shifted from a heavy retail presence to a more institutionalized, professional base. At the end of 2016, individual investor accounts held 86 percent of outstanding commodity futures contracts, while high trading turnover also indicated an outsized presence of retail investors rather than commercial hedgers.[62] Over the past decade, more professional investors and commercial hedgers have entered China's markets. The daily volume-to-open-interest ratio provides a proxy measure for speculative activity.* A higher number indicates more speculative trading, while a lower number indicates hedgers are buying and holding contracts.[63] China's daily volume-to-open-interest ratio has fallen from a peak of 1.91 in 2010 to 0.83 in 2025, likely reflecting a reduction in primarily speculative trading and the growing presence of producers and consumers using futures to hedge their price risk.[64] Evidence from academic research indicates that Chinese markets continue to be more speculative than their international counterparts but have improved over time, especially in commodities like corn, nickel, and rubber.[65]

Innovation to Meet Domestic Market Needs

Chinese exchanges have moved from replicating international benchmarks for goods like soybeans and cotton to innovating in products that appeal to China's commercial hedgers in the domestic manufacturing sector. Some of China's most traded commodity futures are designed for Chinese manufacturers, especially when those products are both refined and passed along as intermediate inputs to other manufacturers all within China. For example, Zhengzhou Commodity Exchange's (ZCE) flat glass contract, a major input into construction, was the most traded future in China in 2025 and the second-most traded commodity contract in the world by volume.[66] It is also the only flat glass future in the world.[67] In September 2026, DCE began offering coke futures and options, completing a trio of hedging tools—iron ore, coking coal, and coke—serving the needs of China's steelmakers.[68] China's huge manufacturing industry has allowed it to build demand for a wide variety of futures contracts linked to the specific industrial and manufacturing needs. (See Appendix III for a full list of commodity futures and options available in China.) China has also seen success in offering an oil contract for sour crude that better meets the needs of regional oil refineries. (See "China's INE Contract Fuels RMB Oil Trade" for more.)

*Commercial hedgers refers to farmers, producers, consumers, and others hedging the risk of price fluctuations of their commercial activities. Ing-Haw Cheng and Wei Xiong, "Financialization of Commodity Markets," *Annual Review of Financial Economics* 6 (2014): 424.

Figure 3: Major Commodity Exchanges in the United States, the UK, and China and Their Primary Contracts



Note: The founding date refers to the date the predecessor entity was founded, if applicable.
Source: Various.[69] Created for the U.S.-China Economic and Security Review Commission. Names and boundary representation are not necessarily authoritative.

HKEX Acquisition of the LME in 2012 Led to Greater Chinese Influence

In 2012, HKEX, the owner of the Hong Kong Stock Exchange, acquired the LME, raising concerns over foreign management of a UK-based exchange. Since the acquisition, Chinese influence on the LME has grown. In addition to its Chinese ownership, the LME includes a significantly higher percentage of Chinese members than other exchanges outside of China.* Just before the HKEX acquisition, the LME welcomed its first Chinese member.[70] Since the acquisition, the LME has grown to include six Chinese members out of a total of 38 as of August 2026 (or 15 percent of its total Category One and Two members).†[71] Since 2015, the LME has allowed its clearing members to post RMB as collateral to cover margin requirements on their trades, reducing foreign exchange frictions for Chinese traders.[72] In 2026, the LME updated its rules to make it easier to use RMB as collateral, including raising the cash limit for clearing members and shortening settlement time from two days to one.‡[73] In 2025, the LME added Hong Kong as an approved warehousing location for metals, easing access for traders in mainland China.[74] These decisions to broaden access for Chinese traders make commercial sense within China's outsized role in metals trading, as exchanges earn revenue by increasing the volume of transactions they host. The LME has also announced plans to use Shanghai Futures Exchange (SHFE) steel pricing for a new contract launching in October 2026.[75]

Over the same period, the CCP's control over Hong Kong has broadened and in recent years has extended more directly into commercial sectors. Beijing exercised considerably less direct control over Hong Kong in 2012 than it has since 2019, when it began introducing a series of laws to bring the city's political system to heel. (For more on China's continuing crackdown and erosion of the rule of law in Hong Kong, see Chapter 10, "Hong Kong: Enabler of China's Global Finance and Technology Ambitions.") Though HKEX is a publicly listed company, the government of Hong Kong may appoint up to half of its board and must approve its chairman, and the Securities and Futures Commission must approve its CEO.[76] It is important to note that the LME is

*For example, CME Clear, the clearinghouse for CME Group's exchanges, only has one Chinese-owned member out of over 70 total. Only three Chinese institutions are represented in ICE Futures Europe clearing membership out of around 50 total. Clearing Firms, *CME Group*, accessed September 24, 2026; Membership, *Ice Futures Europe*, accessed September 24, 2026.

†Some of these were existing LME members that were later acquired by Chinese companies. Three additional Chinese brokerages are reportedly preparing to apply for LME membership. Members refer to Category One and Category Two members. This tier of membership provides direct access to the LME's trading infrastructure and its clearing house, while non-members must access LME trading through Category One and Two member service infrastructure. Only Category One members can access the LME trading ring. "Become a Member: Base Metals," *London Metal Exchange*; Tom Daly and Pratima Desai, "EXCLUSIVE Chinese Brokerages Push for LME Membership to Expand Global Metals Role," *Reuters*, June 28, 2026; Eric Onstad, "China's CCB Buys Majority Stake in LME Ring Dealer Metdist," *Reuters*, April 6, 2016; "China's ICBC Targets Commodity Trade Via Stanbank Unit Purchase," *Reuters*, July 31, 2013.

‡CME approved the use of RMB as collateral in 2012 prior to the LME, although other major exchanges such as the Intercontinental Exchange have not as of July 2026. Acceptable Collateral, *CME Group*, accessed September 24, 2026; "List of Permitted Cover, Margin Cover, and Limits on Collateral," *ICE Clear Europe*, July 2026; "CME Clearing Performance Bond Collateral Update—Offshore Renminbi," *CME Group*, April 30, 2012.

HKEX Acquisition of the LME in 2012 Led to Greater Chinese Influence—*Continued*

based in London and governed by UK law, regulators, and courts. Analysts and traders have raised concerns, however, about the potential for influence from Beijing in the LME's role in setting global prices.[77]

In 2022, the Hong Kong-owned LME took extraordinary measures in nickel trading after a massive short position held by a Chinese steel firm threatened to collapse the market.[78] As nickel prices shot up over 250 percent following Russia's invasion of Ukraine, a short squeeze threatened losses worth billions of dollars to the firm and several other LME members.*[79] The LME subsequently canceled trades worth up to $12 billion, which benefited the Chinese firm and several other LME members while wiping out over a billion in profits due to those on the other side of the trades.[80] The LME claimed that its unprecedented actions to resolve the crisis were necessary to avoid the collapse of numerous exchange members, its clearinghouse, and the exchange itself.[81] As commodities expert Craig Pirrong quipped, "If you owe the clearinghouse $1 million and can't pay, you have a problem: if you owe the clearinghouse billions and can't pay, the clearinghouse has a problem."[82] The UK financial authority fined the LME 9.2 million pound sterling ($12.2 million) over the crisis, finding that it lacked adequate controls to prevent a disorderly market.[83] However, in a lawsuit brought by the traders whose profits were canceled, UK courts decided in favor of the LME.[84]

China Opens Domestic Futures Markets to International Participation in Push to Enhance Global Pricing Influence

China has taken steps to evolve its futures markets from a purely domestic price discovery tool into globally recognized benchmarks. CSRC has taken incremental steps to entice greater global participation in Chinese commodity exchanges, opening China's RMB-denominated iron ore and crude oil contracts to foreign traders in 2018.[85] Since then, it has fully internationalized 37 futures and options contracts, including nickel and lithium carbonate in 2026, meaning overseas market participants can register to trade them with the exchange as a direct participant or execute trades through an onshore broker.[86] CSRC allows a professional subset of foreign entities—"qualified foreign investors"—to trade another 81 contracts (see Appendix III for the full list of commodity contracts).[87]

The split between fully internationalized futures and those available only to professional investors reflects China's different aims for each market. China hopes to encourage uptake of its fully inter-

*A trader that has agreed to sell a commodity in the future is said to be "short." A trader with a short position benefits when the price of the underlying commodity falls. A short squeeze occurs when rising prices trigger additional margin calls on traders. As traders close their positions to comply with margin requirements and reduce their exposure, their buying behavior increases prices even more. These price increases then trigger additional margin calls in what soon becomes an upward spiral. Rena Miller, "Introduction to Derivatives and the Commodity Futures Trading Commission," *Congressional Research Service* (Report No. R48451), March 13, 2025, 4–5; Rebecca Cattlin, "Short Squeezes: Why Do They Happen and How Do They Work?" *StoneX*, February 15, 2022.

nationalized futures as global benchmarks underpinning physical trade. Meanwhile, the selective opening of the remaining futures to professional investors indicates a desire to raise the level of trust and institutional knowledge in these markets without exposing them to sudden global price shocks.[88]

Chinese exchanges are also attempting to draw foreign capital by reducing regulatory burdens. Last year, the SHFE announced a plan to revise rules on market access, risk management, and delivery that would allow foreign investors to maintain collateral in foreign currency.*[89] CSRC has also granted licenses to foreign financial institutions to operate as commodity futures brokers in China.[90]

Some Chinese exchanges are considering approving overseas warehouses to serve as official delivery and storage points, which would drive linkages between Chinese futures and physical trade abroad.[91] The SHFE, DCE, and ZCE, the country's largest exchanges, together already have over 1,000 designated domestic warehouses for physical delivery.[92] In 2023, the SHFE announced it was exploring adding overseas warehousing infrastructure.[93] In July 2026, the SHFE-owned Shanghai International Energy Exchange (INE) added a Thailand-based warehouse for rubber futures, its first approved overseas warehouse for physical delivery.[94] HKEX already has an extensive overseas network through its subsidiary, the LME.[95]

China's Dominance in Physical Supply Chains Augments Weak Financial Influence

China has made a concerted effort to control upstream extraction, refining, and transportation of commodities beyond its borders, seeking to ensure that goods flow to China to meet its economic goals. China's strategies for managing access to commodities include consolidating its commodity buyers for negotiating leverage, vertically integrating by purchasing overseas mines or agribusinesses, and embedding Chinese logistics operators and infrastructure (ports, railways, shipping lines) into global supply chains.

- *Consolidation:* China has merged its largest agriculture, metals, and energy state-owned enterprises (SOEs) to concentrate buying power. Over the decade leading up to 2021, China combined its rare earth producers into the China Rare Earth Group, the world's second-largest producer of rare earths.[96] In 2022, Sinograin and COFCO established new joint ventures to consolidate China's grain crushing and storage assets.[97] In the same year, China established the China Mineral Resources Group (CMRG) to manage and centralize purchasing of iron ore where previously steel mills each secured import contracts separately.[98] China also began further consolidating its energy sector in 2026, integrating its largest oil refiner with a top jet fuel distributor.[99]
- *Vertical integration through acquisition:* Chinese firms also vertically integrate key supply chains through outbound investment. Chinese firms acquired U.S.-based pork producer Smithfield Foods and Swiss seed and pesticide producer Syngenta in

*The need for this regulation confirms the challenges imposed by China's currency and capital controls on its goal to grow its role in commodities markets. See "Despite Progress, China Remains Constrained by Self-Imposed Hurdles" for more on this point.

2013 and 2017, respectively, shoring up access to supplies of pork and soybean seeds.[100] Chinese state-owned smelters and traders have made similar acquisitions in upstream mining and refining of aluminum, nickel, cobalt, and other metals in Southeast Asia, Central Asia, Africa, and Latin America.[101] Often, these investments lead to mined ores being sent to Chinese-controlled refineries and onward to China's domestic manufacturers at subsidized prices.[102] This strategy allows China to maintain control over resources even when host governments ban exports of raw materials to encourage domestic processing. In Indonesia, despite a 2014 ban on nickel exports, Chinese firms control around 75 percent of Indonesia's refining capacity for the metal.[103]

- *Logistics:* Chinese firms have built out extensive commodities logistics networks by financing the construction of ports and other transportation infrastructure. Rail and shipping provide vital transit infrastructure for many bulk commodities for cost reasons, and China's Belt and Road Initiative (BRI) has directed lending toward freight railways across Africa, Southeast Asia, and Latin America, connecting inland mines to ports.[104] China has contributed to the construction of nearly 100 active overseas port projects as of July 2026, many in or close to countries with extensive natural resource reserves and with Chinese companies retaining ownership or operational stakes.[105] Trade between host countries and China increases roughly 21 percent after Chinese firms secure terminal operating contracts.[106] China has capitalized on its investments not just to improve logistics but also to obtain guaranteed access for Chinese SOEs. BRI loans for unrelated infrastructure projects are often secured by offtake agreements for commodities, directing the proceeds of export sales to bank accounts in China and the raw materials to its SOEs.[107]

- *Exploring new sources of supply:* China seeks to tap seabed metal and mineral resources to expand its control over mineral resources. It is positioning itself to lead this emerging industry by investing in research and development, supporting seabed exploration licensing and activities, and building global influence through international ocean governance organizations and bilateral partnerships. Chinese entities hold more exploration contracts (issued by the UN's International Seabed Authority) than any other country or company.[108] The scale of the potential resource spans cobalt, copper, manganese, nickel, and rare earth elements and is large enough that even partial exploitation would constitute a major shift in global critical mineral availability. Even with uncertainty surrounding the commercial feasibility of seabed mining, China's state-directed economic model enables firms in government-supported industries to continue investment and production in situations where a firm subject to market principles would have to cease operations. (For more on China's efforts to dominate seabed mining, see Chapter 5, "Active Intercept: China's Efforts to Narrow U.S. Undersea Advantage.")

SOEs Give the CCP a Direct Lever of Influence in Commodities Markets

SOEs enable China's strategy to control commodity supply chains. SOEs make up a larger share of China's imports in upstream sectors compared with more processed goods. As of 2015, SOEs were responsible for only 5 percent of China's imports of electrical equipment and machinery (i.e., non-commodities) but made up 21 percent of iron and steel imports, between 20 and 43 percent of agricultural commodities, 52 percent of coal, and 82 and 93 percent of liquified natural gas and crude oil purchases, respectively.* [109]

SOEs also extend China's global influence in commodities markets through outbound investment and logistics networks. SOEs accounted for 91 percent of coal, oil, and gas outbound investment from 2000 through May 2026.[110] Over the same period, they accounted for 85 percent of China's farming and animal husbandry and 59 percent of metals and minerals outbound investment.[111] SOEs account for 82 percent of Chinese-owned foreign mines.[112] In terms of global logistics, state-owned COSCO Shipping is the world's largest shipowner, including the largest fleets in the world by capacity for both oil and gas tankers and dry bulk carriers.[113]

Soft budget constraints and state capital at below-market rates enable SOEs to engage in greater risk taking and longer-term investment horizons, allowing them to make and sustain volatile commodities-related investments when a company subject to market discipline could not.[114] The state also provides diplomatic support for SOEs operating abroad in strategic sectors like critical minerals.[115]

China's SOEs also give Beijing a direct tool to influence commodities markets apart from any official government policy. Even in commodity supply chains where China faces competition from entrenched mining and refining giants and major commodities traders, the scale of its SOE ecosystem provides Beijing with a key tool of leverage to influence the market. Most global commodities powerhouses are either privately owned or publicly listed, meaning policymakers have limited ability to influence their actions in the same manner that China controls its SOEs.†

China's Playbook for Pricing Influence Combines Its Physical and Financial Market Power

China is using its outsized position in physical supply chains in concert with its domestic price discovery tools to expand its market power in global commodities markets. In some markets, including lithium, purified terephthalic acid, and flat glass, China remains the center of gravity for physical processing and consumption and has

*More recent data on the breakdown of China's trade by type of enterprise are not available, although the total SOE share of Chinese imports has only declined from 24 percent in 2015 to 22 percent in 2025, making it unlikely that these percentages have changed drastically. China's National Bureau of Statistics, via Haver Analytics.

†These companies include iron ore miners and producers Brazil-based Vale and Australia-based Rio Tinto and BHP Group; the four large agricultural trading houses Archer Daniels Midland, Bunge, Cargill, and Louis Dreyfus (commonly referred to as the ABCDs); and energy and metals traders Vitol, Glencore, and Trafigura.

leveraged that into being the primary location for price discovery.[116] For example, Chinese futures for lithium carbonate listed on the Guangzhou Futures Exchange lead global markets, and comparable futures on the CME's COMEX are thinly traded.[117] Purified terephthalic acid—an essential input into polyester—and flat glass futures appear to only be traded in China (see Appendix III).* John Fan, associate professor of finance at Griffith University, noted that the existence of only Chinese benchmarks for a product means international participants must necessarily reference Chinese prices, meaning Beijing has a potent tool to influence markets and potentially undercut competition.[118] When volatility in these markets ramps up due to shortages, Chinese regulations kick in, setting limits to the daily price fluctuations on exchanges and obfuscating price signals for international producers and consumers. (See the subsection "A Closer Look at Markets for Iron Ore, Copper, Lithium, Soybeans, and Crude Oil Reveals China's Strategies" below for more.)

In markets where China represents a large share of demand, such as iron ore, China is beginning to use its monopsony power to force trading partners to use its preferred benchmarks. Since 2008, participants in the iron ore market have relied on price reporting agencies (PRAs) publishing independent price assessments as well as a nascent futures market to determine fair transaction terms. Initially, global seaborne iron ore trade settled on U.S.- and UK-based PRA assessments that also came to underpin a growing futures market in Singapore. However, since 2025, after China consolidated its buying power in CMRG, it has used its position as the world's largest importer of iron ore to force a transition to its more preferred pricing indices. China has combined this buying power with other sources of leverage. CMRG is a state-owned entity, not a regulator, but it appears to have the ability to issue requests or directives to China's transportation and port authorities to achieve its aims.[119] (See "Success in Iron Ore Pricing Power Demonstrates Playbook for Other Minerals" below for a full discussion of CMRG and its iron ore pricing strategy.) State-owned buyers have boycotted uncooperative entities directly, ostensibly private-sector entities have slowed negotiations with them, and China has subjected their imports to longer inspection times. China's recent efforts to consolidate its copper industry indicate that it is readying a similar playbook in this sector.

China's strategy works particularly well for commodities markets with a lower degree of financialization, as pricing relies more directly on bilateral negotiations. In more well-developed metals markets, such as copper, where trading on commodities markets determines prices, China has made little progress encouraging uptake of its domestic futures, some of which are still partially closed to international participation. Nevertheless, China's recent efforts to consolidate its copper industry indicate that it is readying a similar playbook in this sector. The subsection "A Closer Look at Markets for Iron Ore, Copper, Lithium, Soybeans, and Crude Oil Reveals China's Strategies" below examines China's efforts with respect to various commodities.

*Commission staff did not have access to a full list of commodity futures and options traded around the world. To determine which contracts primarily trade in China, staff performed a general search and cross-referenced to major global exchanges.

Despite Progress, China Remains Constrained by Self-Imposed Hurdles

China has made progress, but its efforts to enhance its pricing influence in global commodities markets face major challenges, and its efforts to internationalize its futures prices will involve a multi-year effort. Outside of a narrow range of commodity futures unique to China, Chinese exchanges do not exert significant price influence on global markets and do not host the dominant futures underpinning global trade. Despite the high volume of Chinese trading, the United States and the UK together still account for a higher notional value of commodity futures trading.[120] Additionally, U.S. and UK markets have a much lower ratio of volume-to-open-interest compared with China—0.32 versus 0.83 in 2025—indicating U.S. and UK markets host a larger presence of commercial hedgers and professional investors rather than retail speculators, reducing speculative price volatility.[121] Academic research indicates that price discovery in U.S. markets tends to influence Chinese markets, not the other way around.[122] While granular data on traders' nationality and benchmark usage are not available, most anecdotal evidence suggests traders continue to use U.S. dollar-denominated benchmarks for international trade, while Chinese traders engaging in domestic pricing and hedging are the primary users of Chinese benchmarks (see "A Closer Look at Markets for Iron Ore, Copper, Lithium, Soybeans, and Crude Oil Reveals China's Strategies" for more).[123]

As China's rhetorical use of "pricing power" to describe its goals in global commodities markets demonstrates, there is a fundamental contradiction between the government's desire for greater control over markets and the inherent definition of a functioning market. China wants globally influential derivatives markets because it wants to apply its vision of financial markets in the context of commodity pricing.[124] China seeks to influence prices in such a way that further fosters a self-reliant domestic manufacturing base and deepens foreign dependence on its exports.[125] Its vision for achieving this aim includes stable prices and limits on speculative trading.[126] While a market with these characteristics could benefit commodity consumers by fostering more stable and lower input costs, it negates the true price discovery a market brings, reducing the hedging utility of exchanges. As Dr. Fan put it, "The state's priority for domestic price stability acts as a permanent brake on the internationalization of the RMB-denominated contracts, suggesting that for the foreseeable future, global benchmarks will remain anchored in the more intervention-resistant environments of London and Chicago."[127]

Regulatory oversight of Chinese exchanges has focused on controlling volatility and ensuring stability for physical markets—to the detriment of other potential market participants. China has imposed caps on price fluctuation, hedging quotas, requirements for physical delivery rather than cash settlement upon contract expiration, and sudden rule changes. All of these deter foreign participation, particularly among non-commercial market participants.[128] While regulators, politicians, and analysts outside of China have at times criticized speculators and the financialization of commodities

markets as disrupting physical markets, in general regulators and markets believe these participants are vital to a well-functioning and transparent marketplace.[129] By limiting the ability of speculators to influence market transactions, China may simultaneously limit the ability of commercial traders to hedge risk.[130]

The other challenges noted above also continue to constrain international interest in China's commodities financial markets. Traders and investors' reluctance to use RMB-denominated instruments remains one of the primary impediments to greater adoption of Chinese benchmarks. Even as China has incrementally liberalized its capital account in recent years, it maintains strict capital controls.[131] These capital restrictions prevent arbitragers from fully correcting price differentials between markets.[132] Further, the RMB is only partially convertible, limiting the ability of investors to repatriate funds invested into China's domestic markets.[133]

China's exchanges also face challenges in attracting global interest due to the lack of rule of law.[134] Financial markets need a reliable rule of law to enforce contracts and resolve disputes.[135] China's rule by law legal system does not provide such an approach.

Chinese data on domestic supply and state stockpiles are also opaque, further calling into question the utility of supposed market signals. Recent raids on due diligence firms and limitations on the services Chinese data brokers can provide to foreign clients have further restricted cross-border flows of information that China may consider sensitive to national security but market participants view as necessary for rational decision-making.[136]

A Closer Look at Markets for Iron Ore, Copper, Lithium, Soybeans, and Crude Oil Reveals China's Strategies

China's influence over commodity prices varies based on its level of physical and financial presence and the degree of homogeneity in each market. It exerts the greatest control where futures play a less prominent role in price discovery, such as in iron and lithium. Because pricing for these metals is fragmented and determined through bilateral negotiations, China can leverage its buying power to move prices directly or dictate contract terms, as CMRG recently did in forcing several miners to abandon the Platts benchmark. By contrast, its sway in pricing is limited where physical trades reference exchange-traded benchmarks, such as in copper. Even where there are deep markets, though, China has established a regional foothold by offering a distinct benchmark that meets a market need—in crude oil, for example, where variation in grade matters for downstream refiners.

China's successful efforts suggest an early warning for the soybean market. China has already used its leverage as a large buyer to impose retaliatory tariffs on soybeans, temporarily cutting U.S. farmers out of their largest export market.[137] China's consolidation of its oilseed processing and its rising soybean trade with Brazil threatens to reduce U.S. farmers' visibility into price formation and in the long run could potentially shift the benchmarks underpinning global trade from Chicago's CME to Dalian's DCE.

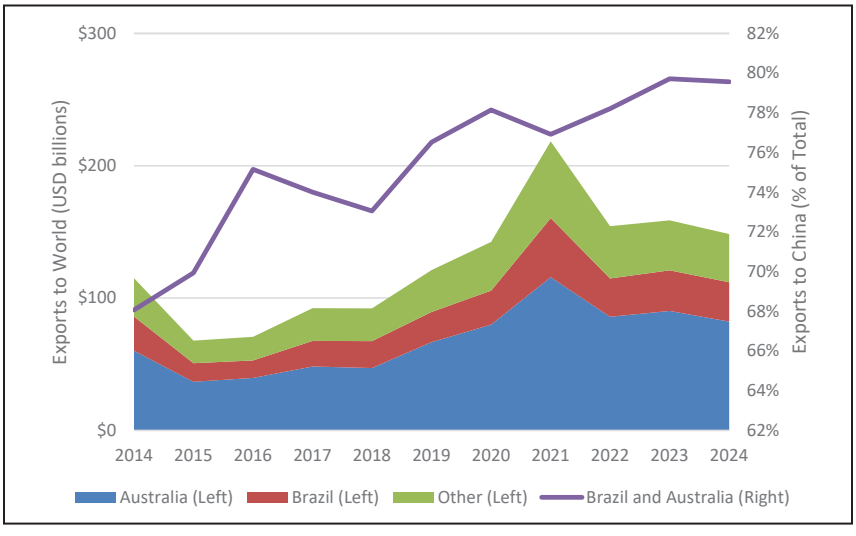
Success in Iron Ore Pricing Power Demonstrates Potential Playbook for Other Minerals

China is using its consolidated buying power for iron ore to compel miners to price contracts based on China's preferred benchmarks. These benchmarks more closely reflect China's domestic market transactions, creating the conditions for China's market for iron ore to start spreading pricing distortions of a nonmarket economy to global markets.

China Consolidates Its Physical Buying Power in Iron Ore Markets

Though the world's largest importer of iron ore, China has traditionally been a price taker in negotiations with large overseas mining companies.[138] Ninety-eight percent of iron ore mined globally is used to produce steel, a critical industrial input.[139] As China's annual steel output expanded nearly 600 percent by volume from 2001 to 2025, it became the world's largest buyer of iron ore, taking in 69 percent of global iron ore exports in 2024.[140] Iron ore production is concentrated in four mining firms that primarily operate in Brazil and Australia—Vale, Rio Tinto, BHP, and Fortescue.[141] China's domestic steel production, however, had been fragmented and prone to waves of overcapacity.[142] China has long viewed this dynamic as contributing to lopsided negotiations for iron ore prices and an unfair distribution of profits between foreign iron ore miners and its steelmakers.[143]

Figure 4: China Share of Brazil and Australia's Iron Ore Exports Has Grown to 80 Percent, 2014–2024



Source: UN Comtrade.

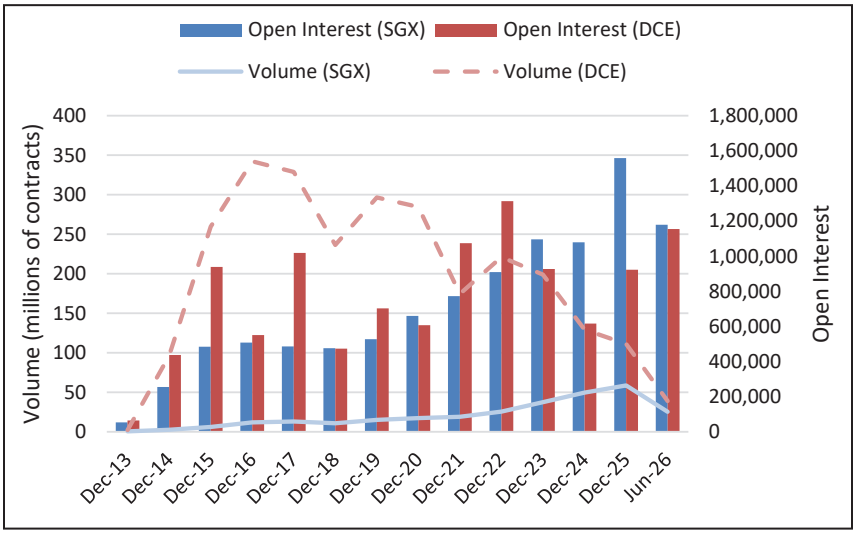
China's Role in Global Price Discovery for Iron Ore Has Traditionally Been Weak

Buyers and sellers of iron ore rely on daily price assessments published by PRAs based on surveys of real transactions in the market

and evaluations of current supply and demand conditions.* Platts, a PRA owned by U.S.-based S&P Global, publishes the U.S. dollar-denominated Platts Iron Ore Index (IODEX), which is a globally accepted benchmark for seaborne iron ore spot transactions; iron ore derivatives on the Singapore Exchange (SGX) are closely linked to Platts.† [144]

China had long sought to increase its role in price discovery by launching a fully internationalized iron ore future to compete with Platts and the SGX. China introduced a domestic-only contract in 2013 on the DCE and internationalized its RMB-denominated iron ore futures contract in 2018.[145] The DCE contract attracted early usage by the large iron ore miners to price cross-border trade, although international traders made up only around 5 percent of total activity by physical volume of iron ore in 2019, the most recent data available.[146] While the DCE iron ore contract has a relatively high volume of open interest, it has a reputation for being dominated by speculative retail investors and it lags behind the SGX in global adoption.[147] The DCE has primarily been used for domestic trading and price discovery (see Figure 5).‡ [148]

Figure 5: Volume and Open Interest for Iron Ore Futures on the SGX and DCE, December 2013–June 2026



Note: Both DCE and SGX iron ore futures represent 100 metric tons per contract.
Source: "ETD Tracker," *Futures Industry Association*.

*Until 2010, iron ore prices were based on annual negotiations between Japanese steelmakers and iron ore miners. As China overtook Japan as the world's largest iron ore importer, the annual negotiation process gave way to spot markets and bilateral price negotiations. Katharine Gemmell and Alfred Cang, "Xi's Giant Iron Ore Trader Is Shaking Up a $130 Billion Market," *Bloomberg*, June 19, 2025; "Tentative Deal Reached on Iron Ore Pricing – FT," *Reuters*, March 21, 2010.

†The SGX offers a wide variety of futures, swaps, and options that link cash settlement to IODEX-reported spot indices. This structure allows traders with IODEX-based physical contracts to more accurately hedge price risk. The SGX also offers derivatives that settle against a separate index published by UK PRA Fastmarkets.

‡A majority of open positions for SGX iron ore contracts are held by physical traders. While Chinese exchanges do not provide granular data similar to the CFTC's COT reports, the DCE's inflated volume-to-open-interest ratio supports the conjecture that retail investors constitute a higher share of trading for its iron ore futures. "Aggregate Exposure Report," *SGX Group*, June 12, 2026, 2.

The urgency within China to develop an effective competitor to Platts/SGX has increased in recent years. Chinese observers argued that Australian iron ore deposits had declined in quality and non-Chinese market participants had outsized influence over SGX futures and IODEX pricing, disadvantaging Chinese steel producers.[149] Chinese news outlets and credit ratings agencies accused Platts of unfair pricing procedures and of favoring iron ore miners due to overlapping ownership interests in S&P Global and the miners.*[150]

China Leverages Buying Power to Push Trade Partners onto Alternative Iron Ore Benchmarks

Over the past year, China used CMRG to successfully leverage its power in the market to force the world's largest iron ore traders to shift the composition of pricing indices and settlement currencies underlying their purchasing contracts, in some cases specifically in favor of Chinese entities.

After years of failed attempts to organize Chinese buyers, in 2022 the Chinese government finalized the consolidation of its iron ore imports under CMRG, a state-owned buyers club, which as of 2025 is responsible for over half of the industry's imports.[151] China further enhanced its power in the market by investing in and diversifying its iron ore import sources. In September, Reuters reported that China's Baowu Steel, the world's largest steelmaker, is considering seeking a 15 to 25 percent stake in one of BHP's Australian iron ore mines.[152] In 2026, China also received its first shipments of iron ore from the Simandou mine in Guinea.† The mine is expected to produce 120 million metric tons of high-quality iron ore annually, increasing total seaborne supply over 8 percent by 2028 and reducing China's reliance on Australian and Brazilian iron ore.[153] Supply from Simandou continued to ramp up rapidly throughout the year, further reducing the market share of Australia and Brazil.[154]

China did not rely only on its buying power and supply diversification. It also used other tools of leverage against iron ore miners. China's state-owned entities act in concert with its regulators to leverage nonmarket practices against foreign commercial actors. CMRG has spearheaded a concerted pressure campaign that has also enlisted government action, including tactics such as cargo inspections, higher storage fees, import bans, and instructions to Chinese steel mills to abstain from communicating with the miners about their products.[155]

China's efforts have been successful. Rio Tinto agreed to switch to a different UK PRA benchmark. Fortescue agreed to an average of benchmarks published by Chinese and UK PRAs.[156] After months

*To support this claim, one Chinese credit agency pointed out that global asset management firms own shares in both the parent company of Platts as well as BHP and Rio Tinto. "从困境到破局: 中国钢铁行业如何争夺铁矿石定价权?" [From Predicament to Breakthrough: How Can China's Steel Industry Seize Pricing Power for Iron Ore?], *China Lianhe Credit Rating Co., Ltd*, December 25, 2025, 5.

†Simandou is being developed through partnerships among Chinese and Singaporean companies, Australia's Rio Tinto, and the Guinean government. Consistent with its focus on outbound investment to enhance its access to commodities, China provided substantial financing and constructed much of the physical infrastructure for the project, including mines, tunnels, railways, and ports. Luo Guoping, Bao Zhiming, and Denise Jia, "How China Unlocked Simandou to Reshape the Global Iron Ore Trade," *Caixin Global*, November 21, 2025.

of negotiations, BHP, which earns over 60 percent of its revenue in China, agreed to use an RMB-denominated index to calculate over 50 percent of its China price for one of its iron ore grades as well as offer a discount to CMRG.[157]

The switch to new benchmarks advantages China's physical manufacturing base. According to market data, the replacement iron ore benchmarks have reported consistently lower prices compared with Platts, largely due to the difference in how the benchmarks are calculated.*[158] CMRG's new long-term contracts with iron ore miners also require a greater share of trade to be priced and settled in RMB, reducing foreign exchange risks for China's domestic steel producers. According to one source, the proportion of China's iron ore trade settled in RMB rose from 5 percent in 2023 to 25 percent in 2025.[159] Moving forward, China's steel mills, which are already overwhelming the world with a glut of oversupply, could take advantage of lower input costs to capture more of the world market.[160]

Moreover, China's success has arguably eroded the role of IODEX as a benchmark for pricing physical iron ore shipments, with potential implications for the SGX's iron ore futures. Because some SGX futures cash settle against the IODEX benchmark, the shift to alternate PRAs may weaken linkages between China's huge domestic physical market and international financial markets.[161] For transactions involving China that have shifted to a different basket of pricing indices, using an IODEX-linked futures contract now may mean a less perfect hedge.

China Renews Efforts to Control Copper Markets

Despite China's outsized presence in the physical markets for mining and refining copper, it remains at a disadvantage for price discovery, which primarily still occurs on the LME and CME's COMEX. Unlike iron ore, which is priced based on a PRA-published spot market assessment, copper futures contracts are physically deliverable against an exchange-driven price—as noted above, exchanges benefit from strong network effects, making it harder for a rival market to establish itself. Despite this, China is ramping up its efforts to repeat its iron ore playbook with copper.

China is the world's dominant buyer and refiner of copper, conveying significant cost advantages in downstream manufacturing for renewable energy and emerging technologies. Copper's high conductivity makes it especially suited for use in technologies and infrastructure, including data centers, electricity grids, and renewable energy.[162] China has strategically expanded access to overseas copper deposits, consolidated importers to increase its buying pow-

*Different indices conform to raw ore with varying mineral composition. The Platts IODEX index originally tracked ore with 62 percent iron content, while the Fastmarkets index that has likely replaced it in some cases tracks 61 percent iron content. Platts updated its IODEX index in January 2026 to 61 percent iron content, although other aspects of chemical composition like silica and phosphorus remain slightly above Fastmarkets. The two PRAs also use different assessment procedures. Platts requires market participants to make their trades public as part of the assessment process, while Fastmarkets allows details of trades to remain private. Lichoo Tay et al., "Market Prices or Made-Up Prices? Evidence from the Iron Ore Market," *SSRN Working Paper*, May 20, 2026, 30–32; "New Fastmarkets Index Signals Shift in Iron Ore Pricing Trends," *Fastmarkets*, January 9, 2026; "Platts to Update IODEX Quality Specifications to Reflect 61% Fe Effective Jan 2, 2026," *S&P Global*, July 1, 2025; Norman Fong, "Launch of Iron Ore 61% Fe Fines, CFR Qingdao Index: Pricing Notice," *Fastmarkets*, June 2, 2025.

er, and upgraded facilities to achieve greater efficiency. China's BRI program financed the acquisition of what is now one of the world's largest copper mines, located in Peru.[163] In 2025, China accounted for 59 percent of global copper concentrate imports by value and hosted roughly 50 percent of global copper smelter production, the first stage in copper processing.[164] China expanded its refined copper output by 9 percent in 2025, and it has been reducing imports as it ramps up domestic production.[165]

China Seeks to Replicate Its Iron Ore Playbook in Copper

Similar to the iron ore playbook, China has begun consolidating buying power in an industry group called the China Smelters Purchase Team to lead negotiations with overseas miners on behalf of China's smelters.[166] CMRG is also reportedly exploring an expansion into copper markets, potentially seeking to emulate its role in iron ore markets by representing Chinese smelters through a consolidated buyer.[167] Smelter consolidation primarily impacts their ability to negotiate higher payments from miners for their refining services, while trading in futures markets still determines downstream refined copper prices.*[168] However, trade with Chile shows how PRC firms are leveraging their market power to ensure access to physical supplies of copper ore and refined copper. In Chile, where copper mines are nationalized and smelters are largely state-owned, China has instead turned to purchasing raw ore and expanding smelting capacity at home, putting pressure on Chile's refiners.[169] As Beijing's domestic smelting capacity expanded, PRC smelters competed aggressively for raw copper, even paying a premium to secure it.[170] Chilean miners exported more raw ore to China, leaving Chile's value-added refiners struggling to compete for their own country's ore and reducing production by 25 percent since 2019.[171] China plays such a big role in the market that this phenomenon has shifted the composition of Chile's total exports. (For more on China's expanding reach in Latin America's commodity markets, see Chapter 4, "China's Predatory Diplomacy in Latin America: Broken Promises, Harmful Practices.")

Copper Price Discovery Remains Centered in Markets Outside of China

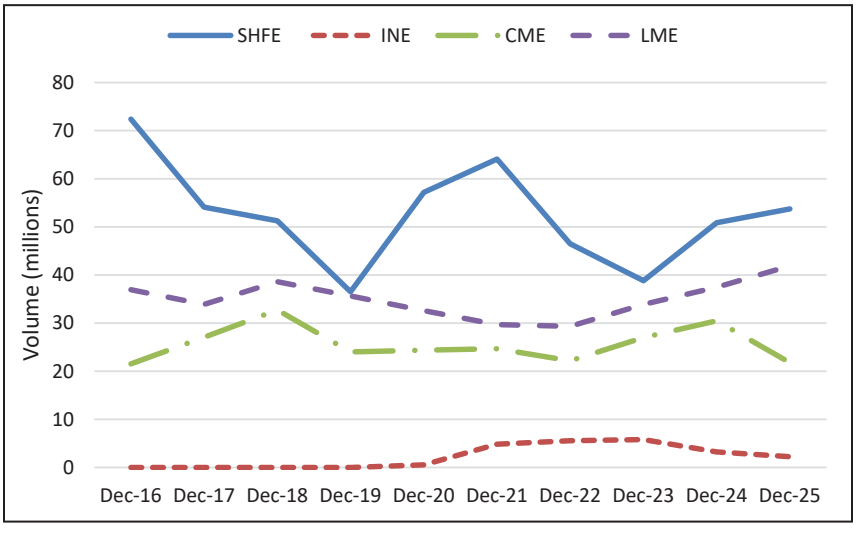
China has tried to grow its role in copper markets by further internationalizing its copper futures and professionalizing its copper markets.[172] Domestic pricing for refined copper cathode is linked to futures trading on the SHFE; SHFE subsidiary INE hosts copper futures open to international traders, but these have

*Smelters earn revenues called treatment and refining charges (TC/RCs) from miners for processing copper ore. TC/RCs are negotiated on an annual basis between smelters and miners, and the largest Chinese smelters coordinate within the China Smelters Purchase Team to agree on a floor price for the TC/RCs. However, global copper futures markets track the price of refined copper, which is called copper cathode, rather than the pure copper ore extracted from the ground. Copper products upstream in the value chain from copper cathode are priced at a discount relative to the global benchmark, while copper products that are downstream from copper cathode are priced at a premium. "China's Copper Smelters Band Together to Strengthen Hand in Talks with Miners," *Reuters*, June 17, 2026; Kevin Brunelli and Tom Moerenhout, "Protecting Existing US and Allied Copper Smelting Capacity," *Columbia Center on Global Energy Policy*, April 2026, 5; "How Are LME Reference Prices Used in Physical Metals Contracts?" *London Metal Exchange*, September 2025.

not attracted major international usage. The SHFE is exploring proposals that would make trading on its exchanges more attractive for foreign investors, including by allowing them to post collateral in foreign currencies and expanding offshore warehouses.[173] In January 2026, Chinese regulators ordered the SHFE to restrict high-frequency traders' access to its exchange after a period of heightened volatility and rising prices for metals.[174] In May 2026, regulators launched a crackdown on a widespread copper industry practice in China of circular invoicing to generate illicit fees. The crackdown could indicate that China is seeking to reduce speculation in the market, drive out unprofitable players, and consolidate the industry.[175]

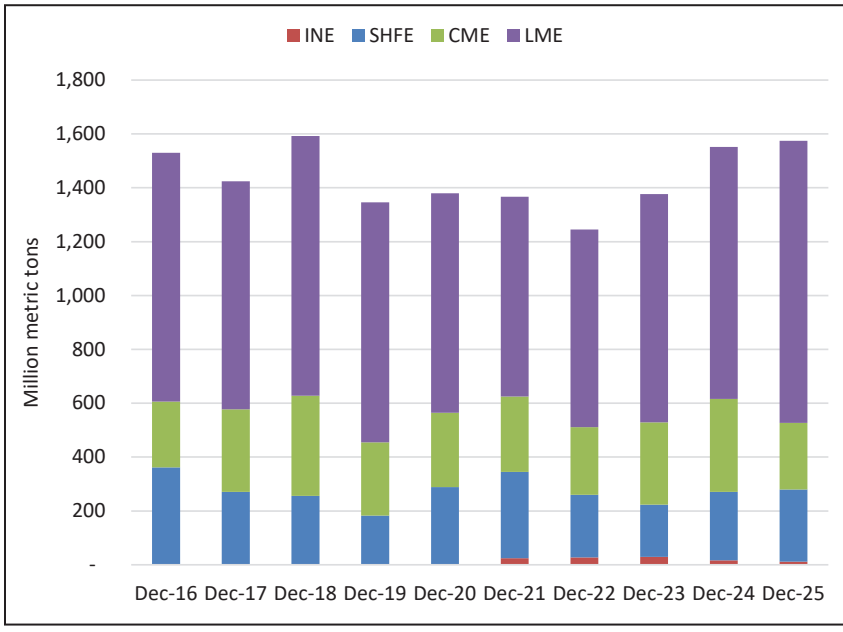
Despite these efforts, trading volume for INE international copper futures contracts remains well below both the SHFE domestic-only copper contract and CME's COMEX and LME contracts (see Figures 6.1 and 6.2). Traders, for now, continue to choose international financial markets over Chinese alternatives.

Figure 6.1: Copper Futures Volumes Traded on CME, LME, SHFE, and INE, 2016–2025



Source: "ETD Tracker," *Futures Industry Association*.

Figure 6.2: Copper Physical Tonnage Represented by Trading on CME, LME, SHFE, and INE, 2016–2025



Note: SHFE and INE copper lot sizes are five metric tons per contract. LME copper lot size is 25 metric tons per contract. CME copper lot size is 25,000 pounds, or 11.3 metric tons, per contract.
Source: "ETD Tracker," *Futures Industry Association*.

China Uses Vertical Dominance in Lithium Market to Become Leader in Futures

China has had the most success in cementing its role in commodities markets that lack a strong existing exchange-based price reference and where China is the dominant physical consumer. With respect to lithium, China dominates production and downstream manufacturing using refined products. Eighty-seven percent of lithium is used in battery cells, where China represents nearly 85 percent of the world's production capacity.[176] In 2023, the Guangzhou Futures Exchange (GFEX) launched a lithium carbonate futures market, which covers a compound that is widely used by Chinese battery manufacturers.[177] CME's COMEX has also created a cash-settled futures contract for the same compound, but the market is more thinly traded despite being introduced first, and its price is essentially set according to the GFEX contract.[178] The volume of transactions combined with the hedging needs of physical producers have tethered spot prices for lithium to Chinese futures exchanges.

As Ian Lange, professor at the Colorado School of Mines, noted in testimony before the Commission on critical minerals pricing, China's dominance of processing and downstream manufacturing limits the extent to which U.S. exchanges and spot markets facilitate price discovery.[179] Chinese futures require physical delivery into ware-

houses, anchoring pricing firmly in Chinese supply and demand conditions.[180] Insofar as China remains a global leading manufacturing power in electric vehicles, batteries, and similar products that drive lithium demand, China's domestic producers will continue to have a de facto outsized role in pricing dynamics.[181] With the lithium contract listed on China's domestic exchange driving global pricing, China has a potent tool to limit price volatility, dampen trading activity, and base global trade in Chinese RMB-denominated benchmarks.

Tungsten: China Drives Up International Prices of Key Input Critical for Defense Applications

China has used a multifaceted strategy of supply dominance, export controls, and targeted purchasing to heighten scarcity and increase prices of tungsten for international consumers. China accounts for around 80 percent of mined capacity, 85 to 90 percent of global refining, and around half of global demand for tungsten, a metal used in high-performance cutting tools and munitions.[182] The United States is over 50 percent import reliant for tungsten, with China being the largest single source of imports.[183] Total market volumes for tungsten have historically been too low to attract the liquidity necessary for standardized futures contracts, while PRAs have difficulty assessing accurate spot prices in a market where most transactions are bilateral and confidential.[184] China's imposition of export controls on tungsten and related products in early 2025 along with high demand for aerospace applications, ammunition, missiles, and tooling have contributed to price increases of 300 percent or more over the past year.[185] As global shortages worsened, Chinese buyers also sought to buy up used tungsten products in the United States for recycling in China.[186] From December 2025 to March 2026, China's onshore tungsten ore prices more than doubled, although by June 2026 they had fallen back near the levels at which they started the year.[187] Conversely, international tungsten ore prices have risen more than 200 percent since the beginning of the year and stayed elevated through June.[188] In an effort to develop alternative supplies, the United States is providing loans and financial support for tungsten mine development outside of China and has banned tungsten scrap exports for one year beginning August 2026.[189] In September 2026, the U.S. Department of Defense also announced a new near-20 percent stake in Elmet Group Co, a U.S. producer of tungsten.[190]

China Leverages Dominant Role in Soybean Trade to Diversify Away from the United States

China's drive to diversify agricultural imports has exposed the United States to volatile shifts in buying behavior and a reduced role in global price formation. While largely self-sufficient in staples like corn, wheat, rice, and pork, China remains heavily reliant on imported soybeans for animal feed and edible oils and accounts

for over 50 percent of global imports.*[191] Between 2017 and 2025, China reduced its reliance on U.S. soybean imports from 35 percent to 15 percent of the total, replacing them with Brazilian and Argentinian soybeans.[192]

China often employs soybean imports as an instrument of trade policy. During each round of major tariffs the United States has imposed on China, it has responded by cutting off soybean imports from the United States as a negotiating tool. China will typically pledge to purchase U.S. soybeans as part of a broader deal, but these commitments lag behind its historical purchasing level, and China has continued to diversify toward Latin America, primarily Brazil and Argentina.†[193]

China's transition to Brazilian beans exposes U.S. sellers, who are highly dependent on Chinese demand, to politically motivated buying behavior. Efficiency gains and the expansion of planting areas helped Brazil more than double the volume of its soybean exports from 2008 to 2015.[194] As Susan Stroud, consultant and founder of No Bull Agriculture, described, Brazil is now the primary supplier of soybeans to China, and the United States makes up the portion of China's demand that Latin America cannot meet.[195] Chinese SOEs charged with maintaining national stockpiles are the primary buyers of U.S. soybean exports to China, further exposing U.S. farmers to policy-driven purchasing commitments.‡

China's Domestic Soybean Futures Link to U.S. Markets

Chinese soybean prices are still linked to futures markets in the United States. Although Brazil now exports more than twice as many soybeans than the United States by volume, global price discovery for trade in soybeans remains tied to the CME§ due to the more sophisticated U.S. financial markets and their historic role in the sector. Both the CME and the DCE host widely traded futures contracts for whole soybeans, soybean meal, and soybean oil, and the DCE's soybean futures complex was fully internationalized in 2022, including a futures contract designed for use by international producers.¶[196] Nevertheless, price discovery starts in the United

*China's food security efforts span a wide range of initiatives that aim to reduce its reliance on imports impacted by price fluctuations and geopolitical tensions. China aims to better predict agricultural production using artificial intelligence and is stepping up research and development in gene editing techniques to enhance crop yields. Mia Nurmamat, "China Backs AI, Gene Editing to Bolster Its Food Security in a Risky New Era," *South China Morning Post*, June 3, 2026; Mia Nurmamat, "China Warns of Food Security Risks as Iran War Threatens Global Supplies," *South China Morning Post*, April 17, 2026.

†China has reportedly indicated it will meet its purchase pledge of 25 million metric tons of U.S. soybeans in 2026. It is worth noting that China's current purchase commitments are set about 15 percent below the previous five-year average of soybean imports from the United States. Patrick Thomas, "China Is Placing Fresh Soybean Orders, USDA Says," *Wall Street Journal*, June 2, 2026; Joana Colussi and Michael Langemeier, "U.S.–China Soybean Deal: Comparing Past Export Levels and Global Market Impacts," *FarmDoc Daily* 15, no. 212 (November 17, 2025).

‡According to 2015 data made available by China's customs agency, SOEs accounted for around one-third of Chinese agricultural imports. Chad P. Bown and Mary Lovely, "Trump's Phase One Deal Relies on China's State-Owned Enterprises," *Peterson Institute for International Economics*, March 3, 2020.

§For clarity, CME Group's soybean contract is traded on the Chicago Board of Trade.

¶The DCE's Soybean Number Two contract specifies delivery of genetically modified (GM) soybeans, aligning with soybeans produced in the United States and Brazil. The DCE's Soybean Number One contract specifies the non-GM soybeans produced domestically in China and is more widely traded than the Number Two contract, reflecting its current role as a Chinese domestic price discovery tool. "Futures and Options of No. 1 Soybean and No. 2 Soybean to Be Available to Overseas Traders as of December 26, 2022," *Dalian Commodity Exchange*, December 23, 2022; "China's Dalian Soybean, Soyoil Options Make Debut Trade," *Reuters*, August 8, 2022.

States as soybean crushers from China and elsewhere in the world buy soybean futures on the CME to protect against fluctuation in input costs.[197] Price signals from the CME are transmitted to China as these same crushers hedge output prices by selling soybean meal or oil futures on the DCE.*[198] The relative trading volumes of soybean futures on the CME and soybean meal futures on the DCE reflect this dynamic, with the CME hosting proportionally more whole soybean futures trading and the DCE dominating soybean meal.†

China's Overseas Investments Shore Up Agricultural Supply Chains

China has acquired soybean production assets and transportation infrastructure abroad, conveying informational advantages it can use to increase its role in price discovery. COFCO's recent investments in Brazil's transportation and logistics sector highlight its strategy to bolster China's food security through vertical integration. China's $7.9 billion investments in Latin American agriculture and food industries between 2002 and 2025 have oriented soybean supply chains toward China.[199] These investments build on previous COFCO stakes that expanded its network of grain storage, port terminals, and crushing capacity across Asia and Latin America.[200] Recent analysis by the Center for Strategic and International Studies found that Chinese firms helped finance, build, expand, or operate at least 37 ports in Latin America and the Caribbean, ten of which involve active facilities owned or operated by Chinese companies.[201]

Upstream, COFCO is expanding crushing capacity in Brazil's primary soybean growing regions and adding new rail capacity to connect its crushing operations to port terminals.[202] COFCO is expanding its existing investment in Brazil's Santos Port with the construction of what will be its largest grain export terminal in the world when it is completed.[203] In 2025, China and Brazil also signed a memorandum of understanding to explore the construction of a railway linking the Brazilian coast to Peru's Chancay Port, which is majority owned by Chinese shipping giant COSCO.[204] In addition to tying Brazilian physical infrastructure to Chinese soybean trade, these investments give China's agricultural giants better insight into local supply and demand conditions. By accumulating direct insight into the pricing conditions at every stage of the value chain, Chinese traders hold proprietary information that gives them a comparative advantage and a greater role in price discovery.[205]

Buyer Concentration Creates Risks for U.S. Growers

China's reorientation of agricultural trade toward Latin America and a more aggressive futures internationalization agenda could be-

*DCE contracts have achieved global significance even if they are not yet used as major pricing references for international soybean trade. In 2024, the DCE licensed its soybean oil futures prices to Malaysia's commodity exchange, allowing traders in Malaysia better access to arbitrage between the price of soybean oil and palm oil. The Malaysian DCE soybean oil contract has grown in volume to become its second-most traded commodity future, although volumes are just a fraction of its domestic palm oil contract. Samyak Pandey and Aditya Kondalamahanty, "Bursa Malaysia to Launch Soybean Oil Futures Contract on March 18," *S&P Global*, March 6, 2024; "Statistics on Bursa Malaysia Derivatives Berhad's Products," *Bursa Malaysia*, September 2026.

†The volume of CME soybean future trading in 2025 was about 71 percent greater than for soybean meal. The opposite trend was true on the DCE, with soybean meal trading more than three times greater than whole soybean trading by volume during the same timeframe. "ETD Tracker," *Futures Industry Association*.

gin to shift pricing influence toward China and erode the utility of U.S. futures markets as centers of global price discovery.

China could begin to employ its iron ore playbook in the soybean market by leaning on traders to set prices based on its preferred benchmarks. The composition of Chinese demand for soybeans, however, remains relatively fragmented compared to CMRG's heft in the iron ore industry. According to a Chinese outlet that tracks trends in the domestic edible oil industry, as of 2024 China's imported soybean crush capacity was owned 38 percent, 32 percent, and 30 percent by state-owned entities, domestic private entities, and foreign-invested entities, respectively.*[206] However, as U.S. and Brazilian soybean cash prices diverge and Brazilian exports become more concentrated in Chinese demand, China may have an opportunity to promote its RMB benchmark to price transactions.

A reduced role for U.S. exporters in global soybean trade could begin to erode the United States' position as a global pricing center if China pushes trade partners to use its domestic markets as a benchmark. However, U.S. and Latin American soybean growers are asymmetrically exposed to this risk. U.S. traders have greater capacity to resist China's efforts to force U.S. traders toward the DCE soybean futures given the CME's long-established standing as a global benchmark and connection to U.S. physical warehousing. Conversely, Brazil's export concentration could give China growing influence over which benchmarks are used to price physical trade for Brazilian entities. The share of Brazilian production exported abroad has grown to exceed 50 percent.[207] Although almost none of Brazil's agricultural trade was denominated in RMB as of 2025, both countries have expressed a desire to use local currencies for a greater share of their bilateral trade.[208] Recent price divergence between U.S. and Brazilian futures prices has made U.S. prices less reflective of local Brazilian supply and demand conditions, and Brazilian soybean growers have reportedly expressed interest in using DCE futures to price Brazil-China soybean trade.[209]

While commodity exchanges help agricultural sellers gauge future demand and hedge price risk, a shift in price discovery to less transparent Chinese markets would present a long-term challenge to their utility. As China politicizes some types of commodities trade, U.S. farmers would risk making production decisions based on futures data that are not reflective of market supply and demand. China already introduces volatility into agricultural markets when its buyers postpone, cancel, or shift orders due to political decisions by the CCP.[210] China also does not publish data on COFCO and Sinograin's state grain stockpiles, contributing to uncertainty over onshore market signals.[211] Greater influence over prices could become an additional tool for Beijing to pursue its political agenda.

China's INE Contract Fuels RMB Oil Trade

China's oil import dependence has spurred its pursuit of pricing influence in global oil markets. Despite increasing electrification in China's economy, oil remains a significant energy source; China

*Much of the foreign ownership traces back to investments from the ABCDs, which also dominate global grain trade. Sophia Murphy, David Burch, and Jennifer Clapp, "Cereal Secrets: The World's Largest Commodity Traders and Global Trends in Agriculture," *Oxfam Research Reports*, August 2012, 11, 39.

consumes 15 percent of the world's oil but only produces 5 percent, making access to oil central to its economic resiliency—and a key vulnerability.[212] The Middle East accounted for 44 percent of China's $296 billion in crude oil imports in 2025, according to official customs figures.[213] China is also the world's largest purchaser of sanctioned oil, providing a key lifeline to U.S. adversaries. (For more, see the "Axis of Autocracy: China's Revisionist Ambitions with Russia, Iran, and North Korea" in the Commission's 2025 Annual Report to Congress and the Commission paper "China's Facilitation of Sanctions and Export Control Evasion.") By one estimate, purchases from Iran, Russia, and Venezuela made up over 22 percent of China's total crude imports.[214] Additionally, China has been the largest purchaser of Russian oil, which accounted for about 20 percent of its oil imports in 2025.[215] State-owned Chinese oil traders like Unipec and Chinaoil already play a major role in price discovery in Middle Eastern oil markets due to sheer purchase volumes, with many of these purchases using a Platts Dubai-based price and other regional exchange prices as underlying benchmarks.[216]

While China's onshore energy markets have yet to challenge the price discovery dominance of Western benchmarks, its domestic crude oil contract has become an important regional benchmark providing hedging capabilities to transactions priced and settled in RMB. Launched in 2018, the INE crude oil futures benchmark had near-overnight uptake and was the first futures product China opened to foreign investors.[217] In contrast to the dollar-denominated Brent and West Texas Intermediate (WTI) oil benchmarks, INE contracts are priced in RMB, facilitating non-dollar oil trade.* In addition, the benchmark is linked to a diversified basket of Middle Eastern oil grades that are physically deliverable to China's coastal refining hubs, building "on one of the world's largest and most stable centers of crude demand."[218]

China's INE contract has had broader uptake in part because it serves the regional market in a useful way. Chinese and other Asian oil refineries primarily process sour crude, which is a different product and refining process compared with the sweeter oils included in WTI and Brent benchmarks.[219] With the introduction of the INE contract, regional price discovery is linked directly to a product more aligned with localized demand conditions.[220] Previously, buyers and sellers of sour crude indexed their prices relative to Western benchmarks and had to adjust prices to reflect underlying differences in qualitative characteristics.[221] According to the SHFE, overseas traders represented over 30 percent of daily INE trading volume and open interest by 2023, demonstrating how the contract serves an international, rather than purely domestic, hedging need.[222] By exploring physical warehousing overseas, the INE is taking incremental steps toward broadening the potential pool of physical market participants and increasing the use of RMB benchmarks in international trade.[223]

*Brent Crude is a futures contract tied to the price of a basket of crude oil from the North Sea and Midland, Texas. It is the most widely used contract as a price reference for physical oil transactions. West Texas Intermediate (WTI) is the most actively traded futures contract indexed to oil delivered at Cushing, Oklahoma. WTI and Brent are primarily traded on the New York Mercantile Exchange (NYMEX)—a subsidiary of CME Group—and ICE Futures Europe, respectively. "Energy Investing Basics: WTI vs. Brent Crude Oil," *Charles Schwab*, August 19, 2025.

Table 2: Trading Volumes of Crude Oil Futures on ICE Futures Europe, CME's NYMEX, and INE, 2018–June 2026

	ICE Futures Europe (Brent + WTI)	NYMEX (WTI + Brent Financial)	INE
2018	291,803,373	333,655,986	26,509,423
2019	274,929,357	323,388,779	34,644,385
2020	282,002,479	307,880,504	41,585,786
2021	295,387,950	286,953,805	42,645,180
2022	281,485,552	261,286,908	53,580,837
2023	325,468,147	248,317,159	49,545,477
2024	375,881,490	269,844,592	38,563,472
2025	413,337,789	285,734,724	38,882,241
YTD Jun-26	239,648,535	208,664,000	17,269,886

Source: "ETD Tracker," *Futures Industry Association*.

Despite growing usage, the INE remains a regional benchmark with limited impact on the dollar's dominance on global oil trade.[224] The focus on sour crude that helps with regional uptake is unhelpful for global interest.

Other obstacles to further international use of the INE help elucidate some of the challenges of a bigger role for China in global commodities markets. China imposes a trading band that limits its daily price fluctuation to promote price stability.[225] China's official oil reserves, which are relevant to supply and demand conditions, are a closely guarded state secret.[226] Transactions on the INE have higher transaction costs and reflect the relatively outsized influence of retail traders over commercial hedgers on the exchange.[227] Above all, Chinese regulators' frequent intervention in financial markets to reduce volatility and limit speculation disincentivizes greater participation from international participants accustomed to stable regulatory frameworks.[228] As Michelle Brouhard, head of policy and geopolitical risk at data firm Kpler, stated, "A hedging instrument that fails in a crisis will not get used as a primary risk management tool."[229] Futures and other financial derivatives provide vital tools for commercial traders exposed to price risk, but ad hoc and discretionary limits on index volatility reduce the effectiveness of hedging, potentially compounding economic distress in a crisis.

RMB Benchmarks Could Facilitate Oil Purchases Beyond the Reach of Sanctions

One factor favoring greater use of the INE benchmark is that China's construction of alternative physical and financial market infrastructure may allow oil purchases to take place outside the purview of U.S. sanctions. Countries wary of those sanctions may gravitate toward the RMB-denominated INE contract to price and hedge transactions that are settled in RMB.[230] As the primary buyers of sanctioned crude oil, China's private "teapot" refiners have the most

to gain from a strengthened domestic price.[231] The INE, potentially as part of efforts to expand its market share in domestic oil hedging, has added delivery points closer to operations in Shandong and Liaoning, where many teapot refiners are located.[232] A price reference not connected to U.S. dollar markets also helps traders transacting in RMB manage their own price fluctuations.

The conflict in Iran has demonstrated China's ability to insulate itself from external energy shocks and could precipitate a shift toward using the INE, although INE trading volumes have not increased markedly during the first half of 2026. China's average daily imports of crude oil have fallen by over four million barrels as of June 2026 compared with 2025, which could reduce Chinese producers' hedging needs linked to U.S. dollar commodities markets. (See Chapter 1, "U.S.-China Economic and Trade Relations (Year in Review)" for a full discussion of China's multilayered energy security strategy that has muffled oil price hikes in 2026.) While Brent and WTI will likely remain the global benchmarks for the foreseeable future, the INE could begin to comprise a higher share of China's total hedging needs if its oil importers are completing more of their transactions in RMB to avoid U.S. dollar sanctions. Similar to its buying behavior in soybean markets, China could opportunistically return to global markets to replenish stockpiles while also fundamentally reducing its reliance on U.S. dollar-based markets.

Anticipating China's Next Moves

China will continue targeted efforts to internationalize its futures markets and to impact price discovery. Domestic futures trading has created deep, liquid markets that are seeing greater international uptake and advancing China's goal of counterbalancing the United States' financial dominance. China will likely follow the playbooks that have led to its greatest successes to date.

- **Consolidate control over physical supply chains.**
  - *Invest in physical logistics for targeted commodities:* State-owned shipping and transportation companies and traders will likely continue to invest in overseas logistics assets, particularly in locations important to the supply chain of commodities targeted by Beijing. Ownership of these assets expands China's control over physical commodities, provides informational advantages for Chinese traders, and could enhance their role in price discovery.
  - *Concentrate buying power:* China continues to pursue efforts to centralize Chinese importers of key commodities so it can better take advantage of its massive presence in commodities markets.
  - *Use SOE buying power to advance China's financial market goals:* Once China establishes sufficient dominance in a physical market, it can put greater pressure on its partners to adopt financial measures favorable to its own interests—for example, requiring greater use of domestic exchanges and futures (e.g., it has already initiated discussions with Brazilian soybean producers to use DCE futures), shifting underlying benchmark prices away from U.S. and UK exchanges toward

RMB-denominated indices (e.g., the INE), and using Chinese PRAs for pricing (e.g., iron ore).

- *Deepen role in linking physical and financial markets:* State-owned Chinese exchanges are continuing to drive efforts to internationalize bonded warehouses linked to Chinese futures contracts and benchmarks, easing hurdles to global adoption of its futures contracts by allowing traders to access and deliver commodities at more points around the world.

- **Become a first mover in rapidly expanding markets for emerging technologies.** Following its lithium carbonate model, China will likely identify products that lack developed financial markets, that are growing rapidly, and where China is a significant part of global production. China has established itself as a global leader in several "new energy" technologies* and it may seek the opportunity to cement its pricing influence by introducing new products tailored to these markets.
- **China will take further steps to insulate itself from sanctions.** On a more macro level, China will push to expand the range of physical commodities trades it can settle in RMB. By settling physical trade in RMB, China decreases currency risk for its market participants and reduces the threat from U.S. financial system sanctions.
- **Beijing is also likely to continue efforts to expand the role of RMB in pricing of commodities.** Settlement of commodities trades in RMB resolves only a portion of China's vulnerability. As long as price formation occurs in U.S. dollars, Chinese buyers are still exposed to price volatility China cannot control. China already settles significant portions of its trade with Russia and Iran in RMB, and the next step in China's playbook is to underpin those transactions with RMB price benchmarks that reflect not just domestic supply and demand but also China's economic priorities through state intervention in trading behavior.
- **China will continue to selectively open its commodities markets to foreign traders.** Underpinning all of these approaches are China's efforts to expand global use of its exchanges while avoiding what it views as harmful instability. China added 14 more commodity futures and options to the list of fully internationalized contracts in 2026 already, and it will add more in the future.

There are still limits to China's pricing power. China benefits from the stability and interconnected nature of U.S. dollar-led global capital markets, and there is no indication it is seeking to fully displace this system with an alternative RMB-led financial order. (See Appendix I for an evaluation of China's recent progress in RMB internationalization.) China must maintain rigorous capital controls and limits on currency convertibility to prevent RMB instability from eroding its export competitiveness. Given the CCP's broad definition

*See U.S.-China Economic and Security Review Commission, Chapter 10, "Power Surge: China's Electrification Drive and Push for Global Energy Dominance," in *2025 Annual Report to Congress* for a fuller discussion.

of national security and deeply embedded priority of control, China's policymakers are also unlikely to welcome the loss of governmental control over capital inflows and outflows that would be required to truly internationalize the RMB.

Implications for the United States

China is accelerating its effort to open Chinese-owned exchanges to the world, leveraging its position as a large player in the physical commodities markets to expand their reach. The risks are clear. First, market manipulation. An RMB benchmark set in China could reflect CCP interventions designed to advantage Chinese companies—directives to state-owned traders, contract terms structured to favor Chinese producers, and price interventions that serve political rather than market objectives. Second, currency risk. Contracts priced in RMB are exposed to China's currency policy—including deliberate devaluation when it serves Beijing's interests. Third, sanctions evasion. An RMB-denominated commodity system would let Chinese traders and their partners conduct global transactions entirely beyond the reach of U.S. financial tools—undermining one of the most important instruments of American statecraft.

A growing role for Chinese exchanges and price benchmarks in global markets would mean conditions in China's markets have greater influence over global prices. In turn, the CCP's nonmarket economic policies that advance its goals—rather than market-based competition—would have a bigger influence on commodity prices in the United States and provide the CCP an additional avenue to influence market participants.

Greater internationalization of Chinese exchanges and price benchmarks would give the CCP a more direct lever of control over global commodities markets through regulation. Chinese authorities have a history of intervening in onshore stock exchanges to reduce speculation and limit volatility. It is likely that CCP commodities market regulations will at least sometimes be less focused on market stability and efficiency and more reflective of Beijing's geopolitical or economic goals. China could set the parameters of contracts that global producers must meet (e.g., quality, environmental standards, delivery points), encouraging criteria that favor Chinese firms. China could try to turn the network effects of exchanges in its favor to create logistical and infrastructural lock-in to Chinese exchanges and undermine U.S. and partner country efforts to diversify supply chains away from Chinese control.

If China holds a bigger role in global commodity prices, market-based firms could find it harder to compete. At best, they would be forced to accept lower margins, reducing their ability to invest and expand; at worst, market-based competitors could be put out of business. In critical minerals, China has already used its role in markets to undercut attempts by other countries to diversify sourcing away from China. Globalization of Chinese commodities markets would enhance this type of leverage in the future.

An expanded role for China in global commodities markets also has significant implications for sanctions authority. Among other impacts, U.S. sanctions increase costs and risks for

designated countries and entities by restricting access to dollar-denominated commodities hedging tools. RMB-denominated commodities markets provide better risk management tools for sanctioned entities barred from U.S. and allied financial markets, undermining the efficacy of U.S. economic statecraft.

The greater the role of Chinese exchanges and price benchmarks in global commodities markets, the greater China's own sanctions authority becomes. Just as the centrality of the dollar in international settlement gives the United States broad leverage in financial sanctions, increasing influence over commodities markets could become a point of leverage for China. It could exclude U.S. firms from its own exchanges, which could disadvantage U.S. firms' access to specific commodities or hedging tools, to the extent Chinese exchanges are the primary market.

Even if China's commodities markets and benchmarks only become regional heavyweights rather than crowding out global exchanges, that still introduces risks for the United States. The resulting market fragmentation will increase volatility and inflation risk, which can complicate long-term planning (e.g., for strategic stockpiles) and heighten supply chain risks. Thinner, less liquid markets are more susceptible to manipulation, while prices that incorporate China-specific conditions could reduce the hedging utility of markets. China's push for its preferred benchmarks could introduce price signals driven by its own excess supply and other policy interventions. These distorted prices in turn could undermine international efforts of market-based economies to cooperate on critical minerals and other essential materials.

Policymakers face competing priorities in terms of evaluating the role of U.S. financial institutions in advancing China's goals. U.S. financial institutions' participation on Chinese futures exchanges enhances the level of professionalism for onshore markets, and greater international participation supports China's pricing ambitions. At the same time, their presence could help maintain their leading global position in derivatives markets and enhance their visibility into an often opaque market.

The standards and accountability that exist in U.S. and European markets do not yet exist on Chinese exchanges. But complacency and short-term thinking yields risk. As noted in the Executive Summary and in witness testimony from Dr. Fan, "China's approach is gradual and strategic. It is not attempting to replace existing benchmarks overnight. Instead, it is building parallel systems that may, over time, reshape the global landscape."[233]

Recommendations

- For over two decades, China has quietly pursued the development of domestic commodities exchanges, and expanded its production and processing of core commodities, becoming a key market maker in many segments and sectors. China is actively working to exert greater influence over global commodities markets with the aim of advantaging its domestic manufacturers and insulating itself against U.S. sanctions. To this end, China is pursuing numerous policies to expand its leverage, growing its domestic commodity exchanges, and opening more "in Chi-

na for China" commodities trading to foreign participants. In recent years, China established the China Mineral Resources Group and other state instruments to consolidate purchasing of key commodities and has begun leveraging its position as a major buyer in physical markets to compel producers to use its preferred benchmarks and, in some cases, transact in RMB. China is building parallel systems that, absent action, may, over time, reshape the global landscape.

Congress should direct the U.S. Commodity Futures Trading Commission (CFTC) to monitor Chinese engagement and influence in commodities exchanges and warehousing and provide an annual report to Congress on activity, strategic risks, and efforts to coerce market participants as well as signs of market manipulation. To support this activity, Congress should:

- Expand CFTC foreign market surveillance and provide the CFTC the direction and, as needed, authority to monitor trading activity on Chinese exchanges, including but not limited to the Dalian Commodity Exchange (DCE) and the Shanghai International Energy Exchange (INE), with particular attention to participant concentration, state-owned enterprise positioning, and coordination among state-owned buyers. Current CFTC jurisdictional limits leave this activity unmonitored, and the China Securities Regulatory Commission does not make these data public.
- Direct the CFTC to monitor the development of China's futures markets, in particular for semiconductor, battery, renewable energy, and critical industrial materials. Data on commodity pricing are difficult to obtain, particularly in markets where benchmark usage and settlement terms are embedded in opaque, privately negotiated contracts and are not systematically reported. Thinly traded contracts are susceptible to a risk of biased market data, putting U.S. producers at a disadvantage.
- Require disclosure of U.S. financial institution exposure to Chinese exchanges and other non-CFTC-registered foreign exchanges, as appropriate. Dodd-Frank reporting captures most U.S. derivatives activity on domestic and CFTC-registered foreign exchanges; however, many Chinese exchanges, including the INE, fall outside this framework, and these exchanges have not sought CFTC registration as Foreign Boards of Trade, meaning U.S. firms can trade on them without that activity being systematically captured in CFTC reporting.

- Congress should strengthen the U.S. Department of Agriculture's (USDA) agricultural market intelligence and early warning capacity by directing the Secretary of Agriculture to enhance USDA's capacity to monitor Chinese agricultural commodity markets, supply chain flows, and state reserve management—such as dedicated monitoring of the Dalian Commodity Exchange's price signals and South American logistical flows controlled by Chinese-affiliated entities—and by providing sufficient appropriations to do so.

Appendix I: China Advances Its Digital Currency as a Solution for RMB-Denominated International Payments

China's commodity futures markets are one facet of a multipronged effort to insulate itself from the effects of U.S. dollar sanctions. China has benefited from the stability of the U.S. dollar-denominated global trade and investment ecosystem.*[234] However, any transaction denominated in U.S. dollars at some point passes through a U.S. financial institution either directly or through a correspondent banking account or financial intermediary or system subject to the effective jurisdiction of the United States, giving the U.S. Department of the Treasury significant enforcement leverage over these payments.[235] Sanctions could cut China off from access to any financial institution connected to the U.S. dollar-based financial system, which is often called the "death penalty" for financial institutions that need to engage in international transactions.[236]

China has taken numerous measures to address this risk. It has developed alternative messaging and settlement systems under its control to provide a path for RMB payments and settlement outside of the system subject to U.S. jurisdiction.[237] It has also expanded its own network of overseas correspondent banks so that transactions between foreign currencies and RMB can be handled directly.[238] China has been denominating more trade finance and overseas lending in RMB, as well.[239] China has established bilateral swap lines with 34 other countries with the goal of providing RMB to foreign entities to purchase Chinese exports.[240]

In its current form, China's network of alternative financial systems and institutions represents a viable—if untested at scale—solution to transact with sanctioned entities while avoiding broader economic repercussions.[241] This parallel RMB network lacks the scale and sophistication of the global financial system, however, contributing to higher transaction costs, limited liquidity, and limited hedging instruments—and therefore fewer participants.[242] The advancement of Chinese commodities markets addresses one hurdle to more widespread use of the RMB.

China has also made limited progress in fostering alternative payments systems through its central bank digital currency (CBDC). China began experimenting with a centralized digital currency around 2014 as the rising use of cryptocurrencies enabled circumvention of capital controls and anonymous payments.[243] In 2016, it announced plans for issuance of a digital currency that is now called the e-CNY.[244] Unlike some traditional electronic payments systems, users are not charged for CBDC transactions, lowering their costs.[245] From a state perspective, a CBDC also allows for more surveillance over payments compared with cash.[246] However, retail use of the e-CNY has advanced slowly in part due to the presence of two entrenched private digital payments systems, Alipay and WeChat Pay.[247] Cumulative transactions in the e-CNY through November 2025 have reached only RMB 16.7 trillion—which looks

*The RMB accounts for only 2 percent of global foreign currency reserves as of the end of the first quarter of 2026, compared with 57 percent for the dollar, 20 percent for the euro, 5 percent for the Japanese yen, and 4 percent for the British pound. "Currency Composition of Official Foreign Exchange Reserves," *International Monetary Fund*, March 31, 2026.

like a large number but is just around 1 percent of the total annual value of card and digital transactions in China.[248] In the first nine months of 2026, to encourage wider e-CNY circulation, China added 20 commercial banks to its existing network of ten and authorized them to pay interest on e-CNY deposits.[249]

Chinese policymakers are also developing a wholesale CBDC for use in international transactions between central and commercial banks. In theory, a wholesale CBDC would reduce the need to transfer international payments through networks of correspondent banks, reducing costs, allowing round-the-clock processing, and increasing the speed at which payments are completed from days to potentially seconds.[250] CBDCs would also allow China to bypass U.S. dollar-based payments systems by employing distributed ledger technology, insulating itself from the threat of sanctions.[251] Project mBridge, which encompasses China's efforts to facilitate cross-border CBDC payments, has recorded only around 4,000 transactions valued at $55 billion total since inception.*[252] Despite these small volumes, one of mBridge's participants, the United Arab Emirates (UAE), is an important commodity exporter and could potentially serve as the link between commodities trade with China and its efforts to grow the use of the RMB internationally.[253]

The lack of attractive RMB-denominated assets remains one of the largest hurdles to China's ambitions for the RMB as recipients are incentivized to convert their extra RMB back into dollars in search of higher-returning investment opportunities.[254] To address these concerns, China is encouraging a system of RMB circulation whereby proceeds earned in RMB from exports to China are recycled into RMB-denominated assets.[255] China has made more RMB-denominated assets available to foreign investors through official portfolio investment channels, introducing offshore hedging options for Chinese government bonds and expanding access to its onshore debt markets.[256] China has encouraged foreign governments and corporations to tap RMB-denominated onshore and offshore debt markets as well, although uptake by sovereign entities remains low.[257] However, the RMB's share of total central bank reserves remains just below 2 percent as China continues to prioritize stability and control over expanding the use of the RMB as a reserve currency.[258]

China has had limited success with its major commodity trading partners. Brazil, for example, has access to a RMB 190 billion swap line with the People's Bank of China and plans to issue its first RMB-denominated "panda bond" in 2026.[259] The UAE and Saudi Arabia have RMB 35 billion and RMB 50 billion swap lines, respectively.[260] Indonesia, a major exporter of refined nickel to China, has an RMB 200 billion swap line and has issued both panda and offshore RMB-denominated "dim sum" bonds within the last two years.[261]

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*The Bank for International Settlements (BIS) initiated Project mBridge in 2021. BIS later stepped back from the project and China took over de facto leadership in 2024. Its participants include central and commercial banks from Hong Kong, Macau, the UAE, and Thailand. Saudi Arabia, which joined in 2024, confirmed it had withdrawn from the project as of 2025. "Saudi Arabia Quits China-Led Cross-Border Currency Platform," *Financial Times*, September 20, 2026; Liu Ran, "Macao Joins $56 Billion Central Bank Digital Currency Platform mBridge," *Caixin Global*, June 3, 2026; "Inthanon-LionRock to mBridge: Building a Multi CBDC Platform for International Payments," *Bank for International Settlements*, September 28, 2021, 7.

Appendix II: Commodity Trading and Derivatives Background

The extraction and movement of vast quantities of raw inputs from the ground to the final consumer involves a complex network of miners, traders, refiners, logistics providers, and producers. Derivatives markets enable participants along all stages of the value chain to factor near-real-time market information into business decisions, such as negotiating prices, arbitraging price differences, planning future production decisions, and managing risk.[262] Like any traditional market, commodity prices are driven by supply and demand dynamics. However, because commodities are typically interchangeable raw materials at some level and often need to be transported vast physical distances between where they are mined/grown/produced and where they are processed, centralized exchanges have developed to help market participants ensure they are transacting at a fair price and under predictable terms.*[263] Exchange-traded contracts are standardized by quantity and quality of the physical good and the requirements for physical delivery.[264]

Derivative market participants are generally categorized as either hedgers or speculators. Hedgers are physical producers and consumers of commodities, limiting their risk exposure to price fluctuations. Speculators are seeking exposure to commodity price fluctuations for investment purposes rather than due to underlying physical exposure. While "speculation" can have negative connotations, speculators are essential for normal market function and are often on the other side of the trade from hedgers. Hedging and speculative behavior can coexist within the same firm, especially large global commodities traders. Arbitrage, whereby traders take advantage of price discrepancies between two futures markets, drives markets back into equilibrium and prevents these prices from diverging indefinitely.[265]

Futures markets promote market efficiency. Exchanges pool buying and selling activity in major derivative contracts (futures and options), enhancing liquidity and efficiency and facilitating risk management across market participants.[266] Banks also play a major role in commodity trading by offering bespoke over-the-counter swap contracts, often to physical traders.[267] Futures markets act as a signal by representing market participants' view of future supply and demand, which in turn feeds back into the current spot price.[268] In theory, futures prices reflect the market's collective knowledge of future supply and demand, providing a convenient signal for commercial market participants.[269] Price formation occurs via a massive amount of buying and selling activity on the exchange, allowing producers to focus on the business of growing crops or extracting and refining oil. They also help buyers hedge against risk. For example, a food processing company looking to establish a secure supply chain for inputs of corn and wheat benefits from hedging against future price fluctuations from weather-related conditions.[270]

*Many commodities do have physical variations within specific versions of the product. For example, soybeans grown in different parts of the world have different oil content, which impacts how long they can be stored. Crude oil from different parts of the world may involve different refining processes.

Pricing "benchmarks" provide transparency and liquidity across global markets.[271] They often underpin futures contracts and over-the-counter trades. Although commodities seldom physically change hands through futures contracts, futures prices and spot (or cash) prices are linked.*[272] Contracts between producers, traders, and consumers for the physical exchange of commodities typically reference an underlying benchmark plus or minus a spread (the "basis") based on the specifics of the transaction being negotiated. This structure lets physical buyers and sellers take advantage of a transparent global or regional price while still accounting for what differentiates their trade from the standard futures contract—such as proximity to transportation infrastructure or the chemical composition of the commodity.[273] Benchmarks thus manage price volatility, streamline global trade, and reduce transaction costs across huge trading volumes. While data on the exact share of commodities trades referencing specific futures prices are not available, the U.S.-based Intercontinental Exchange claims its Brent crude oil futures are "the price barometer for ~80 percent of global crude."[274] Multiple benchmarks can exist for the same commodity, reflecting differences in physical characteristics or regional markets. For example, in the energy sector, West Texas Intermediate (WTI) is a lighter, sweeter crude oil (easier to refine into gasoline) produced and delivered primarily in the United States; Brent refers to a similar crude produced in Europe and is typically seaborne.[275]

Benchmarks are highly sticky. Market participants are generally unwilling to switch to alternatives, since hundreds of thousands of futures contracts—along with associated accounting, risk management, and pricing systems—are all linked to them.†[276] Because traders gravitate toward the most accepted benchmarks, liquidity concentrates in a few exchanges. This winner-takes-all dynamic gives top exchanges significant influence in determining which financial institutions can trade, which benchmarks are traded, and where and how delivery of physical commodities must occur.[277]

PRAs act as information providers on spot pricing to the rest of the market by sourcing intelligence on commodities markets from producers, consumers, and traders of commodities.[278] While hundreds of PRAs exist around the world, the largest and most well-known benchmarks come from only a few firms. Buyers and sellers of commodities rely on PRAs to provide independent, non-biased assessments of fair prices.[279]

A futures contract can be settled either in cash or through physical delivery, allowing market participation by both producers

*Futures prices represent the market's best estimate of the price of the commodity upon future expiration of the contract, while cash prices, also called spot prices, represent the price of the commodity for immediate delivery. Joshua Kamps and Steven Okonek, "Understanding Basis in Grain Marketing," *University of Wisconsin-Madison*; U.S. Commodity Futures Trading Commission, "Futures Glossary—Cash Price, Futures Price, Spot, Spot Price," accessed August 5, 2026.

†There have been instances in the past where markets have switched from using one benchmark to another, typically in response to changes in the underlying physical supply and demand conditions. In 2009, Saudi Arabia switched from pricing its oil exports in WTI to an Argus index, which rapidly triggered a competition among oil-focused exchanges to host the new derivatives tied to the Argus benchmark. As benchmarks with the most liquidity have strong network effects, the exchange that wins volume early on is unlikely to lose its dominant position later. Brian Baskin and Jacob Bunge, "Futures Markets Jockey for Benchmark," *Wall Street Journal*, November 9, 2009.

seeking raw materials, entities involved in the market where they wish to hedge their risks, and speculators looking for exposure to commodity-based assets. Under physical delivery, the purchaser of the commodity will receive the actual goods in the agreed amount and location upon contract expiration.[280] However, many contracts are settled on a cash basis, meaning that on the day of contract expiration, the buyer receives a net payment in cash equal to the differential to the market value of the good instead of the physical product.[281] The cash basis against which futures contracts are settled is often a basket or average of PRA-assessed spot prices.[282] This financialization adds significant flexibility, making hedging and speculation easier. It also means vastly more participants can be involved in the market than one limited in scale by the actual underlying commodity assets.[283]

For example, two parties agreeing to exchange 5,000 bushels of soybeans can reference the CME's soybean futures as the price at which the transaction will take place, plus or minus a spread negotiated directly between the parties.[284] A trader taking physical delivery of soybeans on the date of contract expiration receives a certificate reflecting ownership of the product stored at an approved warehouse.[285] CME-registered warehouses are concentrated in a band extending from Chicago to St. Louis along the Illinois River, directly tying futures markets to the underlying physical infrastructure used to store and transport grain.[286] Farmers extract useful information from market signals that inform production decisions. The ratio of corn-to-soybean futures helps farmers decide which crop is more economical to plant long before they lock in sales.[287]

Appendix III: China's Commodity Derivative Contracts

Exchange	Contract	Chinese Name	Commodity Contract Primarily Traded in China	Open to QFI (Qualified Foreign Institutional) Investors	Fully Internationalized
Dalian Commodity Exchange (DCE)	No. 1 Soybean Futures/Options	黄大豆1号期货/期权		×	×
	No. 2 Soybean Futures/Options	黄大豆2号期货/期权		×	×
	Soybean Meal Futures/Options	豆粕期货/期权		×	×
	Soybean Oil Futures/Options	豆油期货/期权		×	×
	RBD Palm Olein Futures/ Options	棕榈油期货/期权		×	×
	Corn Futures/Options	玉米期货/期权			
	Corn Starch Futures/Options	玉米淀粉期货/期权	×		
	Polished Round-Grained Rice Futures	粳米期货			
	Egg Futures/Options	鸡蛋期货/期权	×		
	Live Hog Futures/Options	生猪期货/期权	×		
	Fiberboard Futures	纤维板期货	×		
	Blockboard Futures	胶合板期货	×		
	Log Futures/Options	原木期货/期权			

Exchange	Contract	Chinese Name	Commodity Contract Primarily Traded in China	Open to QFI (Qualified Foreign Institutional) Investors	Fully Internationalized
Dalian Commodity Exchange (DCE)—*Continued*	Coking Coal Futures/Options	焦煤期货/期权	×		
	Coke Futures/Options	焦炭期货/期权	×		
	Iron Ore Futures/Options	铁矿石期货/期权		×	× (futures only)
	LLDPE (linear low density polyethylene) Futures/Options	聚乙烯期货/期权		×	
	LLDPE Monthly Average Futures (MAF)	聚乙烯月均价期货	×	×	
	PVC (polyvinyl chloride) Futures/Options	聚氯乙烯期货/期权	×	×	
	PVC MAF	聚氯乙烯月均价期货	×	×	
	PP (polypropylene) Futures/Options	聚丙烯期货/期权		×	
	PP MAF	聚丙烯月均价期货	×	×	
	Ethylene Glycol Futures/Options	乙二醇期货/期权		×	
	Ethenylbenzene Futures/Options	苯乙烯期货/期权		×	
	Liquified Petroleum Gas Futures/Options	液化石油气期货/期权		×	
	Benzene Futures/Options	纯苯期货/期权			

Exchange	Contract	Chinese Name	Commodity Contract Primarily Traded in China	Open to QFI (Qualified Foreign Institutional) Investors	Fully Internationalized
Zhengzhou Commodity Exchange (ZCE)	White Sugar Futures/Options	白糖期货/期权		×	
	Cotton Futures/Options	棉花期货/期权		×	
	Wheat WH Futures	强麦期货			
	Wheat PM Futures	普麦期货			
	Early Rice Futures	早籼稻期货			
	Late Rice Futures	晚籼稻期货			
	Japonica Rice Futures	粳稻期货			
	Rapeseed Meal Futures/Options	菜籽粕期货/期权		×	×
	Rapeseed Futures	油菜籽期货			
	Rapeseed Oil Futures/Options	菜籽油期货/期权		×	×
	Cotton Yarn Futures	棉纱期货	×	×	
	Apple Futures/Options	苹果期货/期权	×	×	
	Dried Jujube Futures/Options	红枣期货/期权	×	×	
	Peanut Kernel Futures/Options	花生期货/期权	×	×	×
	Thermal Coal Futures/Options	动力煤期货/期权			
	PTA Futures/Options	精对苯二甲酸期货/期权	×	×	×

Exchange	Contract	Chinese Name	Commodity Contract Primarily Traded in China	Open to QFI (Qualified Foreign Institutional) Investors	Fully Internationalized
Zhengzhou Commodity Exchange (ZCE)—*Continued*	Methanol Futures/Options	甲醇期货/期权		×	
	Glass Futures/Options	玻璃期货/期权	×	×	
	Ferrosilicon Futures/Options	硅铁期货/期权	×	×	
	Manganese Silicon Futures/ Options	锰硅期货/期权	×	×	
	Urea Futures/Options	尿素期货/期权			
	Soda Ash Futures/Options	纯碱期货/期权	×	×	
	Polyester Staple Fiber Futures/ Options	短纤期货/期权	×	×	×
	Paraxylene (PX) Futures/ Options	对二甲苯期货/期权		×	×
	Sodium Hydroxide (SH) Futures/Options	烧碱期货/期权	×	×	
	Bottle-Grade PET Futures/ Options	瓶片期货/期权	×	×	×
	Propylene Futures/Options	丙烯期货/期权		×	
Shanghai Futures Exchange (SHFE)	Copper Futures/Options	铜期货/期权		×	
	Aluminum Futures/Options	铝期货/期权		×	
	Zinc Futures/Options	锌期货/期权		×	

Exchange	Contract	Chinese Name	Commodity Contract Primarily Traded in China	Open to QFI (Qualified Foreign Institutional) Investors	Fully Internationalized
Shanghai Futures Exchange (SHFE)—*Continued*	Lead Futures/Options	铅期货/期权		×	
	Nickel Futures/Options	镍期货/期权		×	×
	Tin Futures/Options	锡期货/期权		×	
	Alumina Futures/Options	氧化铝期货/期权		×	
	Cast Aluminum Alloy Futures/ Options	铸造铝合金期货/ 期权	×	×	
	Gold Futures/Options	黄金期货/期权		×	
	Silver Futures/Options	白银期货/期权		×	
	Rebar Futures/Options	螺纹钢期货/期权		×	
	Wire Rod Futures	线材期货	×		
	Hot-Rolled Coil Futures/Options	热轧卷板期货/期权		×	
	Stainless Steel Futures/Options	不锈钢期货/期权	×	×	
	Fuel Oil Futures/Options	燃料油期货/期权		×	
	Bitumen Futures/Options	石油沥青期货/期权	×	×	
	Synthetic Rubber Futures/ Options	合成橡胶期货/期权	×	×	
	Natural Rubber Futures/ Options	天然橡胶期货/期权		×	

Exchange	Contract	Chinese Name	Commodity Contract Primarily Traded in China	Open to QFI (Qualified Foreign Institutional) Investors	Fully Internationalized
Shanghai Futures Exchange (SHFE)—*Continued*	Pulp Futures/Options	纸浆期货/期权		×	
	Offset Printing Paper Futures/Options	胶版印刷纸期货/期权	×	×	
Shanghai International Energy Exchange (INE)	Crude Oil Futures/Options	原油期货/期权		×	×
	Low Sulfur Fuel Oil Futures/Options	低硫燃料油期货/期权		×	×
	TSR 20 Rubber Futures/Options	20号胶期货/期权		×	×
	(BC) Copper Futures/Options	国际铜期货/期权		×	×
Guangzhou Futures Exchange (GFEX)	Platinum Futures/Options	铂期货/期权		×	
	Palladium Futures/Options	钯期货/期权		×	
	Polysilicon Futures/Options	多晶硅期货/期权	×	×	
	Lithium Carbonate Futures/Options	碳酸锂期货/期权		×	×
	Industrial Silicon Futures/Options	工业硅期货/期权	×	×	

Note: Only commodity futures and options are included in the chart above. Some exchanges have developed additional commodity indices and weather indices; these are not included in the chart. Contracts for the same commodity may differ based on quality of the product or degree of processing. Additionally, while some of these commodities have futures contracts listed on overseas exchanges, they have little to no active market, such as the CME's LLDPE contracts traded on NYMEX. The Commission performed a general search to determine which Chinese commodities had comparable contracts traded on other exchanges but did not have access to a verified complete list of every future or option contract around the world.

* The CME lists lean hog futures for meat.

Source: Various.[288]

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PART III

CHINA'S TECHNOLOGY AMBITIONS

CHAPTER 7: COLLECT, STEAL, BUY, FUSE, MONETIZE: HOW CHINA IS TURNING DATA INTO ASSETS AND AMMUNITION

Executive Summary

Beijing sees data as a source of national power, not just a commercial asset or a privacy concern. Under General Secretary of the Chinese Communist Party (CCP) Xi Jinping, it has built a state-backed framework for collecting and using data from across society to advance economic, technological, intelligence, and military goals. China's strategy is to maximize the amount and variety of data available to Chinese actors (including but not limited to the Chinese government), improve the state's ability to aggregate and analyze those data, and convert them into economic and strategic advantage. Even seemingly mundane or disconnected information can become more valuable when collected, combined, and analyzed to identify "patterns of life," behaviors, relationships, and anomalies.

China is building the infrastructure and sector-specific datasets needed to put this strategy into practice. Economically, Beijing has designated data as a factor of production and encouraged local governments and companies to commercialize data within a state-controlled framework. In artificial intelligence (AI), Beijing is promoting a "data flywheel" in which deployment of AI systems generates real-world data that can improve those systems and support further deployment. In biotechnology, Chinese entities can draw on large domestic biological datasets and, in some circumstances, foreign repositories, while Chinese regulations restrict foreign access to comparable Chinese data. Data also support China's military, intelligence, and security objectives: the People's Liberation Army (PLA) is researching how new datasets can improve equipment, train AI systems, monitor adversaries, identify vulnerabilities, and support operational planning, while Chinese cyber actors have already acquired sensitive personal, technical, and critical infrastructure information with potential intelligence and operational value.

For the United States, the challenge extends beyond protecting individual databases from theft. China can acquire data through both illicit and lawful channels and use them for espionage, coercion, influence operations, technological development, and

military planning. U.S. measures have restricted some paths to sensitive U.S. data, but significant vulnerabilities remain, as current U.S. policy largely addresses cybersecurity, privacy, foreign investment, biotechnology, and AI as separate issues. In contrast, Beijing approaches data as a strategic resource that spans across sectors and issues. However, China's ability to translate its data resources into concrete advantages is not assured: commercial data remain fragmented, and high-quality AI training data are scarce. Even so, its drive to collect, aggregate, and exploit data at scale poses an enduring challenge to U.S. competitiveness and national security.

Key Findings

- Beijing pursues a state-directed strategy to acquire, consolidate, and exploit data from a vast array of sources, including state surveillance infrastructure, cyber operations, scientific and biomedical sources, and even routine commercial activity, while leveraging AI to fuse disparate datasets into actionable intelligence.
- China acquires data illicitly through state operations as well as via a contracted "hackers-for-hire" ecosystem. This provides it with access to vast troves of information via cyber operations. Yet cyber theft is only one component of a far broader collection apparatus.
- China's legal and institutional architecture ensures state access to data held by any Chinese entity, while cross-border controls allow Beijing to retain high-value Chinese data domestically. Any data a Chinese company collects can be claimed and absorbed by the state, no matter how mundane their commercial purpose.
- In 2020, China became the first country to designate data as a factor of production, alongside land, labor, capital, and technology—a deliberate decision that elevated data to a strategic national asset and an instrument of national power. It is perhaps the only country to have built an end-to-end, state-directed system to control, collect, aggregate, deploy, and exploit data.
- China converts data into power through aggregation. Capabilities refined through its domestic surveillance state—fusing biometric, financial, communications, behavioral, and any other data into predictive profiles—are being applied to foreign targets, with AI accelerating the transformation of disparate datasets into "pattern-of-life" intelligence.
- Beijing is converting its data position into competitive advantage: building a national data infrastructure to power its digital economy; enforcing strategies to generate high-quality AI data by deploying the model in a system that feeds the data back for further iteration; and engineering deliberate asymmetries—most starkly in biotechnology—that maximize

access to foreign data while denying reciprocal access to China's data.

- China's data dominance strategy threatens U.S. national security. The aggregation of data on Americans enables espionage, coercion, and influence operations with unprecedented precision; supports pre-positioning campaigns such as Volt Typhoon that collect critical infrastructure data to support "system destruction warfare" in a future conflict; and facilitates the use of stolen technical data to accelerate PLA modernization. Where Washington sees a privacy problem, a cyber problem, and a trade problem, Beijing sees a single resource of national power and has organized its laws, economy, and intelligence apparatus to control it end to end.

Introduction

In 2015, the security clearance records of more than 21.5 million federal employees, contractors, and their families were stolen in the Office of Personnel Management (OPM) breach.[1] The same year, the personally identifiable information (PII) of 78.8 million Americans was taken from the insurer Anthem.[2] In 2017, the Equifax breach exposed the sensitive personal information—including names, birth dates, and Social Security numbers—of approximately 145 million Americans, nearly half the country.[3] The Marriott breach disclosed the following year revealed the travel histories of hundreds of millions of guests.[4] More recently, in an operation known as Salt Typhoon, actors associated with Chinese security services penetrated major telecommunications networks, capturing records of who Americans called and when.[5] The U.S. government and cybersecurity firms have attributed all of these data breaches to cyber actors linked to the Chinese government.[6] Collectively, these breaches mean China has collected comprehensive data on Americans: who holds a U.S. government clearance and what their vulnerabilities are, their health, their finances, their travel, and their communications.[7]

Theft is only the most notorious channel of a broader collection apparatus. Every day, Chinese mobile applications, routers, Internet-of-Things (IoT) devices, industrial equipment, and other connected products lawfully gather vast quantities of information on Americans and U.S. infrastructure, all subject to access on demand by the Chinese government under Chinese law. Furthermore, commercial data brokers collect vast troves of data on Americans that, until recently, could be freely sold to Chinese entities.

These activities reflect the Chinese state's view of data as a strategic resource central to economic competitiveness, technological innovation, military modernization, and state security. The strategic challenge goes beyond data collection and extends to Beijing's ability to integrate information at scale to transform the value of data from "observation to prediction" and from "prediction to strategic advantage."[8] With this approach, China is the first country to designate data as a factor of production and let firms carry data as an asset on their balance sheets. In contrast, the United States largely

addresses aspects of data and data collection issues in silos—cybersecurity, privacy, foreign investment, biotechnology, and AI are seen as separate policy areas. China increasingly treats them as interconnected components of a unified national data strategy.

Control: The One-Way Valve

Understanding the Value of Data

In the economic realm, data are a foundational driver of commercial performance and the digital economy. Empirical studies from the Stanford Digital Economy Lab highlight how data generate value for consumers via improved products and services, and for producers through better operational efficiency, productivity, and AI-enabled decision-making.[9] Additionally, the U.S. Bureau of Economic Analysis has conducted numerous empirical studies on data as an asset for the digital economy.[10] A March 2026 study found that if U.S. firms' data were treated as a capital asset—similar to property, equipment, and software—the estimated contribution of information technology-related capital to U.S. GDP growth between 2002 and 2024 would have been about one-third higher, suggesting standard economic measures understate the extent to which data contribute to U.S. economic growth.[11]

In technology competition, data are a prerequisite for both the development and deployment of emerging technologies. AI models are trained on data at scale, and their accuracy, reliability, and utility depend on the quality and breadth of such training data.[12] In specific industries such as autonomous systems, medical diagnostics, financial modeling, and logistics optimization, technology improvements from AI all depend on rich, domain-specific datasets that can only be accumulated over time.[13] Similarly, biotechnology requires large, diverse biological datasets to identify meaningful patterns for design and to develop effective results.[14]

As early as 2018, an article posted on the Ministry of National Defense's website stated that military data are becoming an "extremely important strategic resource" that would be a "driving force" for military research and an "important resource for winning wars."[15] Two years later, PLA-linked sources made the military implications more explicit. A 2020 *China Military Network* article described data as combat power and argued that data collection, control, analysis, and operational application are essential to gaining initiative in intelligentized warfare.[16] In the same year, the U.S. Department of Defense (DOD) Data Strategy noted that "data is a strategic asset."[17] Adversaries use detailed personal information to identify, target, and tailor approaches to individuals of intelligence value—facilitating espionage, coercion, and influence operations with a precision that was previously unattainable.[18] For authoritarian states in particular, the relationship between data and security is even more fundamental: the capacity to monitor, profile, and preempt the activities of citizens and perceived adversaries is the architecture of political control.[19]

China's Comprehensive National Data Strategy

The Chinese government has long recognized the importance of data. Since 2015, when the State Council identified data as a "na-

tional basic strategic resource," the Chinese government has been building a national strategy and extensive legal and institutional architecture to govern, mobilize, and secure data. China's data strategy has evolved, moving from fragmented regulation in the 1990s to a unified, state-directed, "whole-of-society" system under Xi Jinping today. China leverages both state and non-state entities, including but not limited to various ministries and a sprawling "hackers-for-hire" ecosystem, to collect and analyze data at scale and acquire information through its large-scale surveillance network, espionage, and cyber breaches.[20] While the scale of data collected is massive, China's growing capacity to aggregate and analyze disparate data into more actionable intelligence is the more notable feat.

Beyond these state-directed collection efforts, China also recognizes that routine business activity generates immense amounts of data and has been building the legal framework to incentivize firms to collect, organize, analyze, and monetize their data. Connected vehicles, mobile applications, e-commerce platforms, data brokers, and corporate acquisitions can generate important data to enhance products and processes as well as granular information about individuals, transactions, locations, and business operations. China's legal framework also gives the state the authority to access data held by ostensibly private Chinese companies, which are obligated to cooperate with intelligence service requests and share data with the Chinese government if requested to do so. A variety of everyday consumer data collected through commercial avenues can be channeled to Chinese authorities regardless of the collecting company's terms of service or original commercial intent.

Data Regulators: Cyber Administration of China Demands Data for the State

The Cyberspace Administration of China (CAC) serves as the regulator of China's information environment, including oversight of online content, implementation of cybersecurity and data security regulations, and review of cross-border data transfers.[21] The CAC formally sits under the CCP Central Committee and houses the secretariat of the CCP Central Commission for Cybersecurity and Informatization.[22] The CAC's dual Party-state structure blurs the institutional distinction between political direction and regulatory enforcement, making it difficult for domestic and foreign firms to determine whether particular actions reflect regulatory policy, Party direction, or both.[23] China can compel Chinese companies to hand over data, and the CAC is the chief enforcer, as discussed below. The CAC has expanded its regulatory power through data security regulations, including the 2017 Cybersecurity Law and 2021 Data Security Law. While the architecture makes access legally available, the system lacks independent judicial review and transparency mechanisms that would reveal when such access occurs.[24]

Table 1: Select State Entities in China's Data Collection Ecosystem

Name	Role/Responsibility	Details
CCP Central Committee	Party Organ	Party's top decision-making body when the National Congress of the CCP is not in session
Central Military Commission (CMC)	"Single institution with two nameplates," meaning both a Party and government body	Directs China's armed forces
PLA Cyberspace Force	Surveillance/Data Collector	Collects foreign data
Central Cyberspace Affairs Commission (CCAC)	Party Organ	Policymaking commission chaired by Xi Jinping responsible for cybersecurity and informationization directly under the Central Committee
Cyberspace Administration of China* (CAC)	"Single institution with two nameplates" meaning both a Party and government body	Dual policymaking and enforcement of online content, cybersecurity, data security, and privacy issues directly
State Council		Carries out government's administrative functions. Enacts regulations and instructions on how to execute Chinese law
Ministry of Industry and Information Technology (MIIT)	Regulator	Regulates sector-specific data collection
Ministry of Finance (MOF)	Regulator	Regulates data-related accounting standards
Ministry of Commerce (MOFCOM)	Regulator	Regulates cross-border data flows
National Development and Reform Commission (NDRC)	Regulator	Promotes broader data infrastructure policies
National Data Administration (NDA)	Regulator	Promotes data as a strategic asset
Ministry of Public Security (MPS)	Surveillance/Data Collector	Conducts mass surveillance
Provincial and municipal public security bureaus	Surveillance/Data Collector	Collect day-to-day surveillance data
Ministry of State Security (MSS)	Surveillance/Data Collector	Civilian intelligence and counterintelligence
Regional state security bureaus	Surveillance/Data Collector	Collect foreign information and conduct influence operations and cyber operations

Note: *Referred to as the CCAC Office when referring to its Party function.
Source: Various.[25]

State Council's Ministries Govern Data

Several national-level ministries are tasked with implementing China's data strategy (see Table 1). This distributed structure allows Beijing to pursue two related objectives at once: treating data as a strategic asset to be secured and controlled while developing the institutions and market mechanisms needed to mobilize data for economic and technological competition.

The National Data Administration (NDA), which is managed by the National Development and Reform Commission (NDRC), is the central coordinator for China's data development agenda. Established in 2023, the NDA is charged with building a system that treats data as a factor of production; expanding access to and use of data resources; and planning the country's digital economy and digital infrastructure.[26]

Additionally, the Ministry of Industry and Information Technology (MIIT), Ministry of Commerce (MOFCOM), and Ministry of Finance (MOF)—often in coordination with the CAC, NDA, and other ministries—enforce sectoral data security and development rules, shape cross-border data flows through trade and investment policy, and promote the treatment of data as an intangible asset by firms, thereby ensuring China's data strategy is embedded across the industrial and commercial landscape.[27]

MOFCOM's main function in the data ecosystem is to integrate data into China's trade, services, foreign investment, and economic opening. It aims to promote cross-border data movement that supports digital trade and foreign commercial activity while coordinating with security regulators on the conditions under which those data flows are permitted.[28] MOF's role is to help make data legible as an economic and financial asset. It does not lead in cybersecurity or cross-border data transfer regulation but instead sets accounting rules that allow enterprises to place qualifying data resources on their balance sheets under existing accounting standards.[29]

China's Legal and Institutional Data Architecture

Under Xi Jinping, the Chinese government views centralized control over data as critical to unlocking its value.[30] In his oral testimony before the Commission, Nigel Cory, director with Crowell Global Advisors, described China's top-down data strategy as unmatched internationally.[31] Official Party documents emphasize the importance of data as a "strategic basic resource" that can have a "revolutionary impact" on national governance.[32]

Xi began to articulate the foundations of China's current data strategy in late 2017, when he called for the implementation of a national big data strategy and the development of rules governing data security and oversight. This approach gained institutional weight in March 2018, when Beijing elevated the CAC from a Party leading group to a Party commission. The move strengthened Party oversight of data governance, with the CAC serving as the main regulator.[33] In 2019, Xi called for deeper integration of the internet, big data, and AI alongside "the expansion of technology-security early-warning and monitoring systems."[34]

In more recent years, China's policy has evolved to recognize the value of data in other contexts. In a 2021 speech to the Politburo

Study Session, Xi articulated a broader view of data as an asset, identifying China's vast resources in data as a source of national power and stating that China must "give full expression to the advantages of mass data and rich application settings."[35] Beijing's policy framework accordingly expanded to include a range of policies focused on treating data as an asset and expanding ways to collect, organize, analyze, and increase the value of data in advancing CCP priorities. Beijing now treats data as key enablers and prerequisites of data-driven development. In Beijing's view, though, data should only be monetized, shared, and industrialized at scale if the state first controls where they flow, who can access them, and how they are used—making legal control over data circulation not a barrier to growth but the condition that makes growth possible.[36]

Following a decade of fragmented and shifting priorities among national security, privacy protection, and economic development, Beijing has accelerated efforts in unifying its data governance regime.[37] Five pillars anchor Beijing's approach, and the pace of rollout has accelerated (see Table 2 below).[38]

Table 2: The Five Pillars of China's Data Governance Strategy

Function	Beijing's Objectives	Key Regulations and Measures
State Access—Ensure the state can obtain data when required	Establish legal authorities to compel companies, organizations, and individuals to cooperate with the state's intelligence and security entities when requested.*	National Intelligence Law (2017) Data Security Law (2021)
Data Control—Keep strategically important data within Beijing's regulatory reach	Establish localization, classification, security-review, and cross-border transfer requirements that give authorities greater oversight over sensitive and important data.	Cybersecurity Law (2016, effective 2017) Data Security Law (2021)
Data Protection—Regulate how organizations collect, process, and transfer data	Establish privacy and data security obligations, particularly for personal data and information deemed "sensitive," while regulating overseas transfers.	Personal Information Protection Law (2021) Data Security Law (2021)
Data Mobilization—Turn data into an economic and technological resource	Encourage data sharing, circulation, commercialization, aggregation, and reuse to support the digital economy, AI, industrial upgrading, and government administration.	Factor-of-production policies (2019–2020) Twenty Data Articles (2022)
Institutionalization—Build the state capacity to govern and exploit data at scale	Create institutions, infrastructure, standards, markets, and accounting mechanisms to implement the broader data strategy.	National Data Administration (2023) Data exchanges; public data infrastructure; data asset accounting

Source: Various.[39]

*Critically, it is important to note that these laws do not automatically give the Chinese government access to all data within its assumed legal jurisdiction; rather, they set the legal precedent for the Chinese government to require entities to hand over their data when asked.

With data governed from a national security perspective and China's evolving policy framework focused on data from an economic perspective, Beijing plans to direct the development and circulation of data as a "factor of production" while strengthening its digital economy. By modernizing and expanding its data policy framework, Beijing aims to harness data as a source of new economic value and as an input into AI and other industries to help offset the drag from slower growth in sectors such as real estate.[40] Senior officials, including Xi Jinping, emphasize data's role in powering AI and supporting a wide range of industrial applications, arguing that data-driven innovation can both upgrade the economy and accelerate the development of emerging technology sectors.[41]

Beijing is seeking to institutionalize this data-driven development perspective through the regulatory and bureaucratic framework of the NDA and a broader national data ecosystem.[42] In December 2024, the NDRC, NDA, and MIIT released an ambitious plan to build a National Data Infrastructure, targeting expansion across large and medium-sized cities by 2028 and completion by 2029.[43] The plan spans finance, agriculture, healthcare, transportation, education, and science.[44] The National Data Infrastructure would be a system of data centers, networks, standards, and technical platforms that collects, stores, transmits, processes, and exchanges data across government agencies, industries, and regions in China—functioning as the physical and technical backbone that allows data to be gathered, shared, and used at national scale.[45] NDA Director Liu Liehong has framed the initiative in explicitly competitive terms, citing the need to catch up to "early-leading countries such as the United States" in core technologies.[46] The project remains in its design phase, with China expected to invest 400 billion renminbi (RMB) ($54.5 billion) annually over five years—a total commitment of RMB 2 trillion ($272.7 billion).[47]

Beijing further elevated its data infrastructure in April 2026, when the Politburo called for development of the "Six Networks" infrastructure plan, placing computing power networks alongside water, electricity, next-generation communications, pipelines, and logistics as foundational infrastructure.[48] Chinese policymakers envision the Six Networks forming a modern infrastructure system integrating physical components, data, intelligent connectivity, and green connectivity. The computing power network is intended to link computing facilities nationwide to enable computing resources and data to move between regions.[49] By August 2026, the NDRC had begun establishing mechanisms to coordinate the computing power, electricity, and communications networks through major grid operators, telecommunications carriers, and computing power companies.[50]

Beijing also launched the World Data Organization (WDO). The WDO seeks to shape norms on global data governance and cross-border data sharing. In March 2026, Xi stated that the organization is intended to deepen international data cooperation and improve global data governance.[51] Upon its launch, the WDO claimed 233 domestic and foreign members, including 70 founding participants drawn from companies, universities, think tanks, international organizations, and financial institutions spanning 14 industries and 40

countries.[52] Although the organization has not disclosed its membership, Chinese state media reports suggest that approximately 67 percent of members are corporate entities, including multinational corporations and their Chinese subsidiaries, such as Tesla Shanghai and Intel China, as well as leading Chinese AI firms.[53]

The WDO also fits within China's broader efforts to shape international standards and governance frameworks for emerging technologies. In testimony to the Commission, Edward You, founder and principal of EHY Consulting, noted that participation in international standards-setting bodies provides a pathway for influencing how technological systems are structured and adopted globally.[54] Mr. You argued that China's emphasis on standards development reflects its recognition that standards-setting is not merely a technical exercise but a mechanism for shaping the global adoption and scaling of key emerging technologies.

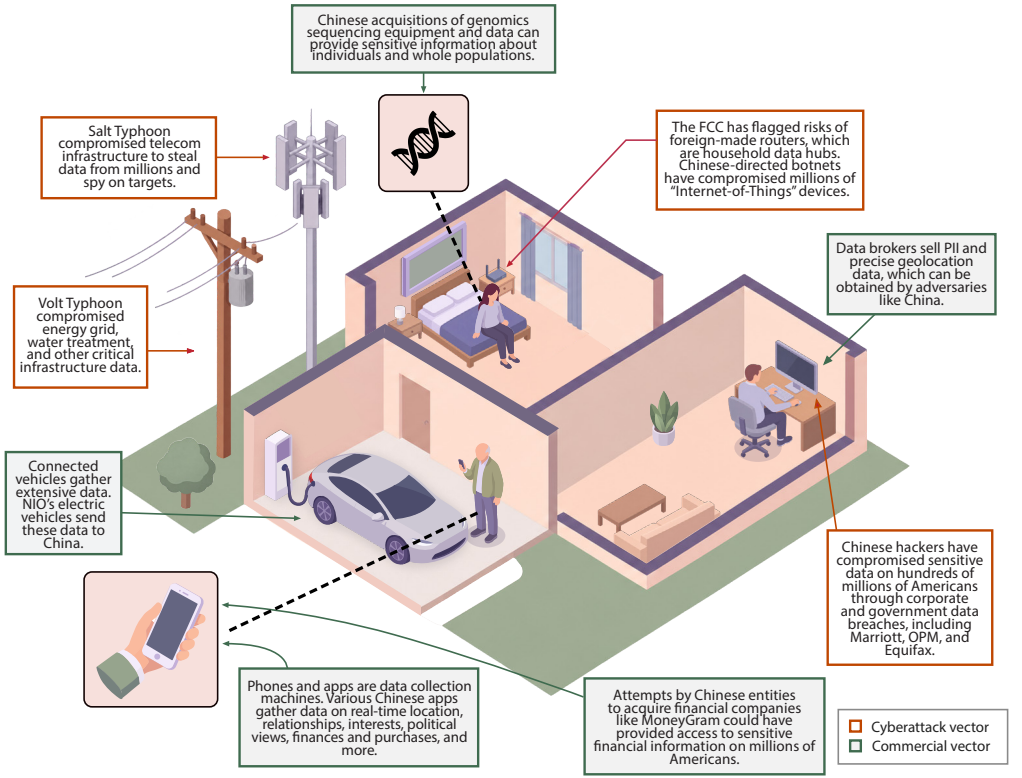
Collect: How China Steals, Gathers, and Buys Data

China's data collection ecosystem involves state and non-state entities that obtain foreign data through two complementary vectors: cyber operations and commercial channels. China acquires data through direct state operations and a "hackers-for-hire" ecosystem that expands scale while obscuring attribution. While data theft is a primary aim of China's attributed cyber operations, it is only one ironically visible component of a far broader collection apparatus. The commercial vector is potentially far larger in scope than cyber data theft, reaching into the ordinary products and transactions of daily life (see Figure 1). Taken altogether, the two vectors reveal a comprehensive approach that exploits both the vulnerability of open connectivity systems and the openness of global markets.

Cyberattack Vector: State-Sponsored Entities and "Hackers for Hire" Steal Data

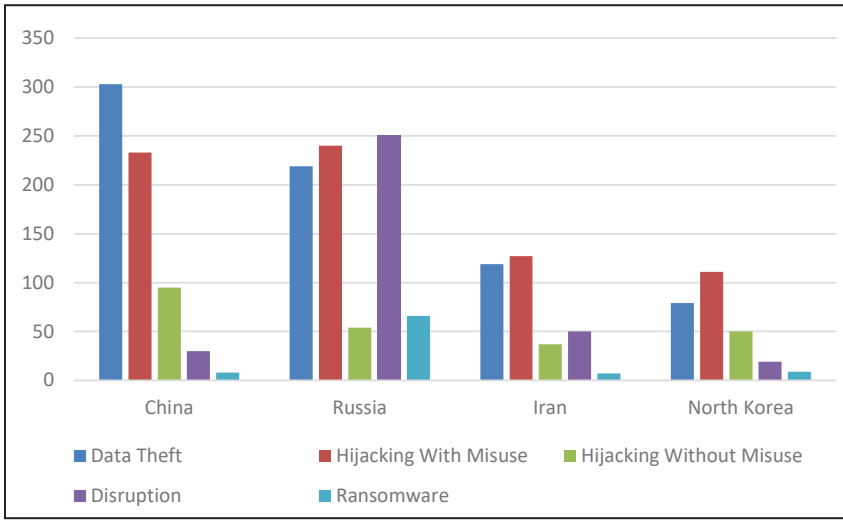
Amazingly, despite decades of unbridled behavior, China's cyber espionage and data theft operations continue to expand. Based on publicly available information, data theft is the dominant objective of Chinese-attributed cyberattacks—far more so than for other major state-sponsored attackers from Russia, Iran, and North Korea (see Figure 2). According to the European Repository of Cyber Incidents—an independent research consortium that compiles a database of cyber incidents worldwide—nearly 70 percent of cyberattacks attributed to Chinese actors were for data theft, compared to 44 percent by Russian threat actors as of June 2026.

Figure 1: Cyberattack and Commercial Vectors of China's Data Collection



Source: Various.[55]

Figure 2: Number of Cyberattacks by Type of Attack and Country of Origin (2000–2026*)



Note: *As of June 8, 2026. Attack categories are not mutually exclusive; a single incident may appear in more than one category. Category counts therefore should not be summed. A cyber incident may be attributed to data theft and hijacking with misuse.
Source: Various.[56]

Chinese cyber operations have collected data spanning critical sectors. These long-duration government-sponsored or -tolerated operations—often called "Advanced Persistent Threat" (APT) groups, but more appropriately called intelligence operations or operational preparation of the environment—collect data at scale. Operations affiliated with China have targeted key industries such as defense and critical infrastructure and have also targeted public-sector entities, collecting sensitive intellectual property and technical data, financial data, PII, and government intelligence.[57] According to Google Mandiant, state-sponsored cyber espionage group Comment Crew has conducted large-scale data theft—hundreds of terabytes (i.e., the size of hundreds of modern-day laptops)—from at least 141 organizations across aerospace, scientific research, agriculture, and education.[58] Across the China-attributed groups Google Mandiant tracks, the most commonly exfiltrated data types are intellectual property and research and development (R&D) data, such as proprietary designs, engineering plans, and research that give Chinese organizations a competitive edge.[59] Other groups pursue government policy data, diplomatic material, and personal information on dissidents, journalists, and Tibet- and Xinjiang-related activists rather than corporate secrets.[60]

PLA, MPS, MSS Cyber-Enabled Data Operations

Chinese ministries, including the PLA, MPS, and MSS, conduct cyber operations targeting military, political, economic, and personally identifiable information from the United States and other targeted countries and groups.[61] Chinese state-sponsored hackers have focused most of their data collection on foreign populations

and institutions, reflecting their calculation that population-scale datasets provide durable value for espionage and counterintelligence.

The PLA Collects Foreign Data

The PLA Cyberspace Force, under the direction of the Central Military Commission, plays a role in China's foreign data collection efforts. The PLA Cyberspace Force's responsibilities are distinct from the MSS's broader foreign espionage role, discussed below. PLA writings characterize network reconnaissance as a peacetime military cyber activity conducted to exploit adversary data and information and prepare for later network attacks.[62] Publicly available information on the PLA's cyber operations remains limited but indicates a range of activities focused on collecting data on both military and non-military targets, including large datasets on Americans. In 2014, the U.S. Department of Justice (DOJ) indicted five PLA officers for stealing sensitive data on U.S. nuclear power, metals, and solar products industries. A January 2020 indictment against Yanqing Ye alleged that while she was studying at Boston University's Department of Physics on a J-1 visa, she was conducting research for the PLA, including accessing U.S. military websites and sending U.S. documents and information to China. Other PLA cyber actors such as PLA Unit 61486 have been found to be targeting government, military, and technology targets across Europe, Japan, South Korea, Russia, and Central and Southeast Asia as well as U.S. military assets in the aerospace, satellite, and communications technology industries.[63]

Volt Typhoon demonstrates China's strategic understanding of the value of data. Suspected to be affiliated with the MSS or PLA, Volt Typhoon has conducted wide-scale infiltration of critical infrastructure networks in the United States and around the world, specifically gathering data on systems that could sabotage the infrastructure during a time of Beijing's choosing—a focus consistent with PLA doctrine.[64] With activity dating back to at least 2021, Volt Typhoon has compromised the information technology environments of numerous critical infrastructure organizations in the United States, primarily in the communications, energy, transportation systems, and water and waste systems sectors.[65] In 2025, reporting revealed a years-long intrusion of a local water utility in Massachusetts—the Littleton Electric Light and Water Departments—to obtain sensitive data on its operations, including control system procedures and energy grid layout data.[66]

PLA-attributed activities also include vast data theft on Americans. Four members of the PLA's 54th Research Institute—a Chinese military-backed hacker group—were indicted for hacking into Equifax to steal sensitive PII, proprietary database schemas, and data compilations.[67] From May to July 2017, these PLA hackers compromised Equifax data containing personal information on approximately 145 million Americans—nearly half the U.S. population—including Social Security numbers and dates of birth as well as at least ten million driver's license numbers and approximately 200,000 consumers' credit card information and other PII.[68] Then–U.S. Attorney General William Barr noted the potential intelligence

value of the Equifax breach: "This data has economic value, and these thefts can feed China's development of AI tools* as well as the creation of intelligence targeting packages," for instance tracking and coercing U.S. officials and identifying opportunities for blackmail and entrapment.[69]

The MPS and MSS Collect Domestic and Foreign Data for Surveillance

The Chinese government relies primarily on the MPS and MSS to conduct large-scale data collection from domestic and foreign sources.[70] The MPS, which functions as China's national police force, is chiefly responsible for domestic law enforcement, mass surveillance, and monitoring and suppressing dissidents through extensive physical and digital tracking systems.[71] As former Minister of Public Security Meng Jianzhu said as early as 2015, big data is important to "find order… in fragmented information" and "to pinpoint a person's identity."[72]

Beneath the MPS, a nationwide network of provincial and municipal public security bureaus has varying degrees of autonomy to carry out data collection activities.[73] These bureaus implement day-to-day surveillance and data collection, including household registration, identity card management, and the integration of camera networks, facial recognition systems, and "Safe City" platforms into local monitoring.[74] Through these data collection activities, the bureaus can track key individuals and feed data on residents into higher-level public security and intelligence databases, thereby operationalizing China's mass surveillance state.[75]

The MSS, by contrast, serves as China's main civilian intelligence and counterintelligence agency.[76] It focuses on disrupting foreign espionage, monitoring individuals and organizations with overseas ties, and surveilling ethnic minorities and political opponents it views as threats to state security while also playing a central role in foreign intelligence collection and cyber-enabled data exfiltration.[77] The MSS also operates through regional bureaus to gather intelligence abroad on a wide range of government policies, national security matters, and technological and scientific developments, with the United States among its primary intelligence targets.[78]

Salt Typhoon is an MSS cyber operation focused on mass data collection and espionage. Salt Typhoon has carried out well-documented, broad, and sophisticated cyber espionage campaigns targeting U.S. government systems and citizens. Starting in 2024, the group carried out one of the worst-ever breaches of U.S. telecommunications companies that compromised the metadata of over one million individuals.[79] In 2025 it continued its activities, infiltrating state government and U.S. National Guard networks and targeting congressional email systems for large-scale data collection and reconnaissance, among other malign activities.[80]

*Notably, this time frame pre-dated the public release of ChatGPT and the very rapid AI development since 2022.

"Harvest Now, Decrypt Later" Operations

China's "harvest now, decrypt later" (HNDL) operations collect vast amounts of encrypted data today in anticipation of near-future decryption capabilities of quantum computers.*[81] While the exact arrival date of cryptographically relevant quantum computers remains unclear,† the convergence of AI and quantum is likely to shorten the window.[82] In the meantime, HNDL collection efforts—and a failure to ensure data are protected by post-quantum cryptography—create a present-day security risk.[83] Chinese government officials and scholars publicly warn of the HNDL threat, even as China-affiliated cyber operations collect encrypted U.S. data that could retain intelligence value for decades, including biometric data, covert intelligence officer and source identities, Social Security numbers, security clearance information, and weapons designs.[84] Beijing can retain this encrypted information until advances in quantum computing enable its decryption, after which the information could be combined with other collected data to generate additional intelligence value.[85]

In addition to the exfiltration of large amounts of encrypted data, China's HNDL efforts are apparent in other ways. In 2025, SentinelLabs researcher Dakota Cary identified more than ten patents for intrusive data collection technologies—including technologies that allow for the acquisition of encrypted endpoint data—registered by companies linked to Chinese state-affiliated threat actor Hafnium (also known as Silk Typhoon).[86] Hafnium was responsible for the 2021 breaches of Microsoft Exchange servers on behalf of the Shanghai State Security Bureau, a local bureau of the MSS.[87] Through that campaign alone, Beijing targeted more than 60,000 U.S. entities and compromised sensitive data from over 12,700 victims worldwide across healthcare, law firms, higher education, defense contractors, policy think tanks, and non-governmental organizations based in the Five Eyes,‡ the EU, and Japan.[88]

The Chinese government and academic institutions are actively responding to the HNDL threat. The Shanghai municipal government, for example, has identified HNDL as a current cybersecurity concern in its 2026 quantum cryptographic security initiative.[89] Similarly, a 2025 report by Xi'an Jiaotong-Liverpool University cited HNDL as demanding immediate and sustained response strategies and described the quantum threat as "not merely a future event but a present-day risk."[90]

Chinese Government Deploys "Hackers for Hire" to Steal Data

To expand their scale and further increase their plausible deniability, the MSS and MPS leverage a network of state-owned firms, private firms, universities, and contract hackers to acquire

*The national security and policy community has long discussed China's "harvest now, decrypt later" strategy, but the rapidly growing AI capabilities have increased the urgency of this concern.

†For an analysis of U.S.-China competition in quantum computing and other quantum technologies, please see U.S.-China Economic and Security Review Commission, Vying for Quantum Supremacy: U.S.-China Competition in Quantum Technologies, November 18, 2025.

‡The Five Eyes countries are Australia, Canada, New Zealand, the UK, and the United States.

foreign data. In his testimony before the Commission, Joseph Lin, chief executive of U.S.-based cybersecurity startup Twenty, noted that China's cyber activities include "formal intelligence services, contractors, access brokers, and data intermediaries operating with overlapping incentives."[91] The partnership between the Chinese state and its industry hackers operates under a "hackers-for-hire" model to steal data globally, which DOJ described as "reckless and indiscriminate."[92]

The "hackers-for-hire" model allows the state to cultivate a broader bench of technical expertise while expanding its data collection campaigns and obscuring direct involvement in efforts that target not only rival governments and militaries but also dissidents, journalists, foreign officials, and businesses in critical sectors.[93] In some operations, the Chinese intelligence services give direct orders for specific targets. For example, both the MSS and MPS contracted Chinese technology firm Anxun Information Technology (also known as i-Soon) to conduct cyber operations targeting foreign companies and Chinese dissidents abroad.[94] DOJ's indictment against eight employees of i-Soon alleges the group hacked and sold data to at least 43 separate MSS and MPS bureaus in 31 provinces in China.[95] In others, the extent of agency involvement is more opaque. In September 2026, the *Wall Street Journal* reported on Chinese "hackers-for-hire" company Zhengzhou Zhirong Network Technology (also known as ZRON), which has stolen data from governments in the United States, Russia, the Philippines, Taiwan, and Pakistan to sell through illicit channels and to Chinese authorities.[96]

China's "hackers-for-hire" ecosystem is designed to purposefully blur the line between state-directed espionage and independent cybercrime. While attribution in the field of cybersecurity is generally challenging, these threat actors use techniques to make detection even more difficult and provide similar services to state and non-state clients.[97] Chinese mercenary "hackers for hire" often conduct state-sponsored espionage while engaging in parallel financially motivated cybercrime and data brokering, generating independent revenue streams by selling exfiltrated data through Chinese data brokerage networks.[98] For example, DOJ indicted Zhou Shuai for acquiring data from highly sensitive U.S. critical infrastructure networks and then selling the stolen data through i-Soon.[99] These operations may be outside of the state's direction, but the Chinese government looks the other way as entities that support its broader hacking and data collection efforts engage in rampant criminal activity. As another example, a Chinese state-affiliated group reportedly exfiltrated data from healthcare, high-tech, telecommunications, and government targets on behalf of Chinese government clients during normal working hours.[100] At night, the group targeted the video game industry for financially motivated reasons, using the same tools and non-public malware typically linked to Chinese espionage actors.[101]

Hacked, Packaged, and Sold: How China's Darknet Economy Hurts Americans

Data stolen by Chinese state-sponsored hackers can enter a broader commercial ecosystem in which stolen information is brokered and sold to additional customers.[102] Underground platforms enable anonymous trade in stolen data, credentials, and other cyber toolkits for data acquisition, often via cryptocurrency exchanges. While the Chinese government has made some efforts to shut down these criminal data-sharing platforms, they continue to adapt, with new markets replacing those taken offline.[103] U.S.-based cybersecurity company Recorded Future identified the following examples in 2022: Tengu marketplace advertised the sale of databases, including email addresses with passwords and U.S. driver's licenses, while Chang'an Sleepless Night marketplace offered various stolen data, including PII, protected health information, and loan and retail data.[104]

These underground markets create privacy and financial risks beyond the initial data breach. The problem is especially pronounced with China's "hackers-for-hire" efforts, since such companies have both state-directed and criminal efforts going in parallel. Data, or a backdoor, acquired for government purposes can be repurposed for darknet sales. In early 2024, Taiwan's Defense Ministry accused threat actors with ties to the Chinese government of breaching Taiwan's largest telecommunications company, Chunghwa Telecom, and stealing sensitive documents from the military, foreign affairs ministry, and coast guard before selling the data on the dark web.[105] DOJ accused i-Soon of selling excess stolen data to various customers other than state clients.[106]

The Wild West of Data for Sale: China's Lawful Campaign to Gain Access to Foreign Data

While hacking receives attention as a vector by which China obtains U.S. data, it may well be just the tip of the iceberg. China may have access to vastly more data through legal collection avenues. China's designation of data as a strategic factor of production has pushed private Chinese companies to expand their own collection efforts. While most of this activity serves ordinary commercial purposes, China's legal architecture—particularly the National Intelligence Law and the Data Security Law—enables the government to compel Chinese companies to share data on demand. The risk that commercially collected data reach Chinese authorities and advance state objectives is therefore structural rather than hypothetical. Even more concerning is the vast scope of data available to Chinese companies, given the routine data collection at the heart of many products and services in which Chinese companies are active globally.

Stockpiling Data Behind Closed Doors

China combines state direction with commercial execution to build specialized and non-public data for its benefit. With the open web largely exhausted as training data, competitive advantage now rests on the proprietary, non-public data held inside companies and

institutions that cannot be publicly scraped.[107] Rather than relying solely on government collection, Beijing establishes legal authorities, technical standards, and national platforms while leveraging state-owned and private companies to generate, aggregate, and operationalize specialized data at scale. This public-private model allows the state to shape data collection and standardization while drawing on commercial actors' access to domestic and global data sources.[108] Three domains illustrate the breadth and depth of this effort: biological data, embodied AI data, and logistics data.

China Amasses Genomic and Biological Data for Research and Targeting

China has built one of the world's most extensive genomic and biological data repositories. This decade-long effort predates and now operates alongside more recent state controls over biological data, such as the 2020 Biosecurity Law, which designated human genetic and biological data as state-controlled national resources while restricting foreign access.[109] In 2011, China initiated the China National GeneBank (CNGB) database through a public-private partnership with BGI Research—a nonprofit division of China's biotech giant BGI.[110] Five years after the ideation phase, China launched its first national-level gene bank facility that operates "three banks and two platforms," including a biorepository, bioinformatics data center, living biobank, digitalization platform, and synthetic and editing platform.[111] CNGB's biorepository freezes and tracks more than ten million biological samples; its bioinformatics data center manages and analyzes genetic data; its living biobank preserves live genetic resources; its digitalization platform turns those samples into genetic data at very high volume; and its synthesis/editing platform uses that information to design and modify DNA.[112]

The strategic value of such repositories extends well beyond research. Large individualized genetic datasets carry security implications, including the potential to identify individuals from trace samples.[113] Over a longer time horizon as biotechnology evolves, such data may be used to harm specific populations or even individuals.[114]

China aims to amass domestic biological data and maximize access to foreign datasets while restricting reciprocal access to comparable Chinese data. In the UK, Chinese researchers had access to the UK Biobank—a dataset containing detailed health and genetic information from approximately 500,000 volunteers—until April 2026, when UK authorities suspended access for the implicated institutions after discovering that data on all Biobank participants had been listed for sale on Alibaba's platform in China.[115] Additionally, Chinese researchers also had access to 21 biological databases maintained by the U.S. National Institutes of Health (NIH) until the agency restricted access in April 2025, including repositories containing information on genetic variation, cancer cases, and neurodegenerative diseases.*[116] By contrast, Chinese biobanks that collect comparable genetic and clinical data have remained closed or restricted to for-

*In 2025, DOJ issued a regulation restricting access to government data or bulk "sensitive personal U.S. data" to "countries of concern," including China, and people and companies in those countries. The provision exempted certain drug, biological product, and medical device authorizations and data from medical research or clinical trials covered by other regulatory frameworks.

eign researchers.[117] Chinese regulations on human genetic resources and cross-border genomic data sharing have required foreign institutions to undergo security reviews and obtain approvals for collaborative projects, and they limit how health and genetic data can be exported or made available to overseas partners.[118]

China Builds Robotics Datasets to Pull Ahead in Embodied AI

China is leveraging private firms to generate the large-scale, high-quality datasets required for embodied AI, while the state establishes common standards to ensure interoperability and use. For example, China's leading humanoid startup AgiBot has built dedicated facilities to generate training data by deploying robots in various scenarios.[119] The company's embodied intelligence ecosystem—AgiBot World—contains large volumes of high-quality, annotated manipulation data across 217 distinct tasks from over 100 robots deployed in the physical world.[120] Another effort involves cooperation between government and industry. In late 2023, Beijing state-linked and private companies—including Jingcheng Machinery & Electric, E-Town Robotics, UBTECH, and Xiaomi Robotics—jointly established the Beijing Embodied Intelligent Robot Innovation Center.[121] In October 2024, MIIT and the Beijing Municipal People's Government upgraded the center to the National and Local Joint Embodied Artificial Intelligence Robotics Innovation Center, discussed in detail in a later section.[122] To standardize this growing embodied AI data collection ecosystem, MIIT released its Intelligent Data Collection Standard 1.0 for embodied AI, proposing a unified framework for formatting, labeling, refining, and quality-controlling multimodal robot training data.[123]

China Builds Platforms to Track Global Trade and Logistics Data

China operated perhaps the largest trade logistics database in the world that tracked the movement of ships and goods in near real time across global supply chains. Established in 2007 and subsequently elevated to a national platform by China's Ministry of Transportation, the National Transportation and Logistics Public Information Platform (LOGINK) grew into a logistics intelligence system drawing on data from at least 86 ports across 24 countries.[124] LOGINK leveraged the role of China's state-owned enterprises (SOEs) and private Chinese firms in global commerce and logistics infrastructure (e.g., port operations, container ships) to extend its access to a broad range of trade and logistics data, reportedly including access to real-time movement data of 90 percent of the world's container ships.[125] Rice University's Baker Institute for Public Policy estimated that as of 2020, LOGINK's international network positioned the platform to potentially have visibility into at least half of all global container flows that year.[126] Beyond vessel location, LOGINK could have provided access to granular shipment data, including sellers and buyers, cargo contents, weight and value, shipping routes, customs and inspection status, freight prices, and related financial and corporate information.[127] To prevent the Chinese government from gaining near-real-time visibility into critical

Access to U.S. Sensitive Personal Data and Government-Related Data by Countries of Concern or Covered Persons, 28 C.F.R. Part 202, 2025.

information about global supply chains, in 2023 the United States banned certain U.S. entities from using the platform and began encouraging allies and partners to do the same.[128] A *Reuters* article on October 5, 2026, indicated that U.S. efforts had been successful and suggested LOGINK's role in global maritime logistics has been significantly curtailed.[129]

Connected Apps, Devices, and Vehicles: Continuously Collecting Personal Data

As Chinese-made connected products become more deeply embedded in daily life, they provide additional vectors to collect valuable data through routine consumer and commercial activity, including data that can be used to develop detailed "pattern-of-life" analyses. The continuous collection of location, operational, and behavioral data throughout a device's lifecycle transforms connected products from one-time data sources into enduring platforms for data generation. As disclosed in the fine print of their terms of service, smartphones, wearable devices, cameras with cloud storage, any "smart" home products (e.g., thermostats, speakers, vacuum robots), connected vehicles, and other internet-connected technologies collect information as a matter of course, which can include data on users' locations, movements, behaviors, and—in some cases—biometric characteristics.* Individually, these data may appear benign. However, when continuously collected and aggregated, they can reveal detailed insights into individuals or systems, including routines, purchasing patterns, banking and credit card information, relationships, activities, and physical environments. When fused with other data, these kinds of data can generate "pattern-of-life" information that allows intelligence services to expose outliers and enable further operations. (For more, see Appendix I: Techniques for "Pattern-of-Life" Analysis.)

Connected vehicles illustrate the scale of this data collection. Modern vehicles contain dozens of sensors and connected systems that generate information on vehicle location, driving behavior, camera and audio recordings, navigation routes, and the surrounding environment.[130] This vast collection creates a risk that data from connected vehicles may be transmitted to servers outside the country of operation.† In January 2025, the U.S. Department of Commerce's Bureau of Industry and Security issued a rule restricting imports of certain connected vehicles from China over concerns that Chinese companies can be compelled to

*Terms of service govern the basic relationship between service providers and consumers, including what data are collected, under what circumstances, and how they may be used or shared. While consumers often express concern about privacy in the abstract, it is common for users to consent to terms of service without a complete understanding of what they contain. A 2019 Brookings Institution survey found that three-quarters of respondents agree to the terms of service without reading them. A 2026 survey by Goldberg Law Group also found that nine in ten Americans have clicked "I agree" on digital terms and conditions without reading them. Even if consumers did read the terms, most terms of service are non-negotiable and consumers must accept terms established by the service provider or forgo the service altogether. "The Fine Print Problem: How Americans Really Interact with Contracts," *Goldberg Law Group*, accessed August 17, 2026; Darrell M. West, "Brookings Survey Finds Three-Quarters of Online Users Rarely Read Business Terms of Service," *Brookings Institution*, May 21, 2019.

†Connectivity, coupled with internet-based control, creates risks of remote access and cyber exploitation as well. Testing of Chinese-made Yutong electric buses operating in Norway found that the manufacturer retained live remote access to vehicle control systems through mobile network connections. "Tests Showing Chinese-Made Buses Can Be Stopped Remotely Prompt Norwegian Pullback," *Associated Press*, November 6, 2025.

share data or allow remote access to these vehicles in the United States.[131] Independent testing also shows these risks are realized, not theoretical: some Chinese electric vehicles collect local data and transmit them to servers in China. A researcher at Norway-based threat intelligence company Telenor Group audited the Chinese-manufactured NIO electric vehicle and found that 90 percent of the data communications were sent to China.[132] They even found that the vehicle's software processed voice command data outside the vehicle even for simple commands.[133]

Beyond vehicles, Chinese-made components in other connected devices such as drones pose a similar data transmission threat. In August 2026, a spokesperson from Britain's Ministry of Defense (MOD) shared that cameras installed on British naval drones were found to have sent data to an internet address in China. British authorities stated that the signal came from a Chinese-made component in the K3 Scout drone boat manufactured by UK-based Kraken Technology.[134] After an investigation, authorities claimed the component did not broadcast any sensitive information and that they did not find any evidence of MOD data or systems being accessed, compromised, or transmitted externally.[135] Nevertheless, the discovery—made during routine cybersecurity testing—underscores a critical vulnerability in military supply chains that rely on Chinese components.[136]

Connected robotic devices are another commercial vector for data collection. According to the Federal Communications Commission (FCC), many advanced robotic devices carry high-fidelity sensors, including LiDAR, electro-optical/infrared, acoustic, and thermal sensors, that generate data valuable to foreign intelligence services, such as detailed maps of their operating environments.[137] While there is no public evidence of China exploiting this vulnerability, independent testing shows that Chinese-made DJI vacuums have backend security flaws that allow intruders to access their cameras, microphones, and floorplan maps.[138] One engineer, for instance, accidentally gained control of nearly 7,000 devices across 24 countries.[139]

The Federal Bureau of Investigation (FBI) has warned that Chinese mobile applications also collect and send data back to China, and some even install malware that could collect data beyond users' authorization.[140] WeChat, used by Chinese diaspora communities to stay in contact with family and communities in China, collects data that could be exploited to monitor, coerce, and run influence operations against those same users.[141] In 2020, Canadian research group Citizen Lab conducted a technical assessment of WeChat communications and found that content transmitted entirely among accounts registered outside China was subject to pervasive surveillance.[142] The researchers found that documents and images exchanged exclusively among non-China-registered accounts were analyzed for politically sensitive content and that content identified through this surveillance was subsequently used to strengthen WeChat's censorship system for China-registered users.[143] The study found that Tencent did not disclose or confirm whether WeChat routinely collected personal data, including geolocation information, IP address logs, PII, and any content exchanged between users.[144] These

findings demonstrate that WeChat's content surveillance extends beyond communications involving China-registered accounts.[145] Beyond social media apps, the researchers also found that Chinese e-commerce apps such as Shein and AliExpress "demonstrate expansive data-gobbling practices" and shared those data with third parties that the researchers could not identify.[146] The types of data collected by the Chinese apps include but are not limited to location, PII, financial and health information, photos, videos, contacts, and audio, with the specific categories varying by app.[147]

The possibility of constant connectivity to China also means Chinese-connected devices and apps contain the potential for inherent cyber and operational vulnerabilities. On July 27, 2026, the FCC announced a National Security Determination stating that foreign-made power inverters and robots pose national security and safety risks. The FCC identified the potential for foreign-produced power inverters to collect and exfiltrate data; it also named surveillance, intelligence collection, and remote commandeering among the risks posed by advanced robotic devices.[148] As discussed in the Commission's 2025 Annual Report, connected inverters provide users with real-time data collection and remote access, which can create a cyber vulnerability.[149] The UK's National Cyber Security Centre and 15 international partner agencies from nine countries, including the United States, warned that China-linked cyber actors use large-scale networks of compromised routers, IoT devices, and other connected devices to disguise and conduct malicious cyber activity.[150]

The FBI has repeatedly found botnets in the United States that are either reliant on connected consumer devices manufactured in China or controlled by Chinese entities. Botnets are networks of internet-connected devices that are infected with malware, are controlled remotely by an attacker, and are hard to track since they blend in with normal network traffic.[151] In June 2025, the FBI issued a warning about the Badbox 2.0 botnet that infected millions of Chinese-manufactured Android-based devices sold to consumers globally, including in the United States.[152] In other cases, China-based entities used botnets that relied on consumer electronic devices, many of which are manufactured in China. The FBI assessed that internet routers, internet protocol cameras, and other network-attached storage devices were infected with a botnet controlled by Beijing-based Integrity Technology Group, which is responsible for state-sponsored Flax Typhoon operations that created a database containing over 1.2 million records of compromised devices, including over 385,000 unique devices in the United States.[153] More recently, in August 2026, the FBI and the National Security Agency (NSA) disrupted a botnet operation by China-based Nanjing Xinjiuwei Network Technology, which has sold access to hacked networks and stolen information to China's foreign and military intelligence services since 2018.[154] According to an affidavit used in that effort, actors working for Nanjing Xinjiuwei, also known by the name QTFY, developed and sold products that could automatically scan and exploit thousands of vulnerable IoT devices worldwide and then use those devices as nodes to further extend the reach of its botnet network.[155]

Commercial Data Markets Obscure Foreign State Access to U.S. Data

Commercial data markets provide a path for Chinese firms and researchers to acquire foreign data through business transactions.[156] These markets provide ready access to vast amounts of data with immense intelligence value.

Data brokers (see textbox below) play a central role in the global data ecosystem by aggregating and selling often sensitive personal information collected from numerous sources. While many of these data are used to tailor digital advertising, the amount and scope of data available are vast, and studies have shown that they can be de-anonymized easily, tied to specific individuals, and repurposed for more alarming objectives.[157] A 2021 study by a Duke University researcher found that data brokers were "openly and explicitly" advertising sales of data on "U.S. individuals' sensitive demographic information, on U.S. individuals' political preferences and beliefs, on U.S. individuals' whereabouts and even real-time GPS locations, on current and former U.S. military personnel, and on current U.S. government employees."[158] A separate 2023 study by the same researcher demonstrated that foreign purchasers could obtain detailed datasets on active-duty U.S. military personnel and their family members, including home addresses, health information, financial details, and more, through commercial data brokers with minimal scrutiny.[159] In 2024, *Wired* and two German news organizations did a joint investigation demonstrating that they could easily access, identify, and track individuals in sensitive U.S. and allied installations in Germany using commercially available digital advertising data, including a suspected secret NSA signals analysis facility, a restricted weapons testing facility, and a nuclear weapons storage facility.[160] Their investigation found that these data could be used to identify operational routines and some aspects of security protocols at a military base, which personnel have access to sensitive facilities, and even activity that might expose some of the tracked individuals to blackmail (e.g., visits to a brothel).[161] The report described a prior briefing to the U.S. military that used similar data to track the movement of U.S. special forces to a covert forward operating base in Syria.[162]

Some legislation and executive branch actions have sought to address concerns over data brokers. Congress enacted the Protecting Americans' Data from Foreign Adversaries Act (PADFAA) in 2024, prohibiting data brokers from selling or otherwise providing sensitive personal data on U.S. individuals to foreign adversaries or entities under their control, including China and companies organized in China.[163] Pursuant to Executive Order (EO) 14117 in February 2024, DOJ established a Data Security Program (DSP) that effectively prohibits certain categories of data transactions that would give foreign adversaries access to bulk U.S. sensitive personal data (including genomic, geolocation, biometric, health, and financial data) or certain government-related data, even for "first-party" data (see textbox).[164] DOJ published compliance guidance for the DSP in 2025, but critics assert it has since "largely remained inert."[165] The program lacks necessary funding, and the president's fiscal year

2027 budget submission did not include any further budget requests for it.[166]

Despite these congressional and executive branch efforts, there are signs data brokers continue to sell American data to U.S. adversaries. In February 2026, the Federal Trade Commission (FTC) reminded 13 commercial data brokers of their obligations under PADFAA and urged them to review their data-sharing practices, citing concerns that sensitive data—including information related to U.S. armed forces personnel—could otherwise be made available to foreign adversaries.[167] In March 2026, the California Data Broker Registry listed at least 33 registered brokers that reported selling or sharing data with foreign entities in North Korea, China, Russia, and/or Iran, including some datasets that included precise geolocation information.[168] The risk is not just theoretical. In April 2026, U.S. Central Command (CENTCOM) indicated that it had "received multiple threat reports concerning adversary exploitation of commercial location data to target or surveil U.S. personnel in theater," presumably including troops deployed as part of the U.S. conflict with Iran.[169] This is reported to be the first official public confirmation that commercial data had been used to target U.S. forces in an active war zone.[170] A bipartisan group of senators and representatives wrote to DOD expressing concerns that commercially brokered data "can be used to identify where U.S. troops congregate and their pattern of life, which can be exploited by adversaries to target attacks such as missiles, drones, and roadside bombs, as well as for counterintelligence purposes."[171]

Even restricting direct transfers to entities in China does not eliminate indirect pathways for data acquisition. As privacy and security experts have noted, U.S. data may be sold to companies in third countries before being resold or otherwise made available to Chinese entities.[172] As the CENTCOM statement suggested, whether through data brokers, first-party data transactions, or other mechanisms, sensitive data on Americans, including service members, continue to be readily available on the commercial market and accessible to foreign adversaries.[173]

Data Brokers as Defined by Congress and Enforcement Authorities

While a few states define data brokers in their respective laws, there is no uniform definition across federal regulatory frameworks.[174] Congress established a version in PADFAA, DOJ has a somewhat different definition as part of its DSP implementation, and the FTC has used an informal definition as part of its general "unfair or deceptive" commercial practices enforcement authority.[175] Common to each definition is the concept of an entity that collects (or obtains via a third party) data on U.S. individuals and provides access to those data to a separate entity.[176] However, PADFAA only applies when the data broker did not collect the data directly from the consumer in the first instance, and notable FTC enforcement efforts also seem to focus on these "third-party" brokers that collect and aggregate data from various sources (ver-

Data Brokers as Defined by Congress and Enforcement Authorities—*Continued*

sus "first-party" entities).*[177] In the DSP, DOJ defines "data brokerage" not by whether the entity *selling* the data collected them directly from the consumer but by whether the entity *on the other side of the transaction* did. If the recipient did not, and if the recipient is a country of concern or covered person, the transaction is prohibited when it involves government-related data or bulk U.S. sensitive personal data, subject to applicable exceptions.[178]

"Third-party" data brokers raise at least two policy issues of note. First, by collecting and aggregating data from a variety of sources, rather than relying only on whatever they collect in direct interactions with a consumer, data brokers can accumulate vastly more information about specific individuals, as reflected in the examples discussed in the main text.[179] This is particularly true when the information includes regularly updated location data or "persistent identifiers" that can often be combined with other information to de-anonymize data.[180] In one notable case, a data broker advertised its access to data aggregated from over 600,000 separate smartphone apps, enabling detailed profiles and location tracking on individuals of interest.[181] Separately, from the perspective of U.S. law, companies that collect data directly from consumers must honor the privacy commitments they make concerning those data.[182] Data brokers that obtain information from other entities—and have no relationship with the consumer—therefore have not made commitments to the consumer as to how the data may be used.[183] Since the United States lacks a general data protection law, there may be no clear legal limits on further use or sale of such data, and consumers may have no idea that the data broker is collecting and aggregating the data on them.†[184]

Acquisitions Enable Foreign Entities to Access U.S. Data

Acquisitions allow Chinese firms to acquire not only foreign companies but also the data ecosystems those companies have built. By purchasing businesses that collect large volumes of biometric, genomic, biological, financial, behavioral, or other data, Chinese firms gain access to datasets that would otherwise be difficult to obtain le-

*Businesses that regularly interact with consumers collect substantial "first-party" data through those interactions, including purchase histories, preferred purchase times and locations, and home addresses. Companies that provide smartphone apps and internet-based services also typically collect IP addresses, device identifiers, and information about consumers' direct interactions, such as social media posts, interests, and relationships with other users. They often collect extensive data about other digital activity when consumers opt in to online tracking technologies. By contrast, "third-party" data is information an entity obtains about a consumer or transaction despite having no relationship with the consumer and no involvement in the transaction. "Get Started with Advertising and Data," *Salesforce*; U.S. Federal Trade Commission, *A Look Behind the Screens: Examining the Data Practices of Social Media and Video Streaming Services*, September 2024, 21–30, 55–57.

†The FTC has begun to engage in enforcement actions that arguably impose legal obligations on data brokers apart from legal commitments made to consumers. See, for example, enforcement actions against X-Mode/Outlogic and Mobilewalla. U.S. Federal Trade Commission, *FTC Takes Action Against Mobilewalla for Collecting and Selling Sensitive Location Data*, December 3, 2024; U.S. Federal Trade Commission, *FTC Order Prohibits Data Broker X-Mode Social and Outlogic from Selling Sensitive Location Data*, January 9, 2024.

gally. These acquisitions often provide ongoing access to customers, proprietary algorithms, business information, and digital infrastructure that generate new data, allowing firms to expand and refine their data holdings. For example, Chinese biotechnology company BGI expanded its U.S. market presence through its 2013 acquisition of Complete Genomics, gaining access to genomic sequencing technology and an established U.S. business that also provided genomic sequencing and analysis services.* [185] Complete Genomics was part of a spin-off of BGI assets into a separate Chinese-listed company in 2022 and announced in 2026 that Switzerland-based Swiss Rockets had agreed to acquire 100 percent of the company from MGI.[186]

Policymakers have relied on tools like the Committee on Foreign Investment in the United States (CFIUS) to address national security concerns associated with Chinese and other foreign access to Americans' sensitive data. In 2018, Congress enacted the Foreign Investment Risk Review Modernization Act, providing CFIUS the authority to conduct national security reviews of foreign investments in U.S. businesses that handle Americans' sensitive personal data.[187] That same year, CFIUS blocked Ant Financial's proposed acquisition of MoneyGram, citing concerns that the transaction would provide the Chinese company access to data that could be used to identify Americans.[188] In 2019, CFIUS likewise ordered Kunlun Tech, a Chinese mobile gaming company, to divest from the dating app Grindr over concerns that a Chinese investor's control of the platform could provide foreign access to users' sensitive PII, which in turn could be accessed by the government of China.[189] More broadly, proposed or completed acquisitions involving companies that collect health, financial, location, or other sensitive personal data have prompted Congress, CFIUS, and other executive branch agencies to heighten scrutiny over the risk that Chinese ownership of U.S. businesses that collect data on Americans could provide China with long-term access to valuable datasets or create opportunities for coercion and blackmail.[190]

Combine: How China Fuses Data for Intelligence Analysis

The strategic value of multisource data compounds once they are aggregated, and China has leveraged the same data collection ecosystem described earlier in the chapter to develop strong aggregation capabilities. In his written testimony before the Commission, professor of aerospace engineering at Cornell University Gregory Falco stated, "China is not collecting data for isolated insights. It is building a large-scale data dragnet to extract pattern-of-life across systems and environments."[191] Beijing has demonstrated both the intent and the capability to aggregate data at scale.

As part of its data strategy, Beijing has promoted data aggregation to break down data silos across government and commercial sectors.[192] Seventeen departments collaborated on the Three-Year Action Plan for Data Factor of Production X, calling for data aggregation from a multitude of sources to promote innovation in critical

*Beyond data acquisition, acquisitions also may facilitate entry into foreign markets through established companies with existing customer bases, regulatory approvals, commercial relationships, and commercial reputations.

sectors including transportation and finance.[193] In July 2026, the NDA reiterated Beijing's intent to promote data aggregation, noting that "achieving large-scale and diverse data aggregation through data circulation is a crucial pathway to unlocking the value of data."[194]

Fusing Data for Surveillance

State and non-state entities in China's data collection ecosystem are also responsible for shaping China's data aggregation capabilities, which are evident via its domestic mass surveillance programs. China has some of the world's most elaborate mass surveillance programs, which Chinese ministries such as the MSS, MPS, and local public security bureaus have implemented with the assistance of Chinese state-owned and private companies. These programs leverage ubiquitous data collection, cross-sector data fusion and analysis, and automated risk identification to carry out Xi Jinping's vision of an enhanced public security apparatus that can prevent conflict before it begins.[195] Chinese authorities can reconstruct an individual's "pattern of life" by linking identity information with communications, biometrics, travel, financial or administrative records, physical movements, social relationships, and even routine behaviors—where they go, whom they interact with, and how their activities change over time. China uses surveillance programs such as Sharp Eyes, Police Cloud, and Xinjiang's Integrated Joint Operations Platform to aggregate data from a variety of sources and assemble detailed portraits of Chinese citizens and foreigners.[196]

The Sharp Eyes project, launched nationally in 2015, helps the CCP extend its surveillance into sparsely covered rural areas.[197] It hosts a data fusion platform that collects a variety of public and private data sources, including surveillance cameras with facial and vehicle license plate recognition capabilities, WeChat accounts, and phone numbers.[198] Sharp Eyes also relies on vetted local volunteers to aid in surveillance by watching video feeds from their network-connected smart TVs.[199] Police Cloud is another ambitious big data project managed by China's MPS that is designed to uncover hidden relationships between people and events, helping to predict perceived "threats" before they appear.[200] The program has a software and cloud computing layer that aggregates data across a wide swath of sources, including medical records, transportation records, IP addresses, phone numbers, biometrics, and closed-circuit television (CCTV) footage.[201] In Shandong's Weihai city alone, Police Cloud aims to integrate 63 types of police data and 115 types of data from other government departments and industries into a unified resource.[202]

Xinjiang's Integrated Joint Operations Platform (IJOP) appears the most intrusive and politically extreme of the surveillance programs in China. Under the Chinese government's "Strike Hard Campaign" in Xinjiang, this policing program is used in the province to aggregate data about those it deems threatening, leading to Chinese authorities "arbitrarily and indefinitely detaining Turkic Muslims (also known as Uyghurs) in Xinjiang en masse," according to an investigation by Human Rights Watch.[203] The IJOP police program collects information like DNA samples, iris scans,

blood types, location and movement data, vehicle type, electricity usage, GPS coordinates, family member information, and *hukou* registration status.*[204] The platform even tracks information like the extent of social interactions with neighbors, religious activity, and if an individual avoided using the front door.[205] This database links to the individual's personal national ID number and card, which police officials can scan at checkpoints to track individuals and restrict their movement.[206]

In addition to monitoring Chinese citizens, Beijing has deployed similar software specifically to aggregate data and track foreigners in the country. A 2026 investigation by an Australian cybersecurity researcher revealed the state's extensive efforts to track foreigners in China through the "Dynamic Control Platform for Overseas Personnel," which combines information such as passport details, hotel stays, transportation records, CCTV footage, hospital visits, and relationship mapping into a single platform.[207] During the Commission's trip to China in July, Commissioners noted that the prevalence of security cameras, mobile phone-based transactions, and interactions requiring identification points to a Chinese surveillance state much more deeply embedded into daily life than even a decade ago.[208] Analysis of aggregated data into such platforms has the potential to identify behavioral patterns and even predict aspects of an individual's routine.[209]

These programs illustrate how China's surveillance apparatus fuses discrete pieces of information from disparate datasets into comprehensive, regularly updated profiles of individuals. Platforms such as Sharp Eyes, Police Cloud, and IJOP can then apply automated analytics to these aggregated datasets to identify relationships, anomalies, and behaviors deemed indicative of risk, potentially giving Chinese authorities the capability to move beyond retrospective surveillance toward the identification and targeting of individuals based on predicted behavior.

Like China's surveillance programs, the Social Credit System (SCS) also fuses dispersed data across its national and local-level government entities to monitor, evaluate, and influence the behavior of its citizens and corporations. Xi Jinping describes the system as designed "to make everything convenient for the trustworthy . . . and ensure the untrustworthy cannot move a single step."[210]

China's 2014 to 2020 construction plan for the SCS aimed to create a credit evaluation system that "covers the entire society and is based on the sharing of data resources about credit."†[211] Within that timeframe, China built two distinct components of the SCS: one for monitoring individual behavior—which is still in an earlier stage of development—and the Corporate SCS, which monitors corporate behavior.[212] In 2015, China's NDRC created the National Credit Information Sharing Platform, which forms the data-sharing backbone

*China's *hukou* system is a household registration system that records a person's official place of registration and is tied to access to certain public services and local administrative management.

†In the context of China's SCS, "credit" has a broader meaning than financial creditworthiness as commonly understood in the United States. It encompasses assessments of the trustworthiness and compliance of individuals, businesses, government entities, and other organizations based on a wide range of legal, regulatory, contractual, financial, and other conduct. Katja Drinhausen and Vincent Brussee, "China's Social Credit System in 2021: From Fragmentation Towards Integration," *Mercator Institute for China Studies*, March 3, 2021, 6–8.

of the Corporate SCS, partnering with 45 other government ministries to integrate all national and local-level corporate regulatory data.[213] All companies registered in China are assigned a Unified Social Credit Code, which is a common identifier used across all of the Corporate SCS datasets.[214]

Shared data enable coordinated penalties, but gaps in those data still limit SCS integration. National and local government departments create blacklists for companies that have repeatedly violated regulations.[215] Blacklists are published on a national portal, allowing agencies to coordinate penalties for the same violation.[216] Individuals who are flagged can face restrictions in a variety of areas, such as airline and high-speed rail travel. In June 2018, Chinese authorities reported that these measures had blocked 11.6 million airline ticket purchases and 4.41 million high-speed rail ticket purchases, while 2.54 million judgment defaulters had fulfilled their legal obligations under the pressure of social credit penalties.[217] China's current SCS nevertheless remains fragmented. NDRC officials have explicitly described remediating the country's data-sharing gaps, calling on Beijing to connect "information islands" and exploit the "aggregation effects" of combined data.[218]

Beyond China's borders, one way China has aggregated data from multiple foreign sources is through its network of "hackers for hire," discussed above. At least some of these Chinese-contracted hackers combine industrial-scale cyber operations with data aggregation capabilities, offering a bundle of services and products for Chinese state clients. For example, i-Soon hackers, described earlier, targeted specific data on behalf of state actors, including data from foreign governments and organizations; they also established a wholesale operation with products and services, including penetration and analysis tools.[219] Analysis of a data leak from the company shows it also set up an "APT research" team to infiltrate victims' networks, collect data for state clients, analyze stolen data, and build comprehensive reports on victims for its clients.[220] To aggregate and analyze the data, i-Soon developed multiple capabilities, including an integrated training program capable of processing large amounts of personal data and transforming raw data* into structured forms that are searchable and analyzable.[221] i-Soon also developed an Email Analysis Intelligence Decision Making Platform to profile individuals and map relationships from information shown in email and attachments, creating the possibility of a primitive version of "pattern-of-life" analysis.[222] In another case, the *Wall Street Journal* reported that Chinese "hackers-for-hire" company ZRON offers a full private intelligence service to Chinese authorities, having developed a dashboard system that combines, sorts, and analyzes stolen sensitive data to make them easier to digest.[223] (For more on this concept, see Appendix I: Techniques for "Pattern-of-Life" Analysis.)

"Smart cities" represent another example of Chinese entities' ability to collect and fuse data into a single platform, amplifying the data's utility for surveillance. In the case of smart cities, the integra-

*Raw data are information in their original, unprocessed form before they have been cleaned, labeled, organized, or analyzed for use in an AI system. Raw data can include text, images, audio, video, sensor readings, web pages, spreadsheets, or other source material collected from the real world. U.S.-China Economic and Security Review Commission, *AI Technology Stack Glossary*, October 15, 2026.

tion layer—where the data are aggregated or fused—is the critical piece in the "pattern-of-life" puzzle.[224] With sufficient data storage and retention capabilities in addition to data and software analytics tools (and, more recently, AI and machine learning techniques), users can fuse data and information from across disparate technology silos and discover patterns in behavior.[225] Chinese companies have developed and exported smart city surveillance systems that integrate multiple data collection and monitoring technologies, including CCTV networks, facial and license plate recognition, crowd monitoring, and other situational awareness tools.[226] Huawei has emerged as China's leader in smart city technologies and infrastructure.[227] In May 2017, Huawei introduced eLTE Safe City, specifically marketed as a solution that integrated "voice, video, data, and geographic information system (GIS) services . . . all in one network" and could "incorporate existing service resources and integrate various types of communication networks, whether public or private, broadband or narrowband, wired or wireless," thereby emphasizing its utility at the integration layer.[228] The company also touted the platform's compatibility with other Chinese partners, including the Aircam unmanned aerial vehicle, Hikvision's in-vehicle network camera, and Hikvision's Dome Network Camera.[229] This Safe City package has since been deployed around the world, including in Kenya, Serbia, Spain, Bolivia, Chile, and many other countries.[230]

In November 2019, researchers at the Center for Strategic and International Studies identified 73 Huawei Safe City agreements across 52 countries that explicitly referred to command centers, CCTV cameras, intelligent video surveillance, facial and license plate recognition, crowd monitoring, situational awareness detection, noise monitoring or detection, abandoned object detection, and social media monitoring.[231] In 2020, research conducted by SOSi found 398 reported instances of 34 different Chinese companies exporting smart city technologies across 106 countries.[232] In a 2016 white paper, Huawei marketed Safe City systems as helping law enforcement "predict, prevent, and reduce crime" through a "suite of technology that includes video surveillance, emergent video communication, integrated incident command and control, big data, mobile, and secured public safety cloud."[233] By installing and operating this vast array of technologies that can monitor, geolocate, track, and timestamp, Chinese public and non-public firms are able to gather massive swaths of data that, when fused together, can pinpoint an individual's routine and identify "baseline" and "anomalous" behaviors based on pattern recognition.[234]

Ecuador's ECU911 Integrated Security Service, designed and built by state-owned China National Electronics Import & Export Corporation (CEIEC) between 2011 and 2015, is a prominent example of the technical infrastructure from which Chinese state actors could construct "pattern-of-life" profiles on citizens abroad. CEIEC and Chinese companies Huawei and ZTE constructed a so-called "networked command system" for police, military, and first responders in Ecuador that comprised an intelligent analysis module system, video monitoring system, GPS, GIS map system, and one-button alarm system.[235] One Ecuadorian expert discussed collaboration with the CEIEC team on a geolocation program called "Mobile Locator" that

allows users to locate a mobile device and track it using various data inputs.[236] According to research conducted by the Latin American Faculty of Social Sciences in 2023, the most significant element developed by CEIEC for ECU911 was the software platform that coordinated information across the system. This integration of data, enabled by Chinese-built infrastructure and software analytics tools, demonstrates the latent potential of these Chinese projects for building "pattern-of-life" profiles.

Convert: Monetizing and Weaponizing Data

The Chinese government has attempted to convert data into economic, technological, and security advantages to advance CCP interests. Beijing has put data at the center of its longstanding ambition to achieve technology self-sufficiency and global technology leadership. Through coordinated regulatory control and large-scale data infrastructure, Beijing seeks to generate, refine, and retain high-value data within China's borders, converting these data advantages into leadership in AI and biotechnology. On the military side, China is fusing data to accelerate PLA modernization and to conduct operational preparation of the environment to create persistent threats to U.S. critical infrastructure, to be deployed as leverage or disruption capability in a future crisis.

China Uses Data to Support Economic Goals

As noted previously, China's policy focus on data through an economic—rather than primarily security—lens began in earnest in 2020 when China formally designated data as the "fifth factor of production, after land, labor, capital, and technology."[237] Since then, China has undertaken numerous efforts to expand the value of data to its broader economy. Instead of leaving the development of a data economy up to market forces, China is building infrastructure where participants can exchange data, fostering third-party services like data valuation, analytics, and financing and encouraging wider participation in the data economy. This familiar industrial policy-style approach is designed to unleash the same forces that have made China a leader in next-generation manufacturing, namely Party-led prioritization, hyperlocal competition, regulatory experimentation, and direct economic incentives. (For more on China's efforts to turn data into a factor of production, see U.S.-China Economic and Security Review Commission, *The People's Republic of Data: How China Is Turning Data into Capital*, August 18, 2026.)

Beijing's approach also reflects Chinese policymakers' confidence that they can have their cake and eat it, too: the mandate to build a data market and leverage data as a productive resource coexists with a regulatory framework that ensures state access, limits foreign control, treats a wide and morphing range of data as sensitive to national security, and censors politically contentious data.[238]

Within these constraints, Beijing is also developing markets, infrastructure, and governance mechanisms intended to facilitate the circulation, pricing, and commercial use of data across sectors.[239] In December 2024, the NDA and two other agencies released the Guidelines for National Data Infrastructure Construction, which outlines plans for the technical and institutional foundations needed

to expand data sharing and support the digital economy.[240] These efforts also seek to integrate fragmented local and sectoral datasets through standardized data infrastructure and sector-specific "industry databases."

China has targeted priority sectors for implementing its data policies and increasing the economic value derived from data—including agriculture, transportation, finance, science and technology, and healthcare—through its Three-Year Action Plan for Data Factor of Production X initiative.[241] The initiative promotes projects that integrate R&D, logistics, inventory, and price data across industrial supply chains. In 2025, the NDA reported that some participating firms reduced high-end product development and procurement delivery cycles by more than 30 percent and shortened inventory cycles from three months to one month.[242] Although these performance figures are government-reported, the projects illustrate Beijing's effort to treat data as an economic input that can improve supply chain coordination, reduce operating costs, and raise industrial productivity.

The NDA has also promoted data applications intended to increase agricultural productivity and expand rural financing. In one example, the agency reported that data-enabled agricultural services improved fertilizer use and increased crop yields by 5.5 percent.[243] It also highlighted Zhejiang's livestock "industry brain," which integrates data from eight government bodies to support farm management and credit provision; according to the NDA, the platform helped facilitate RMB 724 million ($108 million) in collateral-backed loans to 251 farms.[244] These initiatives demonstrate how Beijing seeks to combine government, commercial, and sectoral data to improve agricultural production while directing more capital toward rural economic activity.

Chinese companies also utilize stolen data and intellectual property to advance China's economic goals and strengthen its competitiveness with global firms. In 2017, the Commission on the Theft of American Intellectual Property estimated counterfeit goods, pirated software, and trade-secret theft cost the U.S. economy between $225 billion and $600 billion annually; it also identified China as the principal intellectual property infringer.[245] For U.S. companies, these activities increase the costs of cybersecurity, regulatory compliance, and risk management while potentially eroding competitive advantages derived from innovation and proprietary assets.

In addition, combining domestic and foreign data and platforms helps China strengthen the global competitiveness of its firms. Access to diverse, large-scale datasets can accelerate product development and enhance the ability of Chinese companies to compete with leading U.S. and international firms across different languages, regions, and market conditions.[246] While China has begun putting its ambitious plans to value and commercialize data into practice, it remains unclear whether these efforts will generate significant and sustainable economic value at scale. Beijing has established data exchanges, new accounting and valuation rules, and other mechanisms intended to turn data into a tradable and financeable asset, but significant obstacles remain. Data are inherently difficult to value, and China's current cost-based accounting approach may either overstate or understate their economic value. Meanwhile, low-quali-

ty and duplicative datasets, unclear ownership and regulatory rules, and firms' reluctance to share proprietary data have constrained participation in state-led data markets. These challenges have limited the ability of Beijing's preferred mechanisms to displace traditional bilateral data transactions, even as China continues to experiment with new approaches to commercializing and productively using data.[247]

China Uses Data to Support Technology Goals

Data are central to China's longstanding ambition to achieve self-sufficiency and dominance in emerging technologies such as AI and biotechnology. In March 2026, Xi Jinping wrote in a congratulatory letter to the WDO that "the world is accelerating into the intelligent era, and the role of data as a basic resource and an innovation engine is becoming increasingly apparent."[248] Through coordinated regulatory control and large-scale data infrastructure, Beijing seeks to create a closed-loop ecosystem that generates, refines, and retains high-quality and high-value data within China to support scientific leadership.

China Promotes "Data Flywheel" to Generate High-Quality Data and Improve AI Capabilities

An example of China's effort to enhance the value of data is a set of policies to create high-quality training datasets for AI models. As publicly available training data near exhaustion, China sees an opportunity to leverage its vast industrial IoT infrastructure and deployment scale to build proprietary AI training datasets.[249] The 2025 AI+ Initiative promotes deployment across various sectors and calls for data supply innovation by focusing on real-world applications to improve the quality of data used to train AI models.[250]

The Chinese government is promoting the concept of a "data flywheel" as part of its implementation of the 15th Five-Year Plan on high-quality data development.[251] In June 2026, the NDA directed industry to build a "data flywheel application loop" in which AI models deployed across applications drive data collection and those data are fed back into improving the models.[252] The China Academy of Information and Communications Technology adopted the strategy for embodied AI, describing such a cycle in its 2026 Report on Embodied AI Development:

> *An embodied agent is deployed in a real-world scenario → real behavioral data is collected during task execution → high-quality data is used for model training and iteration → more generalized models are deployed across a wider range of robots, thereby gathering even more high-quality data.*[253]

One example of industry implementation of the "data flywheel" strategy is China's National and Local Co-built Embodied Artificial Intelligence Robotics Innovation Center. Established in 2024 in Beijing, the center operates a 5,000-square-meter training facility (i.e., roughly the size of a standard American football field) that uses more than 100 humanoid robots across industrial environments to collect, curate, and validate data in a continuous feedback loop.254 The in-

novation center is operated by X-Humanoid, a government-backed humanoid startup that used the database to develop Tiangong humanoid robots, known for winning the robot division at Beijing's half marathon in 2025.[255]

In 2023, MIIT released guidelines directing industry to develop training databases and treat training data as a strategic resource and a core input for the development of humanoid robots.[256] In May 2024, China inaugurated the National and Local Co-Construction Humanoid Robot Innovation Center in Shanghai focused on R&D for humanoid robots across a variety of applications, including intelligent manufacturing, public services, agriculture, healthcare, and more. In March 2026, the center launched China's first open source embodied AI dataset for humanoid robots with the intention of working to overcome constraints related to the shortage of high-quality, real-world multimodal data—an obstacle facing almost all developers in the humanoid robot space globally.[257] One Chinese media report argued that this announcement signaled a potential shift from siloed, company-level datasets toward shared infrastructure supporting broader industry development.[258]

Chinese AI labs and robotics companies have also improved the quality of their training data in line with the "data flywheel" strategy. AI labs such as those within Alibaba and ByteDance build their own reinforcement learning environments for data labeling.*[259] Chinese robotics company AgiBot claims it has the world's largest dataset of real-world robot actions, containing one million recorded tasks and nearly 3,000 hours of data.[260] Chinese robotic and sensor company PaXini† has also released a ten-billion-scale multimodal embodied AI dataset, accumulated from five large-scale data collection factories across China where workers use sensor-equipped tactile gloves to capture real-world manipulation data from industries such as manufacturing, healthcare, and retail.[261] In Tianjin municipality specifically, the government recruited PaXini and set up a cross-agency working group to support the company in site selection, construction, recruitment, standards work, and access to municipal policies in order to stand up its Super Embodied Intelligence Data Factory—purportedly the world's largest embodied intelligence data collection and model training base that produces nearly 200 million data points annually.[262]

China's data centralization strategy has so far produced uneven results, yielding tangible advantages in sectors such as robotics and advanced manufacturing, where China has structural advantages, but limited gains in general-purpose AI. Chinese AI labs continue to cite a lack of access to high-quality data used to train large language models (LLMs).[263] In April 2025, the co-founder of leading AI firm Z.ai (formerly known as Zhipu AI) called China's fragmented and scattered data a leading bottleneck to domestic LLM development.[264] Chinese AI researchers often attribute the problem to the less mature data vendor industry, unlike in the United States where

*Data labeling is the process of adding tags or categories to raw data so an AI model can learn what the data mean. Without labeled examples, or if the labels are inconsistent, an AI model's outputs can be inaccurate. U.S.-China Economic and Security Review Commission, *AI Technology Stack Glossary*, October 15, 2026.

†PaXini has received state-backed investments, including from CIM International Group Inc. Du Zhihang, "Robot Sensor Startup PaXini Raises $145 Million, Tops $1.4 Billion Valuation," *Caixin*, March 7, 2026.

data vendors have built a business in selling data labeling and evaluation services to frontier labs.[265] Meanwhile, data from Chinese "super apps" such as WeChat and Alipay sit in so-called "walled gardens," and Tencent and Alibaba have little incentive to share their data.[266] In 2025, for example, Tencent blocked ByteDance's Doubao Phone AI agent from accessing information on WeChat—a commercially understandable move that nevertheless conflicted with Beijing's push for open data sharing across the AI ecosystem.[267]

China Creates Asymmetric Data Advantages for Biotechnology Development

The Chinese government has cemented an asymmetric data collection advantage as part of its biotech development strategy by collecting biological data at home while using regulatory frameworks to keep China-origin data in China and under state control. In particular, the Chinese government treats health data as both sensitive personal information and "important data," both of which are regulated under two of the primary data laws—the 2021 Data Security Law and the Personal Information Protection Law—described in a preceding section.[268] Data protected under both regimes include large-scale genomic-clinical datasets; AI training datasets using health data; national biobank datasets; and multimodal datasets that combine genomic, clinical, and imaging data.[269] For example, China's National Center for Bioinformation, established in 2019 under the Chinese Academy of Sciences, serves as the country's national bioinformatics hub and oversees the National Genomics Data Center, which has expanded to allow searches across major foreign databases, including those of the European Bioinformatics Institute and U.S. National Center for Biotechnology Information.[270] However, European and U.S. counterparts cannot access China's data due to China's data protection laws. Furthermore, Chinese regulations require foreign firms seeking direct access to genetic data to partner with Chinese institutions. This partnership forces foreign firms to cede leverage over their data to their Chinese partners, including by sharing data and storing a copy in China.[271]

China is attempting to move from passively collecting existing data to actively generating new biological data to gain an asymmetric advantage in advanced biotech capabilities. One example from the University of Science and Technology of China indicates China's interest in creating a closed-loop system that links dry lab design (i.e., on the computer) to wet lab experiments (i.e., experiments in a physical testing lab) to generate new data.[272] Researchers at Peking University claim they created a platform that automates the generation of experimental genetic and protein data that get fed into the model for further iteration.[273] While the platform is operational, the researchers noted it remains underdeveloped and the autonomous closed-loop capability is not yet fully realized.[274]

Future of Warfighting: Leveraging Data to Support Military and Security Goals

Beijing recognizes that the data generated by military technologies and systems during their day-to-day operations are a strategic resource that can be mined to better understand adversary capa-

bilities, refine China's own systems, and develop the AI capabilities that will underpin the future of warfighting. Beyond systems development, China's data acquisition also strengthens operational and tactical advantages for a variety of uses during wartime. By combining data from military and civilian systems, China can generate a larger, more coherent unified operational picture, potentially allowing it to more effectively map vulnerabilities, anticipate intentions, and pre-position for attack before a conflict begins. As those military systems continue to grow more reliant on digital connectivity, data, and AI for their operations, China is positioning itself to exploit and weaponize data to degrade and disrupt the decision-making and combat effectiveness of its adversaries. China's data collection directly affects the pace of U.S.-China military competition—accelerating PLA modernization, improving China's warfighting, and identifying vulnerabilities in U.S. forces, networks, and infrastructure U.S. power projection depends on.

As AI capabilities improve and become more integrated into military platforms, autonomous systems, and other defense-related infrastructure, these systems will rely heavily on data and algorithms for their utility.[275] Below are some key ways China's military seeks to use data to modernize, improve efficiency, and challenge U.S. power more effectively.

- *Employing data to enhance the equipment development cycle and predictive maintenance.* The PLA and China's broader defense industry are constructing a data-centric equipment development ecosystem to improve the equipment development and innovation cycle and enhance maintenance capabilities. According to reports from 2025, PLA researchers have identified opportunities for AI related to predictive maintenance and advance signs of failure, each of which requires high-quality data from the equipment itself.[276] The PLA emphasizes fusing data across systems and domains to extract value from operational signatures, test data, telemetry data, and environmental information.[277] The PLA is also likely using the Ukraine war to gather information on the effectiveness of military technologies and components deployed on the battlefield.[278]

- *Data espionage for military modernization.* China steals U.S. military data through cyber and traditional espionage campaigns to help modernize the PLA. In January 2024, a former U.S. Navy service member was sentenced for providing "electrical diagrams and blueprints for a Ground/Air Task Oriented Radar system in Okinawa, Japan" to Chinese intelligence officers.[279] In a notorious case, a Chinese spy worked with two PLA-affiliated hackers to break into the networks of Lockheed Martin, Boeing, and other subcontractors to exfiltrate over 630,000 files from Boeing related to the C-17 as well as design data related to the F-22 Raptor and the F-35 Lightning II.[280] Analysts note that China's first stealth fighter, the J-20 Mighty Dragon, bears a striking resemblance to U.S. fifth-generation stealth fighters and possesses design characteristics that are similar to U.S. planes but are entirely absent from prior Chinese designs.[281]

- *Powering AI deployment for military purposes.* China's efforts to enhance data collection and sharing for embodied AI directly support various PLA efforts to integrate that technology into its operations. The PLA has already begun to expand its operational concepts and training to include autonomous systems such as drones and robotic quadrupeds.[282] Chinese defense researchers believe physical AI systems will enhance battlefield awareness, optimize mission planning, and take over complex tasks previously performed by humans.*[283] These systems remain constrained, however, by the difficulty of training AI models to perform reliably across unfamiliar environments, as models trained on simulated or terrain-specific data may struggle when confronted with different terrain, weather, or battlefield conditions.[284] Advances in China's military intelligentization could erode important U.S. military advantages by enabling the PLA to field larger numbers of autonomous systems and accelerate battlefield decision-making.[285] Chinese AI researchers have highlighted the scarcity of real-world data to train machine learning models in physical systems as an obstacle to intelligentization.[286] Robotics training databases, discussed earlier in this chapter, provide a useful architecture to supply the PLA with a wide range of militarily relevant data, including multimodal sensory data, environmental data, and physical world data.[287] As the PLA continues to integrate more autonomous physical systems for force development, Beijing will likely use its legal authorities to access training data for training military systems.[288] Reports indicate that China is accessing battlefield performance data from Russian drones in the Ukraine war through the Chinese firms that manufacture them.[289]

- *Data for system destruction warfare.* As discussed above, China is actively collecting data on U.S. critical infrastructure systems through efforts like Volt Typhoon. China's threats to critical infrastructure are rooted in the PLA doctrinal concept of "system destruction warfare," a theory of warfighting that shifts the focus away from the confrontation of forces on the battlefield and prioritizes the disruption, paralysis, or destruction of the enemy's operational systems.[290] Official PLA publications identify cyber operations against critical infrastructure as a means of creating widespread disruption and reducing an enemy's overall combat effectiveness.[291] According to U.S. government sources, Volt Typhoon's targeting seemed intended to complicate U.S. force deployment and logistics, potentially hindering U.S. intervention in a Taiwan Strait conflict.[292] DOD assessed in December 2025 that China will continue to seek opportunities to disrupt critical infrastructure, including space-based communications infrastructure between the United States and Asia.[293] According to DOD, the PLA would likely aim to cause disruption in U.S. military C4ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance) and

*Potentially creating synergies with its efforts around data for equipment maintenance, some Chinese researchers have even suggested that humanoid robots could carry mobile 3D printers to manufacture new parts directly on the battlefield. Researchers at RAND believe this development could allow the PLA to sidestep the need to develop its own human maintenance force.

logistics nodes before targeting civilian infrastructure such as gas pipelines, with the aim of deterring U.S. involvement in a conflict and weakening public support for intervention.[294]

- *Data for military posture monitoring.* China is also taking advantage of its access to critical infrastructure and other digitally connected technologies around the world to gain access to data that can provide valuable intelligence into other countries' activities in both the military and civilian realms. PLA writings note that aggregating data from multiple sources, including electromagnetic signatures, can help build baseline profiles of an adversary's normal operations. By identifying deviations from these patterns, the PLA seeks to improve its ability to detect force movements, infer operational intent, and identify vulnerabilities that could be exploited during a crisis.[295] As Dr. Falco noted in his testimony before the Commission, China's robust presence throughout global research stations is a key enabler of Beijing's collection of militarily relevant data.[296] China's access to platforms collecting ionospheric data supports its ability to detect high-energy events such as rocket launches or other space-based activities, even contributing to global early warning capabilities that could detect undisclosed U.S. activities.[297]

- *Data for influence operations.* Since coming to power, Xi Jinping has called for stronger efforts to assert China's "discourse power" and create a favorable external opinion environment for the CCP to pursue its aims.[298] In the military space, PLA writings in recent years have discussed analyzing personal data to conduct psychological warfare against enemy soldiers during military operations, including by gathering information about their personalities, decision-making habits, and psychological characteristics.[299] (See also Appendix I: Techniques for "Pattern-of-Life" Analysis.) A 2018 *PLA Daily* article explicitly described data resources as vital to national security and noted that countries could use personal data to conduct targeted information warfare against individuals or groups and steer public opinion in favorable directions.[300] U.S. national security concerns that China could weaponize Americans' personal data and targeted information for influence operations have figured prominently in scrutiny of TikTok.[301] These concerns led to the law that ultimately required restructuring of Chinese parent company ByteDance's U.S. operations under majority-U.S. ownership to limit Beijing's ability to access data and exercise control over the platform. TikTok and other social media platforms possess uniquely rich behavioral data and individualized recommendation engines that promote tailored content to users. Given Beijing's ability to compel private companies to comply with its national security activities, concerns over content manipulation on Chinese-owned platforms are more than hypothetical; polling conducted in 2023 by the Taiwan Information Environment Research Center showed a correlation between the use of TikTok and higher acceptance of certain CCP-aligned narratives compared to the general population in Taiwan.[302]

Implications for the United States

China's government-led data strategy poses economic, technological, and security challenges to the United States. The U.S. response has been reactive and partial, and no element of it is built to match the scale or the coherence of what Beijing has assembled. As discussed in this chapter, China has a comprehensive approach to collecting, integrating, governing, and exploiting data to advance national objectives. U.S. policy, by contrast, is either absent or fragmented into silos. There is no similarly comprehensive national policy effort to capture or enhance the value of data for societal gain.

China can acquire sensitive personal data on Americans and U.S. government-related data through multiple channels, and it can use those data to support espionage, influence operations, targeted cyberattacks, and preparations for sabotage. The U.S. policy response has been reactive, piecemeal, and inadequate even for high-urgency risks like protecting sensitive data associated with U.S. servicemembers on deployment. While PADFAA and DOJ's Data Security Program have put limits on third-party data brokers selling sensitive U.S. data to Chinese entities, these activities have apparently continued with little transparency and oversight, and U.S. policies have only covered a fraction of the ways adversaries can acquire mass data on Americans. The resulting risk is cumulative: information acquired through a commercial transaction can become more revealing when combined with records stolen through cyber operations or collected through connected apps and devices.

The national security value of data extends beyond categories traditionally considered sensitive, especially when such data can be aggregated at scale. Although routine commercial information may reveal little in isolation, these data become strategically valuable when combined with other datasets. Assessing exposure risk based on the sensitivity of individual records risks overlooking how aggregated information, including but not limited to "pattern-of-life" profiles, could reveal U.S. government personnel's vulnerabilities, industrial dependencies, or infrastructure weaknesses.

China is working to turn its data holdings into an advantage in AI, robotics, and biotechnology. Both countries struggle to standardize, curate, and label data. But Beijing is pursuing "data flywheel" strategies that generate better data as technologies are deployed, with visible progress in robotics and biopharmaceuticals. Access to diverse datasets, combined with deployment that generates additional data, could help Chinese firms improve products and tailor them to foreign markets. Where U.S. firms and researchers lack comparable access to Chinese data, these advantages could become cumulative. Their significance will depend on data quality, interoperability, and Chinese actors' ability to translate information into useful capabilities. The United States has made no comparable policy response.

The United States remains exposed to China's doctrine of System Destruction Warfare. State-backed actors such as Volt Typhoon have infiltrated critical infrastructure networks, gaining access to information about how those systems operate and where

they are vulnerable. By combining information acquired from U.S. networks with other datasets, Chinese actors could identify dependencies across energy, water treatment, power, transportation, and telecommunications systems and target disruptions accordingly. In a conflict, Beijing is positioned to use that knowledge to disrupt U.S. military mobilization and essential civilian services. The United States needs stronger defenses against future infiltration and a credible means of deterring attacks on these systems.

The United States is fighting a five-alarm fire with no fire department. Existing U.S. policies address only portions of the national security risks created by the vast range of U.S. data potentially accessible to Chinese companies. Connected Chinese apps and hardware continue to proliferate in U.S. homes and infrastructure. The Department of Commerce's Office of Information and Communications Technology and Services has broad authority, but its public activities have stalled in recent years. While the FCC has stepped in to absorb some of this portfolio, it is not clear that there is a coherent strategy for a U.S. policy response or that adequate resourcing is being provided given the scale of risks to examine. The Commission has been raising concerns about risks from various Chinese-connected products for years. Without a coordinated and comprehensive strategy to evaluate and mitigate the risks of data collection and related challenges from Chinese-connected devices, these apps and devices will continue to proliferate, increasing the United States' threat exposure.

Recommendations

- Data are a strategic asset that can drive scientific discovery, economic growth, and national security, but their value depends on the ability to organize, protect, and use them effectively. The United States needs a coordinated framework that makes data more accessible for legitimate uses, gives Americans control over their personal data, and prevents exploitation by China and other adversaries. An American Data Initiative would advance these goals while providing Americans meaningful control over their personal data.

  Congress should establish an American Data Initiative to put American data to work as a source of national power, while preserving decentralized ownership, giving Americans control over their own data, and keeping their data out of the hands of China and other adversaries. Congress should:

  Organize Federal Data

  - Make the Administrator of General Services the Federal Chief Data Officer, with binding standards authority over all agencies and every agency Chief Data Officer appointed by and reporting to the Administrator, after consultation with the agency head.
  - Direct the Administrator to govern all federal data by sensitivity and value, including in aggregate, and to make Data.gov the catalog of all federal data, open by default, with registered access for non-public data.

- Direct the Administrator to establish sectoral data foundries that produce AI-ready datasets, beginning with biology and embodied AI.
- Require the Administrator's approval of agency data budgets and bar funding for noncompliant data systems.
- Apply the confidentiality protections of Title 13 to personal data shared through the Initiative and record every access to non-public federal data in a tamper-proof log.
- Give the Government Accountability Office continuous access to those logs and authority to review any access to personal data and require an annual report to Congress with agency scorecards and privacy and civil liberties compliance audited by the Government Accountability Office.

Put Data on the Balance Sheet

- Make it U.S. policy that data held by federal agencies and U.S. businesses are an asset recognized on the balance sheet.
- Direct the U.S. Securities and Exchange Commission to require the Financial Accounting Standards Board to set standards for recognizing data as an asset within two years.
- Direct the Federal Accounting Standards Advisory Board to set comparable standards for federal agencies.
- Direct the Public Company Accounting Oversight Board to set matching audit standards.
- Direct the federal banking regulators to exclude data assets from regulatory capital.
- Condition the Governmental Accounting Standards Board's federal funding on comparable standards for state and local governments.

Let Americans Decide Who Gets Their Data

- Codify the core prohibitions of the U.S. Department of Justice's Data Security Program, including its bars on giving China and other countries of concern and covered persons access to Americans' bulk sensitive personal data and government-related data and its limits on onward transfer, and leave compliance requirements to regulation.
- Direct the President to designate an appropriate Cabinet or agency official to establish a national opt-in program under which data brokers may not sell, license, or share Americans' personal data unless the consumer has opted in through a single federal portal that brokers must check before any transfer.
- Extend the Protecting Americans' Data from Foreign Adversaries Act to require data brokers, under a common statutory definition that applies throughout the Initiative and includes resellers and other intermediaries, to register with the designated official, hold them liable for transfers made without consent, bar transfers to persons under the jurisdiction of China or another foreign adversary regardless of consent, and make these obligations follow the data through every resale.

- Require data brokers, within two years, to obtain consent for personal data they already hold or delete it.

Bring Data Sales Out of the Shadows

- Define the rights in data that companies, governments, and consenting individuals can buy, sell, and license.
- Direct the designated official to register and supervise data exchanges, require data brokers, within two years, to sell personal data only through registered exchanges, and require exchanges to verify data provenance and consumer consent, screen buyers for ties to China and other foreign adversaries, including beneficial ownership and intended use, keep auditable records of every transfer, bar unauthorized resale and improper data combination, bar onward transfers to third countries without equivalent controls, meet security standards, and bar participants under foreign-adversary jurisdiction.
- Direct the Secretary of Commerce to open U.S. data exchanges to participants from allied and partner countries whose governments adopt equivalent consent, provenance, and foreign-adversary screening rules and extend reciprocal access to U.S. participants.

- In 2024, the Commission recommended that Congress codify the authority established under the "Securing the Information and Communications Technology and Services Supply Chain" Executive Order (ICTS). The Connected Vehicle Rule demonstrates that the ICTS framework can work but it lacks a statutory basis and congressional direction to regularly identify, assess and mitigate risks across high-risk technology sectors.

  Congress should codify the U.S. Department of Commerce's Office of Information and Communications Technology and Services (OICTS) and its ICTS authorities, provide dedicated funding and personnel, and require the office, in coordination with relevant federal agencies, to:

  - Regularly assess categories of foreign-adversary information and communications technologies and services that could expose sensitive U.S. data, enable remote access or control, or compromise U.S. critical infrastructure.
  - Report findings and proposed mitigation measures to Congress and initiate rulemaking for sectors posing national security risks, or explain why regulatory action is unwarranted.

- To prevent China from stealing American data and harming American companies, Congress should establish a systematic effort against the ecosystem that supplies and monetizes China's cyber intrusions using "hackers for hire" and commercial cyber actors, by taking the following actions:

  - Direct the National Cyber Director, in coordination with the Director of the Cybersecurity and Infrastructure Agency, the Director of the Federal Bureau of Investigation, the Director of National Intelligence, and the Secretaries of State, Trea-

sury, Commerce, and Defense, to publish annually a list of foreign persons that:

- Knowingly supply data, intrusion software, and botnet services to China's state-sponsored cyber actors or "hackers for hire";
- Acquire or commercialize data or intellectual property stolen through those operations; or
- Act as subsidiaries, affiliates, partners, joint ventures, licensees, or significant subcontractors of covered entities.

○ Require within the 180-day period after the publication of each annual list:

- The Secretaries of Treasury and State to determine whether blocking, financial, or visa sanctions are warranted;
- The Secretary of Defense to determine whether government-wide or defense-specific procurement exclusion is warranted; and
- The Chair of the Federal Communications Commission, where communications equipment or services are involved, to determine whether Covered List inclusion is warranted based on a determination by an authorized federal entity.

○ Establish a program that would allow designated U.S. private sector entities to conduct cyber operations against approved foreign entities.

○ Require reporting to the relevant committees of Congress, on: whether sanctions were imposed or list placements made; any identified statutory or resource gaps; enforcement coordination with allies; beneficial ownership and affiliate information; and procurement exposure across federal agencies.

Appendix I: Techniques for "Pattern-of-Life" Analysis

"Pattern-of-life" analysis identifies recurring patterns in how people and other entities move and interact, helping analysts detect and track complex behavior in unpredictable environments.[303] It has evolved from a loosely defined intelligence tradecraft into a technically rigorous, multidisciplinary field, drawing on advances in AI and data analytics across sectors. Chinese researchers have published papers that indicate capabilities to conduct "pattern-of-life" analysis:

- *Biometric fusion* is a technique for combining two or more pieces of biometric information—including face, voice, gait, fingerprint, iris, and DNA—to increase identification confidence.[304] In a highly cited 2018 paper funded by the National Natural Science Foundation of China (NSFC) and the National Key Research and Development Program of China, researchers fused iris and periocular (i.e., surrounding the eyes) image data to create a large compact biometric database.[305] Beyond academic researchers, Chinese companies such as CloudWalk, Megvii, SenseTime, and Yitu are global leaders in developing and commercializing large-scale deployment of biometric fusion.[306] China's "City Brain" program, which combines data to track and monitor urban trends, has been deployed to hundreds of cities across China.[307] Biometric fusion capabilities demonstrated via City Brain successfully contributed to China's large-scale surveillance, from tracing contacts during the pandemic to monitoring illegal public assemblies and river pollution.[308]
- *Location data fusion* is the process of integrating location signals from different sources—including mobile network records, GPS traces, transportation transactions, vehicle license plate readers, and Wi-Fi or Bluetooth data—to identify an individual's movement or pattern of routine activity.[309] A 2022 paper by scholars at Northwestern Polytechnical University—one of China's "Seven Sons of National Defense"—demonstrated China's capabilities to identify urban functions—including business, working, and residential functions in Changchun, Jilin—using point of interest data (i.e., structured information about specific real-world locations, including coordinates).[310] Additionally, Yu Zheng, former researcher at Microsoft in Asia and current vice president of JD.com, wrote a 2015 paper on trajectory data mining, describing techniques that have "generated massive spatial trajectory data, which represent the mobility of a diversity of moving objects, such as people, vehicles, and animals."[311]
- *Financial and transaction data fusion* is the process of integrating financial records, including bank transactions, mobile payments, ATM withdrawals, and utility payments, to map purchasing behavior, travel, and social relationships.[312] In a 2020 paper funded by the NSFC, researchers fused multisource traffic flow data, including smart card transactions and taxi GPS trajectories, to map human mobility patterns in Beijing.[313]

- *Social media behavioral profiling* is an analysis of communication and social networks to identify an entity's relationships and behavior—pattern or anomaly.[314] In 2024, the Ordnance Science and Research Academy of China—China's state-backed defense research institute—filed a patent for an application that uses data from intelligence sources (e.g., OSINT, HUMINT, SIGINT, GEOINT, and TECHINT) to train a military LLM.[315] These data include relationship mapping, such as connections on social media and appearances.[316]
- *Entity resolution and identity linking* involve recognizing and connecting records that refer to the same entity (e.g., individual or organization), often using names or other unique identifiers.[317] China has developed this capability, evidently through MPS's Police Cloud program, which most likely links individuals' CCTV facial matches, medical history, IP addresses, social media usernames, etc. using China's national identification number.[318]
- *Knowledge graph* construction is a process of fusing knowledge of different nodes—such as people, companies, documents, geographic locations, and physical and digital assets—and the edges linking them, such as conversations, phone calls, emails, and personal relationships.[319] In a 2024 paper, Chinese researchers developed a maritime knowledge graph using multisource automatic identification system data to integrate ship trajectory prediction, collision investigation data, and environmental monitoring into a unified semantic schema to advance intelligent maritime systems.[320]

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CHAPTER 8: SILICON TO SOVEREIGNTY: CHINA'S BID TO CONTROL THE AI STACK FROM WAFER TO WEIGHTS, PART ONE

Executive Summary

Competition between the United States and China for leadership in artificial intelligence (AI) extends across the technologies, infrastructure, and applications that underpin the development and deployment of AI systems. Leadership at one layer can create advantages elsewhere in the stack, but weaknesses at one layer can also constrain the performance of the entire system. This makes control over key AI-related technologies, infrastructure, and supply chains a critical issue for U.S. economic and national security. The United States and its allies and partners currently hold substantial advantages in many of the most technically difficult and concentrated segments of this stack. U.S. firms lead in advanced AI chip design and software; Taiwan dominates leading-edge semiconductor fabrication; the Netherlands maintains a monopoly over extreme ultraviolet (EUV) lithography systems; and South Korean and U.S. firms currently dominate high-bandwidth memory (HBM). Together, these advantages have constrained China's access to the advanced computing resources required to develop frontier AI systems.

China has pursued technological self-sufficiency for more than two decades, and U.S. technology restrictions since 2019 have increased the challenges—and likely the urgency—of Beijing's localization campaign. Export controls on advanced AI chips, semiconductor manufacturing equipment, and related technologies have disrupted China's access to advanced computing capabilities and slowed the development of its indigenous semiconductor ecosystem, even as Chinese firms continue to make progress. China is simultaneously attempting to engineer around its remaining technological chokepoints while leveraging advantages elsewhere in the AI stack, including China's dominance of critical minerals and materials. These strengths could help China compensate in part for less efficient domestic AI hardware and other technological constraints.

Ultimately, U.S.-China AI competition is unlikely to be determined by dominance at any single layer of the technology stack. Despite constraints on advanced compute, Chinese firms have produced near-frontier models with fewer advanced computing resources, while inexpensive open-weight models have facilitated their rapid international adoption. China could therefore remain dependent on foreign technology at critical portions of the infrastructure layer while gaining influence in global model and

application ecosystems. Conversely, U.S. leadership in advanced computing will not automatically translate into broader AI leadership without sufficient energy, networking, and data center infrastructure to deploy these technologies at scale. U.S. and allied export controls can preserve critical technological advantages and slow China's progress, but their strategic value ultimately lies in buying time for the United States to strengthen or solidify its competitiveness across the entire AI technology stack. Part Two of this research will dive deeper on how China is attempting to overcome its own chokepoints across the AI tech stack, including those associated with software, servers, hyperscalers, and energy constraints.

Key Findings

- The United States and allies hold decisive advantages at the top of the stack, and export controls are the principal tool slowing China. Their continued effectiveness depends on closing loopholes and working closely with allies to prevent their erosion.
- For more than two decades, Beijing has been pursuing self-sufficiency and global competitiveness across the entire semiconductor ecosystem and—more recently—the AI technology stack. U.S. and allied controls did not drive China's indigenization efforts, but they have added urgency in recent years.
- Although China has made some progress in achieving its goals, it has not yet closed the hardest chokepoints—including the most advanced capabilities in logic fabrication, memory, and semiconductor manufacturing equipment, as well as the Nvidia Compute Unified Device Architecture (CUDA) software moat—and likely will not for some time.
- China is investing heavily to engineer around major chokepoints: alternative lithography, advanced packaging, photonics, and an open-weight, lower-compute model strategy. Success is not assured, but U.S. policymakers need to closely follow developments in these areas.
- China's dominance in processing and refining several critical minerals and rare earth elements creates upstream vulnerabilities throughout the AI technology stack for the United States and its allies and partners. Beijing has demonstrated its willingness to leverage this position through export restrictions, raising the risk that it could disrupt U.S. access to materials needed for advanced semiconductors, data center hardware, power systems, and other AI infrastructure during a geopolitical or trade dispute.

Introduction

The surge in frontier AI capabilities over the past six to 12 months has reshaped U.S.-China competition. Advances have come far faster—and with greater economic and security implications—than many policymakers anticipated. Leadership increasingly depends on who first develops the ability to uncover and exploit vulnerabilities, defend against them, and accelerate technological breakthroughs. How those capabilities are used has the potential to shift the geopolitical balance of power.

Over the past several months, leading U.S. AI companies have discovered capabilities in their most advanced models with potentially serious consequences for cybersecurity, financial system security, and other sensitive sectors. Although they notified relevant authorities and worked to address those risks before releasing the models more broadly, these discoveries show that consequential capabilities can emerge before their developers, much less governments, fully understand their implications. Policymakers must therefore prepare for advances that outpace existing safeguards and compress the time available to respond.

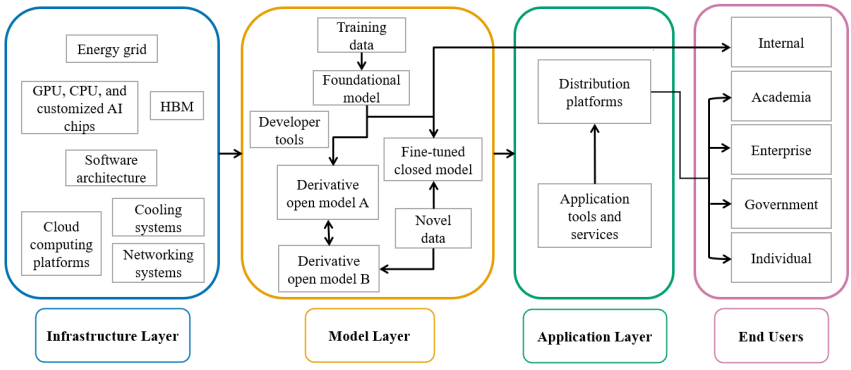
Whether Chinese companies would disclose comparable discoveries is an urgent question. If they withheld those findings or made the capabilities available to Chinese state actors first, the rest of the world could learn of them only through attacks on businesses, financial institutions, critical infrastructure, or military systems. Maintaining U.S. and allied leadership is therefore essential both to securing AI's economic and technological benefits and to identifying dangerous capabilities early enough to develop defenses. As frontier progress accelerates, falling behind could leave the United States confronting threats it has not yet learned to anticipate.

This chapter seeks to establish an information baseline and an analysis of the current situation and lines of effort to help U.S. policymakers identify the policies and conditions needed for continued U.S. leadership in AI. Part Two of this research will dive deeper on *how* China is attempting to overcome its own chokepoints across the AI tech stack.

What Is the AI Tech Stack?

The AI tech stack is the collection of technologies, built on top of one another, needed to develop and deploy AI systems. The AI tech stack generally encompasses three interdependent layers: infrastructure, models, and applications (see Figure 1). Each layer depends on the ones beneath it—a relationship illustrated throughout this section by OpenAI's Generative Pre-trained Transformer 3 (GPT-3) and ChatGPT—traced from the infrastructure that trained it, to the model itself, to the ChatGPT application that made it accessible to users.

Figure 1: AI Tech Stack



Source: Staff's synthesis of AI tech stack definitions provided by government, industry, and think tank research.[1]

The Infrastructure Layer: Hardware, Software, Networking Systems, and Energy Supply

At the base of the AI tech stack is the infrastructure layer, which includes hardware, software, the networking and cooling systems that support cloud computing platforms, and the energy supply that powers the servers. (For more on specific terms and definitions, see U.S.-China Economic and Security Review Commission, *AI Technology Stack Glossary*, October 15, 2026.)

Hardware

The AI hardware layer consists of semiconductors that provide the compute power, memory, and networking required for AI workloads, and that store the vast troves of required data (see textbox below on "What Are Advanced Semiconductors?").[2] This layer includes logic chips such as graphics processing units (GPUs) and central processing units (CPUs), as well as custom AI chips such as tensor processing units (TPUs) and other AI accelerator chips. AI chips also include associated hardware for networking, memory, and storage such as dynamic random-access memory (DRAM), high-bandwidth memory (HBM), and NAND memory.[3] For example, OpenAI built early versions of ChatGPT using Microsoft's Azure AI supercomputing infrastructure, a system that linked together roughly 10,000 specialized AI chips (Nvidia V100 GPUs) and 285,000 computer processors (CPU cores) so they could work as a single system.[4]

What Are Advanced Semiconductors?

Advanced semiconductors are typically defined as leading-edge chips fabricated at "advanced nodes," which most industry and policy sources treat as roughly equivalent to 7 nanometers (nm) and below.[5] The node designation indicates how densely transistors can be packed onto a chip, enabling greater performance and efficiency; fabricating at these nodes requires the most advanced manufacturing processes available.[6] Modern 3 nm nodes can fit 200 million transistors per square millimeter, with tens of bil-

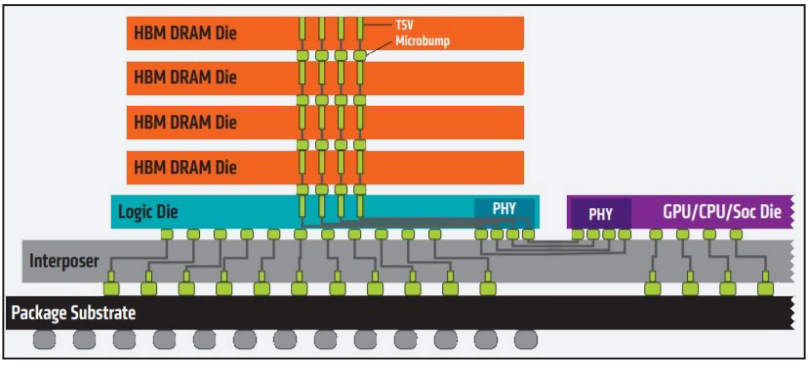
What Are Advanced Semiconductors—*Continued*

lions across a chip.[7] Nvidia's Rubin, for instance, contains 336 billion transistors, densely packed on two GPU dies (i.e., blocks of silicon).[8] To achieve this size and density, advanced semiconductors require state-of-the-art fabrication machines, specialized materials, and intricate transistor architectures to deliver the high-speed, efficient, and powerful computing capabilities that underpin today's most advanced AI systems. Cutting-edge semiconductors power the AI frontier in both training (i.e., teaching AI models to predict) and inference (i.e., running trained AI models on new data):

- *Logic:* Advanced logic chips serve as the "brains of electronic devices."[9] GPUs, for example, are optimized for parallel computation involving hundreds of trillions of operations, achieving this massive processing power through densely packed transistor nodes. Beyond GPUs, other logic chips target specific AI workloads, including field-programmable gate arrays (FPGAs), which are used primarily for inference, and application-specific integrated circuits (ASICs), which can be optimized for either training or inference.[10]
- *Memory:* Advanced semiconductors also rely on more advanced memory chips to store information with greater bandwidth, larger capacity, and higher energy efficiency than traditional memory technologies.[11] These chips generally fall into two categories: volatile memory, such as DRAM, which temporarily stores data while devices are powered on; and non-volatile memory, such as NAND flash, which retains data even when devices are powered off.[12] Data centers optimized for AI workloads require HBM—a specialized type of DRAM designed for extremely fast processing of large-scale data—to maximize the performance of advanced semiconductors while reducing energy consumption and operational costs.

The most advanced chips integrate specialized HBM stacks closely beside—or directly on top of—the logic processor using "advanced packaging" technologies. This architecture shortens the distance signals must travel, increasing both speed and energy efficiency (see diagram below). The logic chip performs calculations in parallel across thousands of cores and continuously exchanges data with memory. As a result, computing power and memory bandwidth must be scaled together in a tightly coordinated system to achieve state-of-the-art AI performance.[13]

What Are Advanced Semiconductors—*Continued*



Source: AMD, via Tom's Hardware.*[14]
Note: "PHY" refers to physical layers.

Indicators to Measure Quality and Quantity of Advanced Semiconductors

The semiconductor industry typically measures chip-level performance, as well as manufacturing yield and output, to determine the quality and quantity of advanced chips. Collectively, these indicators paint a more comprehensive picture of a country or firm's capacity to produce usable chips.

Chip-level performance: logic chips. For logic chips, the primary indicator is total processing performance (TPP)—a measure of the speed at which a chip can perform math operations per second.† However, the speed of a chip is only one aspect of performance and does not provide an indicator of efficiency. Performance density—usually measured as TOPS/mm^2‡—captures the amount of computing a chip delivers relative to its physical size or die surface area.[15]

Chip-level performance: memory chips. Key HBM performance metrics and design characteristics include memory bandwidth (terabytes per second [TB/s]), capacity per die and stack, energy consumed per bit transferred, latency, and the number of vertically stacked dies. These characteristics influence AI chip perfor-

*TSV refers to "Through-Silicon-Via," and SoC refers to "System-on-Chip." For more information on these terms, see U.S.-China Economic and Security Review Commission, *AI Technology Stack Glossary*, October 15, 2026.

†U.S. Export Administration Regulations (EAR) provide a mathematical formula to measure TPP: "2 × 'MacTOPS' × 'bit length of the operation' aggregated over all processing units on the integrated circuit." U.S. Department of Commerce, Bureau of Industry and Security, "Implementation of Additional Export Controls: Certain Advanced Computing Items; Supercomputer and Semiconductor End Use; Updates and Corrections; and Export Controls on Semiconductor Manufacturing Items; Corrections and Clarifications," 89 Fed. Reg. 23876, 23893 (April 4, 2024).

‡TOPS refers to Trillions of Operations Per Second, used to quantify the number of operations (i.e., mathematical matrices or tensor calculations) an AI accelerator can perform in one second. TOPS/mm^2 refers to the number of operations an AI accelerator can perform per second per square millimeter (mm^2) of chip area. Essentially, the TOPS/mm^2 value conveys how much computing power a chip can deliver relative to its physical size. Jesse Clayton, "TOPS of the Class: Decoding AI Performance on RTX AI PCs and Workstations," *Nvidia,* June 12, 2024; Kartik Prabhu et al., "A Methodology for Accurate Benchmarking of Neural Network Accelerators Using a High-Level Synthesis-Based Hardware Generator," *Philosophical Transactions Royal Society A* 384, 2315 (February 26, 2026): 2–3.

Indicators to Measure Quality and Quantity of Advanced Semiconductors—*Continued*

mance and efficiency by determining how much data memory can hold, how quickly it can supply data to the processor on the chip, and the energy required to transfer those data.[16]

Software

Alongside physical hardware, software plays an equally critical role in AI compute, exemplified by Nvidia's Compute Unified Device Architecture (CUDA). Because GPUs were originally designed for gaming, the invention of CUDA in 2006 allowed GPUs to transition to more general-purpose tasks.[17] Put simply, CUDA allows developers to tap into the parallel processing power of GPUs and run code directly on them for tasks such as machine learning without having to disguise the work as a graphic task.[18] By enabling GPUs to operate near their maximum computing capacity, CUDA has become a de facto industry standard* and a key advantage for Nvidia.[19]

Networking System and Energy Supply

Hyperscalers such as Amazon Web Services (AWS), Google Cloud, Microsoft Azure, Alibaba Cloud, and Tencent Cloud run data centers that link thousands of advanced chips together to deliver the immense computing power required for large AI workloads. Because advanced AI chips consume large amounts of power and are increasingly packed tightly into dense servers and racks, they generate significant amounts of heat, requiring cooling systems that continuously remove heat while the computing equipment operates.[20] Hyperscalers then use large clusters of advanced chips to train and deploy AI models in the cloud. These data centers also require enormous amounts of reliable electricity. A small data center distributes roughly 50 percent of its energy consumption to power the computing equipment and the remaining 50 percent for cooling and power supply systems that ensure a consistent flow of electricity from the grid to the data center.[21] Although an individual ChatGPT query using GPT-4o† consumed roughly 0.3 watt-hours of electricity, training GPT-3 required 1,287 megawatt-hours (MWh), which researchers argue is enough energy to supply an average U.S. household for 120 years.[22] A 2024 report by U.S.-based nonprofit Electric Power Research Institute indicated that new data centers are large enough to use electricity from 100 MW to 1,000 MW each, roughly equivalent to the load from 80,000 homes (i.e., the size of Alexandria, Virginia) to 800,000 homes (i.e., roughly comparable to the number of housing units in Philadelphia, Pennsylvania).[23] In addition, data centers rely on high-speed, low-latency networks that allow thousands of chips to operate together on complex AI workloads.[24]

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*OpenAI trained GPT-3 using PyTorch accelerated by Nvidia's CUDA-based cuDNN library. Nefi Alarcon, "OpenAI Presents GPT-3, a 175 Billion Parameters Language Model," *Nvidia Developer Technical Blog*, July 7, 2020; "NVIDIA cuDNN," Nvidia Developer.

†GPT-4o, released in May 2024, is a later-generation model than GPT-3 but predates OpenAI's GPT-5 and GPT-6 model families. "GPT-6 and Intelligent UI for Everyone," *OpenAI*, October 7, 2026; "Hello GPT-4o," *OpenAI*, May 13, 2024.

The Model and Application Layer: Data, Development, and Deployment

The model layer is the "brain" of the AI stack, where models are developed, trained, and deployed to learn from and act on data. During model development, AI developers train foundation models, such as the large language models (LLMs) developed by OpenAI and Anthropic, using the AI infrastructure described above. Model training relies on data pipelines that integrate diverse data sources, including the open web, enterprise and proprietary databases, licensed data repositories, scientific datasets, public records, and synthetic data.*[25] Developers also rely on AI frameworks and libraries that simplify model development, including TensorFlow, PyTorch, JAX, and scikit-learn. They also use specialized libraries for natural language processing, computer vision, recommendation systems, and generative AI, which uses models to create text, images, and videos.[26]

GPT-3, for example, was built using the transformer architecture—a breakthrough from 2017 that enabled AI models to read whole passages at once (rather than word by word) by weighing how each piece of text relates to every other piece.†[27] GPT-3 was trained using PyTorch—a widely used software toolkit for building AI models—on approximately 570 gigabytes (GB) of cleaned-up text, plus materials collected from large web archives, two online book collections, and English-language Wikipedia.[28]

In the application layer, once a foundation model has been trained, developers deploy and adapt it for practical applications by fine-tuning it with proprietary or domain-specific data, or by releasing derivative models optimized for particular use cases. These adapted models can then power downstream applications that generate predictions or responses in real time.[29] For instance, ChatGPT is a proprietary chatbot application built on OpenAI's GPT model family.[30] Enterprise users have adopted and integrated ChatGPT into numerous diverse workflows, including administrative, research, data analysis, financial, or tax tasks.[31]

AI agents are another key development in the application layer and can autonomously break down goals, make decisions, and take multi-step actions.[32] Unlike a traditional chatbot, an AI agent can operate in a self-directed loop—planning, acting, observing results, adjusting, and repeating until a task is done or the agent requires human input.[33] An AI agent typically combines an AI model with memory and access to tools such as web browsers, software, or databases, and can decide on its own which tools to use and what steps to take. Instead of simply answering a prompt, an agent can develop

*Synthetic data are artificially generated data from AI models and algorithms and are primarily used to train and improve AI systems at scale. These data mimic real-world data to supplement or replace real datasets that are proprietary, difficult to obtain, or becoming finite. Synthetic data have some advantages: they are scalable, cost less to generate than real-world data cost to collect, preserve privacy, and can be tailored to specific needs. However, these data often lack the complexity of real-world data, can amplify existing biases, and risk degrading model performance over time if AI systems are trained repeatedly on AI-generated data. U.S.-China Economic and Security Review Commission, *AI Technology Stack Glossary*, October 15, 2026.

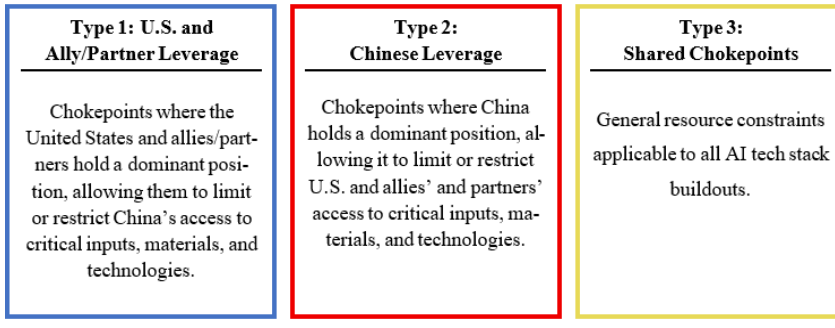
†Tokens are units of text that AI language models use to process language. A token can be a whole word, part of a word, punctuation mark, or other sequence of characters. AI models read, generate, and count text in tokens rather than words. U.S.-China Economic and Security Review Commission, *AI Technology Stack Glossary*, October 15, 2026.

a game plan for action: planning, acting, evaluating, and improving its approach until a task is completed.[34]

Key Chokepoints in the AI Tech Stack

The AI tech stack contains multiple strategic chokepoints across the infrastructure, model, and application layers. These chokepoints encompass the hardware and manufacturing capabilities required to produce advanced semiconductors; the compute, data, and software ecosystems needed to develop frontier AI models; and the platforms and applications through which AI capabilities are delivered to end users. Different types of chokepoints exist across different parts of the AI tech stack, with different countries maintaining unique advantages and disadvantages that have created the globalized and interdependent ecosystem that exists today, as demonstrated in Figure 2 below.

Figure 2: Types of Chokepoints



The Infrastructure Layer Relies on a Small Number of Critical Suppliers

At the infrastructure layer, many critical capabilities are concentrated in the United States and allied countries, including the Netherlands, Japan, South Korea, and Taiwan (see "Type 1" Chokepoint in Figure 2 above).[35]

No single company or country controls the semiconductor supply chain. Leadership in advanced AI chips relies on a set of highly specialized capabilities concentrated among a small number of firms across various countries. Nvidia—followed by AMD and Google—is universally recognized as the designer of the world's most advanced AI chips, including its Blackwell and Rubin processors, which underpin frontier AI training and inference.[36] Since 2022, the U.S. government has restricted the export of some advanced chips to China, leaving Chinese industry in a particularly compute-constrained environment. (For more information about U.S. export controls, see Appendix I, "Overview of U.S. Export Controls Targeting the AI Tech Stack.")

The resulting gap in compute is substantial, largely due to U.S. export controls on advanced chips. EpochAI estimates that as of May 2025, the United States hosted roughly three-quarters of observed global AI compute capacity, compared with about 15 percent in China.[37] Both the Federal Reserve and the White House have

since reiterated similar figures in October 2025 and January 2026, respectively.[38] In July 2024, DeepSeek's founder and CEO Liang Wenfeng stated that his company's biggest problem was AI chip export controls, not money—a concern he effectively confirmed in a meeting with investors as recently as July 2026, according to investor meeting minutes reported by *Yicai*.[39] In May 2025, a senior executive at Tencent Holdings said that broad adoption of AI models by enterprises in China was hindered by the country's limited access to advanced GPUs resulting from tightened U.S. export controls.[40] In January 2026, Lin Junyang, a leading researcher for Qwen at Alibaba, estimated that U.S. compute capacity exceeded China's by one to two orders of magnitude[41] (For more examples of Chinese industry opinions ofcurrent compute constraints, see Appendix II: Chinese Industry Assessments of Current Compute Constraints.)

AI Chip Design: Designing these advanced AI chips also relies on electronic design automation (EDA) software supplied primarily by U.S.-based Synopsys and Cadence and Germany-based Siemens, which together account for more than 85 percent of the global EDA software market.[42] One European expert has argued that the EDA software market is likely to remain an oligopoly among these three companies, particularly at the cutting edge, largely due to the high switching costs associated with changing EDA software suppliers.[43] This is a notable hurdle for new Chinese companies trying to enter the EDA software space, though some have made initial strides in the domestic Chinese market. For example, Beijing-based Empyrean Technology made such gains prior to the company's addition to the U.S. Entity List in December 2024.[44] Before these export controls went into effect, a Chinese EDA software researcher argued in 2018 that a long-term "embargo" over EDA software exports to China by Germany and the United States could actually present an opportunity for China, positing that the move would further incentivize China's push toward self-sufficiency.[45] However, U.S. restrictions have created additional obstacles for China's EDA software sector, including access limitations and uncertainty regarding overseas customers' continued use of Chinese EDA software following Empyrean's blacklisting.[46]

AI Chip Fabrication: Once designed, the most advanced chips are manufactured ("fabricated") almost exclusively by Taiwan Semiconductor Manufacturing Company (TSMC), which accounts for more than 90 percent of the world's leading-edge logic production.[47] Fabricating these chips depends on EUV lithography systems produced exclusively by the Dutch firm ASML, creating another critical chokepoint in the semiconductor supply chain.[48] ASML's monopoly on EUV lithography is itself supported by a highly specialized supply chain of more than 100,000 precision components sourced from suppliers across Europe, North America, and Asia, making these systems extraordinarily difficult and costly to replicate.[49] Chinese industry has long been aware of the challenges associated with overcoming its reliance on ASML for EUV lithography, particularly due to the complexities of the underlying technology.[50] In a 2018 interview with China's state-owned *S&T Daily*,* He Rongming, general

**S&T Daily* is under the supervision of China's Ministry of Science and Technology (MOST). Sidney Leng, "China Must Stop Fooling Itself it is a World Leader in Science and Technology,

manager of Shanghai Micro Electronics Equipment (SMEE), shared that an ASML representative told him even if ASML were to give him the blueprints for one of its photolithography machines, SMEE would still be unable to replicate it.[51] Dependence on ASML for specialized maintenance, technical support, and replacement components creates an additional chokepoint—acquiring an EUV system alone would not ensure that Chinese manufacturers could sustain reliable production due to ASML's position as the gatekeeper for EUV lithography, components, updates, and servicing needs.[52] China's challenges catching up to ASML's technology became more difficult after the Netherlands, in consultation with the United States, withheld the export license needed to ship ASML's EUV lithography equipment to China in 2019, effectively blocking its export.[53] These restrictions were broadened in September 2023 when the Netherlands imposed new export licensing requirements on additional advanced semiconductor manufacturing equipment.[54]

The performance of advanced AI accelerators depends not only on the chips themselves but also on specialized memory capable of keeping pace with their computational demands. AI performance depends on HBM, a specialized form of DRAM that enables the rapid movement of data between processors and memory during AI training and inference.[55] Global DRAM production is highly concentrated among South Korea's SK hynix and Samsung and U.S.-based Micron, which together account for roughly 90 percent of the market and dominate production of HBM used in advanced AI accelerators.[56] Other competitors, such as Chinese firm ChangXin Memory Technologies (CXMT), have reportedly achieved HBM capabilities.[57] As demand for AI accelerators has surged, HBM has become one of the most significant supply constraints in the AI hardware ecosystem, with industry analysts expecting shortages to persist through at least 2027.[58] Limited HBM supply has driven up memory and AI accelerator prices substantially and compelled chip designers and hyperscale cloud providers to reserve production capacity years in advance.

AI Chip Software: Software platforms represent another critical chokepoint in the AI infrastructure layer because they determine whether developers can effectively use AI hardware. As discussed earlier, Nvidia's CUDA has become the dominant software ecosystem for AI training and inference.[59] Beyond enabling GPU programming, CUDA includes mature libraries, compilers, communication frameworks, debugging tools, and optimization software that are deeply integrated into leading AI frameworks and widely used by developers.[60] This ecosystem creates switching costs for firms seeking to use alternative hardware: they may need to port and optimize models, replace or adapt software dependencies, retrain technical personnel, and reconfigure existing workflows. CUDA's dominance therefore reinforces Nvidia's position across the AI technology stack and raises a significant barrier for competing AI chip ecosystems, including China's domestic alternatives (see "Type 1" Chokepoint in Figure 2 above).[61]

Unlike the associated advanced AI chips, CUDA is not subject to broad export controls; in January 2025, Nvidia CEO Jensen Huang

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Magazine Editor Says," *South China Morning Post,* June 16, 2018.

said that about 1.5 million developers in China were using CUDA.[62] However, consistent with China's push for self-sufficiency across its full AI stack, Chinese industry has been working to develop alternatives to CUDA. A July 2025 *People's Daily Overseas* interview with Zhang Xin of China's University of International Business and Economics warned that Nvidia was leveraging CUDA to lock in customers—suggesting Nvidia was trying to delay the independent development of domestic Chinese competitors—and argued that China must therefore build its own developer toolchain and software ecosystem to "strengthen technological diffusion and market stickiness."[63] In a subsequent report, the Commission will take a deeper dive on the role of software in the infrastructure layer in U.S.-China AI tech stack competition, examining CUDA's role and China's efforts to develop alternatives.

Critical Minerals Provide China Upstream Leverage

Rare Earth Elements and Raw Materials

Critical minerals and raw materials constitute another critical chokepoint in the AI tech stack, though unlike previous examples, they represent a chokepoint China can leverage over the rest of the world (see "Type 2" Chokepoint in Figure 2 above). Their extraction, processing, and supply are concentrated among a small number of countries and firms, creating vulnerabilities that can disrupt semiconductor manufacturing and data center operations. Rare earth elements (REEs), in particular, are indispensable for high-performance permanent magnets used in advanced computing (as well as in electric motors and defense systems), yet the United States relies on imports for roughly 67 percent of its REE mineral consumption as of 2025.[64] China has long dominated REE mining and processing, accounting for approximately 69 percent of global mine production and 85 percent of global refining output in 2025.[65] This concentration translates into direct leverage over downstream industries that depend on rare earth magnets, gallium, germanium, graphite, and other specialized inputs. Beijing has demonstrated a willingness to exploit this leverage for strategic and geopolitical purposes by imposing export controls and other restrictions on critical minerals essential to both advanced and foundational semiconductors, defense systems, and advanced manufacturing. In 2025, it issued two waves of global export controls on rare earths following U.S. tariffs, causing worldwide manufacturing and automotive supply disruptions and demonstrating the current fragility of this vital chokepoint.*[66] Table 1 provides an overview of critical minerals and materials that represent notable chokepoints across the AI tech stack.

*For more on China's weaponization of supply chains, see U.S.-China Economic and Security Review Commission, Chapter 9, "Chained to China: Beijing's Weaponization of Supply Chains," in *2025 Annual Report to Congress*, November 2025.

Table 1: Critical Mineral and Material Chokepoints Across the AI Tech Stack

Mineral/ Material	Principal Use in AI Tech Stack	U.S. Net Import Reliance (2025)	China's Share in Supply Chain (2023)
Aluminum	Heat sinks, server/data center structures, electrical conductors, power infrastructure	60%	59% of production
Antimony	Flame retardants, electronics, specialty semiconductor applications, power infrastructure	91%	59% of mined production
Arsenic	Gallium-arsenide wafers for high-frequency/optoelectronic chips	100%	Second-largest producer of arsenic trioxide behind Peru
Copper (refined)	Chip interconnects, printed circuit boards (PCBs), cables, busbars, transformers, cooling, grid infrastructure	57%	44% of refined production
Fluorine (derived from fluorspar)	Semiconductor etching/ cleaning chemicals; fluorinated process gases	100%	63% of mined fluorspar production
Gallium (metal)	Gallium nitride (GaN)/gallium arsenide (GaAs) power semiconductors, radio frequency (RF) devices, lasers, photonics	100%	98% of primary refined production
Germanium (metal)	Fiber optics, photodetectors, silicon photonics, compound semiconductors	>50%	77% of refined production
Graphite (natural)	Batteries; thermal management and some electronics applications	100%	79% of natural production
Indium (metal)	Indium phosphide (InP) photonics, lasers, optical transceivers, displays	100%	68% of refined production
Lithium	Data center power and energy; grid storage	>50%	Australia/Chile/ Argentina/Zimbabwe important upstream; China highly important in processing and batteries
Nickel	Batteries, stainless steel/ data center infrastructure	41%	Indonesia dominates recent mine growth; China important in processing

Table 1: Critical Mineral and Material Chokepoints Across the AI Tech Stack—*Continued*

Mineral/ Material	Principal Use in AI Tech Stack	U.S. Net Import Reliance (2025)	China's Share in Supply Chain (2023)
Rare Earth Elements (REEs)	Permanent magnets in motors, cooling, power systems, and other electronics	67% (REE compounds and metals) 100% (heavy REEs)	68% of mined REEs
Silicon (metal)	Starting material for essentially all CPUs, GPUs, HBM/DRAM, and networking chips	>50%	85% of silicon metal production
Silver	Conductive contacts, printed circuit boards (PCBs), electronics, and power equipment	77%	Global mining relatively diversified
Tantalum	Capacitors; semiconductor interconnect/barrier layers	100%	China is an important processor/ import source but does not dominate global mining
Tin (refined)	Solder, PCBs, chip packaging, and electronics assembly	77%	23% of mined production
Tungsten	Semiconductor contacts/ interconnects; chip-fab equipment/electronics	>50% (concentrates and other forms)	83% of mined production

Source: Various.[67]

Arsenic

High-purity arsenic is a critical input for compound semiconductors such as gallium arsenide (GaAs), indium arsenide (InAs), and indium gallium arsenide (InGaAs), which are used in high-frequency communications, photonics, and advanced computing (as well as biomedical imaging and photovoltaics). Between 2020 and 2023, approximately 96 percent of U.S. arsenic metal imports originated from China, while in 2024, China accounted for 85 percent of global arsenic metal exports.[68] In early 2026, the U.S. Geological Survey (USGS) reported that China had supplied over 80 percent of U.S. imports of arsenic trioxide and more than 90 percent of arsenic metal imports through July 2025, leaving this segment of the semiconductor supply chain particularly vulnerable to Chinese export controls or broader geopolitical disruptions.[69]

Fluorine

China's upstream dominance extends to a broader portfolio of industrial minerals that support nearly every stage of both advanced and foundational semiconductor manufacturing. Fluorine, derived

from the critical mineral fluorspar, is indispensable for etching and cleaning semiconductor wafers, and for producing specialty chemicals such as hydrofluoric acid and nitrogen trifluoride used throughout chip fabrication.[70] Although Mexico hosts the world's largest fluorspar mine, China accounts for roughly 63 percent of global fluorspar production, leaving many chipmakers reliant on Chinese mining and processing.[71]

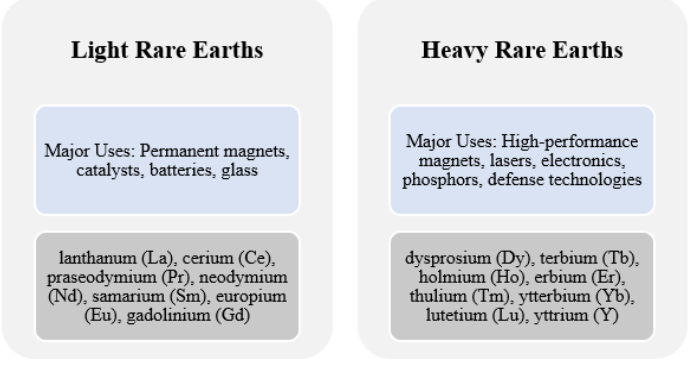
Indium

According to USGS, China accounted for about 70 percent of refined indium in 2025, and the United States was 100 percent net import reliant in 2025.[72] Specifically, indium phosphide (InP)-based photonic devices enable the high-speed optical interconnects that move data between processors, memory, and systems inside advanced AI data centers. As AI workloads scale and data center demand grows, InP devices are critical to alleviating data transfer bottlenecks and enabling faster, more energy-efficient computing.[73] As with REEs, Beijing appears to be weaponizing its dominant position in the supply chain: in February 2025, China's Ministry of Commerce (MOFCOM) added three indium compounds to its export control list.[74] In June 2026, *Reuters* reported that Nvidia-backed photonics chipmaker Coherent had warned the previous month of an InP shortage, and its CEO subsequently raised the issue of delays in China's export license processing.[75]

Rare Earth Elements

REEs represent one of the United States' most acute supply chain vulnerabilities, not only for key aspects of the AI tech stack but also for other critical electronics and components. The 17 REEs are split into two categories based on their atomic number and differences in geological abundance, supply, and applications (see Figure 3 below), though two REEs—scandium and promethium—are not covered by these categories.

Figure 3: Types of Rare Earth Elements*



Source: Various.[76]

*Although there are 17 REEs, scandium is classified as neither a light nor a heavy REE, according to USGS, and promethium is not included because it is rare and unstable in nature.

For almost two decades, USGS has acknowledged China's outsized role in the supply and production of REEs. In 2011, USGS found that China produced more than 95 percent of the global output of REEs, and in 2017, USGS referred to China's position in REE production and supply as a "near monopoly."[77] Beijing also appears to be aware of its strong position. In April 2025, MOFCOM announced export controls on several REEs, including samarium, terbium, dysprosium, lutetium, yttrium, gadolinium, and scandium.[78] In 2026, due to China's dominant role in production and its new export controls, economic modeling by USGS found the United States faced some of the highest supply chain disruption risks from several middle and heavy REEs, including samarium, lutetium, dysprosium, gadolinium, terbium, and yttrium.[79]

The 3 "Gs" of Chinese Critical Mineral Export Controls: Gallium, Germanium, and Graphite

Since 2023, the Chinese government has been weaponizing its dual-use export control system to threaten U.S. and global access to key critical minerals over which China maintains a dominant role in supply and refining. This weaponization began in July 2023 when MOFCOM introduced export licensing requirements on gallium and germanium and later extended those requirements in October 2023 to cover high-purity graphite.[80] In December 2024, MOFCOM issued Announcement No. 46, thereby escalating measures to a near-total export ban on gallium and germanium (and antimony), as well as imposing more stringent license requirements on graphite exports to the United States.[81]

After a year of heightened trade tensions, in October 2025, U.S. President Donald J. Trump met with General Secretary of the Chinese Communist Party (CCP) Xi Jinping in Busan, South Korea, where China agreed to restrain its exercise of these controls. According to the official White House fact sheet, China agreed to the following: "China will issue general licenses valid for exports of rare earths, gallium, germanium, antimony, and graphite for the benefit of U.S. end users and their suppliers around the world. The general license means the de facto removal of controls China imposed since 2023."[82] In line with this agreement, in November 2025, MOFCOM issued Announcement No. 72, suspending part of the export ban in Announcement No. 46 until November 27, 2026.[83] Almost a year later in September 2026, the broader U.S.-China trade truce was extended through January 10, 2027, ahead of the Trump-Xi September 2026 summit, with the White House stating that the two sides would "continue to work on U.S. concerns regarding supply chain shortages related to rare earths and other critical minerals."[84]

While China has suspended aspects of implementation, it has neither moved to reverse the export controls on gallium, germanium, or graphite nor reversed its April 2025 export controls on certain REEs. As of September 2026, China's global exports of

Shelby Johnston, "Scandium Statistics and Information," *U.S. Geological Survey*; Bradley S. Van Gosen et al., "The Rare-Earth Elements—Vital to Modern Technologies and Lifestyles," *U.S. Geological Survey*, November 2014, 1.

The 3 "Gs" of Chinese Critical Mineral Export Controls: Gallium, Germanium, and Graphite—*Continued*

key materials have remained below pre-control levels, and Beijing had reportedly granted European companies fewer general licenses than it had initially pledged.[85]

Collectively, these dependencies demonstrate that China's strategic position extends across multiple layers of the AI hardware supply chain. In some cases, Beijing dominates upstream extraction; in others, it controls midstream refining or downstream component manufacturing. Together, these positions provide multiple avenues through which China could disrupt the production of semiconductors, AI servers, networking equipment, and other technologies essential to frontier AI.

Energy Constraints

The growing computational demands of frontier AI make electricity another strategic chokepoint in the AI tech stack. Scaling advanced AI systems requires reliable access to electricity generation, transmission, distribution, and cooling infrastructure. However, insufficient investment in power generation and electric grids threatens to constrain global AI data center expansion and the compute capacity needed to train and deploy frontier models (see "Type 3" Chokepoint in Figure 2 above). By 2030, global data centers are projected to consume approximately 945 terawatt-hours (TWh) of electricity annually—more than double the 413 TWh consumed in 2024 and exceeding the current electricity consumption of Germany and France combined.[86] AI is projected to account for more than 20 percent of global electricity demand growth by 2030.[87] Rising electricity demand can also increase pressure on water resources used for power generation and data center cooling, particularly in water-stressed regions.[88] More broadly, growing competition for electricity and water could raise energy prices, delay industrial and residential grid connections, and intensify social and environmental challenges for local communities. Some new projects have proven unpopular among local communities, prompting protests and growing opposition and creating new political challenges to continued data center buildout.*[89]

Unlike semiconductor manufacturing where key chokepoints are concentrated in a small number of firms, electricity represents a general capacity constraint. Countries that can rapidly expand power generation, transmission, and cooling infrastructure will be better positioned to scale frontier AI. China may have an advantage in this aspect of the AI tech stack because it can deploy power

*While these protests represent genuine community opposition, concerns have been raised that Chinese-linked actors have also sought to stoke them at times. In a September 2026 letter to U.S. Department of the Treasury Secretary Scott Bessent and Internal Revenue Service CEO Frank Bisignano, House Committee on Ways and Means Chairman Jason Smith (R-MO) and House Select Committee on China Chairman John Moolenaar (R-MI) expressed concerns about CCP efforts to "use its influence campaigns and networks to manipulate" U.S. sentiment on data centers. For more information, see United States House Committee on Ways and Means, *Chairmen Smith, Moolenaar Demand Investigation into Chinese Communist Party-Linked Network Bankrolling Sabotage of American AI Infrastructure*, September 23, 2026.

generation and transmission infrastructure at a faster pace than the United States through centralized planning and state-directed investment. From 2020 to 2023, China's electricity production grew 22.9 percent from 7.8 million gigawatt-hours (GWh) to 9.5 million GWh.[90] U.S. electricity production grew 4.5 percent from 4.3 million GWh to 4.5 million GWh.*[91] In other words, China's existing capacity is more than double that of the United States, and it is still managing to grow the sector significantly faster. In a subsequent report, the Commission will take a deeper dive on the role of energy in U.S.-China AI tech stack competition.

High-Speed Networking

AI servers within data centers exchange enormous volumes of information across thousands of interconnected chips, meaning that high-speed networking is becoming essential to scaling frontier AI models. Fiber optic interconnects provide the bandwidth and low latency needed to move data rapidly between servers while minimizing communication bottlenecks and reducing energy consumption.[92] As AI clusters scale to tens of thousands of accelerators, networking performance becomes a critical determinant of overall system efficiency, making high-speed optical transceivers, switches, and networking chips strategically important.[93] This has concentrated another critical segment of the AI supply chain among a relatively small number of suppliers, including Nvidia, Broadcom, and Marvell for networking chips and technologies; Arista, Cisco, and Nokia for high-speed networking equipment; and Coherent, Lumentum, and Fabrinet for optical components and manufacturing.[94]

China, however, has significant capabilities in this layer. Huawei supplies data center switches, optical modules, and optical transport equipment and is already deploying these technologies in large-scale clusters of its Ascend AI processors.[95] China also occupies a leading position further upstream in the optical supply chain, accounting in 2025 for an estimated 59 percent of global optical preform output, 57 percent of optical fiber production, and 47 percent of optical cable production.[96] In a subsequent report, the Commission will take a deeper look at the role of other key elements of AI data center infrastructure in U.S.-China AI tech stack competition.

Firms Rely on the Application and Model Layers to Achieve Frontier AI Capabilities

Chokepoints in the AI tech stack are also present in the application and model layers. Frontier AI model development is dominated by a small number of U.S. and Chinese firms that rely on capital-intensive compute infrastructure, high-quality data, and sophisticated software ecosystems to develop and deploy advanced AI systems. Companies including OpenAI, Anthropic, Google, Alibaba, and DeepSeek are competing to produce the highest-performing foundation

*China's rapid growth in electricity production is due in large part to a structural electrification of its economy. Electricity consumption growth in China has outstripped real GDP growth since 2020, driven by demand in the manufacturing sector and the adoption of high-speed rail, electric vehicles, and electric heating and cooling systems. Electricity now accounts for 29 percent of China's final energy consumption versus 21 percent of U.S. final energy consumption. For more on China's electrification strategy, see U.S.-China Economic and Security Review Commission, Chapter 10, "Power Surge: China's Electrification Drive and Push for Global Energy Dominance," in *2025 Annual Report to Congress*, November 2025, 537–599.

models, seeking to capture global market share and achieve breakthroughs toward artificial general intelligence (AGI).*[97] Because frontier development is primarily concentrated in the United States and China, developers and enterprises worldwide depend on models created by firms in these two countries—whether through open-weight releases, proprietary application programming interfaces (APIs), enterprise offerings, or fine-tuned derivatives built on existing foundation models.

The model layer also includes critical chokepoints that create obstacles to training and running AI models. Data serve as crucial elements to effective AI systems that can produce reliable results and perform at the frontier level. As publicly available datasets approach exhaustion, frontier AI development increasingly depends on proprietary and domain-specific data held by a relatively small number of firms.[98] These data include healthcare, finance, scientific research, legal, enterprise, or other user data to improve AI capabilities. (For more on China's efforts to expand collection and access to data, see Chapter 7, "Collect, Steal, Buy, Fuse, Monetize: How China Is Turning Data into Assets and Ammunition" and U.S.-China Economic and Security Review Commission, *The People's Republic of Data: How China Is Turning Data into Capital*, August 18, 2026.)

The application layer differs as it comprises the user-facing and business logic components that integrate models into end-to-end workflows.[99] Developers build tools and services that are offered directly to users or distributed to others indirectly through platforms. This layer includes end user applications such as downloadable apps, chatbots, decision support tools, analytics dashboards, generative content tools, and embedded AI features that connect to other enterprise systems.[100] For example, the chatbot application of OpenAI's latest LLM models is ChatGPT, which provides a conversational interface that exposes the model's capabilities to end users and integrates with other services via APIs and plugins.[101]

China's Indigenous AI Tech Stack: Progress and Challenges

Consistent with Xi Jinping's belief that advanced technology is key to the long-term development of China's economy and that its control over such technology is critical to Beijing's geo-economic power, China has long pushed to localize the entire semiconductor supply chain. This goal has become more urgent given the growing importance of AI and the need to overcome constraints imposed by U.S. and allied export controls. The Chinese government has pursued industrial policy in favor of indigenizing key technologies for many years, efforts that were accelerated under its Made in China 2025 policy, channeling billions of dollars into its semiconductor industry through the Big Fund, subsidies, grants, and other policy support.[102] Despite the massive financial and political support, China has yet to close the hardest chokepoints in the infrastructure layer—particularly logic and memory chips, where it trails by multiple generations

*The Commission's 2024 Annual Report to Congress noted that AGI is generally defined as "systems that are as good as or better than human capabilities across all cognitive domains and would surpass the sharpest human minds at every task." U.S.-China Economic and Security Review Commission, *2024 Annual Report to Congress*, November 2024, 733.

and remains dependent on the very fabrication and design capabilities that U.S. and allied export controls target (see Table 2).

Beyond hardware that requires precision technology, the gap narrows and many advantages derive from scale, capital deployment, or infrastructure buildout. China is competitive or ahead most clearly in the energy grid—where longstanding policy and investments have created a structural advantage in electricity availability, grid capacity, and grid reliability. At the model layer, the competition is harder to characterize as the two ecosystems have split between different strategies—one focused on open models, the other focused at the leading edge on closed models. Chinese AI labs have generally elected an open model strategy to improve their model capabilities and erode the advantage of the closed models operated by U.S. frontier labs. At the application layer, competition centers on scale, commercialization, and industry customization. This layer is harder to quantify, as well, but China has a strategy, pursuing a coordinated top-down approach to incentivize a diverse range of industry sectors and companies to adopt AI and adapt it for maximum industry benefit. China's focus on open models also may give it an edge over time because the open approach allows for a potentially wider range of customization and experimentation integrating the model into other applications or for sector- or company-specific use cases. China's ecosystem would benefit from greater diffusion in the application layer that provides an innovation feedback loop to the original model developers.

Table 2: China's Localized AI Tech Stack

AI Tech Stack	Segment	Summary of Advantage	Major Chinese Players	Major Global Players
Infrastructure	Logic chips	The United States and allies lead, while China is multiple generations behind.	Huawei, Cambricon, Moore Threads, Biren Tech (+ Semiconductor Manufacturing International Corporation)	Nvidia, AMD, Global Foundries, Intel, Qualcomm, Apple (+ TSMC)
	Memory	The United States and allies lead. China trails in advanced DRAM and HBM but is competitive in NAND flash.	Huawei + ChangXin Memory Technologies and Yangtze Memory Technologies Co.	SK hynix, Samsung, Micron
	Software platform	The United States leads, while China is developing alternatives.	Huawei's CANN and Moore Threads' MUSA	Nvidia's CUDA
	Energy grid	China holds a structural advantage in energy availability and grid capacity.	State Grid and China Southern Power Grid	Local energy providers

Table 2: China's Localized AI Tech Stack—*Continued*

AI Tech Stack	Segment	Summary of Advantage	Major Chinese Players	Major Global Players
Infrastructure—*Continued*	Hyperscalers	China has hyperscalers, but its long-term progress is contingent on access to advanced logic and memory chips, as hyperscalers run on advanced nodes.	Alibaba, Baidu, Tencent, Huawei, ByteDance	Google, AWS, Microsoft, Meta, Oracle
	AI servers	China builds alternative suppliers to reduce dependency on the United States.	Inspur, H3C, Lenovo, xFusion (spun off from Huawei)	Dell, HPE
Model	Foundational model	The United States has the most capable models, but China is a close second. China leads in open models.	DeepSeek, Alibaba, Moonshot.ai, MiniMax, Z.ai, Stepfun, and others	OpenAI, Anthropic, Google, Meta, X.ai
	Developer tools	The United States leads, while China is developing alternatives.	MindSpore and Paddle Paddle	PyTorch and TensorFlow
Application	Distribution platforms	The advantage rests on companies' ability to adopt AI widely. China has a national strategy, while in the United States, industry leads the process.	State-led approach but many players involved given diversity of this layer. China believes open model approach will help it lead in AI adoption across various applications.	Many players

Source: Various.[103]

Infrastructure Layer: The Hardest Chokepoints for China

China Struggles to Solve the Lithography Challenge

Beijing has pursued a large-scale industrial policy effort to indigenize AI chips, supporting domestic alternatives to Nvidia and AMD such as Huawei's Ascend series and Cambricon's Siyuan series. As discussed earlier, hardware—namely the advanced AI chips and equipment needed to produce them—represents a critical chokepoint for China because many key segments are dominated by U.S. and allied firms, with certain technologies in some cases controlled by only a handful of companies—or even a single supplier. Without access to the most advanced precision tools like EUV lithography,

Chinese firms have been forced to rely on older deep ultraviolet light (DUV) lithography machines to print tiny circuit patterns onto silicon wafers. DUV technology is widely used to produce mature-node or foundational chips, including those at 28 nm and above process nodes, but is also essential to many steps in advanced-node chip production.[104] However, China's semiconductor industry and Chinese researchers have been working to extend DUV lithography's capabilities through a technique known as multi-patterning, where instead of printing a chip's tiny circuits all at once, manufacturers can print them in several carefully aligned passes, allowing them to produce smaller and more complex chips.*[105] The obvious downside to this process is that it materially lowers yields, which would be a significant constraint from a market-based competition standpoint (see discussion in the box below). There are also fundamental physical limitations: industry experts generally agree that DUV with multi-patterning cannot match the most advanced EUV-produced chips in performance and may already be approaching the practical physical limits of how far the technique can be pushed to produce smaller-node chips.

China's most prominent semiconductor company, Semiconductor Manufacturing International Corporation (SMIC), has had some success in using DUV machines and multi-patterning to produce chips at 7 nm process nodes and even smaller. In July 2026, industry analysts found that SMIC's N+3 fabrication process that employed DUV multi-patterning for Huawei's Kirin 9030 system-on-chip (SoC) was able to achieve a higher transistor density than TSMC's N6 fabrication process that used multiple EUV layers.[106] Although an expert analysis noted this is a technological achievement for SMIC, it also pointed out that higher transistor density does not necessarily equal overall competitiveness, as reported performance of the Kirin 9030 was comparable to similar flagship processors from about mid-2023 and substantially less energy efficient than modern Apple, Qualcomm, MediaTek, and Samsung designs.[107] To put it more simply, brute-forcing an advanced chip into existence does not necessarily make it scalable, commercially viable, or competitive from a performance standpoint.

Beyond logic chips, China's efforts to reduce reliance on SK hynix, Samsung, and Micron for HBM are centered on partnerships among Huawei, ChangXin Memory Technologies (CXMT), and Yangtze Memory Technologies Co. (YMTC). Huawei has reportedly developed its own HBM technologies for AI chips, including HiBL 1.0 and HiZQ 2.0, which are fabricated by CXMT.[108] Although reporting from earlier in 2026 noted that most experts believed Chinese memory companies were at least two generations behind market leaders, in late August 2026, *Reuters* and *The Information* reported that CXMT had begun producing advanced HBM—namely HBM3E—in small quantities and expected to expand production in 2027, though CXMT has not released the performance metrics.[109] The same reporting also claimed that Chinese AI chip designers such as Alibaba's T-Head and Cambricon were testing CXMT's HBM3E with

*Notably, "because DUV and EUV systems rely on fundamentally different optical designs, light sources, and materials, existing DUV machines cannot simply be upgraded or converted into EUV machines." U.S.-China Economic and Security Review Commission, *AI Technology Stack Glossary*, October 15, 2026, 2.

their own AI processors.[110] Notably, Huawei and YMTC have been on the Commerce Department's Entity List since 2019 and 2022, respectively.[111] YMTC and CXMT were also added to the U.S. Department of Defense's 1260H list in 2024 and 2025, respectively, and though both were briefly removed from the list in February 2026, the Department of Defense clarified they remain on the list as of June 2026.[112]

The Chip Quality and Quantity Debate

Huawei Ascend chips lag behind Nvidia's closest equivalent, the B200, in performance (see Table 3).

Table 3: Huawei Ascend 910C vs. Nvidia B200

Metric	Huawei Ascend 910C	Nvidia B200	Approximate Gap
Total processing performance (TPP)	12,800	40,000	B200: 3x better than the Ascend 910C
Memory bandwidth	3.2 TB/s	8 TB/s	B200: 2.5x the memory bandwidth of the Ascend 910C

Source: Various.[113]

Huawei's lack of access to the most advanced manufacturing technologies means its chips are less powerful than their U.S. counterparts in measurements of how many calculations a chip can complete per second (i.e., total processing performance) and how much information can flow on and off the chip per second (i.e., memory bandwidth). Practically, this means Huawei requires more chips, more power, more physical infrastructure, and more sophisticated networking to achieve the same level of performance as its U.S. competitors.

Understanding Manufacturing Yield and Output

For both logic and memory chips, production yield—measured as the percentage of functional chips relative to the total number of potential dies on a wafer—is an indicator of manufacturability and usable output.[114] Low yield contextualizes the efficiency of a company's manufacturing process, indicating that there is a reduced number of usable chips per wafer, which in turn means the chips produced require increased inputs, tools, and testing time, resulting in increased costs.[115] If a company is operating on the basis of market principles, a yield lower than its competitors' would signal an inability to stay competitive over the medium and long term—a low yield indicates the producer has both higher input costs and lower revenue per similar-sized semiconductor fab than its competitors. For China specifically, because its firms receive state subsidies, grants, funding, and other support, commercial profitability is a weaker constraint on production decisions than it is for market-driven competitors. In that context, low yield might not necessarily mean low aggregate production output—an indicator to track the total number of usable chips

Understanding Manufacturing Yield and Output—*Continued*

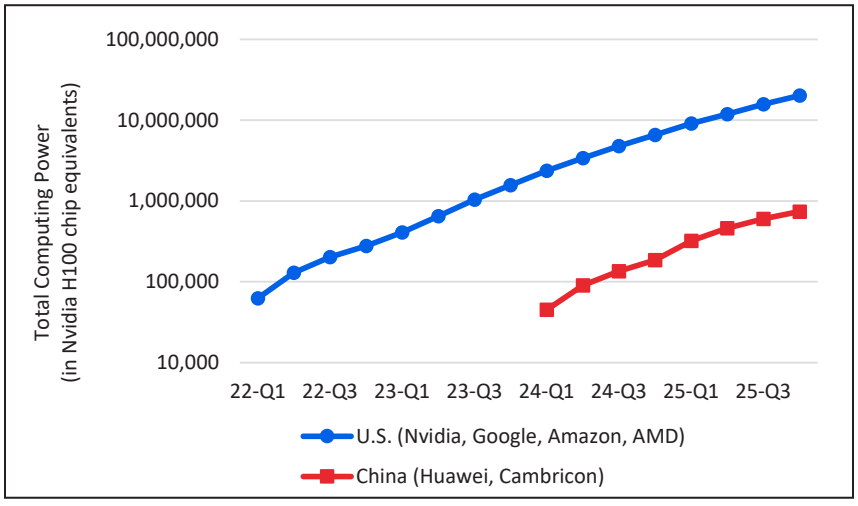
produced, taking into account constraints from low yield. Aggregate production output depends on the total number of fabs employed to make a given type of chip and the capacity and yield of those fabs. As such, assessments of capability and capacity for China must examine both yield and actual output, where yield shows usability of chips and relative inefficiency of production technology and output indicates the actual scale of usable production capacity.[116]

Lower yield compounds the challenge posed by the weaker performance of China's leading AI chips. According to the *Financial Times*, the SMIC-fabricated Huawei Ascend improved from yields of approximately 20 percent to nearly 40 percent by February 2025, compared with estimated yields of 60–80 percent for Nvidia's Blackwell chips.[117] At the same time, the Ascend 910C delivers less compute performance per chip than its leading U.S. counterparts (see Table 3). China therefore faces a twofold disadvantage in scaling aggregate compute: it must process more wafers to produce a given number of chips, and it must deploy more of those chips to achieve a comparative level of compute performance. This combination magnifies demand for scarce resources, including leading-edge fabrication capacity, etching, deposition, inspection, and metrology equipment, making it more resource intensive for China to translate semiconductor production capacity into deployable AI compute.[118]

The output constraint extends beyond logic chip fabrication. Huawei's Ascend 910C combines two logic dies with HBM in an advanced package, so yield also depends on HBM capacity and capability. Public estimates also put the Ascend chip at lower memory bandwidth than Nvidia's Blackwell (see Table 3).

Global memory shortages and equipment export controls have likely constrained Huawei's AI chip production, which public estimates placed at just 200,000–400,000 units in 2025—a fraction of the four to five million units Nvidia produced, according to estimates.[119] As part of research for this chapter, a knowledgeable source estimated that China is able to produce 2–3 percent of production outside the country, based on an assumption that Huawei produces approximately one million Ascend chips in 2026 and accounts for two-thirds of China's AI chip market share.[120] Figure 4, based on other data, tends to confirm this assessment.

Figure 4: Cumulative Compute Over Time, U.S. vs. Chinese Advanced Chip Designers, 2022–2025*



Note: Values are summed across designers each quarter—log scale. Quarters shown are calendar-year quarters.
Source: EpochAI.[121]

China Is Trying to Innovate Around Lithography Challenges

In addition to innovative approaches such as multi-patterning, China is also pursuing advanced packaging, 3D chip stacking, and system-level engineering to compensate for its lack of access to EUV technology. 3D chip stacking—a chipmaking process in which multiple chips are vertically stacked on top of each other rather than laid out flat, side by side—can dramatically increase bandwidth and efficiency by shortening the distance data need to travel between layers.[122] Using 3D stacking, Chinese firms aim to narrow performance gaps with leading-edge AI chips (produced using EUV-based processes) by combining mature node chips with advanced memory and optimized computing architectures. Reflecting this strategy, in November 2025, a vice president from the China Semiconductor Industry Association reportedly claimed that a Chinese-designed 14 nm chip using hybrid bonding—an advanced chip packaging technology used to join two chips together†—could achieve performance comparable to Nvidia's 4 nm-class products when combined with high-performance memory and advanced system-level architecture.[123] Independent experts have yet to verify this claim. Even if

*Because different companies use different types and generations of AI chips, it can be difficult to directly compare their computing power. To address this issue for this analysis, all chips have been converted into a common unit—the equivalent number of Nvidia H100 chips it would take to match that computing power. The United States' total is roughly 25–50 times larger than China's, and both have been growing fast. On a normal (linear) scale, the smaller China line would look almost flat against the huge, fast-growing U.S. line, making it hard to see any trends. A log scale compresses large numbers and stretches out small ones, so both lines' growth patterns, not just their raw size, can be seen clearly side by side.

†Hybrid bonding is an advanced chip packaging technique that directly connects two chips or wafers using extremely small copper connections. This allows chips to be stacked very close together and exchange data faster and more efficiently. U.S.-China Economic and Security Review Commission, *AI Technology Stack Glossary*, October 15, 2026.

this type of technique is successful, it is not clear whether non-Chinese semiconductor companies could use it with their more powerful chips to gain a similar performance improvement, thus maintaining their lead over China.

Chinese chip startups like Dongfang Suanxin (or DFSX) are also pursuing 3D stacking innovation. On July 13, 2026, DFSX unveiled its self-designed DF1000 AI chip, which it says uses 3D stacking and an older 14 nm manufacturing process to avoid reliance on the most advanced chipmaking equipment.[124] The company claims the DF1000 has strong performance (520 TFLOPS* in BF16 and 6.4 TB/s of memory bandwidth), with two more powerful versions, the DF2000 and DF3000, reportedly planned for late 2026 and late 2027, respectively.[125]

A related concept to the industry's move toward 3D stacking is Huawei's τ (Tau) Scaling Law—best understood as a post-Moore's Law design framework—rather than a complete replacement for leading-edge fabrication.† In May 2026, Huawei semiconductor chief He Tingbo announced at the 2026 IEEE International Symposium on Circuits and Systems that the company has shifted from the Moore's Law-related optimization—that is, shrinking transistors—to reducing the time it takes signals to travel through a chip by optimizing across devices, circuits, chips, and systems.[126] The company claims Tau's Scaling Law would let it keep boosting performance and transistor density without relying on EUV machines.[127] The company's claim, however, does not necessarily indicate real progress.‡ Tau's Scaling Law has yet to prove that stacking active logic chips can be manufactured economically without drawbacks and that its equivalent density results translate into real performance and cost gains.[128] It remains an organizing principle and roadmap for 3D integration and co-design of memory, software, and hardware, but whether it is a true scaling law that provides consistent improvement over time in node-equivalent outcomes at competitive yield, cost, performance, and power is an open question.

Advanced packaging has become critical to AI chip production, particularly TSMC's CoWoS§ (chip-on-wafer-on-substrate) process, which links an AI processor to its HBM through thousands of tiny connections so they can exchange data fast enough for AI workloads. TSMC remains the leading supplier of CoWoS packaging, controlling approximately 80 percent of GPU-class CoWoS capacity as of July 2026, according to one industry estimate.[129] China also faces bot-

*TFLOPS measures computing performance in trillions of floating-point operations—calculations involving numbers with decimal points—per second. "One Trillion-Operations-Per-Second!" *Intel*, December 17, 1996.

†Moore's Law projects that the number of transistors on a single chip doubles every two years. The theory has extended to include vertical stacking to bypass the horizontal size limits. Ally Heinrich, "What Is Moore's Law? Examples from the Semiconductor Industry," *Harvard Business School Online*, May 14, 2026.

‡It is worth noting that given Beijing's high prioritization of progress on its domestic AI tech stack technology, announcements from Chinese entities may reflect both Chinese propaganda and an attempt by entities to gain more favorable access to state resources. Companies publicly listed on Chinese exchanges also may have financial incentives to tout technological advancements. Each claim needs to be taken seriously and closely evaluated, but it is very likely that not every claim will indicate an advancement that ultimately affects the state of U.S.-China AI tech stack competition.

§CoWoS is an advanced semiconductor packaging technology that places multiple chips—such as AI processors and HBM—closely together on a shared base to increase processing speed, memory bandwidth, and energy efficiency. U.S.-China Economic and Security Review Commission, *AI Technology Stack Glossary*, October 15, 2026.

tlenecks in advanced packaging, including interconnect precision, warpage control, and thermal management.[130] To address these challenges, China has used national industrial policy to provide financial and government support to its advanced packaging sector, including firms such as Jiangsu Changjiang Electronics Technology, whose 2015 acquisition of STATS ChipPAC—then the world's fourth largest chip packaging and testing firm—received backing from China's Big Fund.[131] JCET has worked to develop advanced packaging technologies such as XDFOI, which integrates logic chips and HBM for high-performance computing.[132]

Model Layer: A Diverse Model Development Ecosystem Improves Competition

China's AI model ecosystem is diverse—including tech giants, smaller AI labs, and new entrants, all of which contribute to China's growing competitiveness in this layer. Tech giants like Alibaba, ByteDance, and Tencent have set up frontier labs, using revenue from their main businesses to fund their AI endeavors. ByteDance's substantial advertising and e-commerce business provides a strong financial base for its AI ambitions, enabling multi-billion-dollar investment in infrastructure and model development.[133] Smaller AI labs that raise venture capital funding—dubbed the "Six Tigers"—emerged as the de facto national champions in foundation models, including Z.ai (formerly known as Zhipu AI), Moonshot AI, MiniMax, Baichuan Intelligence, StepFun, and 01.AI.[134] A handful of notable cases fall outside the Six Tigers cohort. DeepSeek is excluded likely because it emerged from a quantitative hedge fund rather than the venture-backed startup ecosystem.[135] Lin Junyang, a former lead architect of Alibaba's Qwen models, departed Alibaba to establish Pragmatik Labs, an AI laboratory reportedly valued at approximately $2 billion.[136] Similarly, former SenseTime executive Wu Wei founded a company known as Manifold AI in May 2025 that focuses on developing world models for embodied AI.[137] Another new player is Naive AI, a secretive Beijing-based LLM startup founded by Tsinghua University professor Dai Jifeng that reached a $1.42 billion post-money valuation in October 2026 and released its first model, an open-weight LLM called Naive-N0.5-Flash, on September 27, 2026.*[138]

As discussed in the Commission's "Two Loops: How China's Open AI Strategy Reinforces Its Industrial Dominance" Research Working Group staff paper, Chinese AI labs have leveraged an open-weight model strategy to release foundational models slightly behind or comparable to those developed by U.S. frontier labs such as OpenAI, Anthropic, and Google.[139] In 2026, Chinese AI labs continued to release open-weight models while maintaining their close performance results with leading U.S. models. Following several years of substantial growth in the Chinese open model ecosystem, developers continued apace in 2026. Between January and July 2026, the non-

*These examples of founder-led or university-led spinouts from established AI companies are often referred to as "neo labs." "Neo lab" is a term that emerged in 2026 to describe a Chinese research-first AI startup organized similarly to an elite academic laboratory rather than a conventional technology company. Chinese reporting often describes these as "新研究型AI实验室" (new research-oriented AI laboratories) or "创新实验室" (innovation laboratories). "最猛清华副教授，7个月融了27亿" [The most impressive Tsinghua associate professor raised 2.7 billion yuan in 7 months], *36Kr*, September 29, 2026.

profit EpochAI recorded 43 models released by Chinese AI labs, 29 of which were open-weight models.* [140] The 2026 releases include DeepSeek's long-awaited V4, Alibaba's Qwen 3.5 multimodal models, Z.ai's GLM 5.2 with improved agentic capabilities, and Moonshot AI's 2.8 trillion-parameter Kimi K3—notably the largest Chinese open model release as of July 2026. Kimi K3 appeared to exhibit frontier-level capabilities, consistently securing top-tier positions across prominent AI performance benchmarks. As of July 16, independent evaluations by Artificial Analysis† ranked the K3 model third globally, trailing only Claude Fable and GPT-5.6 Sol, whereas the Vals AI Index‡ positioned K3 third—surpassing GPT-5.6 Sol and trailing only Fable 5 and Claude Opus 5.[141] Moreover, the model demonstrated significant specialized dominance in software development, capturing the leading position in six of the seven domains evaluated by the Frontend Code Arena.[142]

With their near-frontier capabilities and cheaper prices, Chinese open-weight models have become the default option globally for AI developers relying on open models, including those in the United States.[143] According to data from Hugging Face, Chinese open-weight models accounted for over 60 percent of all model downloads on the platform as of June 2026.[144] Much of this growth continues to be driven by the popularity of Alibaba's Qwen family of models, with more than 150,000 derivatives released between January and July 2026.[145] Chinese AI labs' popularity, growing capabilities, and aggressive pricing strategy make their models attractive to companies both large and small in the United States, particularly in the tech sector (see Table 4). For example, according to executive statements and media reporting, larger companies like Airbnb and DoorDash have adopted Chinese models in their enterprise systems, and Microsoft is reportedly considering integrating them as a lower-cost option for Copilot Cowork.[146] Both Amazon and Microsoft are offering Chinese models through Amazon Bedrock and Azure AI Foundry, respectively.[147] Tech startups such as Anysphere (developer of coding platform Cursor), Lindy AI (AI assistant), and Perplexity (AI-powered answer engine) have also turned to Chinese models to support their businesses.[148]

China's models are much cheaper for users to access than U.S. models. With the release of K3, Moonshot AI increased its pricing to $3 per one million uncached input tokens and $15 per one million output tokens, making it the most expensive Chinese model by API price at the time of its release.[149] However, K3 is still cheaper than comparable models from U.S. labs; for example, GPT-5.6 Sol costs $5 per one million input tokens and $20 per one million output tokens, and Fable 5 costs $10 per one million input tokens and $50 per one million output tokens.[150] According to independent U.S.-based

*EpochAI does not list model accessibility data for six Chinese models.

†Notably, while there are problems with relying on benchmarks like gamification of the tests, they remain useful as relative indicators of capabilities. Artificial Analysis aggregates nine benchmarks—including GDPval-AA v2 (agent capabilities) and Terminal-Bench v2.1 (coding)—that track AI progress across mathematics, science, coding, and reasoning. "Artificial Analysis Intelligence Benchmarking Methodology," *Artificial Analysis*, accessed July 24, 2026.

‡The Vals AI Index is a weighted composite benchmark that measures model performance on economically relevant finance and coding tasks, specifically using CorpFin, Finance Agent v2, SWE-bench Verified, Terminal-Bench 2.1, and Vibe Code Bench. "Vals Index Version 1.2," *Vals AI*, accessed August 11, 2026.

benchmark aggregator Artificial Analysis, K3 demonstrated capabilities comparable to Claude's Opus-4.8 at approximately half the cost per task.[151]

Still, questions remain about the ecosystem's trajectory, as some leading Chinese developers have started to keep their most capable models proprietary while continuing to release other open models. Alibaba, for example, has kept one of its flagship models, Qwen3.7-Max, behind API access in 2026 while releasing smaller models in the broader Qwen family with downloadable weights.[152] From January to July 2026, Chinese AI labs released six proprietary models, according to EpochAI's database.*

It is also worth noting that U.S. frontier AI labs and the U.S. government have reported that Chinese AI developers are using large-scale "adversarial" or illicit model distillation to extract capabilities from U.S. frontier models.[153] Anthropic, for example, attributed campaigns involving more than 16 million exchanges across roughly 24,000 fraudulent accounts to DeepSeek, Moonshot AI, and MiniMax, which it said used proxy services and fraudulent accounts to generate outputs from Claude to improve their own models.[154] A September 2026 joint advisory from the National Security Agency, Cybersecurity and Infrastructure Security Agency, and Federal Bureau of Investigation subsequently attributed high-volume distillation campaigns to DeepSeek, Moonshot AI, Alibaba, MiniMax, StepFun, and Z.ai targeting U.S. models including Claude, ChatGPT, Gemini, and Grok.[155] These campaigns can generate large volumes of synthetic training data and allow developers to acquire capabilities with substantially less time, computing power, and cost than developing those capabilities independently.

Table 4: Examples of U.S. Companies' Use of Chinese Models

U.S. Company	Chinese Model Family	Details
Airbnb	Alibaba's Qwen	Integrated Qwen into its chatbot.
Cursor	Moonshot AI's Kimi	Developed Composer 2 using Kimi model as base, with additional training.
Lindy AI	DeepSeek	Moved most functions previously operated by Claude and Gemini to DeepSeek v4 Flash on Atlas Cloud.
DoorDash	Moonshot AI's Kimi	Delegated "lower-level work" in its AI-assisted code-review workflow to Kimi K2.6.
Coinbase	Z.ai's GLM and Moonshot AI's Kimi	Exploring the use of open-weight models such as GLM 5.2 and Kimi 2.7 as default options for their internal LLM gateway.
Perplexity	Alibaba's Qwen	Post-training a model on top of Qwen to improve accuracy while keeping the cost low.

*This is not without precedent—both the United States and China have long released a mixture of open and closed models, though China's ecosystem has generally favored openness. Alib-

Table 4: Examples of U.S. Companies' Use of Chinese Models—*Continued*

U.S. Company	Chinese Model Family	Details
Microsoft	DeepSeek, Alibaba's Qwen, Moonshot AI's Kimi, Z.ai's GLM, and MiniMax	Offers numerous foundation models, including major U.S. models and Chinese models, via Azure AI Foundry and/or Fireworks on Foundry platforms. Weighing whether to host DeepSeek on its Copilot platform. It has acknowledged that it does not share customer data with model providers and has published information on DeepSeek-specific data safeguards.
Amazon Bedrock	DeepSeek, Alibaba's Qwen, Moonshot AI's Kimi, Z.ai's GLM, and MiniMax	AWS offers more than 100 foundation models, including major U.S. models and Chinese models. It has also introduced DeepSeek and Qwen offerings, emphasizing enterprise-grade security, unified infrastructure, and safeguards that prevent customer data from being shared with model providers.

Source: Various.[156]

Evaluating the Effectiveness of U.S. Export Controls

For a full discussion of U.S. and partner country key export controls relevant to the AI tech stack, see Appendix I. Below is a brief assessment of the effectiveness of these controls.

- *Short-term disruption:* There is strong evidence to suggest that U.S. and partner country export controls have significantly disrupted China's access to advanced AI chips and advanced semiconductor manufacturing equipment, which has imposed additional costs in terms of time and money on China's efforts to develop advanced AI models and a self-sufficient indigenous semiconductor manufacturing ecosystem.
- *Long-term effort and regular updates needed:* Most experts assess that the export controls have slowed—but not stopped—China's progress and believe that U.S. and partner country export controls must be constantly monitored and adjusted based on supply chain dynamics and technological developments to preserve the lead of U.S. and partner countries in this critical area.
- *Adequacy of scope:* There have been significant debates about the adequacy of the scope of U.S. export controls and in particular whether they cover a sufficient range of products and technologies, whether they have been extended quickly enough to entities within China active in its AI tech stack

aba, for example, kept six of its models closed (e.g., Qwen 2.5-Max and Qwen3-Max) in 2025 but made 32 models available for download. As of July, the company had released four proprietary models in 2026, according to EpochAI's database. "AI Models," *EpochAI*, accessed July 17, 2026; Ngor Luong, "Two Loops: How China's Open AI Strategy Reinforces Its Industrial Dominance," *U.S.-China Economic and Security Review Commission*, March 23, 2026, 10.

Evaluating the Effectiveness of U.S. Export Controls—*Continued*

ecosystem, and whether they adequately cover obvious workarounds (e.g., cloud access to advanced semiconductor computing capacity or frontier AI models outside of China by Chinese companies).

- *Cloud access challenge:* Since the initial rollout of AI chip export controls in October 2022, U.S.-based think tanks, law firms, media outlets, and Members of Congress have spoken out about the remote access issue.[157] Reports indicate that Chinese AI companies have been accessing advanced Nvidia AI chips through data centers in Southeast Asia.[158] The U.S. Department of Commerce's Bureau of Industry and Security (BIS) attempted to address this remote access issue through various rules issued in October 2023, in January 2024, and again in January 2025 with the AI Diffusion Rule.[159] In May 2025, BIS announced it would be rescinding and not enforcing the AI Diffusion Rule while it worked to develop an alternative policy.[160] In May 2026, BIS issued a clarification that existing controls prohibit exports to companies headquartered in Country Group D:5 (including China) and Macau even if the company is operating outside of the relevant country.[161] Accordingly, as of early October 2026, BIS controls where certain AI chips can physically go and, in some circumstances, what entities can receive them via license.[162] However, existing rules have evidently not fully prevented Chinese entities from remotely accessing advanced semiconductors through AI data centers in third countries. (For more on cloud access, see U.S.-China Economic and Security Review Commission, Chapter 3, "U.S.-China Competition in Emerging Technologies," in *2024 Annual Report*, November 2024, 170, 192–193.)
- *Significance of partner coordination:* There is a strong consensus that coordination with partner governments from key supplier countries is essential to ensuring the effectiveness of these controls—in terms of both restricting China's capabilities and ensuring U.S. technology companies are not left at a disadvantage to those in partner countries due to lost sales to China. Many experts cite the U.S.-Netherlands-Japan coordinated controls on EUV lithography machines and associated components as the strongest piece of evidence in support of allied cooperation.
- *Impact on China's indigenous innovation efforts:* Some argue that U.S. and allied export controls prompted China's indigenous innovation efforts in advanced semiconductors. This claim is demonstrably wrong. Last year's Annual Report and the Commission's "Made in China 2025 Scorecard" staff paper described in detail China's extensive policy support and stated goal—for over a decade—to develop and grow its indigenous semiconductor industry in both advanced and foundational semiconductors. This included an intensification of

Evaluating the Effectiveness of U.S. Export Controls—*Continued*

state support that has drawn waves of new semiconductor projects since 2019 (i.e., predating the more aggressive 2022 semiconductor controls).[163] Xi Jinping has also increasingly put AI at the center of China's efforts for technological self-reliance and global technological leadership, entirely apart from any discussion of U.S. export controls. While U.S. and allied semiconductor export controls may have added to the urgency of Beijing's efforts to indigenize and grow the industry, they certainly did not cause China to establish indigenization as a goal. Moreover, a significant amount of Beijing's policy support in the semiconductor space has been focused on the "foundational" sector—where there are no countrywide U.S. and allied controls. Finally, as discussed in the "Made in China 2025 Scorecard" report, China's industrial policy efforts have been less successful "in markets dominated by a small number of strong global incumbents and when Chinese firms struggled to overcome barriers to entry including specialized intellectual property tightly controlled by incumbents"—a phenomenon that export controls strengthen by effectively converting private commercial decisions about intellectual property access into government technology export limitations.[164]

Implications for the United States

U.S. leadership in chips will translate imperfectly into AI leadership if the United States cannot build the power, transmission, networking, and data center infrastructure needed to deploy those chips at scale. The U.S.-China AI competition is unlikely to be decided by dominance at any single layer of the technology stack. A coherent U.S. policy for AI leadership requires approaches to ensure all elements of the AI tech stack, including energy and permitting constraints, do not become bottlenecks that erode U.S. leadership.

Export controls have worked at a critical level of the AI tech stack but cannot be static. The United States and its allies and partners have the upper hand in various key aspects of the stack—especially in the hardware and compute spaces—and export controls appear to be imposing real costs on China, but their value is primarily in buying time rather than permanently preventing Chinese technological progress. Policymakers must ensure U.S. export controls and other approaches continue to protect this lead through effective enforcement, regular review to ensure consistency with the latest technological and commercial developments, continuing close cooperation with allies and partners, and continuous adaptation to reflect developments in other aspects of the AI tech stack. U.S.-China AI competition at the infrastructure level appears to be shifting from which country can build the best chip to which can optimize the entire AI system; without constant monitoring of export controls

and changing chokepoint dynamics, the United States could find itself falling behind.

China's control over critical minerals necessary to the AI tech stack creates a vulnerability for U.S. and partner countries, which China has weaponized. **The United States must continue and accelerate efforts to ensure secure and trusted access to the critical minerals and REEs necessary for advanced AI infrastructure and should support efforts to develop alternative materials where feasible.**

The United States needs a policy response to the risks from the spread of China's open models. Chinese weakness at the infrastructure layer does not necessarily translate into weakness higher up the AI stack, as demonstrated by recent developments in Chinese AI models. Chinese labs are producing near-frontier open-weight models at substantially lower prices, and Chinese open models are showing widespread global adoption. While China's success appears driven at least in part by distillation of more advanced U.S. models, China could lose the competition for advanced semiconductor production while simultaneously gaining greater influence over the global AI model and application ecosystems. Moreover, if U.S. companies and developers increasingly build products on Chinese open models, U.S. technological dependence could emerge higher in the stack even while China remains dependent on U.S. technology lower in the stack. China has a long history of leveraging open technology ecosystems to establish global technological dependencies. If Chinese AI models become the default starting point for developers worldwide, China could shape the architecture, data formats, and security characteristics of AI systems far beyond its borders.

The cybersecurity risks of integrating Chinese open models into U.S. systems remain insufficiently understood, including whether vulnerabilities or malicious functionality could escape detection and propagate through downstream applications. If undiscovered weaknesses become embedded within widely used applications, adversaries could potentially exploit them to compromise sensitive information or disrupt essential services. Uncertainty about the nature and extent of these risks also undermines U.S. national security by limiting the U.S. government's ability to assess exposure, establish safeguards, and respond effectively. Widespread adoption of Chinese open models before these risks are adequately assessed could leave U.S. critical infrastructure, government networks, and defense-related systems exposed to threats the United States is unprepared to detect or mitigate.

The United States must continue to invest in innovation and diffusion across the entire AI tech stack. Critically, the durability of U.S. and allied technological advantage depends not only on how effectively Washington and other key capitals can constrain China's progress but also on whether the United States and its allies can innovate, manufacture, deploy, and commercialize new technologies faster than China can close its existing gaps. This extends across the full AI tech stack, from developing next-generation technologies and scaling manufacturing to building the energy and infrastructure needed for deployment, accelerating adoption, leveraging allied capabilities, and competing in global markets. A suffi-

ciently large and skilled workforce is also critical for each of these areas, particularly as competition increases for the scientists, engineers, technicians, and other specialized workers needed to develop, manufacture, and deploy advanced AI technologies at scale.

Recommendations

- The growing proliferation and adoption of Chinese open-weight artificial intelligence (AI) models in the United States carries national security implications for sensitive data, cybersecurity, and dependence on Chinese technology. Uncertainty about how these models behave in sensitive applications, what vulnerabilities they may introduce, and whether safeguards can adequately mitigate those risks warrants greater federal scrutiny. Congress should require enforceable protections for sensitive applications before these models become embedded in critical systems and costly to replace.

  Congress should require the Secretary of Commerce, through the Office of Information and Communications Technology and Services (OICTS), in coordination with the Center for Advancing Innovation and Standards for Super Intelligence (CAISSI) and relevant federal agencies, to:

  - Restrict deployment in sensitive applications unless safeguards are demonstrated. Within 180 days, identify sensitive uses—including systems controlling critical infrastructure, performing national security functions, or processing bulk sensitive personal data—and prohibit new deployment of covered models in those uses absent a time-limited authorization based on independently evaluated safeguards. Authorizations should address the model, its deployment environment, and its access to data, networks, and tools.
  - Require identification and mitigation of existing exposure. Direct federal agencies and covered operators in designated sensitive sectors to inventory existing deployments and implement enforceable mitigation or replacement plans within deadlines established by the Secretary.
  - Establish continuing security obligations. Require independent security testing, reporting of significant security incidents, reassessment following material modifications, and verification of compliance. Direct the Secretary to restrict or prohibit the commercial provision or deployment of designated models where identified risks cannot be adequately mitigated.
  - Reduce strategic dependence. Require providers serving designated sensitive applications to maintain documented capabilities to replace covered models and migrate affected systems and data to alternatives meeting federal security requirements.

  Within 180 days, the Secretary should also complete a consolidated assessment, building on existing federal evaluations, the National Telecommunications and Information Administration's (NTIA) open-model assessment, and federal supply-chain re-

strictions. The assessment should distinguish risks inherent in model weights from those arising from hosting, software, updates, and system integration; identify gaps in testing and verification; and inform subsequent requirements without delaying initial implementation.

Congress should authorize and appropriate funding, information-gathering and enforcement authorities, and penalties for noncompliance. The legislation should provide narrowly tailored exceptions for security research and authorized national security activities and require annual reporting to Congress on deployment exposure, compliance, mitigation effectiveness, and remaining dependencies.

- Americans should know when the government services they receive and the commercial products they use rely on AI models developed by Chinese companies. Clear disclosure would help consumers, businesses, and investors assess potential risks to data security, privacy, service reliability, and national security.

  Congress should make it U.S. policy that Americans know when governments and businesses rely on AI models developed by Chinese companies. Congress should:

  - Require federal agencies, and any state or local government or other entity that receives federal funds or federal tax credits, to disclose any use of AI models developed by an entity headquartered in, or organized under the laws of China, or owned or controlled by such an entity, including models fine-tuned on or derived from them, wherever they are hosted. Disclosure should appear in clear language on their public-facing platforms and in their filings with the federal government.
  - Require businesses that use such models in any part of a product or service offered in the United States to consumers or other businesses to disclose that use clearly on their websites and in product documentation and treat failure to disclose as an unfair or deceptive act or practice enforceable by the Federal Trade Commission.
  - Require reporting companies, as part of quarterly and annual disclosure filings with the U.S. Securities and Exchange Commission, to disclose as a material business risk the extent of their use of such models.

- Sustaining U.S. leadership in AI requires reliable access to advanced chips and the manufacturing capacity needed to produce them. Exports to China should not come at the expense of capacity needed to support U.S. AI development and deployment. Requiring auditable exporter certifications would help ensure that export decisions account for these constraints and protect U.S. access to critical capacity.

  Congress should ensure that AI chip exports to China do not divert capacity from the U.S. market, including by amending the Export Control Reform Act of 2018 (ECRA) to condition exports, reexports, or in-country transfers of advanced AI chips to China on exporter certification that they will not divert advanced

semiconductor manufacturing or AI capacity from the U.S. market. The legislation should:

- Cover upstream capacity, including advanced-node wafer fabrication, high-bandwidth memory, and advanced packaging—not finished-chip inventory alone;
- Require auditable capacity-allocation data submitted to the Bureau of Industry and Security, subject to ECRA record-keeping and enforcement provisions, including criminal penalties for false certification;
- Require the Bureau of Industry and Security to report annually to the committees of jurisdiction on certifications, validation methods, and exports coinciding with unmet U.S. or allied demand for equivalent capacity; and
- Prohibit regulatory waivers or narrowing of the requirement without an affirmative national security determination transmitted to Congress for a 30-day review period.

Appendix I: Overview of U.S. Export Controls Targeting the AI Tech Stack

The addition of Huawei to the U.S. export control Entity List in 2019 began a new chapter in U.S. use of export controls relating to semiconductors as a dual-use technology. In October 2022 and October 2023, the new approach became significantly more ambitious, with the United States explicitly identifying a broader range of strategic objectives relating to the national security implications of competition at the frontier of semiconductor and AI technology. In reviewing the various rules identified in Table 5 below, as well as public statements by leadership at the National Security Council, the Department of Commerce, and BIS, the following themes appear to be the key goals behind these policy measures:

- Deny China access to frontier AI compute to hamper its ability to use AI and supercomputing capabilities to surveil its own citizens; support its military modernization; and otherwise threaten U.S. national security.[165]
- Disrupt and degrade China's efforts to develop its own domestic indigenous advanced semiconductor manufacturing ecosystem by restricting the export of advanced semiconductor manufacturing equipment and technical know-how.
- Concentrate controls on a relatively narrow set of technologies deemed essential to the production of advanced computing capabilities to maintain the U.S. and allied technological lead while preserving revenue from China on less sensitive items, which helps ensure U.S. and allied companies are profitable and can fund research and development to remain global leaders.[166]

Table 5: Major U.S. and Allied Export Control Actions Targeting the AI Tech Stack

Date	Policy Measure	What Changed
May 2019	Huawei added to Entity List	Required licenses for exports of U.S.-origin items to Huawei and affiliates.
May & Aug. 2020	Huawei Foreign Direct Product Rule (FDPR) expansion	Extended U.S. jurisdiction to foreign-made chips produced using U.S. technology.
Dec. 2020	SMIC Entity List designation	Imposed license requirements for exports to SMIC and a subset of its subsidiaries and affiliates, particularly for semiconductor manufacturing equipment capable of producing advanced-node chips.
Oct. 7, 2022	First major BIS semiconductor rule ("October 7 Rule")	Introduced comprehensive restrictions on advanced AI chips, semiconductor manufacturing equipment, supercomputer end uses, and U.S. persons' support for the development of AI and semiconductor manufacturing equipment in China.

Table 5: Major U.S. and Allied Export Control Actions Targeting the AI Tech Stack—*Continued*

Date	Policy Measure	What Changed
Jan. 2023	U.S.-Netherlands-Japan Trilateral Agreement reported	Political agreement to align export controls on advanced semiconductor manufacturing equipment.
March–July 2023	Netherlands and Japan announce licensing requirements on advanced semiconductor manufacturing equipment	Netherlands imposed worldwide licensing requirements on advanced DUV lithography systems and related equipment. Japan imposed worldwide licensing requirements on 23 types of semiconductor manufacturing equipment.
Oct. 17, 2023	Second major BIS semiconductor rule ("October 2023 Update")	Updated "October 7 Rule" by adjusting parameters for determining whether an advanced AI chip was controlled, expanded licensing requirements for advanced chips and semiconductor manufacturing equipment, and added 13 Chinese AI and semiconductor manufacturing equipment companies to the Entity List.
April 4, 2024	BIS clarifications	Issued technical corrections and clarifications to improve enforceability of the October 2023 rules, clarify semiconductor manufacturing equipment coverage, and address implementation questions.
Dec. 2, 2024	Third major BIS semiconductor rule	Expanded controls on 24 additional categories of semiconductor manufacturing equipment, three categories of semiconductor software, and HBM; added approximately 140 Chinese entities—including fabs, equipment makers, and investment firms—to the Entity List.
Jan. 2025	AI Diffusion Rule	Established a global licensing framework governing exports of advanced AI chips worldwide through a tiered-country system and controls on AI compute infrastructure.
May 2025	Announced Huawei Ascend guidance and rescission of the AI Diffusion Rule	BIS issued guidance stating that use of Huawei Ascend AI chips in certain circumstances could violate U.S. export controls because they are believed to have been produced using restricted U.S. technology in violation of the FDPR. BIS announced its intention to rescind the AI Diffusion Rule before it took effect and to replace it—and in the meantime not enforce it.

Table 5: Major U.S. and Allied Export Control Actions Targeting the AI Tech Stack—*Continued*

Date	Policy Measure	What Changed
May 2026	BIS guidance on enforcement of license requirements for advanced AI chips	BIS clarified that its May 2025 non-enforcement policy for the AI Diffusion Rule did not eliminate preexisting license requirements for exports of advanced computing items to entities headquartered in certain high-risk countries. The guidance also reaffirmed that exporters must continue to obtain licenses for transactions involving Chinese-headquartered firms and their overseas subsidiaries (e.g., entities headquartered in China but operating in Malaysia or Singapore), unless a license exception applies.

Source: Various.[167]

Appendix II: Chinese Industry Assessments of Current Compute Constraints

Chinese AI industry leaders have offered varying assessments of the scale and consequences of China's compute constraints. The statements below illustrate how leading Chinese AI companies characterize the U.S.-China compute gap, restrictions on access to advanced U.S. chips, domestic semiconductor limitations, and efforts to compensate through greater efficiency and indigenous hardware.

Name	Position / Company	Date	Assessment
Lin Junyang	Former head of Qwen, Alibaba	Jan. 2026	"U.S. compute may overall be one to two orders of magnitude greater than ours.... Today, we are relatively stretched thin; just delivery may already occupy the vast majority of our compute."[168]
Liang Wenfeng	Founder and CEO, DeepSeek	May 2026	"Four Huawei cards are equivalent to one Nvidia card, while being two years behind."[169]
Liang Wenfeng	Founder and CEO, DeepSeek	May 2026	"This problem is basically unsolvable for now, because Huawei's output is also limited. To train an 800B model I would need two hundred thousand of Huawei's newest cards—for training alone, before research. So we simply do not consider competing with the US at that scale for now."[170]
Yan Junjie	Founder and CEO, MiniMax	Jan. 2026	"The United States pursued a 'brute-force breakthrough' based on compute, scale, and paradigm. China initially followed, relying on efficiency and engineering to break through."[171]
Zhang Peng	CEO, Z.ai	Mar. 2026	"I think the biggest problem we may face over the next twelve months is 'compute.'"[172]
Martin Lau	President, Tencent	Mar. 2026	"If conditions allow us to purchase [GPUs], we would actually prefer to buy them. However, because of supply-chain constraints and relevant regulatory factors, we sometimes have no choice but to rent."[173]
James Mitchell	Chief Strategy Officer, Tencent	May 2026	"On one hand, policy restrictions prevent some foreign-produced and foreign-designed GPUs from entering the Chinese market; on the other hand, Chinese-designed GPUs face limited capacity at domestic foundries. As a result, China as a whole has continuously faced a shortage in GPU supply."[174]
Xia Lixue	Cofounder and CEO, Infinigence AI	Nov. 2025	"In chips, we are probably still at least two generations behind the world's leading level."[175]

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PART IV

TAIWAN AND HONG KONG

CHAPTER 9: TAIWAN: A CRUCIAL WINDOW FOR A CRITICAL PARTNER

Executive Summary

The next 24 months could shape cross-Strait relations for years. Beijing will assess Taiwan's 2026 and 2028 elections to gauge whether coercion and political pressure can move Taiwan toward unification. However, even an outcome the People's Republic of China (PRC) favors may not deliver what it expects. Taiwan's public remains overwhelmingly opposed to political integration with China, limiting how far any elected government can move toward Beijing. Xi Jinping could therefore reach 2028 with greater military capabilities and less confidence that political and economic pressure and other forms of coercion can achieve unification. This realization may increase the risk that China will take more aggressive coercive actions against Taiwan, including imposing a quarantine or blockade.

The stakes for the United States have never been higher. Taiwan is indispensable to the Indo-Pacific balance of power and to U.S. technological leadership and economic security. Taiwan's central geographic location in the first island chain and near key maritime routes constrains China's options and concurrently enhances U.S. access, capabilities, and operational freedom in the Indo-Pacific. In recent years, Taiwan's world-leading semiconductor industry has become foundational to U.S. leadership in advanced technologies, particularly artificial intelligence (AI). A change in Taiwan's status would alter the military balance in the Western Pacific, test confidence in U.S. alliances, and threaten critical technology supply chains.

Beijing is pursuing its objectives through coercion backed by a credible threat of force. China is seeking to weaken Taiwan's resistance through military and coast guard activity, cyber and information operations, economic leverage, lawfare, and political influence while building capabilities to blockade or invade the island. Taiwan has responded with increased defense spending, military reforms, investments in resilience, and stronger cooperation with the United States, but significant vulnerabilities remain. Political divisions have slowed defense investments, Taiwan depends heavily on imported energy, and nearly $30 billion in approved U.S. weapons remained undelivered as of August 2026.

The near-term challenge is therefore not only to deter invasion, but to prepare better for the coercion already happening and likely to escalate—sustained pressure designed to change the status quo without triggering war.

Key Findings

- The next 24 months will test Beijing's belief that it can move Taiwan toward unification through coercion and political influence rather than force. This coercion strategy hinges on eventually having a conciliatory government in Taipei, but Taiwan's public overwhelmingly favors the status quo, constraining how far any elected government can move toward Beijing. Even electoral outcomes in 2026 and 2028 that Beijing favors may fail to produce the political movement toward unification it expects. If China concludes its political strategy is failing, Beijing may turn to greater coercion to force progress on its terms, including through imposing a quarantine or blockade.
- Taiwan is a first-order U.S. national security interest. A crisis in the Strait would threaten U.S. military power and economic security simultaneously.
- Taiwan's continued autonomy is critical to the military balance in the Western Pacific, and its security is closely tied to allied confidence in U.S. commitments. Taiwan's geographic location denies the PLA a forward military position between Japan and the Philippines and complicates its access to the Western Pacific. Taiwan's own surveillance, coastal defense, air defense, and maritime capabilities force the PLA to account for threats from the island, while U.S. and allied forces elsewhere along the first island chain further constrain its operations. Chinese control of Taiwan would shift these advantages toward Beijing, extending PLA power in the Western Pacific.
- Taiwan's technology ecosystem is at the foundation of U.S. advantage in AI. Taiwan dominates advanced semiconductor production and supplies critical hardware across the AI stack. U.S. reshoring is building domestic capacity but remains deeply dependent on Taiwan's companies, technology, workforce, and supply chains, making the two economies more integrated rather than making Taiwan dispensable.
- Coercion and military buildup are mutually reinforcing components of Beijing's dual-track strategy rather than alternative paths to unification. Political influence, economic pressure, cyber and information operations, lawfare, and other gray zone activities work to erode Taiwan's will to resist, while the PLA's growing military capabilities make those efforts more credible and preserve Beijing's option to impose unification by force if they fail. U.S. and Taiwan planning remains more heavily oriented toward countering an inva-

sion, leaving both less prepared for the challenge likely to come first.

- China is intensifying its efforts to intimidate and coerce supporters of Taiwan's autonomy, moving beyond symbolic legal threats toward more concrete efforts to punish opposition to Chinese malign influence and to deter support for Taiwan. Over the past year, Beijing introduced new legal authorities, launched criminal investigations, and took public enforcement actions to intimidate a broader range of Taiwan officials, civil society leaders, and public figures, regardless of their location.
- Taiwan is strengthening its military and national resilience, but domestic political divisions and persistent vulnerabilities threaten to slow progress during a critical period. Taipei is strengthening its asymmetric defenses, civil preparedness, critical infrastructure resilience, and counterintelligence efforts, but legislative gridlock has delayed or reduced investments that could produce near-term capabilities. Taiwan's heavy dependence on imported energy also leaves it particularly vulnerable to the quarantine or blockade scenarios Beijing is increasingly rehearsing.
- Delays in U.S. foreign military sales are hindering Taiwan's ability to field critical military capabilities and weakening deterrence even as Chinese pressure increases. A backlog of undelivered weapons, compounded by delays in finalizing additional arms sales, is pushing needed capabilities further into the future. These challenges slow Taiwan's ability to enhance its capacity to resist Chinese coercion, blockade, or invasion.

Introduction

Beijing's goal is to take Taiwan without firing a shot, and it is working to weaken Taiwan's resistance, exploit political divisions, and create an opening for unification on Beijing's terms. At the same time, the PLA is building the military capabilities to conduct a blockade or invade Taiwan and make U.S. and allied intervention more difficult and costly. Beijing's coercion campaign and its military buildup are complementary components of the same strategy. Political influence, economic pressure, cyber and information operations, lawfare, and other gray zone activities* seek to weaken Taiwan's will to resist, while growing military capabilities give that pressure greater weight and provide Beijing credible options to use

*The U.S. National Intelligence Council defines gray zone as "peaceful interstate diplomacy, economic activity, and people-to-people contact on one end of the spectrum and armed conflict on the other." Activities conducted by a state in the gray zone could be coercive or subversive actions "to achieve objectives at the expense of others in contravention or in the absence of internation al norms." Gray zone activities fall below a threshold for military action and take place across a range of domains. For more on China's persistent use of destabilizing gray zone activities, including activities in the military and security, cyber, economic, information, legal, and space domains, see U.S.-China Economic and Security Review Commission, Chapter 2, "U.S.-China Security and Foreign Affairs (Year in Review)," in *2025 Annual Report to Congress*, November 2025, 96–97; U.S. National Intelligence Council, *Updated IC Gray Zone Lexicon: Key Terms and Definitions*, July 2024, 1.

force if coercion fails. Together, this two-pronged approach advances Beijing's political objective and complicates Taipei and Washington's efforts to build resilience and respond effectively.

Taiwan's importance to the United States has never been higher. Taiwan's status is critical to U.S. power in the Western Pacific. Chinese Communist Party (CCP) control of Taiwan would create grave threats to U.S. defense treaty allies and constrain U.S. options in the region. Taiwan's indispensable role in advanced semiconductors puts it at the epicenter of the AI revolution and U.S. efforts to prevent China from taking the lead in advanced technologies.

The United States must be prepared to counter Beijing's coercion while continuing to deter military aggression. Congress built the legal architecture of U.S. support for Taiwan and has repeatedly strengthened it—often over the objections of the executive branch of the day—from the Taiwan Relations Act in 1979 through the Taiwan Enhanced Resilience Act in 2022. That framework was commensurate with the threat it was built to counter, with policy oriented chiefly toward deterring and defeating an outright invasion. While that work remains essential, the more probable danger in the short run is not a sudden assault but rather sustained coercion calibrated to bend Taiwan's choices while denying Washington a clean moment to act. The question facing Washington is therefore not simply whether it can deter an invasion but whether it can prevent Beijing from changing the status quo without one.*

A Critical 24 Months for Deterrence

The next 24 months could be the most consequential period for Taiwan in decades. During that time, there will be a convergence of significant political, military, and strategic developments affecting Beijing's calculus for action, including Taiwan's political direction, the People's Liberation Army's (PLA) readiness, and China's assessment of U.S. willingness and ability to respond, among other considerations.[1] Taiwan's upcoming elections will shape Beijing's judgment about whether it can move Taiwan toward unification through coercion and co-optation or whether greater military pressure is necessary. Between those elections falls 2027, the year by which General Secretary of the CCP Xi Jinping has reportedly directed the PLA to be capable of conducting a successful invasion of Taiwan.[2] While the benchmark is about having developed the capability, not a date for an invasion, the PLA continues to improve its joint combat proficiency, readiness, and posture should China's leaders determine that military action (e.g. blockade, strike, invasion) is necessary.[3] The Department of Defense also assessed that the PLA has linked achievement of its 2027 goals to its ability to build up its strategic deterrence to sufficiently deter or restrain U.S. military involvement and to credibly prevail in a Taiwan conflict.[4] By 2028, Beijing will have a clearer picture of whether its political strategy is working—and a broader set of military options if it concludes that it is not.

*This chapter's findings are based on meetings with the Taiwan Economic and Cultural Representative Office; the American Institute in Taiwan; the 2026 SelectUSA Taiwan Delegation; and the Research Institute for Democracy, Society, and Emerging Technology as well as open-source research.

Beijing continues to describe peaceful unification as its preferred outcome and seeks to create political conditions conducive to negotiations, devoting resources to cultivate political elites and societal actors capable of influencing Taiwan's policy debate.[5] But that strategy depends on a government in Taipei willing and able to move cross-Strait relations in China's preferred direction.[6] Taiwan's November 2026 local elections, and above all its 2028 presidential and legislative elections, may alter China's perceptions of the viability of a non-military solution to Taiwan. If the Democratic Progressive Party (DPP) retains the presidency for an unprecedented fourth term, Beijing may conclude that the chances of more favorable leadership in Taipei have dwindled. But even a win by the opposition Kuomintang (KMT) may alter China's calculus. Taiwan's public remains overwhelmingly opposed to political integration with China, limiting how far any elected government can move toward a policy of accommodation.[7] The gap between what Beijing expects and what any Taiwan government will actually do presents a realistic escalation risk. Beijing may conclude in 2028 that no political outcome can yield leadership willing or able to move in Beijing's preferred direction and timeline and therefore begin a sharper escalation of pressure.

Beijing has strong incentives to intensify its influence operations ahead of Taiwan's January 2028 presidential election as it seeks to improve the prospects for its broader political strategy. In the past, Beijing's efforts to tip the scale of public opinion in Taiwan often have backfired, instead creating a "rally around the flag" effect that benefited the DPP.[8] Beijing recognizes, however, that it does not have to convince Taiwan's citizenry of the merits of joining China, only that unification is inevitable and that resistance is futile and will incur steep costs.[9] Despite Beijing's efforts, public opinion polls show only marginal progress in fostering a sense of fatalism amid Taiwan's current political division and uncertainty around U.S. policy.[10] Only 4 percent of respondents in Taiwan say they support unification with China and 30 percent believe it will occur (up from 22 percent in 2020).[11]

The period immediately following Taiwan's election will also coincide with the opening stages of the 2028 U.S. presidential election. Because Beijing's assessment of U.S. resolve is one factor in its broader calculus over Taiwan, Chinese leaders are also likely to consider that political timing, regardless of whether their perceptions accurately reflect U.S. policy or capabilities.[12]

If developments over the next two years lead Beijing to conclude that its political efforts are not likely to be successful in moving Taiwan closer to unification on its terms, the more immediate challenge may not be invasion but a sharper escalation of the coercive campaign China is already conducting. One possibility is a "customs quarantine" requiring ships bound for Taiwan to first clear customs on the Mainland, potentially accompanied by other restrictions on Taiwan's access to the outside world.[13] Such measures could combine coast guard, military, cyber, and economic pressure while remaining below the threshold of conventional war, forcing the United States and its partners to decide how to counter more aggressive coercion that falls short of an outright attack.[14] As discussed in the

Commission's 2025 Annual Report, China is actively expanding its export control laws and testing their effectiveness through specific campaigns, such as the restrictions it placed on critical minerals.[15]

The next two years are therefore a window for strengthening deterrence. Taiwan and the United States have time to improve Taiwan's military and societal resilience, field needed military capabilities, prepare for quarantine and blockade scenarios, and develop credible economic and diplomatic responses to escalating coercion. As discussed below, maintaining deterrence in an evolving risk environment is critical because of Taiwan's significance to U.S. geostrategic, technological, and economic security.

Taiwan Is a First-Order U.S. National Security Interest

Taiwan's growing importance to U.S. national security reflects a convergence of military, technological, economic, and geopolitical trends that have fundamentally raised the stakes of preserving peace and stability in the Taiwan Strait. Taiwan is critical to maintaining a favorable military balance in the Indo-Pacific, sustaining U.S. technological leadership, protecting economic security, and preserving confidence in the U.S.-led alliance network. As Beijing's capabilities and ambitions have expanded, the consequences of Taiwan's future have likewise grown well beyond the island.

If Beijing were to bring Taiwan under its control, the consequences would extend across each of these areas simultaneously. China's control of Taiwan would strengthen the PLA's strategic position in the Western Pacific, undermine allied confidence in U.S. security commitments, increase Beijing's leverage over critical technology supply chains, and impose significant costs on U.S. economic and national security.

Taiwan Is Central to Preserving a Favorable U.S. Military Balance in the Indo-Pacific and Maintaining Alliance Credibility

In 1950, General of the Army Douglas MacArthur, then–Commander-in-Chief, Far East Command, called Taiwan an "unsinkable aircraft carrier"* that the United States should not allow to be "dominated by a power hostile to the United States."[16] The geography has not changed, but the challenge from China has grown markedly. Since the enactment of the Taiwan Relations Act (TRA) in 1979, China has transformed from a regional military power with limited ability to coerce Taiwan into a competitor to the United States capable of exerting sustained military, economic, and political pressure across the Taiwan Strait and throughout the Western Pacific. Taiwan's security is now more consequential to preserving U.S. power in the Indo-Pacific—and therefore globally. Recognizing these growing stakes, Congress has consistently reaffirmed U.S. support for Taiwan's self-defense and made clear that any effort by China to dictate Taiwan's future through coercion or other non-peaceful

*General MacArthur's specific "unsinkable aircraft carrier" reference was that if the United States allowed Taiwan to fall under hostile control, it would become an unsinkable aircraft carrier to communist forces in the Western Pacific, threatening U.S. forces and alliances in the region. U.S. Department of State, Office of the Historian, *Memorandum of Conversation, by the Ambassador at Large (Jessup),* June 25, 1950.

means would threaten regional peace and stability and be of "grave concern to the United States."[17]

Taiwan Helps Constrain PLA Power in the Western Pacific

Taiwan matters to the regional military balance because its status affects where and how easily the PLA can operate in the Western Pacific. Taiwan sits near the center of the first island chain, between Japan to the north and the Philippines to the south, along the maritime approaches connecting China's near seas to the Philippine Sea and wider Pacific. As long as Taiwan remains outside Beijing's control, the PLA must operate through or around this geography to move major naval and air forces eastward. The Miyako Strait to Taiwan's northeast and the Bashi Channel and Luzon Strait to its south are important approaches for Chinese forces moving between the East and South China Seas and the deeper waters of the Western Pacific.[18] Taiwan does not prevent the PLA from operating beyond the first island chain, but its continued autonomy makes projecting and sustaining Chinese military power more difficult.

Taiwan is located between principal U.S. military positions in Japan and growing U.S. access in the Philippines, a mutual defense treaty ally, making its status important to how U.S. and allied forces operate along the first island chain (see Figure 1 below).[19] Although the United States does not station combat forces on the island,* an autonomous Taiwan denies the PLA the ability to use it as a forward military position between these U.S. allies.[20] Taiwan's own surveillance, coastal defense, air defense, and maritime capabilities also force the PLA to account for military threats from the island when operating around the Taiwan Strait and nearby approaches.[21] These conditions complicate PLA efforts to establish control over the waters and airspace between China's coast and the wider Pacific.

Control of Taiwan would change that geography in Beijing's favor. The PLA could operate aircraft, missiles, sensors, naval forces, and other capabilities from Taiwan. This would move Chinese military power roughly 100 miles east of the Mainland, provide more direct access to the deep waters of the Philippine Sea, and place PLA forces closer to Japan's southwestern islands and the northern Philippines.[22] Chinese forces operating from Taiwan could make it more difficult for U.S. and allied forces to move through and operate inside the first island chain, could expand the area in which the PLA could contest U.S. naval and air operations, and could increase military pressure on two U.S. treaty allies.[23] Chinese control of Taiwan could turn the island from a constraint on PLA power projection into a forward position for projecting Chinese military power deeper into the Western Pacific.

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*The United States reportedly maintains a number of military trainers on Taiwan. Seth Robson, "'It Needs to be a Thousand': US has 500 Military Trainers on Taiwan, Retired Admiral Says," *Stars and Stripes*, May 27, 2025; U.S. House Select Committee on the Strategic Competition between the United States and the Chinese Communist Party, *Hearing on Deterrence amid Rising Tensions: Preventing CCP Aggression on Taiwan*, May 15, 2025, 42.

Figure 1: The U.S. Military Presence Along the First Island Chain



Note: The Ryukyu Islands are under the administration, legislation, and jurisdiction of Japan. Mark Manyin, "The Senkakus (Diaoyu/Diaoyutai) Dispute: U.S. Treaty Obligations," *Congressional Research Service*, (Report No. R42761), March 1, 2021.

Source: Various.[24] Created for the U.S.-China Economic and Security Review Commission. Names and boundary representation are not necessarily authoritative.

The PLA understands the strategic significance of Taiwan. A Chinese military strategist views control of Taiwan as "shatter[ing]" the first island chain, which is viewed as "the semi-sealed predicament of China's sea areas"* and would establish the PLA's maritime military superiority over the deep waters east of Taiwan.[25] In turn, the PLA would further exert its military influence over the Miyako Strait and the Bashi Channel, alleviating the chokepoints PLA strategic ballistic missile submarines would have passed through.[26] China's control of Taiwan would form a new defensive perimeter that preserves decision space for Beijing in a conflict.[27] Such control would further complicate U.S. military operations in the Indo-Pacific, worsening the anti-access/area denial (A2/AD) challenge.[28] Jonathan D. Caverley, professor at the U.S. Naval War College, assessed that control of Taiwan would allow the PLA to saturate the waters 1,300 kilometers (807 miles) from China's Mainland, including the Philippine Sea, with short-range munitions rather than expensive long-range missiles.[29] The threat to U.S. naval ships within the first island chain during a kinetic conflict could push the U.S. 7th Fleet even farther from China's shores.[30] Chinese views of the military and strategic benefits to its control over Taiwan dovetail with Xi Jinping's assertion that Taiwan's status is centrally linked to Beijing's goals of national rejuvenation.[31]

Taiwan's military significance is compounded by the volume of global commerce that passes through the surrounding waters. The maritime approaches around Taiwan carry critical trade and energy flows between Northeast Asia, the South China Sea, and the wider Pacific. In 2023, approximately 28 million barrels per day of petroleum and petroleum products—about 37 percent of such global maritime shipments—traveled through the South China Sea.[32] The Taiwan Strait itself is a major commercial artery: Japan, South Korea, and the Philippines together shipped $755 billion worth of goods through it in 2024, while approximately $986 billion of electrical and machinery goods transited the Strait.[33] Alternative routes exist, but a crisis that forced large volumes of commercial traffic away from these routes around Taiwan would still impose costs and disruption. As recent events in the Strait of Hormuz demonstrate, threats to freedom of navigation on major commercial maritime routes can quickly lead to increased transportation and energy costs and supply constraints.[34]

Beijing's control of Taiwan would offer greater leverage over the commercial routes surrounding the island. In a crisis, the PLA could threaten shipping through or around the Taiwan Strait while operating closer to the routes connecting the South China Sea and Philippine Sea, raising the costs and risks of commercial access to some of the world's largest economies. Beijing's gray zone activities in the South and East China Seas already demonstrate its willingness to use maritime power to pressure neighboring states short of war.

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*Toshi Yoshihara, senior fellow at the Center for Strategic and Budgetary Assessment and adjunct professor at Georgetown University's Walsh School of Foreign Service, assessed Chinese analysts' description of the first island chain—which is occupied by those formally or closely aligned with the United States—as a feature that "imprisons China in a 'semi-sealed state.'" Toshi Yoshihara, "Chinese Views of Taiwan's Geostrategic Value," *Sasakawa Peace Foundation*, December 4, 2023.

Taiwan Is Central to U.S. Alliance Credibility in the Indo-Pacific

Taiwan's security is inextricably tied to the credibility of U.S. security commitments throughout the Indo-Pacific. As China's military power has expanded, key U.S. allies, including Japan, the Philippines, and Australia, have strengthened defense cooperation with the United States, increased defense spending, expanded military access agreements, and deepened trilateral and multilateral security partnerships.[35] Japanese officials have emphasized that peace and stability across the Taiwan Strait are "paramount" to Japan and the wider international community.[36] Philippine President Ferdinand Marcos Jr. has likewise described the external threat from conflict in the Taiwan Strait as "more pronounced" and "more worrisome."[37] He noted that it is "very hard to imagine a scenario where the Philippines will not somehow get involved" in a cross-Strait conflict.[38] A perceived U.S. failure to prevent Beijing from coercively changing Taiwan's status would raise serious questions among allies about the reliability of U.S. security commitments and could accelerate regional hedging toward China.

The credibility of U.S. security commitments has long shaped the strategic choices of Asian allies and encouraged regional states to align their security policies with the United States.[39] Converging threat perceptions and allies and partners' confidence in U.S. commitments influence whether they deepen security cooperation with Washington, expand defense capabilities, or hedge by not fully aligning with either the United States or China.[40] Official communiqués and joint statements now highlight peace and stability across the Taiwan Strait as "indispensable" to regional and even global security and prosperity, reflecting a broadening recognition among Indo-Pacific governments and G7 partners of Taiwan's broader strategic importance.[41] The U.S. position in the Indo-Pacific would be undermined not only by Chinese control of Taiwan but also by diminished confidence in U.S. alliances as countries realized they need to adjust to a more powerful China in the Indo-Pacific.

Japan Increasingly Views Taiwan's Security as Tied to Its Own

Japanese Prime Minister Sanae Takaichi's November 2025 statement that a blockade or attack on Taiwan could threaten Japan's survival underscores how Tokyo increasingly views Taiwan's security as intertwined with Japan's own security and alliance obligations.[42] Japan's westernmost islands lie a short distance from Taiwan.*[43] In response to a question during a parliamentary session about whether a Taiwan contingency involving a Chinese naval blockade would qualify as a "survival-threatening situation," Prime Minister Takaichi noted, "If warships are used, accompanied by the exercise of military force… it could be a situation posing an existential threat to [Japan]."[44] Under Japan's 2015 security legislation, a survival-threatening situation poten-

*Japan's Yonaguni Island is its westernmost island and lies only about 70 miles away from Taiwan. Anthony Kuhn, "On Japan's Yonaguni Island, Fears of Being on the Front Line of a Taiwan Conflict," *NPR*, August 5, 2022.

Japan Increasingly Views Taiwan's Security as Tied to Its Own—*Continued*

tially allows Japan to exercise its right of collective self-defense in support of a "foreign country that is in a close relationship with Japan," including the United States.*[45] China's expanding military capabilities and increasingly assertive regional behavior have fundamentally reshaped Japan's threat perceptions, leading Tokyo to view China as its foremost security challenge.[46]

The stakes extend beyond military alliances to the future of the regional order itself. Taiwan's autonomy is important to maintaining a regional order founded on the peaceful resolution of disputes, the rule of law, and freedom of navigation. Defending this order requires sustaining a favorable military balance in the Indo-Pacific and deterring coercive or unilateral attempts to alter Taiwan's status. As successive U.S. strategy documents have argued, Taiwan is about far more than the future of one democracy. It is a test of whether the United States and its allies can preserve the military balance and regional order that have underpinned Indo-Pacific stability for decades, or whether China can use coercion to unilaterally change the status quo by force, weaken alliances, and reshape that order in its favor.[47] While China is seeking to refashion the Indo-Pacific and broader international environment to suit its interests, Taiwan is a frontline democracy embodying the very principles now under authoritarian pressure.[48] Taiwan is therefore a critical test as to whether the region successfully bands together to resist coercive changes to regional stability.

Taiwan Is Integral to U.S. Technological Advantage and Economic Security

Taiwan's role in semiconductor supply chains, particularly advanced semiconductors, makes it critical for U.S. advantage in AI and related technologies. Even as the United States has been reshoring semiconductor production and enhancing its ability to produce cutting-edge chips, its technological ties with Taiwan have deepened. Aside from U.S. reliance on Taiwan as its advanced semiconductor foundry, the two are in a strategic partnership integral to U.S. buildout of capacity in AI. The long timelines and complexity of establishing a broad advanced semiconductor manufacturing ecosystem within the United States ensure that production capacity on the island will remain crucial to core U.S. economic and national security interests for the foreseeable future. Taiwan's cooperation with U.S. export controls has helped ensure the United States retains an advantage over China in advanced compute for AI. Taiwan is also an important part of U.S. efforts to diversify supply chains away from China.

*Japanese law defines a survival-threatening situation as one in which "an armed attack against a foreign country that has a close relationship with Japan occurs, and as a result, threatens Japan's survival and poses a clear danger of fundamentally overturning people's right to life, liberty and pursuit of happiness." Government of Japan, *Act on the Peace and Independence of Japan and Maintenance of the Security of the Nation and the People in Armed Attack Situations, etc., and Survival-Threatening Situations*, Act No. 79 of June 13, 2003 (as amended). Japanese Law Translation.

Taiwan's Hardware Underpins U.S. AI Advantage

Taiwan's hardware and know-how enable the emerging technologies that will define the 21st century economically, technologically, and militarily and are thus at the heart of U.S.-China strategic competition. Advanced computing—especially AI—is a central arena in this competition owing to its ability to accelerate innovation across other domains like biotechnology, quantum computing, and robotics. (For more on China's plans to use AI to grow its capabilities across each of those domains, see Chapter 1, "U.S.-China Economic and Trade Relations (Year in Review).") Though U.S. companies lead in the design and software layers of the AI technology stack, Taiwan remains dominant in producing the advanced semiconductors at the core of the stack.[49]

Taiwan is crucial to the U.S. effort to remain at the forefront of AI. A key U.S. advantage over China in AI is total compute.* Frontier models from U.S. AI labs have continued to outperform Chinese counterparts due to advantages in access to compute resources, especially during the training phase.†[50] AI hyperscalers are rapidly building data centers, each powered by tens of millions of semiconductors, including AI accelerators, graphics processing units (GPUs), high-bandwidth memory chips, etc.[51] This unprecedented demand for physical compute infrastructure is fueling a massive influx of hardware from Taiwan's chip companies, as semiconductors account for roughly 95 percent of the hardware value in AI server racks that power data centers (see Figure 3).[52]

The unmatched capabilities of Taiwan's leading firms in semiconductor fabrication, as well as the preeminence of its companies throughout the broader semiconductor and information and communications technology (ICT) ecosystem, make it indispensable to global technology supply chains. Taiwan produces over 90 percent of all advanced semiconductors worldwide.[53] The flagship of Taiwan's tech ecosystem is Taiwan Semiconductor Manufacturing Company (TSMC), which as a contract manufacturer for Apple, Nvidia, and other leading chip designers has captured 72 percent of the global foundry revenue, well ahead of next-largest competitor Samsung's 7 percent.[54] Taiwan also maintains significant production capacity for foundational chips used across a wide variety of applications.[55] Furthermore, Taiwan hosts advanced assembly, test, and packaging (ATP) technologies, including its Chips-on-Wafer-on-Substrate (CoWoS) technology that integrates logic and memory chips in a single package for high-performance AI accelerators like Nvidia's Blackwell GPUs.[56]

TSMC's disproportionate value creation and dominant position at the leading edge make it the most notable company, but Taiwan's technology manufacturing industry comprises far more than leading foundries. For example, Nvidia sources more than one million components from over 500 Taiwan firms for its new Vera Rubin infrastructure used to train agentic AI.[57] These in-

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*Compute is a generic term related to software computation, which includes processing power, memory, networking, storage, and other resources necessary to run a program or calculation. "What Is Compute?" *Amazon*, 2026.

†For more on U.S.-China AI competition, see Ngor Luong, "Two Loops: How China's Open AI Strategy Reinforces Its Industrial Dominance," *U.S.-China Economic and Security Review Commission*, March 23, 2026.

clude companies like Foxconn, Wistron, and Quanta Computer, which all contribute to building AI servers and infrastructure, as well as numerous small- and medium-sized enterprise component suppliers.[58] Taiwan's Asia Vital Components (AVC) is a global leader in liquid cooling technology to prevent AI chips from overheating, supplying hyperscalers like Amazon and Microsoft.[59]

The competitiveness of Taiwan's hardware manufacturing ecosystem is very difficult to replicate.* It is the result of decades of localized production networks that have grown adept at pivoting to meet demand from foreign contract buyers. Unlike the state-led development that gave rise to conglomerates in Japan and Korea, Taiwan's industrial landscape is defined by a dense concentration of small- and medium-sized enterprises that offer relative nimbleness and flexibility, especially in low-quantity specialty products.[60] This tight concentration of suppliers in industrial clusters connected by fast and efficient transportation enhances the efficiency of the AI ecosystem. In May 2026, Nvidia CEO Jensen Huang said the company's annual spending in Taiwan was set to reach approximately $150 billion. At the same event, Huang also further outlined plans for a new Taiwan headquarters to strengthen Nvidia's collaboration with local manufacturing partners.[61]

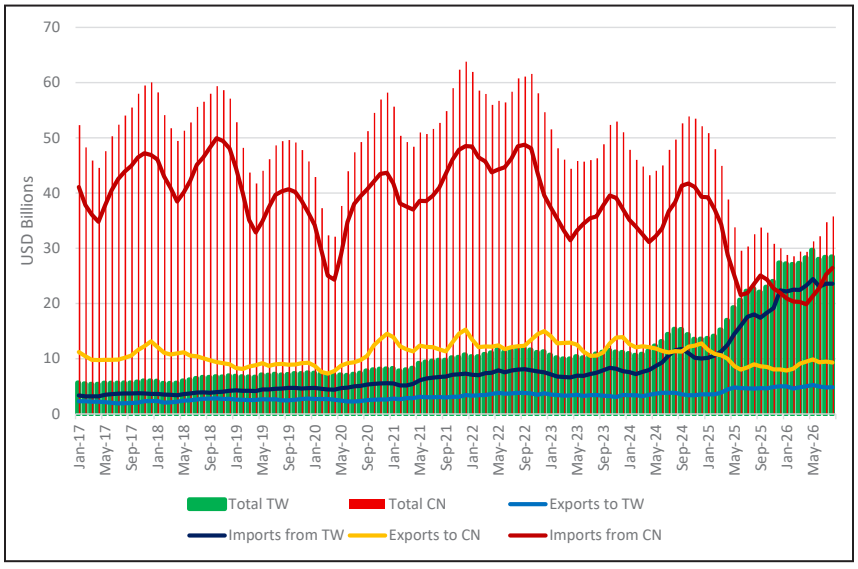
Total U.S. Trade with Taiwan Surpasses Bilateral Trade with China

While Taiwan historically has been among the top trade partners for the United States, the current AI boom has significantly increased U.S. imports of high-value hardware from Taiwan. Total bilateral goods trade with Taiwan may overtake goods trade with China in 2026 (see Figure 2). In 2025, U.S. imports from Taiwan reached $201.4 billion, a 73 percent increase year-on-year.[62] Most of this growth reflects U.S. demand for advanced hardware and equipment from Taiwan to power the AI buildout—imports of these products grew 141 percent, from $51.5 billion in 2024 to $124.4 billion in 2025.[63]

Beyond semiconductors, Taiwan is a significant market for U.S. exporters. Taiwan is the ninth-largest market for U.S. goods exports totaling $54.8 billion in 2025, a 29 percent increase year-over-year.[64] Top exports included electronic integrated circuits ($7.3 billion), petroleum products ($6 billion), and agricultural goods ($4.3 billion).[65] U.S. service exports to Taiwan in 2024 totaled another $13.7 billion.[66]

*As discussed below, even as the United States has been investing in developing the most advanced semiconductor manufacturing capacity, these efforts have merely changed the nature of the dependency on Taiwan, not reduced the level of dependency.

Figure 2: U.S. Trade with Taiwan and China (Three-Month Moving Average), 2017–August 2026



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *U.S. Trade in Goods by Country*.

Disruption to Taiwan's Semiconductor Ecosystem Would Have Profound Consequences for the U.S. and Global Economies

Taiwan is a crucial and currently irreplaceable node in global semiconductor production. If the United States loses access to Taiwan's semiconductor ecosystem, significant harm to the economy would follow. Semiconductor manufacturing is one of the most complex and internationally integrated processes in the world, with Taiwan playing a key role in these fragile supply chains. As the world saw during the COVID-19 pandemic, these supply chains are highly susceptible to disruption, with cascading economic consequences due to the ubiquity of semiconductors in modern products. The ripple effect from chip production disruptions was acute in the auto industry during 2021–2022, when some Western automakers cut production by over half and Ford alone produced 1.3 million fewer cars over this two-year span owing to foundational semiconductor supply constraints.[67]

A disruption of commercial activity around Taiwan would have severe consequences for the global economy given its vital industries and geographic position astride key shipping routes. The scale of adverse economic impact would depend on the nature and duration of any such disruption, but global markets would immediately be roiled from the prospect of halted supply of high-tech products and potential for escalation between the world's superpowers. The ongoing conflicts in both Ukraine and Iran demonstrate worldwide economic disruption that would pale in comparison to a Taiwan contingency. If a conflict or blockade persisted, shortages of Taiwan-produced semiconductors could bring supply chains for smartphones, data centers, automobiles, and countless other products to a halt,

with repercussions for businesses and consumers reverberating far beyond the Indo-Pacific. According to public assessments, the economic damage from Chinese military action could inflict greater economic damage globally than either the COVID-19 pandemic or the 2007–2009 Global Financial Crisis.[68] *Bloomberg Economics* estimates that the most extreme scenario of a U.S.-China conflict in the Taiwan Strait would reduce global GDP by $10.6 trillion in the first year, leaving output 9.6 percent below baseline.[69] Separate assessments warn that a conflict disrupting Taiwan's semiconductor supply could trigger a global depression and the largest economic crisis since the Great Depression.[70] In a more limited scenario involving a one-year Chinese blockade of Taiwan, *Bloomberg Economics* estimates global GDP would still fall by 5.3 percent below baseline, comparable to its estimate that global GDP was 5.9 percent below baseline within the first year of both the 2009 Global Financial Crisis and the COVID-19 pandemic.[71]

The supply shock from a Taiwan crisis would likely be worsened by governments rationing to hoard and compete for limited chip supply. The European Commission is drafting emergency powers to intervene in European chip supply chains during disruptions, according to a May 2026 report by the *Financial Times*.[72] The draft law would allow the Commission to fine companies for failing to provide supply chain capacity and to act as a common purchaser to exert pricing power and limit intra-European demand competition; it would also compel companies to override existing contracts to prioritize orders in critical sectors.[73]

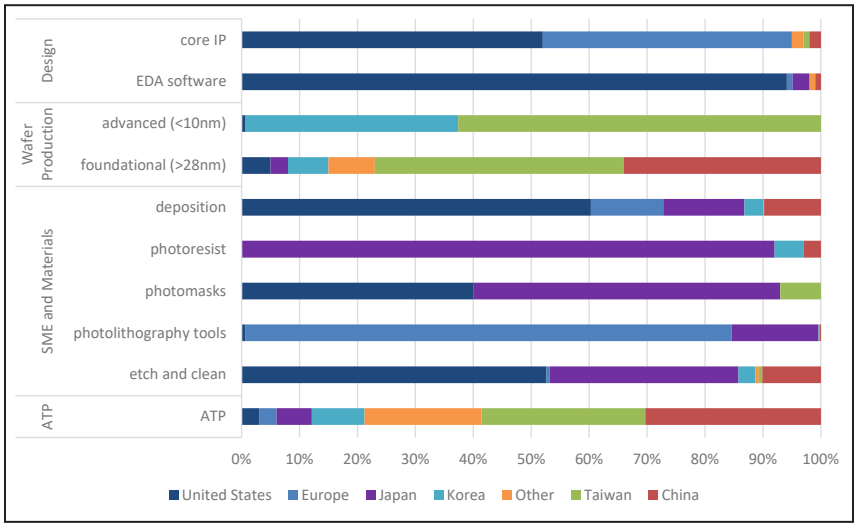
Chinese Control of Taiwan Could Fundamentally Shift Technology Competition in Its Favor

Far worse than disruption to Taiwan's semiconductor ecosystem would be Chinese control of it, which would give Beijing new tools to win the technology competition with the United States and its allies. If China achieved its unification objective without a costly war, Taiwan's companies could be forced by Beijing to transfer technology and comply with Chinese export controls. If TSMC and other key Taiwan companies capitulated, China would gain a decisive chokehold over multiple stages of semiconductor supply chains (see Figure 3). Combined foundational chip production in China and Taiwan is over 75 percent of global supply and set to rise as China continues to build out capacity.[74] While China makes less than 1 percent of advanced semiconductors today, successfully gaining control over TSMC operations would give it a virtual monopoly, with priority access to leading-edge technology and the ability to "flip the script" on export controls—limiting U.S. access to the most advanced chips, as U.S. controls have limited China's access since October 2022. The United States and allies like Japan and the Netherlands could try to cut off China's use of Taiwan's advanced semiconductor manufacturing equipment and restrict certain key inputs.* China would,

*While ASML would continue to control extreme ultraviolet (EUV) technology critical to making the most advanced semiconductors at scale, China would control the most sophisticated EUV foundries in Taiwan. New advanced semiconductor foundries typically take several years to build and bring into production. According to TSMC, construction takes two to three years, followed by another one to two years to ramp up production. "Edited Transcript: 2330.TW – Q1 2026 Taiwan Semiconductor Manufacturing Co Ltd Earnings Call (Chinese, English)," *TSMC*, April 16, 2026, 9–10.

however, have new coercive and retaliatory tools that could swiftly incapacitate industries in each country, potentially undermining their leverage and resolve to do so.[75]

Figure 3: Semiconductor Value Chain Segment Market Share by Region



Note: "EDA" = electronic design automation; "SME" = semiconductor manufacturing equipment; "ATP" = assembly, test, and packaging.

Note: There is no widely accepted definition distinguishing advanced logic chips from foundational ones. Although Chapter 8: "Silicon to Sovereignty: China's Bid to Control the AI Stack from Wafer to Weights, Part One" defines advanced semiconductors as those fabricated at or below 7 nanometers (nm), due to data availability, this figure uses node size below 10 nm for advanced and above 28 nm for foundational. Taiwan's market share for cutting edge logic chips is even more highly concentrated.

Note: Data are current as of September 2026 except for photoresist (May 2024), wafer production for foundational chips (April 2024), and wafer production for advanced chips (June 2023).

Source: Various.[76]

Several factors complicate the prospect of China integrating Taiwan's semiconductor ecosystem to become a technological hegemon. First and foremost, China would have to gain control of Taiwan without destroying key production facilities or causing a prolonged shutdown of their operations. Analysts largely agree that any forced seizure of TSMC's Taiwan-based fabs would render them inoperable, especially for advanced chips that require extreme ultraviolet (EUV) technology.[77] When fabs idle under controlled conditions, they can take weeks to restart; any unplanned shutdown would require longer startup times.[78] Keeping these facilities running during a conflict would be impractical given their proximity to probable contested areas and dependence on logistics infrastructure that would likely become less reliable.*[79]

Even if the facilities were captured intact, production at Taiwan's leading-edge fabs relies on elaborate international supplier networks and a specialized, motivated workforce. TSMC's semicon-

*Some of TSMC's most state-of-the-art facilities are located a short distance from the few beaches in Taiwan suitable to land troops during an amphibious invasion, in particular near the southern cities of Tainan and Kaohsiung. "TSMC Fabs," *Taiwan Semiconductor Manufacturing Company*; "Visualization: PLA's Barge Capability and Taiwan," *Taiwan Security Monitor*, 2026.

ductor fabrication process requires constant replenishment of consumable materials and specialty parts, often sourced from a handful of suppliers in the United States, Japan, and allied countries that would presumably move quickly to cut off these critical inputs.*[80]

Further, even with control over TSMC with limited disruption, China would remain dependent on broad compliance of a highly specialized workforce that operates under a unique corporate culture of dedication.[81] Even absent deliberate sabotage, cooperation of TSMC's workforce might be challenging, as many workers may feel compelled to flee, quit, or quietly dissent as a patriotic act.[82]

Together, the costs of interrupted operations, real-time reliance on global supplier networks, and securing compliance from TSMC's Taiwan and foreign workforce would make sustaining leading-edge production in Taiwan extremely difficult for China in an involuntary takeover. This scenario would mean, however, that global chip supplies were most certainly disrupted—with attendant negative economic consequences discussed above. It would also alter U.S.-China technology competition in ways that favor China in almost every respect: China would have access to the most advanced semiconductor manufacturing equipment and the engineers and workers who knew how to use it, it would possess the bulk of key aspects of global semiconductor manufacturing capacity, and it would gain new leverage over the United States and its allies and partners.

U.S. Reshoring of Semiconductor Fabrication Deepens U.S.-Taiwan Economic Integration

As a long-term response to the threat of disruption to Taiwan's semiconductor ecosystem, the United States has appropriately sought to reshore advanced semiconductor fabrication. Rather than diminishing Taiwan's importance to the United States, these efforts have deepened the partnership. U.S. efforts like the CHIPS Act have put the United States on a trajectory to reshore a significant portion of chipmaking, with the current Administration aiming to reach 40 percent of domestic semiconductor production by 2029.[83]

Taiwan is crucial to these efforts, contributing large investment outlays and enhanced cooperation to build AI manufacturing and innovation hubs across the United States. TSMC continues construction of its industrial park in Phoenix, Arizona, which at $265 billion in committed investment is the largest-ever greenfield foreign direct investment project in the United States.[84] When complete, this industrial cluster will comprise 12 new facilities, including ten semiconductor wafer fabs and two advanced packaging facilities, as well as a research and development (R&D) center producing advanced chips for AI and high-performance computing applications.[85] Production of 4-nm node technology commenced at the first fab in late 2024—ahead of schedule—with yields comparable to TSMC's facilities in Taiwan.[86] The first three fabrication facilities are set to all be online by the end of the decade.[87]

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*Dutch company ASML is the sole maker of EUV machines used in TSMC's most advanced fabs. In 2024, public reporting indicated ASML and TSMC maintain the capability to remotely disable semiconductor manufacturing equipment in the event of a Chinese invasion. Diederik Baazil, Cagan Koc, and Jordan Robertson. "ASML and TSMC Can Disable Chip Machines if China Invades Taiwan," *Bloomberg*, May 21, 2024.

While establishing needed redundancy in fabrication, new production in the United States remains closely integrated with Taiwan. Currently, all the semiconductors produced by TSMC in Arizona are sent to Taiwan to be packaged.[88] In June 2026, TSMC and U.S. company Amkor Technology announced a ten-year agreement to build advanced packaging facilities in Arizona.[89] U.S. workforce challenges have also slowed progress on the effort, and half of the workers in TSMC's Arizona factories are from Taiwan as of 2025.* [90]

U.S.-Taiwan Trade Proposal Seeks to Formalize Economic Security Cooperation

Negotiators from the United States and Taiwan finalized the Agreement on Reciprocal Trade (ART) in February 2026, building on a January 2026 investment memorandum of understanding. The proposed agreement reduces tariffs on most U.S. exports to Taiwan while capping most U.S. tariffs on imports from Taiwan at 15 percent.[91] It also contains purchase commitments for U.S. products and establishes a plan for large investments by Taiwan's companies in the United States totaling at least $250 billion and supported by an additional $250 billion in credit guarantees by Taiwan's government. Proposed investment is concentrated in U.S. advanced semiconductor, energy, and AI sectors, with a focus on building industrial clusters like the TSMC campus in Arizona.[92]

The ART goes beyond addressing the growing trade deficit with Taiwan by including binding provisions to create a shared economic security architecture between the United States and Taiwan. Article 5.2 of the agreement on Export Controls, Sanctions, and Related Matters states that the Taipei Economic and Cultural Representative Office in the United States shall adhere to multilateral export control regimes and align with U.S. export controls. It further requires Taiwan to enhance measures to prevent diversion of advanced semiconductors and related equipment, machine tools, advanced computing items, and other critical technologies to China and other "covered nations," as defined in 10 U.S.C. §4872, and requires Taiwan to align its export controls with those of the United States, especially with regards to the U.S. Foreign Direct Product Rule on semiconductors and related technology.[93] The United States reserves the right to terminate the agreement if Taiwan enters into a new bilateral trade or digital trade agreement with China, though previous bilateral agreements like the cross-Strait Economic Cooperation Framework Agreement (ECFA) from 2010 and multilateral agreements like the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) are not prohibited.[94] Finally, the ART includes a clause reaffirming Taiwan's commitment to spend more than 3 percent of its GDP on defense.[95]

The ART must still be ratified by Taiwan's Legislative Yuan, where it has faced calls for renegotiation following the U.S. Supreme Court's February ruling on tariff authorities under the International Emergency Economic Powers Act.

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*In 2024, 26,760 electrical engineering degrees were awarded in the United States, compared to roughly 25,000 in Taiwan, which has a population 1/15th that of the United States. Jeremy Olivier, "Taiwan Tests the Limits with Artificial Intelligence," *Taiwan Business TOPICS*, May 15, 2020; "Electrical Engineering," *datausa*.

Taiwan's Global Contributions Strengthen U.S. Security, Resilience, and Alliances

Taiwan has been a reliable partner to the United States, with various international contributions that advance U.S. security and resilience as well as U.S. alliances. Taiwan often works with the United States to support development and providing technical assistance to countries in need.[96] Taiwan's international development assistance, focused on its diplomatic partners in the Pacific, Latin America, the Caribbean, and Africa, reinforces traditional U.S. priorities on international security and public health.[97] Taiwan's government channels its official development assistance through Taiwan's International Cooperation and Development Fund (Taiwan ICDF) that has offered humanitarian assistance and supported agricultural development in over 80 countries, underscoring Taiwan's capacity to act as a reliable development partner.*[98]

Taiwan's substantial aid to Ukraine following Russia's invasion highlights its alignment with democratic countries resisting military aggression and its willingness to support U.S. defense partners.† Since 2022, Taiwan has provided more than $126 million in humanitarian and reconstruction assistance to Ukraine.‡[99] Taiwan's assistance to Ukraine deepened its ties with Central and Eastern European democracies, showcasing how its aid diplomacy simultaneously advanced alignment with U.S. and European partners and built practical partnerships that strengthen its own security and standing.

Taiwan's repeated role as a major disaster relief donor to U.S. allies and partners displays its capacity to contribute meaningfully to international humanitarian relief and deepens the dense network of relationships that underpin U.S. regional influence. After Japan's 2011 Tōhoku earthquake and tsunami, Taiwan was one of the largest sources of foreign assistance.§[100] Taiwan has also been a provider of disaster relief to the Philippines.[101] Taiwan's aid has

*The most recent publicly available data for Taiwan's official development assistance were released in 2023, totaling approximately $468 million. Taiwan's Ministry of Foreign Affairs, *Official Development Assistance*.

†Taiwan was quick to condemn Russia's military aggression as a unilateral change of the status quo by force, joined international economic sanctions against Russia, and called for Ukraine's sovereignty and territorial integrity to be respected. Taiwan's Ministry of Foreign Affairs, *The Republic of China (Taiwan) Government Strongly Condemns Russia's Invasion of Ukraine in Violation of the UN Charter, Joins International Economic Sanctions Against Russia*, February 25, 2022.

‡Taiwan's aid has provided medical supplies, healthcare, social services, food assistance and other forms of humanitarian relief to affected communities. Taiwan has also supported efforts to rebuild Ukraine's critical infrastructure. Due to the absence of formal diplomatic relations between Taiwan and Ukraine, Taiwan's aid to Ukraine was delivered through Central and Eastern European Countries (CEE) and associated non-government offices in the CEE region, such as Poland, Romania, Lithuania, Estonia, and the Czech Republic. Vladimíra Ličková and Kristina Kironska, "Taiwan's Aid Diplomacy to Ukraine: Catching Two Birds with One Stone," *CEIAS Insights*, November 1, 2024; Taiwan's Ministry of Foreign Affairs, "Taiwan and Czech Republic Cooperate to Assist Ukraine in Reconstructing Critical Infrastructure," November 10, 2023.

§Taiwan provided more than $240 million in aid and dispatched rescue teams to Japan within 72 hours of the disaster. Taiwan's generosity toward Japan has led to reciprocal aid between the two neighbors. After a 6.4 earthquake hit southern Taiwan in 2016, Japan sent an assessment team within 14 hours to assist with disaster relief; it also provided $1 million in aid to the Red Cross Society of Taiwan and other organizations. In 2024, Japan also pledged to donate $1 million in post-disaster reconstruction aid after a 7.4 earthquake struck Taiwan. *Taipei Times*, "Lai Marks 15 Years Since Tohoku Quake and Tsunami," March 12, 2026; Japan's Ministry of Foreign Affairs, *Emergency Grant Aid for the Damage of Earthquake in Eastern Taiwan*, April 9, 2024; Wayne Change, Nectar Gan, and Ivan Watson, "Taiwan Shaken but Unbowed as Biggest Quake in 25 Years Spotlights Preparedness—and Lessons Learned," *CNN*, April 5, 2024; Japan's Ministry of Foreign Affairs, *Japan's Response to the Earthquake in Southern Taiwan*, February 9, 2016.

flowed globally under the banner of "Taiwan can help, and Taiwan is helping," providing disaster relief to Turkey following an earthquake in 2023.[102] These high-profile acts of solidarity with U.S. allies and partners have built goodwill that translates into diplomatic support for Taiwan and could reinforce a regional and even global coalition that the United States and Taiwan are likely to rely on in a crisis involving China.

Beijing Pursues Unification through Coercion, Co-optation, and the Threat of Force

As Beijing presses toward unification, it is not choosing between coercion, co-option, and military force to reshape the cross-Strait status quo—it is pursuing them as complementary and mutually reinforcing lines of effort. China is mobilizing all instruments of statecraft to erode Taiwan's autonomy and weaken its willingness to resist. The CCP is leveraging government institutions, economic incentives, and societal linkages in an attempt to cultivate support for unification and expand Beijing's influence in Taiwan. The PLA is conducting daily gray zone activities around Taiwan's airspace and waters to intimidate Taiwan and U.S. allies and reduce warning time for a PLA attack. The PLA is also refining the military capabilities needed to conduct a blockade or invade the island, and it is creating conditions to delay, deter, or defeat outside military intervention long enough to achieve Beijing's objectives. Together, these efforts are intended to make coercion more effective by backing it with a credible threat of force while trying to shape the political environment so that the use of force is not necessary.

China Expands Its Comprehensive Campaign of Coercion to Achieve Unification

In 2026, China has continued its coordinated coercion campaign against Taiwan across a range of synergistic lines of effort. Together, China's activities serve mutually reinforcing purposes: weaken Taiwan's international standing and willingness to resist annexation, erode Taiwan's control over its surrounding space while normalizing a militarized Chinese presence, and set conditions for a future conflict.

China expanded the geographic scope of its encroachment around Taiwan utilizing a mix of military, law enforcement, and civilian capabilities. Increasing China Coast Guard (CCG) activity, scientific vessels, and other official presence in gray zone operations around Taiwan illustrate China's use of lawfare to achieve condition-setting and battlespace preparation while adding a veneer of legitimacy to its operations under the guise of law enforcement or research.

- During the PLA's Justice Mission-2025 exercise in December 2025, PLA Navy and CCG ships entered Taiwan's contiguous zone and approached its territorial waters.*[103] (For more on the PLA's Justice Mission, see "China Rehearses Counterintervention Operations to Support a Taiwan Blockade or Inva-

*Consistent with UN Convention on the Law of the Sea (UNCLOS) regulations, Taiwan defines its territorial sea as extending up to 12 nautical miles from its baseline and its contiguous zone extending 24 nautical miles from its baseline. UN Convention on the Law of the Sea, Part II, "Territorial Sea and Contiguous Zone," Section 2, Article 3, and Section 4, Article 33, 1982.

sion" later in this chapter as well as Figure 4 below.) China's encroachment into Taiwan's contiguous zone demonstrates its use of routinized blockade exercises closer to Taiwan's shores, eroding the sea space that would give Taiwan time to detect and respond to threats.

Figure 4: PLA Justice Mission-2025 Exercise



Note: Ship positions are approximate; placements are adapted from reproductions and adjusted slightly for legibility.
Source: Various.[104] Created for the U.S.-China Economic and Security Review Commission. Names and boundary representation are not necessarily authoritative.

- In December 2025 and January 2026, China demonstrated the potential for civilian vessels to augment its maritime pressure campaign as thousands of Chinese fishing vessels formed a dense barrier more than 200 miles long in the East China Sea. Former Defense Intelligence Officer Lonnie Henley stated that a swarm of such size could obstruct U.S. naval maneuvering, illustrating China's ability to mobilize civilian assets to support its A2/AD strategy.[105] (For more on Chinese fishing vessels forming a maritime barrier in the East China Sea, see Chapter 2, "U.S.-China Security and Foreign Affairs (Year in Review).")
- China continued to normalize coast guard incursions into the restricted waters—equivalent to a contiguous zone—around Taiwan's Pratas Island in the South China Sea, which became a focus of CCG gray zone tactics in 2025. China has applied this strategy since 2024 to Taiwan's Kinmen and Matsu Islands, which lie close to China's southeastern coast.[106] Beijing introduced new assets into its pressure campaign around Pratas Island in 2026, using a PLA surveillance drone to violate the airspace above the island and sending a marine research vessel to accompany CCG ships during an incursion into the island's restricted waters.[107]
- Incursions by PLA aircraft into Taiwan's air defense identification zone (ADIZ) remain a near-daily occurrence but at a lower overall tempo in 2026 compared to the first two years of Lai Ching-te's presidency.[108] Reducing the frequency of PLA sorties around Taiwan may reflect an effort to restore the value of ADIZ incursions as a means of short-term political signaling.[109]
- Chinese law enforcement and official vessels took greater steps to normalize their presence in the waters east of Taiwan. In June 2026, China launched an interagency "special maritime traffic enforcement operation" to assert its law enforcement jurisdiction and conduct traffic control against international ships traversing the waters, marking a significant step in its lawfare efforts.[110] The operation, which took place within Taiwan's 200 nautical-mile-wide Exclusive Economic Zone (EEZ), focused on traffic management in the waters east of Taiwan—including a main shipping route to Taiwan's largest harbor, the Port of Kaohsiung—and enabled Chinese law enforcement vessels to rehearse maneuvers for a quarantine or blockade.*[111] The operation also featured seabed mapping and patrols around areas where subsea cables were laid.[112] Although Chinese state media described the operation in terms of maritime law enforcement and coastal governance, these activities seek to establish a new baseline for an expanded Chinese presence and assertions of legal authority in waters around Taiwan, with implications for future military contingencies.

*UN Convention on the Law of the Sea (UNCLOS) preserves freedom of navigation in EEZs and does not grant states general law enforcement authority over commercial ships merely transiting these waters. Even the coastal state enforcement authority is limited to specific areas recognized under UNCLOS, such as fishing and resource extraction. UN Convention on the Law of the Sea Part V, "Exclusive Economic Zone," Articles 56, 58, 73, 220, 1982.

Cyber Operations Target Taiwan's Critical Infrastructure and Crisis Response

China has long conducted cyber operations targeting Taiwan's critical infrastructure. More recently, these efforts have increasingly focused on infiltrating critical systems that would sustain Taiwan's crisis response.[113]

- In a January 2026 report that analyzed Chinese cyber threats to Taiwan's critical infrastructure, Taiwan's National Security Bureau (NSB) highlighted that cyber intrusions against targets in the energy sector focused on penetrating industrial control systems (ICS) with attempts to implant malware.[114] The potential for malware targeting ICS to disrupt power delivery, as demonstrated by Russia's 2015 cyberattack on Ukraine's electrical grid, aligns with China's wartime objectives of paralyzing Taiwan's critical infrastructure functions.[115]
- The same NSB report disclosed that energy facilities, emergency services, and hospitals experienced a disproportionate increase in cyber targeting in 2025—an approximately 1,000 percent increase for energy facilities and 54 percent increase for emergency services and hospitals, compared to an overall 6 percent increase in cyber intrusions against critical infrastructure networks as a whole.[116] Cyberattacks targeting energy infrastructure could weaken Taiwan's ability to endure an energy blockade and force its early capitulation; attacks on emergency facilities would likely be intended to weaken Taiwan's civil resilience.[117]
- A suspected China-sponsored threat actor conducted a cyber operation against targets in Taiwan in July 2026 that utilized open-source AI agents. The operation mapped Taiwan's government systems, compromised user accounts, and exfiltrated personnel data before shifting to attack the networks of Taiwan's nuclear safety agency and at least seven energy companies.[118]

China Uses Information Operations to Weaken Taiwan's Will to Resist

- China is intensifying information operations against Taiwan's population to weaken the public's willingness to resist annexation and to erode political support for the DPP. It also works to undermine the population's confidence that Taiwan can rely on sustained support from the United States during a crisis.[119] To advance these objectives, Beijing uses AI-generated content and automated technologies to increase the speed, scale, and targeting of its information campaigns; its coordinated disinformation campaigns flood Taiwan's information space, seeking to undermine confidence in the government and widen social and political divisions.*[120]

*China's state-sponsored information operations are conducted by a range of party-state and military actors, including PLA political-warfare units such as the Fuzhou-based Base 311, the Ministry of Public Security (MPS), and United Front Work Department (UFWD)-directed networks that covertly manipulate online discourse and target foreign and Taiwan audiences. Yu Kai-hsiang, "國安局揭中共認知戰5手法　動員網軍等傳散爭議訊息" [National Security Bureau Reveals 5 Methods of CCP Cognitive Warfare: Mobilizing Online Army to Spread Controversial Messages], *Central News Agency*, January 11, 2026; United States Attorney's Office Eastern

- At a December 2025 meeting of Taiwan's Mainland Affairs Council (MAC), Advisory Committee members stated that Chinese information operations on Taiwan's social media use algorithms to discern users' "emotional responses" on certain issues and spread targeted narratives accordingly.[121]

Beijing Expands Lawfare Against Supporters of Taiwan's Autonomy

China is expanding its efforts to intimidate and coerce supporters of Taiwan's autonomy, using legal tools to punish opposition to Chinese malign influence and deter support for DPP policies. Over the past year, Beijing introduced new legal authorities, criminal investigations, and public enforcement measures to intimidate a broader range of Taiwan officials, civil society leaders, and public figures. China's targeted investigations against Taiwan citizens build on earlier threatening measures, such as publishing a list of "Taiwan independence diehards"* and a set of legal guidelines that prescribe punishments, up to the death penalty, for "separatist" activity.[122]

- In October 2025, Chongqing authorities announced an investigation into DPP legislator Puma Shen Po-yang, an outspoken activist against Chinese malign influence, for "suspected secessionist crimes."[123]
- In November 2025, Quanzhou authorities issued reward notices for information concerning Taiwan YouTuber Pa Chiung and musician Minnan Wolf PYC, both of whom had previously published content exposing Chinese efforts to co-opt Taiwan celebrities.[124] The move signals a broadening of the target to youth-facing influencers who shape online public opinion.
- China's Ethnic Unity and Progress Promotion Law, which took effect in July 2026, raises the risk of persecution or coercion against Taiwan citizens who retain a Taiwan identity. The law authorizes extraterritorial prosecution of any individuals Beijing deems to undermine national unity.[125] Taiwan's National Security Bureau Director-General Tsai Ming-yen confirmed in December 2025 that Beijing stations personnel specializing in Taiwan affairs at embassies abroad, likely to surveil Taiwan citizens and officials.[126] Beijing could seek to use the law as an additional legal basis to conduct more aggressive transnational repression against Taiwan citizens abroad, increasing the risk of intimidation, harassment, or threats to personal safety.

Beijing Pressures Foreign Governments to Further Isolate Taiwan

China's efforts to stifle Taiwan's international engagement in the past year continue to demonstrate its willingness to use its political and economic leverage over third countries, including renewed efforts to obstruct Taiwan's routine diplomacy.

District of New York, *34 Officers of People's Republic of China National Police Charged with Perpetrating Transnational Repression Scheme Targeting U.S. Residents*, April 17, 2023; Chang Ling-ling, "中國大陸軍媒對臺認知作戰之研析" [Analysis of Chinese Mainland Military Media's Cognitive Warfare Against Taiwan], *Air Force Bimonthly Journal*, Issue 687 (April 2022): 65.

*Described by the CCP as "die hard Taiwan independence separatists."

- In April 2026, Seychelles, Mauritius, and Madagascar revoked overflight permits for President Lai Ching-te's chartered aircraft before a planned April trip to Taiwan's diplomatic ally Eswatini. The revocations resulted in the trip's postponement.[127] An unnamed Taiwan security official stated that China threatened to revoke previously granted debt relief, suspend financing, and impose economic sanctions on those countries if they did not comply with its demands.[128]
- In March 2026, host country Cameroon changed Taiwan's documentation for the WTO's 14th Ministerial Conference to "Taiwan, Province of China"—a label that conforms to Beijing's efforts to subvert Taiwan's status.[129] China has long obstructed Taiwan's accession to international organizations, but it has been a full participating member of the WTO for decades.
- In Paraguay, Taiwan's only diplomatic ally in South America, Beijing has made efforts to cultivate relationships with Paraguayan opposition politicians, including offering extravagant all-expenses-paid trips to China.[130] These efforts likely aim to create the impression that Taiwan's allies would benefit economically from establishing a formal diplomatic relationship with China.

China Seeks to Deepen Cross-Strait Ties to Cultivate Political Support for Unification

Alongside coercive pressure, Beijing pursued a parallel strategy of enticements and co-optation aimed at binding Taiwan closer to China and cultivating a domestic constituency for unification. In contrast to its much wider range of aggression and intimidation tactics, these efforts seek to erode Taiwan's autonomy in more subtle ways—deepening economic and social dependence, drawing in sympathetic elements, and courting the Taiwan public with United Front-driven programs.

China rolled out new policies over the past year centered on cross-Strait integration in an attempt to nurture Taiwan's economic dependence on China and make de-risking a politically unpopular policy. China has continued to operationalize its initiatives on a people-to-people basis at the provincial level rather than waiting for a favorable government in Taipei to endorse them.

- In December 2025, China's Fujian province released its fifth package of policies under its Fujian-Taiwan integration program offering a range of incentives for Taiwan citizens to live and do business in the province.[131] The Fujian city of Fuzhou followed in May with a third round of policies targeting closer local integration with Taiwan's Matsu Islands.[132] Despite no formal participation from the Taiwan government, China's Taiwan Affairs Office claimed in June 2026 that Beijing's integration programs yielded positive results, citing high growth in cross-Strait travel and the establishment of Taiwan enterprises in Fujian.[133]
- In April 2026, Xiamen, another city in Fujian, announced a package of benefits for Taiwan travelers entering China for the first time through Xiamen.[134] The package provides seven

days of free public transit, free entry to 15 tourist sites or projects, and hotel discounts.

Over the past year, China's political influence operations toward Taiwan have demonstrated stronger efforts to engage with preferred intermediaries to promote Beijing's cross-Strait agenda. China likely sees greater opportunity to advance its interests through engagement with the KMT under the new party chair, Cheng Li-wun, who is more accommodative toward China than much of the rest of her party.

- Cheng made a high-profile visit to China to meet with Xi Jinping in April 2026—the first meeting between KMT and CCP leaders in ten years.[135] Cheng's acquiescence to CCP narratives on cross-Strait relations, national identity, and the history of Japanese imperialism prompted DPP accusations that Cheng reinforced China's efforts to undermine Taiwan's autonomy and democracy.[136]
- Following the Cheng-Xi meeting, China released a raft of ten "goodwill measures" to strengthen cross-Strait infrastructure and economic linkages and increase engagement with the KMT.[137]
- In February 2026, China hosted a CCP-KMT think tank forum in Beijing, the first of its kind in nine years.[138] Top CCP ideologue and Taiwan policy-setter Wang Huning met KMT Deputy Chair Hsiao Hsu-tsen during the event and reportedly instructed Hsiao and the KMT to obstruct U.S. arms sales to Taiwan—a claim Hsiao denied.[139]

China Expands Military Capabilities to Support a Taiwan Blockade or Invasion

In 2026, the PLA continued to refine the forces and systems it would need to not only credibly threaten a blockade or invasion of Taiwan but also carry out such actions while holding U.S. forces at risk.[140] Through new platforms, exercises, and demonstrations, China offered a clearer picture of how military action could combine amphibious, naval, unmanned, and undersea capabilities.[141]

China Builds Amphibious and Naval Capabilities for a Taiwan Invasion

China is improving the amphibious lift and naval protection it would need to sustain forces in an invasion of Taiwan.[142] The PLA's new Type 076 amphibious assault ship and Type 055 destroyers are expected to increase China's ability to protect invasion forces within and beyond the Taiwan Strait and could be employed in operations against U.S. and allied forces.[143]

Table 1: PLA Amphibious Assault Ships and Destroyers

System	Mission	Capability
Type 076 Amphibious Assault Ship (*Sichuan)*	Support cross-Strait landings by extending PLA unmanned strike and intelligence, surveillance, and reconnaissance (ISR) coverage by launching fixed-wing uncrewed aerial vehicles (UAVs).[144]	Combine amphibious lift with an electromagnetic catapult-capable flight deck for fixed-wing UAVs and other aircraft intended to enable intelligence collection, targeting, and strike against coastal and maritime targets.[145]
Type 055 Destroyer (*Dongguan* and *Anqing)*	Capable of multiple missions, including protecting amphibious forces, helping establish local sea control around Taiwan, and countering foreign military intervention.[146]	Employ vertical launch systems to deliver anti-ship, land-attack, anti-air, and anti-submarine fires, providing area, air, and missile defense as well as offensive strikes that can threaten naval forces and secure amphibious groups in seas around and east of Taiwan.[147]

China Develops Uncrewed Systems for Diverse Operations Against Taiwan

China is expanding its inventory of uncrewed systems to include expendable, carrier-capable, swarming, and undersea autonomous platforms that could be used during an invasion of Taiwan.

Table 2: PLA Uncrewed Systems Across Domains

System	Mission	Capability
J-6 Expendable Unmanned Aircraft	Overwhelm Taiwan's air and missile defenses and force depletion of air defense systems.[148]	Repurposed supersonic fighters with limited avionics to serve as attritable drones, enabling high-volume strikes at relatively low cost.[149]
GJ-21 Carrier-Capable Combat Drone	Extend ISR and strike reach over Taiwan and surrounding waters and support maritime campaigns.[150]	Designed for catapult launch from carriers and Type 076 class ships, providing ISR and strike against targets.[151]
Atlas Drone Swarm System	Overwhelm air and missile defenses and/or conduct precision strikes by coordinating a large number of drones in a single operation.[152]	Command and launcher vehicles using autonomous algorithms and AI software to control up to 96 drones with configurable payloads (reconnaissance, strike, electronic warfare, communications) and sequencing, enabling rapid, large-scale swarm attacks with limited human input.[153]
HSU-100 and AJX-002 Extra Large Uncrewed Undersea Vehicles (XLUUVs)	Shape the undersea battlespace around Taiwan by conducting surveillance and mine laying to deter or damage U.S. and allied naval forces attempting to assist Taiwan or break a blockade.[154]	HSU-100 appears configured for surveillance and intelligence collection, while AJX-002 is identified as having minelaying capabilities. These platforms could increase undersea ISR and mine threats along approaches and chokepoints around Taiwan.[155]

China Rehearses Counterintervention Operations to Support a Taiwan Blockade or Invasion

During the Justice Mission-2025 military exercise, China rehearsed blockade, counterintervention, and assault operations around Taiwan.[156] (See Figure 4: PLA Justice Mission-2025 Exercise in the section above.) PLA Navy and CCG vessels simulated blockades of major Taiwan ports, including Kaohsiung, through which Taiwan receives much of its imported energy.[157] China also rehearsed some key elements of a PLA invasion of Taiwan.[158] According to Chinese state media, a Type 075 amphibious assault ship, *Hainan*, and its task group participated in "long-range rapid [assault]" drills.[159] State media also reported that to rehearse counterintervention operations, *Hainan* and its task group coordinated with H-6 bombers to simulate anti-ship strikes.[160]

In July 2026, Taiwan's National Security Bureau Director-General Tsai Ming-yen reported an "upward trend" in Chinese naval and maritime mobilizations during the peak exercise season, which he identified as July through September.[161] Separately, Taiwan's National Security Council Secretary-General Joseph Wu reported that Taiwan was tracking a record high of more than 110 Chinese military and Coast Guard ships along the first island chain.[162] (For more on the high-volume PLA Navy and CCG presence deployments, see Chapter 2: "U.S.-China Security and Foreign Affairs (Year in Review).")

Additionally, China is normalizing naval operations beyond the first island chain to improve its ability to sustain operations in areas from which it could delay, disrupt, or deter U.S. and allied intervention in a Taiwan contingency.[163] In May-June 2026, the *Liaoning* aircraft carrier strike group completed combat training in the South China Sea and Western Pacific Ocean.[164] This included tactical flight training, live-fire exercises, and joint training with other warships, marking what Chinese military expert Zhang Junshe called the "longest far-sea, cross-regional training deployment since the *Liaoning* entered service."[165] These deployments and exercises demonstrate that the PLA is no longer focused solely on crossing the Taiwan Strait. It is preparing to contest the broader Western Pacific battlespace.

Global Conflicts Inform PLA Planning for Operations Against Taiwan

Global conflicts and military operations in 2026 gave Chinese planners real-world case studies for a Taiwan campaign, particularly in targeting enemy leadership and paralyzing defenses before Taiwan or the United States can respond. The PLA has built infrastructure and run urban combat drills consistent with "decapitation" operations, including mock replicas of districts housing Taiwan's Presidential Office.[166] Chinese official media studied the U.S. military's capture of Venezuelan leader Nicolás Maduro in January 2026 as a model of special operations, emphasizing the extensive intelligence preparation that enabled it and how simultaneous multi-domain strikes constrained Venezuela's ability to react.[167] Beijing likely also scrutinized Israel's attack

Global Conflicts Inform PLA Planning for Operations Against Taiwan—*Continued*

that killed Iranian Supreme Leader Khamenei in on February 28, 2026, which reportedly involved the AI-enabled fusion of surveillance data to track him.[168] Chinese official commentary on the broader U.S.-Israeli campaign against Iran emphasized the effectiveness of multi-domain attacks to inflict system-level damage.[169] "Decapitation" and simultaneous multi-domain strikes map onto the PLA's doctrinal approach to a joint firepower strike campaign against Taiwan.

Taiwan Works to Strengthen Deterrence Through Civil Resilience and Defense Reform

Taiwan is responding to Beijing's comprehensive campaign by strengthening the institutions needed to sustain government, society, and military operations during prolonged coercion or conflict. Building on reforms initiated under former President Tsai Ing-wen, President Lai has expanded civil resilience and defense preparedness designed to convince Beijing that unification cannot be achieved quickly and without grave cost. However, persistent legislative gridlock on long-term defense investments threatens to slow President Lai's reforms to strengthen deterrence and provides opportunities for Beijing to exploit Taiwan's political divisions ahead of the upcoming election.

Taiwan Builds National Resilience Against Coercion and Conflict

The Lai Administration is transforming societal resilience from a strategic concept into operational capability. The Whole-of-Society Defense and Resilience Committee (WSDRC), a flagship Lai Administration initiative, has introduced new measures over the past year to strengthen Taiwan's survivability during a crisis.[170]

Taiwan is integrating civilian and military institutions to improve crisis response and continuity of government. The establishment of the Central Joint Emergency Operation Center (CJEOC) in February 2025 marked a significant step toward translating the WSDRC's resilience concepts into a functioning emergency command mechanism—integrating central and local military-civilian wartime and disaster response.[171] Taiwan activated the CJEOC from April 12 to April 21, 2026, in conjunction with annual Han Kuang military drills, during which it prepared medical facilities and shelters, maintained energy and critical infrastructure, and oversaw the provisions and distribution of essential resources.[172] The All-Out Defense Mobilization Agency, under Taiwan's Ministry of National Defense, coordinated a series of local civil defense and emergency response drills from April to August 2026 that focused on national defense mobilization, critical infrastructure protection, and air defense.[173] The growing emphasis on integrating civil preparedness with military defense under crisis conditions reflects Taiwan's practical approach to assessing its vulnerabilities and a more serious commitment to addressing them.

Taiwan Strengthens Critical Infrastructure for Crisis and Conflict

Taiwan views critical infrastructure resilience as a prerequisite for sustaining national resistance during conflict. Across communications, cyber defense, and energy, the Lai Administration has introduced new legal authorities, infrastructure upgrades, and civil defense exercises with the shared goal of ensuring continuity of operations under attack.

Taiwan's civil defense exercises emphasize keeping essential services operating under wartime conditions rather than simply responding to disasters. Taiwan's 2026 Urban Resilience exercises placed significant focus on restoring critical infrastructure functions. During a drill in July 2026, Taiwan forces simulated shooting down a Chinese drone threatening a power plant.[174] Other scenarios included physical sabotage, cyberattacks, and a drone attack on a response center that prompted plans to activate a backup operations command center.[175]

Taiwan is reducing vulnerabilities in its communications architecture by building greater redundancy and survivability into critical networks, pursuing a heterogeneous sea-land-air architecture that combines fiber, microwave, mobile networks, and multi-orbit satellites.[176] Traffic is prioritized through a primary, alternate, contingency, emergency (PACE) framework for military, government, rescue, and infrastructure functions.[177] In January 2026, the Ministry of Digital Affairs announced efforts to improve the maintenance of non-geostationary orbit satellite networks to continue securing government communications during emergencies.[178]

Taiwan Expands Efforts to Counter PRC Infiltration and Political Influence

The Lai Administration is treating Beijing's infiltration and political influence operations as threats to Taiwan's national resilience. Taiwan broadened its counterintelligence focus beyond traditional espionage to disrupt CCP recruitment, coercion, and political influence efforts as well. In January 2026, the Lai Administration instituted identity document screening for military personnel, civil servants, and public school employees to verify that they do not hold PRC household registration or identity documents.[179] Taiwan also tightened controls on travel to China for senior civil servants and personnel with national security or core technology responsibilities, increasing scrutiny around a key vector for PRC coercion, cultivation, and recruitment.[180]

Taiwan is strengthening legal authorities to deny Beijing the organizational access, funding channels, and institutional footholds it has used to expand influence inside Taiwan. In December 2025, the Lai Administration proposed revisions to a series of laws to expand liability for participation in hostile organizations, strengthen legal tools to punish public advocacy tied to malign foreign influence, and root out fifth column elements across military, political, and social institutions.[181]

Taiwan is treating election security as a national security issue rather than solely an electoral administration challenge. In February 2026, Taiwan's NSB launched an election contingency project

platform ahead of November municipal elections that integrates intelligence, scrutiny of cross-border funding, monitoring of illicit betting, and identification of PRC-linked disinformation.[182]

Taiwan Seeks to Strengthen Military Credibility and Asymmetric Defense

President Lai's military reforms aim to make Taiwan's defense posture more credible by enhancing its asymmetric capabilities and its operational readiness.[183] His "peace through strength" defense strategy seeks to make any Chinese attempt at coercion prohibitively costly and deny Beijing a quick victory. Toward these ends, President Lai is restructuring forces, institutionalizing decentralized command and control and applying it in realistic defense exercises, and working to rapidly field asymmetric capabilities such as coastal missiles and drones.[184]

Taiwan's military continues to implement reforms to restructure its forces to be better positioned to respond to adversary threats and future warfare scenarios.[185] In 2026, Taiwan established the Littoral Combat Command (LCC) to unify coastal defense into one force.[186] The LCC is equipped with mobile *Hsiung Feng* and Harpoon coastal anti-ship missiles, coastal radar, and uncrewed surface vessels to defend against an amphibious PLA operation and to counter China's maritime coercive activities.[187] Taiwan's army redesignated four armored and three mechanized infantry brigades to improve readiness and combat effectiveness as well as respond rapidly in the opening stages of a PLA attack.[188] One of the new brigades was featured in Taiwan's recent combat readiness exercise, deploying with M1A2T Abrams tanks that practiced defending invasion corridors under realistic wartime conditions.[189]

Taiwan's military reforms are complemented by continued emphasis on decentralized command and control in realistic exercises that help frontline units continue fighting in the event the PLA targets command centers, communications, and senior leadership early in a conflict.*[190] For example, in July 2026, a joint defense exercise simulating the detection of hostile vessels entering Taiwan's territorial waters tested the decentralized command structures of Marine Corps forces.[191] The annual Han Kuang exercise in August also tested dispersed command and control operations, with field commanders revising orders in response to unexpected enemy actions.[192]

In 2026, Taiwan accelerated the fielding of asymmetric capabilities designed to make its forces more survivable and costly for the PLA to defeat.[193] Taiwan established dedicated drone battalions across Taiwan and on the Penghu islands to expand its surveillance and attritable strike capabilities.[194] Adopting asymmetric tactics exhibited in the Ukraine war, the army debuted first-person-view drones with armor-piercing warheads against armored vehicles and tanks in live-fire exercises.[195] Taiwan has also demonstrated its capacity to deploy mobile missile launchers across the island during a five-day

*Taiwan's Ministry of National Defense 2023 *National Defense Report* was the earliest documented reference in an official strategic publication to explicitly state that Taiwan seeks to "improve defense operational resilience with decentralized command and control." Taiwan's Ministry of National Defense, *ROC National Defense Report 2023*, September 2023, 63; Steve Trimble, "New Taiwan Defense Paper Champions Decentralize C2," *Aviation Week*, September 13, 2023; Taiwan's Ministry of National Defense, *ROC National Defense Report 2021*, *U.S.-Taiwan Business Council*, October 2021.

defense drill in July 2026, such as the M142 High Mobility Artillery Rocket Systems (HIMARS) and *Hsiung Feng* anti-ship launchers.[196] The implementation of Taiwan's military reforms reflects a broad institutional modernization toward defense and layered deterrence, preparing the military's ability to quickly and asymmetrically respond to a range of conflict contingencies from blockade to gray zone escalation or a full-on surprise attack from the PLA.[197]

Through these efforts, Taiwan is building a more resilient posture that can impose higher costs on the PLA. Taiwan's military reforms work in tandem with whole-of-society resilience initiatives to strengthen its ability to sustain defense operations and national resistance during a prolonged conflict, further reinforcing the credibility of its deterrence against Chinese aggression.

Taiwan Accelerates Defense Investment, but Political Gridlock Slows Procurement

The Lai Administration is using higher defense spending and a multi-year special budget to accelerate military reforms and strengthen Taiwan's ability to resist growing PLA pressure. The Administration has committed to increasing defense spending to 3.3 percent of GDP, framing this as a necessary investment to make "peace through strength" credible while setting a longer-term goal of five percent of GDP by 2030.[198] In November 2025, the Lai Administration introduced a New Taiwan Dollar (NTD) 1.25 trillion ($40 billion) special budget* for asymmetric warfare that sought to fund a range of programs and platforms that strengthen Taiwan's asymmetric defense capabilities and enhance its integrated air and missile defense network.[199] After months of political gridlock, the opposition-led Legislative Yuan† passed a significantly pared down budget of NTD 780 billion ($24.8 billion).[200] Though this funded only about 60 percent of the Administration's overall goal, it still represents significant progress toward the government's ambition to increase defense spending by the end of this decade.[201] The final budget preserved funding for U.S. arms purchases but excluded most funding for domestic asymmetric capabilities and defense industrial programs.‡[202] At the end of August, the Legislative Yuan

*The Executive Yuan proposed a supplemental defense budget officially titled "Program of Acquisition Special Regulations for Strengthening Defense Resilience and Asymmetric Combat Capacity" and commonly referred to as the special budget, denoting a budget that operates "in tandem alongside the regular annual budget." John Dotson, "The Contents and Controversies of Taiwan's Special Defense Budget," *Global Taiwan Institute*, March 25, 2026.

†KMT opposition to the Lai Administration's proposed $40 billion special defense budget reflects a range of considerations, including: concerns over fiscal discipline and procurement efficiency; disagreement with the scale and composition of the special budget; differing views that expanded cross-Strait dialogue with Beijing could better preserve peace than additional military investment; partisan competition with the DPP; and, according to some analysts, concerns that individual KMT politicians may be susceptible to Beijing's influence. Some KMT legislators do support an increase in defense investment but advocate for different procurement priorities. Drew Thompson, "Defense in Democracy: Political Competition and Taiwan's Special Defense Budget," *Brookings Institution*, March 30, 2026; John Dotson, "The Contents and Controversies of Taiwan's Special Defense Budget," *Global Taiwan Institute*, March 25, 2026; Sam Garcia, "KMT, TPP Block Special Defense Budget for the Eighth Time," *Taipei Times*, January 23, 2026.

‡The budget excluded funding for large-scale drone procurement, joint U.S.-Taiwan drone development, an anti-ballistic missile "Taiwan Dome" air defense network, domestic munitions production, and enhancements to ISR capabilities. Matthew Fulco, "Taiwan's Special Defense Budget Bill Passes with Drastic Cuts," *Jamestown Foundation*, May 29, 2026; Taiwan's Ministry of National Defense, *Ministry of National Defense Issues Press Release Regarding Legislative Yuan's Passage of the "Special Act on Safeguarding National Security and Strengthening Asymmetric Warfare Capabilities Procurement,"* May 8, 2026.

passed a military drone budget of $7.5 billion over six years that supports Taiwan's domestic drone industry and funds one-way attack drones, coastal surveillance vehicles, and unmanned surface vehicles.[203] The legislative gridlock on Taipei's defense budget could influence Taiwan's capacity to develop military capabilities critical for bolstering its deterrence in the near term. While U.S. arms sales would fill critical needs, some major systems are not likely to be in operation or delivered until the 2030s; indigenous asymmetric and industrial programs could be fielded sooner.[204]

Taiwan's Domestic Political Dynamics Shape Response to China's Growing Pressure

Taiwan's ability to sustain its defense modernization and societal resilience agenda depends on its ability to overcome domestic political divisions. As Jessica C. Liao, associate professor at the U.S. Army War College, and Kyle Marcrum, director of the China Landpower Studies Center at the U.S. Army War College's Strategic Studies Institute, argued, Taiwan's defense trajectory is shaped by the realities of democratic bargaining rather than a simple question of political will, making legislative compromise an important determinant of the pace and composition of military modernization.[205] Public opinion remains strongly in favor of maintaining the cross-Strait status quo, while support for eventual or immediate unification has declined over the past two decades.[206] Although Taiwan's major political parties broadly reflect this public sentiment, they differ in how to preserve the status quo, with competing approaches to defense spending, economic engagement with China, and the appropriate balance between deterrence and dialogue.[207] (For basic perspectives on the three largest parties, see Appendix II.) As Beijing intensifies pressure, Taiwan risks entering the next two years of likely heightened cross-Strait tensions without the political consensus to sustain the scale of defense modernization, long-term defense investments, and resilience reforms it needs.

As discussed earlier in this chapter, Beijing uses inducements, coercive pressure, information operations, and United Front activities to shape Taiwan's political environment and deepen existing divisions. These divisions especially benefit Beijing when they make it harder for Taiwan to sustain political consensus on defense and resilience.[208]

Taiwan recognizes that effective deterrence depends on both acquiring weapons abroad and developing a domestic defense industrial base capable of sustaining a prolonged conflict. Taiwan's government has focused its defense industrial modernization goals on its asymmetric defense needs to produce dispersible, mobile, and survivable platforms.[209] The Lai Administration is pursuing efforts to create non-red supply chains with a focus on eliminating cybersecurity risks associated with PRC-linked drone components.[210] Taiwan's government also intends to fund a joint R&D and cooperative procurement effort with the United States that would benefit both jurisdictions, accelerating Taiwan's indigenous defense industrial

manufacturing capacity while expanding the capabilities of the U.S. defense industrial base.[211] Taiwan is prioritizing domestic production of capabilities critical to an asymmetric defense strategy, particularly missiles, unmanned systems, and submarines. In November 2021, the Legislative Yuan passed the Sea-Air Combat Power Improvement Plan Purchase Special Regulations and authorized up to NTD 240 billion ($7.35 billion) to use a special budget to acquire systems, primarily through indigenous defense production, that would enhance Taiwan's anti-air and anti-surface capabilities.[212] Taiwan has funded the first submarine of its Indigenous Defense Submarine program and aims to produce eight domestically built submarines.[213] In addition, Taiwan's Unmanned Vehicle Industry Development Integrated Program 2025–2030 aims to build a large, indigenous unmanned systems industry that can serve both defense and commercial markets while providing an alternative non-red, democratic drone supply chain.[214]

Taiwan's defense industry has made some increases in production capacity across several priority sectors. By 2024, NCSIST, Taiwan's primary defense manufacturer, had expanded to 16 mass production lines for various missiles, although it is unclear whether it met its production target of 1,000 missiles by the end of that year.[215] Taiwan's indigenous submarine, *Hai Kun*, completed the first of three "sea trial" testing phases in June 2025 on surface navigation.[216] According to the Ministry of Economic Affairs, Taiwan's drone industry rapidly expanded in 2025, with industrial output reaching NTD 12.9 billion ($398.8 million), more than 2.5 times the level in 2024.[217] The challenge for Taiwan is turning these individual gains into a sustained expansion of its domestic defense industrial base.

U.S.-Taiwan Security Cooperation Deepens, but Arms Delays Weaken Near-Term Capabilities

The United States plays an indispensable role in helping Taiwan build and sustain the military capabilities needed for credible deterrence against Chinese coercion and a potential invasion. The Six Assurances, a set of commitments then–President Ronald Reagan conveyed to Taiwan in 1982, included pledges not to set a date for ending arms sales to Taiwan or consult with Beijing over those sales.[218] This latter commitment is also part of U.S. law: the Taiwan Relations Act specifically requires that determinations by the president and Congress of arms sales to Taiwan be "based solely upon their judgment of the needs of Taiwan."[219] Consistent U.S. policy also strengthens deterrence and helps preserve peace and stability in the Indo-Pacific.[220]

In January 2026, Congress cleared an approximately $11.1 billion arms package for Taiwan that included systems such as howitzers, Javelin anti-tank missiles, HIMARS rocket systems, and loitering munition drones, strengthening Taiwan's ability to deter a Chinese blockade or invasion of the island.[221] In May 2026, Taiwan's legislature passed a special defense budget establishing a spending ceiling of approximately $25 billion for purchase of U.S. arms.[222] That ceiling includes about $15 billion for an anticipated additional U.S. arms-sale package containing PAC-3 MSE interceptors and NASAMS air-defense systems.[223] At the time of publication, howev-

er, the sale remains on hold pending presidential approval.[224] The pause has raised concerns that delays in U.S. security assistance undermine credible deterrence.[225]

A significant backlog in U.S. weapons deliveries to Taiwan risks undermining the very deterrent capabilities that U.S. assistance is meant to strengthen.[226] At the end of August 2026, the arms backlog was estimated at nearly $30 billion in approved U.S. weapons still awaiting delivery.[227] According to one study, several factors contribute to this backlog: U.S. industrial capacity is limited, programs are highly complex, and bureaucratic procedures slow the process. Taiwan has also played a role through changes in its requirements and occasional delays in funding.[228]

The United States and Taiwan continue to strengthen their military coordination, intelligence sharing, and defense industrial base cooperation. In January 2026, Taiwan opened the Joint Firepower Coordination Center in cooperation with the United States, the highest-level facility of its kind in Taiwan.[229] It is designed to coordinate long-range precision strike planning and intelligence sharing across Taiwan's military services as well as to monitor high-value maritime targets.[230] The center is intended to sharpen asymmetric air and sea warfare by integrating U.S.-made systems with Taiwan's indigenous missile capabilities into a more coherent fires network.[231] Consistent with Taiwan's authorized cooperation programs, the 2026 National Defense Authorization Act (NDAA) called for the Pentagon to work with officials from Taiwan to develop a joint program to enable fielding of uncrewed and counter-uncrewed systems, including the co-development and co-production of those systems.[232] U.S. companies are actively signing memoranda of understanding with companies and organizations from Taiwan to advance this collaboration.[233] The United States and Taiwan have also started co-producing 155-millimeter shells, a munition in high demand globally that can be used for long-range targeting and counter-battery fire, and in support of maneuver operations.[234]

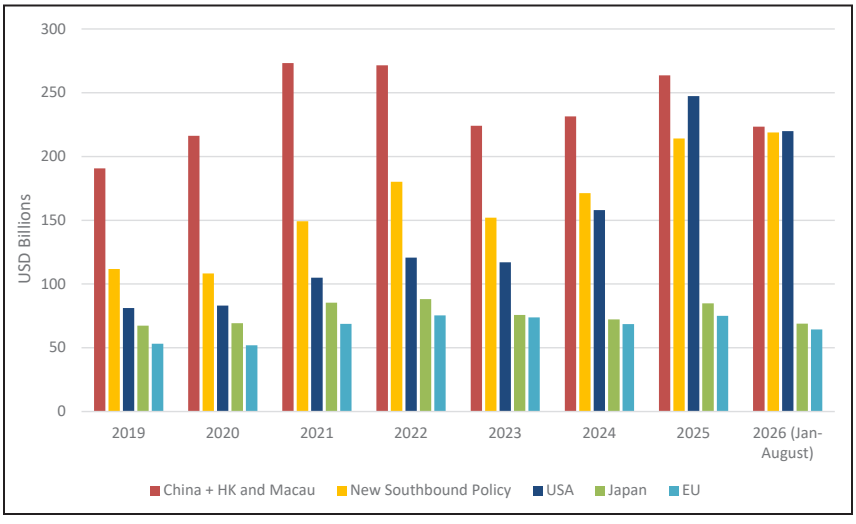
U.S.-Taiwan cooperation on economic, technological, and supply chain resilience complements military assistance by reducing China's ability to use the disruption of critical technologies and materials as leverage in a Taiwan crisis.[235] Economic, technological, and supply chain resilience initiatives were the focus of the sixth U.S.-Taiwan Economic Prosperity Partnership Dialogue, which covered supply chain security across the AI tech stack, cooperation on critical minerals, support for trusted digital infrastructure, and cooperation to facilitate unmanned aircraft systems component certification.[236] During the dialogue, Taiwan also endorsed Pax Silica, a U.S.-led initiative aimed at securing global supply chains for advanced technologies and critical minerals that support AI and economic security.[237]

Taiwan Leans into Economic Diplomacy to Reduce Vulnerability to China

The Lai Administration has sought to accelerate a shift in trade and investment away from China in recent years. The United States briefly overtook China as Taiwan's top trade partner in the first half of 2026, and through August the two were running close to even

alongside combined trade with the 18 countries under Taiwan's New Southbound Policy (see Figure 5).*[238] Taiwan is heavily dependent on international trade: in 2023, its combined exports and imports of goods and services were equivalent to approximately 114 percent of GDP, well above China (36 percent), the United States (25 percent), and the world average (58 percent).[239] Therefore, ensuring dependable trade relationships amid geopolitical pressure from China is paramount to Taiwan's continued prosperity.†

Figure 5: Taiwan's Total Trade with Top Partners (2019–August 2026)



Source: Taiwan's Ministry of Economic Affairs, International Trade Administration, *Trade Statistics*.

The Lai Administration has elevated economic security and resiliency through "integrated diplomacy," an approach to foreign policy that in part‡ seeks to leverage its tech leadership to provide value to friendly countries seeking to build out advanced industries.[240] President Lai has advocated for regional and democratic partners to deepen ties in "Five Trusted Industry Sectors" in which Taiwan excels: semiconductors, AI, military, security and surveillance, and next-generation communications.[241] By shifting the focus from broad expansion of trade and cultural linkages to specific technology and critical infrastructure sectors, Taiwan is more directly offering a value proposition to countries that seek to break economic dependency on China and build rival higher-value industries, consistent

*Launched in 2016 at the start of the Tsai Ing-wen Administration, Taiwan's New Southbound Policy seeks to build and expand economic, cultural, and people-to-people ties with 18 countries in the Indo-Pacific region: Australia, Bangladesh, Bhutan, Brunei, Burma (Myanmar), Cambodia, India, Indonesia, Laos, Malaysia, Nepal, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, and Vietnam.

†This fact also makes planning for a blockade critical, as China cutting off trade to and from Taiwan would have immediate impact on both Taiwan's domestic economy and broader global markets.

‡Taiwan's integrated diplomacy strategy includes values-based diplomacy, alliance diplomacy, and economic diplomacy. Henrietta Levin and Daniel Castro Bonilla, "Southbound Diplomacy: Assessing Taiwan's 'Integrated Diplomacy' on the 10th Anniversary of the New Southbound Policy," *Center for Strategic and International Studies*, June 16, 2026.

with its approach to negotiating the proposed U.S.-Taiwan Agreement on Reciprocal Trade. Backed by government incentives, Taiwan's companies are incrementally diversifying their foreign direct investment stock out of mainland China, over time reducing a point of leverage for Beijing.

Taiwan's expanding trade and investment relations with the 18 New Southbound Policy countries in South and Southeast Asia demonstrate progress over the last decade toward its goal of promoting economic integration and entwining itself in these countries' development strategies.[242] For instance, Taiwan's bilateral trade with India in 2025 was $12.5 billion, a record high. Integrated circuits made up over half of India's imports from Taiwan in 2025 compared to 1.6 percent in 2016, demonstrating Taiwan's importance in expanding India's role in global technology value chains.[243] (For more on India, see Chapter 3, "China's Other Front: India and the Future of U.S. Strategy in the Indo-Pacific.") On the investment side, in 2016 Taiwan's approved outbound investment totaled $21.8 billion, 46.2 percent of which went to mainland China and Hong Kong and 32.5 percent to the rest of Asia.[244] In 2025, only 4.7 percent of Taiwan's $39.9 billion in approved outbound investment went to the mainland and Hong Kong, where flows to the rest of Asia comprised 21.5 percent.[245] Taiwan's government under President Lai supports companies to invest in the industrial development of partner countries under initiatives like the Ministry of Foreign Affairs Diplomatic Allies Prosperity Project, among other initiatives.[246]

Taiwan's Dependence on Imported Energy Leaves It Vulnerable to Blockade

Taiwan's dependence on imported energy remains one of its most serious vulnerabilities to a blockade or prolonged maritime disruption.* Taiwan imported approximately 95 percent of its energy in 2025, and its planned energy transition will not substantially reduce that exposure.[247] The Lai Administration has targeted a 2030 electricity mix of 50 percent natural gas, 30 percent renewable energy, and 20 percent coal.[248] Because natural gas and coal arrive largely by sea, 70 percent of Taiwan's planned electricity mix would remain dependent on imported fuels.[249]

Taiwan's dependence on natural gas is particularly acute. Taiwan currently maintains 11 days of natural gas safety stock, which it plans to increase to 14 days by 2027.[250] According to findings in a 2025 Center for Strategic and International Studies report based on 26 blockade wargames, Taiwan would exhaust its natural gas inventories in about ten days in every scenario, while coal and oil stocks lasted approximately seven and 20 weeks without resupply, respectively.[251] Renewable energy supplied 13.3 percent of Taiwan's electricity in 2025.[252] Reaching the government's 30 percent target would still leave much of Taiwan's electricity system dependent on imported fuels.

*China is also dependent on energy maritime imports to a lesser extent and has invested significant resources into stockpiling, renewable alternatives, and other resilience initiatives. It is possible that China has used the challenges from Iran's blocking of the Strait of Hormuz to stress-test its capacity to endure a long-term disruption to its energy imports, further enhancing its preparedness for a conflict or blockade in a Taiwan contingency. For more, see, Part 1, Chapter 1, "U.S.-China Economic and Trade Relations (Year in Review)."

Taiwan's oil reserves provide a larger cushion, but its dependence on seaborne imports and exposed transportation infrastructure remains a major vulnerability. In 2025, Taiwan's crude oil and petroleum products accounted for 44.4 percent of its energy supply; Taiwan currently maintains crude oil reserves that could last for about 140 days.[253] The Iran war crystallized Taiwan's overreliance on the Middle East for oil imports, as nearly 70 percent of crude oil imports came from the region in 2025.[254] In response, Taiwan increased its crude oil imports from the United States to 60 percent of its total supply, up from 28.3 percent in 2025, according to officials.[255] In a 2023 study, 99.8 percent of Taiwan's crude oil was imported by oil tankers transiting the Taiwan Strait, with a majority designated to three ports along Taiwan's west coast and then transported by rail, roadway, and long-haul pipelines.[256] The transportation and storage of Taiwan's crude oil likely remain vulnerable during conflict.[257]

Despite the potential for nuclear energy to provide Taiwan with a reliable source of domestically produced power, it remains a contentious political issue, with concerns over storage of waste and potential accidents from Taiwan's frequent exposure to earthquakes. Nuclear energy once supplied over 50 percent of Taiwan's total electricity generation in the 1980s, before all of Taiwan's reactors were progressively retired.[258] Taiwan's last nuclear power plant ceased operation in May 2025.[259] Following a 2025 legal amendment that reopened a pathway for license renewal, Taipower submitted plans to restart Taiwan's Kuosheng and Maanshan nuclear power plants.[260] In September 2026, the Nuclear Safety Commission gave approval for the Maanshan plant, but it cannot resume generation until Taipower completes an estimated 18–24 months of safety checks and receives a renewed license.[261]

Implications for the United States

Congress settled the question of whether the United States is committed to Taiwan decades ago, and Taiwan has only grown in importance to U.S. military, economic, technological, and alliance interests since. The United States has spent decades building tools to deter and defeat a Chinese invasion of Taiwan. Rather than asking whether that commitment holds, U.S. policy should focus on whether U.S. tools are adequate to address the ways Beijing is actually pursuing its objective.

Xi Jinping is not choosing between forced unification and political absorption. He is pursuing both at once. The PLA's progress toward developing the capability to take Taiwan by force and Beijing's daily campaign of coercion and co-optation are complementary: the credible threat of force is what gives the coercion its bite, and the coercion is what Beijing hopes will deliver Taiwan without ever having to use that force. **A U.S. policy that prepares for one track while neglecting the other invites failure.**

The work already underway to deter and defeat an invasion must continue and accelerate. Taiwan's shift to asymmetric defense, U.S. force posture in the region, and allied interoperability all remain essential. China's threat of military action is real, persistent, and growing. "Maintain[ing] the capacity of the United States to resist any resort to force or other forms of coercion that

would jeopardize the security" of Taiwan, as required by Section 2(b)(6) of the Taiwan Relations Act, continues to be critical.

Deterrence depends on capabilities in Taiwan's hands—not authorities on the books or contracts awaiting delivery. Although Congress has enacted new security assistance authorities and Taiwan has purchased billions of dollars in U.S. defense equipment, years-long delivery delays have left critical capabilities unavailable when they are needed most. A foreign military sales backlog measured in years is its own deterrence failure against both of Beijing's tracks. Capability authorized is not capability fielded. **Closing the arms delivery backlog is one of the few actions the United States can take independently of decisions in Beijing or Taipei.**

The United States and Taiwan are not adequately prepared to prevent Beijing from using coercion short of war to change the status quo. While the United States has spent decades building tools to deter an invasion, the more probable near-term threat—likely to intensify in the leadup to the 2028 election—is a sustained campaign of coercion involving gray zone pressure, cyberattacks, economic leverage, and political influence operations. For too long, China has been able to "boil the frog" through both more frequent and more provocative gray zone activities around Taiwan—"other forms of coercion" referenced in the Taiwan Relations Act. **The United States' toolkit must develop costs and strategies to change the one-way gray zone trajectory.**

For the last several years, Beijing has clearly been rehearsing operations to conduct a blockade or customs quarantine of Taiwan, with its regular gray zone activities allowing it to make the transition quickly. Beijing may calculate that such actions would fall short of the threshold of armed conflict and would be consistent with its One China principle. The United States must enhance its pre-planned and exercised responses to such contingencies, ensure effective economic and diplomatic countermeasures, and increase support for Taiwan's societal and infrastructure resilience. Taiwan's importance to global technology supply chains also gives Washington a wider basis for building international support. **A quarantine or blockade would not be a problem for Taiwan and the United States alone:** disruption to semiconductor production, shipping, and trade would impose substantial costs on economies far removed from the Taiwan Strait. **The United States can use those shared interests to broaden the group of countries with a stake in deterring Chinese coercion and preparing coordinated responses before a crisis occurs.**

Beijing will also continue to exploit Taiwan's political divisions as a strategic vulnerability. While respecting the reality of divergent views in a democracy, the United States should work with Taiwan to blunt that effort.

Taiwan is central to U.S. military power in the Indo-Pacific, the resilience of the United States' alliance network, and U.S. global technology leadership. It is not an anachronistic security commitment. As Taiwan's importance to U.S. national and economic security has grown, so too has the need for a strategy—and attendant resources and sustained commitment—that is equal to the full scope of the challenge Beijing now presents.

Recommendations

- The People's Republic of China's (PRC) aggressive actions to reshape the Western Pacific and force unification with Taiwan are intensifying. Yet much U.S. and allied contingency planning focuses on large-scale invasion scenarios rather than coercion below the threshold of war. The United States needs a coordinated playbook with allies and partners for responding to a range of coercive gray zone activities by the PRC in the Indo-Pacific, specifically concerning Taiwan.

  Congress should:

  - Direct the National Security Advisor to develop a common playbook with allies and partners calibrated to counter multi-domain day-to-day PRC coercion. Departments and agencies involved in executing the playbook should develop tiger teams to address U.S. actions and coalition/allied actions under each area of responsibility. That playbook should provide a unified framework for participating nations to:
    - Share situational awareness and arrange pre-coordinated responses;
    - Counter disinformation and lawfare;
    - Expand combined coast guard operations with Taiwan and regional partners, including through multilateral initiatives; and
    - Support resistance against economic coercion.
  - Amend and extend the Taiwan Enhanced Resilience Act to establish a Taiwan Democratic Resilience Initiative led by the U.S. Department of State, implemented through the American Institute in Taiwan in coordination with the Office of the Director of National Intelligence and other appropriate departments and agencies.
    - The Initiative should strengthen U.S.-Taiwan cooperation to support the resiliency of Taiwan's civil society and counter PRC united front activities, election interference, and disinformation campaigns. It should also include information sharing with U.S. allies and partners.
  - Direct the National Security Advisor to lead an interagency process to develop a whole of government strategy for deterring, preparing for, and responding to coercive actions by the PRC against Taiwan that are intended to rapidly or substantially alter the status quo, but that fall below the threshold of a large-scale invasion or armed conflict.
    - It should include an assessment of contingency scenarios and for each, provide an assessment of indicators and warnings, likely PRC objectives, decision points, escalation risks, potential effects on Taiwan's access to critical goods and services, and options for coordinated actions with allies and partners.
- As China's military capabilities expand and the regional balance of power shifts, the risk of conflict in the Western Pacific

is increasing. Despite growing defense cooperation among the United States and its allies and partners, the absence of a formal multilateral security framework limits their ability to deter aggression and mount a coordinated response to attempts to alter the regional order by force.

Congress should direct the Secretaries of Defense and State to initiate consultations with U.S. allies on establishing a formal multilateral framework for collective defense in the Western Pacific, building on the multilateral defense cooperation directed by Section 1254 of the fiscal year 2026 National Defense Authorization Act. Where Section 1254 directs operational integration, this framework would institutionalize the political commitment to collective action needed to deter Chinese military aggression and provide the foundation for a Western Pacific Security Pact. The Pact should:

- Build on existing regional defense mechanisms among states with established foundations for expanded multilateral defense cooperation, primarily the U.S.-Japan-Australia-Philippines Defense Cooperation Council, and be positioned to complement multilateral security frameworks such as the Quad and AUKUS. Provide a pathway for accession by other states that share the Pact's principles and possess the willingness and capacity to contribute materially to peace, security, and collective defense in the Western Pacific.
- Establish a common commitment to collective defense under which members recognize that any major threat to, or violent breach of, peace and stability in the Western Pacific—or any military attack upon the members of this framework—threatens their shared security and national interests and commit to coordinate a powerful collective response to deter or defeat aggression and restore regional peace and stability.
- Accelerate the legal and military reforms necessary for collective defense, including combined contingency planning and exercises, integrated command and control, expanded intelligence sharing, reciprocal access, and integrated logistics to enable members to operate effectively as a combined force in crisis or conflict.

- Beijing is using travel bans and other punitive measures to deter and intimidate foreign lawmakers from engaging with Taiwan, including barring four New Zealand legislators from the People's Republic of China in June 2026. By placing exchanges with Taiwan on the same footing as those with the UK, Canada, and Mexico, Congress would signal that parliamentary diplomacy with fellow democracies is routine, legitimate, and not subject to Beijing's veto.

  The U.S. House of Representatives and Senate, respectively, should establish U.S.-Taiwan Inter-Parliamentary Exchanges, modeled on the established bilateral exchanges with the UK, Canada, and Mexico.

  - Like those bodies, the exchanges would convene regular, structured meetings between members of the U.S. legislative

branch and members of Taiwan's Legislative Yuan to discuss trade, security, technology, and shared democratic governance.

- Taiwan is rapidly scaling its civilian and defense drone industries, building asymmetric capability that will be critical to prevailing in a potential future conflict with the People's Republic of China. Recent U.S. actions to broadly prohibit foreign drone imports stand to restrict a key market for Taiwan's drone makers and limit mutually beneficial collaboration with U.S. manufacturers.

  Recognizing the benefit to U.S. national security of supporting drone industries of allies and partners at risk of conflict with adversarial countries, Congress should direct the Federal Communications Commission to limit its December 22, 2025 addition to the Covered List of uncrewed aircraft systems and their critical components, to systems and components produced by entities owned by, controlled by, or subject to the jurisdiction or direction of a foreign adversary, as defined in 15 CFR §791.4.

Appendix I: U.S. Military Sales to Taiwan, October 2025–October 2026

Date of State Department Approval*	Content of Purchase	Value
November 13, 2025[262]	Non-Standard Spare and Repair Parts	$330 million
December 17, 2025[263]	ALTIUS-700M and ALTIUS-600 Systems	$1.1 billion
December 17, 2025[264]	Harpoon Missile Repair Follow-On Support	$91.4 million
December 17, 2025[265]	Javelin Missile System	$375 million
December 17, 2025[266]	Tube-Launched, Optically Tracked, Wire-Guided Missile System	$353 million
December 17, 2025[267]	High Mobility Artillery Rocket Systems	$4.05 billion
December 17, 2025[268]	M109A7 Self-Propelled Howitzers	$4.03 billion
December 17, 2025[269]	AH-1W Helicopter Spare and Repair Parts	$96 million
December 17, 2025[270]	Tactical Mission Network Software, Equipment, and Services	$1.01 billion

*According to the U.S. Defense Security Cooperation Agency, the Foreign Military Sales (FMS) program is a form of security assistance authorized by the Arms Export Control Act (AECA), as amended by 22 U.S.C. § 2751 et seq., and a fundamental tool of U.S. foreign policy. Under Section 3 of the AECA, the United States may sell defense articles and services to foreign countries and international organizations when the president formally finds that to do so will strengthen the security of the United States and promote world peace. Under the FMS program, the U.S. government and a foreign government enter into a government-to-government agreement called a Letter of Offer and Acceptance. The Secretary of State determines which countries will have programs. The Secretary of Defense executes the program. Defense Security Cooperation Agency, *Foreign Military Sales (FMS)*.

Appendix II: Taiwan's Political Parties' General Policy Positions*

Taiwan Political Party	Cross-Strait Engagement	Defense Spending and Military Reform	Economic Policy Toward China
DPP	• Suspicion of cross-Strait engagements as vectors of CCP infiltration and united front work.[271] • Supports dialogue but rejects Beijing's political preconditions.[272]	• Increase defense spending to 5 percent of GDP by 2030.[273] • Focus on developing asymmetric capabilities and fostering indigenous defense production.[274]	• Pursue economic resilience through trade diversification and mitigate risks of over-reliance on China.[275] • Enhance economic security measures.[276]
KMT	• Restore dialogue and exchanges on the basis of the 1992 Consensus and oppose Taiwan independence.[277] • Expand tourism, business, youth, and cultural exchanges with China.[278]	• Cautious on spending growth and supports greater oversight of arms purchases; fund demonstrated military needs rather than GDP targets.[279] • Prioritize well-defined operational needs and "highly deterrent asymmetric capabilities" utilizing AI and uncrewed systems.[280]	• Promote cross-Strait economic exchanges.[281] • Passed Economic Cooperation Framework Agreement (ECFA) in 2010 and supported controversial Cross-Strait Services Trade Agreement (CSSTA) that sparked Sunflower Movement backlash in 2014.[282]
TPP	• Expand exchanges without endorsing Beijing's political preconditions.[283] • Use exchanges to reduce hostility and risk of miscalculation.[284]	• Favors scrutinized investment in asymmetric systems and personnel over broad defense buildups.[285] • Supports 3 percent of GDP but prioritizes oversight.[286]	• "Pragmatic" approach to cross-Strait economic exchange.[287] • Open to CSSTA, conditional on enactment of cross-Strait agreements oversight law.[288]

*This chart reflects the broad policy positions of each party and does not capture the full range of views held by individual party members.

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CHAPTER 10: HONG KONG: ENABLER OF CHINA'S GLOBAL FINANCE AND TECHNOLOGY AMBITIONS

Executive Summary

Hong Kong's political and judicial systems are now subject to complete Chinese Communist Party (CCP) control. In 2026, Hong Kong's loyalist legislature passed new rules allowing the chief executive to unilaterally label any criminal matter as a national security case. Those accused of committing national security offenses cannot contest the designation, and there are no elements of civil society left to provide meaningful resistance. With the CCP takeover, the prerequisites for a thriving financial center—rule of law, a fair legal system, and robust market institutions—are at odds with Beijing's autocratic rule. Yet with the CCP's support, Hong Kong's economy has become a controlled valve for China to achieve its strategic aims vis-à-vis the global trading and investment system.

Despite years of trying, the Mainland's financial markets have not replaced Hong Kong as a conduit to the global financial system. Underdeveloped financial markets and the Party's need to prevent capital outflows limit the ability of cities like Shanghai and Shenzhen to attract offshore capital. As Western markets have become less viable alternatives, Hong Kong has solidified its role as a venue for mainland technology firms to raise foreign capital for global expansion; almost all of Hong Kong's initial public offerings (IPOs) in the first half of 2026 were for mainland companies. Hong Kong is also instrumental to China's efforts to build offshore infrastructure for renminbi (RMB) circulation and investment as it seeks to grow the role of RMB in international financial flows and insulate itself from U.S. sanctions authorities. Hong Kong's active and complex financial system also helps China act as a key enabler of Iran, Russia, and North Korea's sanctions and export control evasion.

The international business community and global financial institutions appear willing to overlook the loss of freedom and rule of law in Hong Kong—and the changing nature of Hong Kong's financial system—as long as the impact to the corporate bottom line remains limited. However, Hong Kong's economy and financial sector are more exposed to geopolitical and economic risks associated with the Mainland. The implementation of top-down economic planning through Hong Kong's first five-year plan and the ongoing subversion of market interests for state priorities set up a fundamental contradiction between what makes a financial center attractive and the purpose China wants Hong Kong to serve.

Key Findings

- Beijing's strong support has been the decisive factor behind Hong Kong's financial improvements over the last year. Hong Kong led the world in IPOs in 2025, with a comparable level of activity in the first half of 2026—not as a revived global hub but as a venue of choice for mainland firms in Beijing's priority sectors to access foreign capital. Mainland-controlled firms accounted for 96 percent of these IPOs by number, more than double the percentage from 2018. Rather than suggesting that Hong Kong retains its role as a global financial center, this resilience marks its transformation into a key node in the CCP's technology ambitions and ties its financial and economic future to Beijing's priorities.
- Over the past year, the Hong Kong government has continued to systematically expand executive and security powers and give Beijing's security offices a greater role in local processes, eliminating the legal predictability and judicial independence that previously distinguished the city from the rest of China. The chief executive now has the unilateral ability to define what constitutes a national security matter and can apply the label retroactively to events that occurred prior to the passage of the National Security Law (NSL) in 2020.
- Beijing's successful imposition of the mainland security regime in Hong Kong remains basically unchecked. Hong Kong authorities have jailed or quelled through repression elements of civil society that had resisted. The government may force anyone in Hong Kong to unlock personal devices and has restricted trade unions from engaging with foreign organizations. Many with the resources to do so have left Hong Kong. Voter participation has plummeted, reflecting widespread rejection of an electoral system that has forced out any elements disloyal to Beijing.
- The city's leadership has aligned its development goals more closely with the Mainland, even following the CCP in issuing Hong Kong's first-ever five-year plan. The government is diverting its resources toward supporting mainland ambitions for global expansion, technological dominance, and self-sufficiency even at the expense of its own fiscal health. In turn, Hong Kong's business community incentives are aligned with China's agenda.
- Hong Kong's growing role in China's export-oriented economy and a resurgence in the financial sector led by Chinese tech stock IPOs have contributed to strong GDP growth. Beijing's cooptation of Hong Kong's economic system is more insidious in some cases. China is using Hong Kong to raise foreign capital for firms that face U.S. restrictions and/or serve the People's Liberation Army (PLA).
- Hong Kong continues to enable China's support for autocratic regimes in Russia, Iran, and North Korea by acting as a central nexus for sanctions and export control evasion. The

city's position as a global financial center and its lax regulatory environment for business registration combined with the leadership's refusal to proactively enforce sanctions have allowed corporations to complete billions of dollars of transactions that route dual-use components to Russia's war in Ukraine, facilitate Russia and Iran's crude oil sales, and allow North Korea to launder stolen cryptocurrency proceeds.

- Beijing's direct intervention in the city's economy has been limited to date, but the stage is set for major challenges ahead. Beijing has ratcheted up its own economic statecraft toolset with expanding export controls, limits on data and technology transfers, and tools to penalize companies complying with U.S. policies Beijing deems objectionable.

Introduction

Hong Kong was once a bastion of independence, political freedom, and the rule of law. That status, together with its connectivity to London's sophisticated financial markets and its role linking global finance to mainland China's economy, made it one of the world's most important financial hubs. Since the imposition of the NSL in 2020 and the Safeguarding National Security Ordinance (Article 23 Ordinance) in 2024, Beijing has steadily eroded Hong Kong's rule of law and its longstanding guarantees of free speech, assembly, press, religion, and democracy. Some observers expected this erosion to forfeit Hong Kong's standing with financial markets, and initially the trajectory seemed to confirm that view: foreign firms and residents departed, and IPOs slumped to a 22-year low in 2023 and stayed depressed through 2024.[1]

Yet in 2025, Hong Kong's markets rebounded, driven almost entirely by Beijing-backed mainland listings, leading the world in IPOs and becoming a financial pillar of the Mainland's tech growth. That resurgence does not reflect a restoration of Hong Kong's traditional role so much as its emergence as a critical component of Beijing's geostrategic aims. Mainland-controlled firms account for roughly 80 percent of market capitalization, up from 68 percent in 2018, while Chinese firms in sectors targeted by Chinese industrial policy have overwhelmingly driven the exchange's revival.[2] Hong Kong's financial sector is positioned to keep serving China's ambitions, but only as long as investors believe in the foundations of China's growth and the integrity of Hong Kong's markets. Meanwhile, this arrangement largely benefits mainland firms crowding into the city rather than Hong Kongers.

This emerging arrangement carries long-term vulnerabilities for both Hong Kong's future and international business and residents in the city. Folding Hong Kong's economy into Beijing's production-oriented state planning cycle risks concentrating growth drivers in sectors exposed to geopolitical tensions. It remains an open question whether foreign business will adequately factor in continued encroachment on judicial independence and regulatory impartiality, however strenuously Hong Kong authorities insist these remain insulated from the broader political crackdown. At the same time,

Hong Kong's growing role as a hub for money laundering, sanctions and export control evasion—coupled with the increasing alignment of its law enforcement and censorship practices with those of mainland China—puts U.S. firms and citizens in the city at risk of becoming caught between conflicting legal regimes.

Hong Kong Adopts New Policies That Further Erode Freedom and the Rule of Law, Sparking New Concerns About the Business and Financial Environment

The erosion of Hong Kong's rule of law has reached new depths in 2026 as Hong Kong's loyalist Legislative Council (LegCo) passed regulations that removed all practical limits on the definition of "national security." The new amendment broadens the powers of the chief executive—handpicked by Beijing—to issue a determination on whether an act involves "national security" that cannot be challenged in court.[3] The amendment removes any room for debate over the scope of "other offenses endangering national security," a catch-all category to provide authorities discretion to extend the Article 23 Ordinance's criminal scope to whatever activities they deem unduly disruptive.[4] Because these crimes will be tried by pre-vetted judges deemed loyal to Beijing, the chance of a fair trial is deeply diminished.[5] In a city where self-censorship was already pervasive under an atmosphere of fear and uncertainty, the new law gives Hong Kong's government the ability to criminalize any activity it views as a threat to its rule or of concern to Beijing.

Hong Kong's leadership has become a full proxy for Beijing, cracking down on the prodemocracy movement so excessively as to indicate that the CCP hardly needs to micromanage the city's leadership to achieve its aims. In February 2026, China's State Council released its third-ever white paper on Hong Kong, praising its efforts to "restore order" over "anti-China agitators" and "hostile foreign forces."[6] The white paper also reminded Hong Kong that while Beijing maintains overarching responsibility for national security affairs, the city's government is responsible for safeguarding national security, including formulating and enforcing relevant laws.[7] Within this context, Hong Kong's leaders have shown enthusiasm for Beijing's agenda. Chief Executive John Lee quoted the white paper during Hong Kong's annual National Security Education Day in April 2026, pledging to implement its tenets.[8] Unlike his predecessors, who had backgrounds in civil service or business, Lee is a former police officer and oversaw the harsh police response to the 2019 prodemocracy crackdown as the city's security chief.[9] At an annual anniversary celebration of Hong Kong's return to Chinese rule on July 1, Lee chose to highlight the concurrent anniversary of the CCP's founding in keeping with his other recent statements showing allegiance to General Secretary of the CCP Xi Jinping and elevating Party policies.[10] Notably, Lee's first term ends in June 2027, and running for a second five-year term would require Xi's support.* The judicial branch is also a major proponent of Beijing's

*Lee was elected in 2022 as the sole candidate in an election decided by a committee of pro-Beijing "patriots." Cao Li and James Areddy, "Hong Kong Committee Confirms Ex-Policeman John Lee as Next Chief Executive," *Wall Street Journal*, May 8, 2022.

stance on national security, with the chief justice also voicing support.[11] Secretary for Justice Paul Lam also has publicly endorsed Beijing's national security perspective, and Secretary for Security Chris Tang recently stated he would "nail" anyone who "engage[s] in acts that endanger national security, collude[s] with external forces, or subvert[s] state power."[12]

Beijing's Abandonment of One Country, Two Systems Through National Security Law

Mainland China has imposed a stringent national security regime on the Special Administrative Region of Hong Kong, effectively eliminating the promises of "one country, two systems." The UK returned Hong Kong to Chinese rule in 1997 under an agreement that would allow Hong Kong to maintain a "high degree of autonomy" for 50 years (i.e., through 2047).[13] In 2019, a bill that would have allowed Hong Kongers to be extradited to the Mainland sparked the city's biggest protest in history, forcing the Hong Kong government to back down.[14] However, on June 30, 2020, after using the COVID-19 pandemic as a pretext to impose tighter restrictions on public gatherings, Beijing adopted its draconian NSL granting Hong Kong the authority to make arrests for vaguely defined crimes of separatism, subversion, terrorism, and "collusion with foreign or overseas forces."*[15] Following the passage of the NSL, Hong Kong's government launched a sweeping crackdown, arresting thousands of activists, raiding newspaper outlets, extraditing booksellers to the Mainland, and disbanding prodemocracy groups. Further legislative updates from Hong Kong in 2021 ensured that all candidates for Hong Kong's legislative and district elections had to be loyal to Beijing.[16] On March 23, 2024, Hong Kong enacted the Safeguarding National Security Ordinance as required by Article 23 of its mini constitution. The Article 23 Ordinance severely undermined civil and legal rights for Hong Kongers with expansive definitions of sedition, treason, espionage, state secrets, and external interference.†

Hong Kong Government Imposes Harsh Consequences for Alleged National Security Violations

Hong Kong's leadership imposes strict consequences on prodemocracy activists to signal its loyalty to Beijing. Convictions are largely a foregone conclusion, with the chief executive defining what constitutes a national security crime and the judicial system stacked against the accused. Jimmy Lai, a prominent activist and the founder of prodemocracy newspaper *Apple Daily*, has been jailed since Hong Kong authorities last arrested him in December 2020.[17] In February 2026, Hong Kong courts sentenced him to 20 years in prison following his conviction for colluding with foreign forces and printing and distributing seditious articles.[18] Now in his late 70s, he remains behind bars despite intense pressure to release him on

*For more, see U.S.-China Economic and Security Review Commission, "Hong Kong," in *2024 Annual Report to Congress*, November 2024.
†For more, see U.S.-China Economic and Security Review Commission, "Hong Kong," in *2024 Annual Report to Congress*, November 2024.

humanitarian grounds from the highest levels of government in the United States, the UK, Canada, and others.[19] According to the U.S. Consulate General in Hong Kong, 309 people have been arrested and 122 people found guilty of "national security" offenses under the NSL and the Article 23 Ordinance through August 28, 2026.[20] In total, the Hong Kong Democracy Council has recorded nearly 2,000 political prisoners arrested under a broader set of offenses through September 2026.[21] Both the percentage of prisoners held in remand and the number in solitary confinement have risen as the crackdown has deepened, reflecting harsh punishments and the court systems' denial of bail for many of the accused.[22] Hong Kong has also turned to targeting family members of the activists, mimicking one of Beijing's signature tactics.[23] In February 2026, Hong Kong sentenced the father of political exile Anna Kwok to eight months in prison for attempting to terminate a life insurance policy he purchased for her decades earlier.[24]

Hong Kong has provided expanded powers and tools for police to investigate alleged crimes. New Article 23 rules criminalize refusing to provide passcodes to police in national security investigations, forcing compliance among the population and widening the potential net to catch alleged criminals.[25] Hong Kong's customs authorities can also seize items they suspect have a "seditious intention."[26]

Hong Kong's Election Turnout Reflects Drastically Diminished Government

Increased oversight of the civil service, diminished transparency for election candidates, and harassment of voters have removed what little space remained for democratic pushback on Beijing's absolute control. New legislation proposed in 2026 grants the Public Service Commission, an "independent" advisory body, the power to investigate heads of government departments for failures in policy implementation.[27] The commission's members, however, are appointed by the chief executive, and the police department is exempt from the new investigatory framework.[28] Hong Kong's Registration and Electoral Office has ceased compiling voting data by age and sex, reducing transparency around electoral metrics and making it more difficult for legislative candidates to evaluate potential support bases.[29] Meanwhile, voter participation nosedived to 31.9 percent in the December 2025 elections, compared with around 70 percent in 2019 prior to Beijing's crackdown.[30] With Hong Kongers directly electing only 20 of the 90 LegCo seats and most of the remainder elected by the pro-Beijing Election Committee, political expression is under increasing strain.[31] In June 2026, Hong Kong's Court of Final Appeal upheld a 2021 law that outlawed calling for an election boycott.[32] In the leadup to the 2025 elections, Hong Kong arrested 22 people for encouraging boycotts or other protests of the elections.[33]

Intimidation Tactics and Arrests Silence Public Discourse

Hong Kong and Beijing are using the national security laws to intimidate and discourage participation in civil society, including public demonstrations, press, and academia.

- *Speech:* Hong Kong used to be the only place in China where it was possible to openly commemorate the anniversary of China's deadly attack on student protestors in Tiananmen Square on June 4, 1989. In 2021, Hong Kong arrested three individuals responsible for arranging what would be Hong Kong's last annual vigil for the Tiananmen Square massacre under accusations including "incitement to subversion."[34] The government held them almost continuously without bail for more than four years until their trial in January 2026.[35] Albert Ho Chun-yan pled guilty when the trial began, and the Hong Kong High Court found Lee Cheuk-yan and Chow Hang-tung guilty of "inciting subversion of state power" in August 2026.[36] The courts handed down sentences of over five years for each of them.[37] On September 2, 2026, student activist leader Joshua Wong pled guilty to "conspiring to collude with foreign forces," which carries a maximum sentence of life in prison under the NSL.[38] These charges stemmed in part from conversations Wong held with then–U.S. House Speaker Nancy Pelosi, then–U.S. senator Marco Rubio, and other members of Congress.[39]
- *Press:* Hong Kong has continued to deny visas to foreign journalists and has carried out new arrests of at least 11 local booksellers accused of selling "seditious" materials and receiving foreign funding while providing little to no evidence of any crimes.[40] Yahoo and CNBC both cited business reasons when announcing closures of their local offices in 2026; their departures follow the downsizing and exits of many other Western press organizations since 2020.*[41] Press restrictions now appear to apply even when media coverage could help expose flagrant corruption that has led to major tragedies. In November 2025, a devastating fire spread through an under-construction apartment complex in Hong Kong, claiming 168 lives.[42] The ongoing investigation has uncovered evidence of bid-rigging between contractors who later substituted cheaper, unsafe material, contributing to the rapid spread of the blaze.[43] Despite longstanding concerns in Hong Kong over this dangerous practice, the Hong Kong government and Office for Safeguarding National Security (OSNS) suppressed information and censored media reports, blaming outrage on "external forces," warning foreign outlets over their coverage, and citing national security laws to arrest a journalist calling for an independent investigation.[44]
- *Education:* Hong Kong is controlling the academic environment from the top down, creating an atmosphere of fear and self-censorship. Beginning as soon as 2027, Hong Kong's Education Bureau will require teachers to obtain a new professional certificate, providing another avenue to control and punish teachers who refuse to fall into line.[45] Teachers must renew the new certificate every three years and receive continuing educa-

*Ironically, Hong Kong courts partially ruled in favor of a former *Wall Street Journal* reporter who was let go after she ran for chair of the Hong Kong Journalists Association. The judge determined that the *Wall Street Journal* had improperly pressured her to drop out of the race—violating her right to engage in union activity—but rejected the claim that the decision to fire her was discriminatory and violated her rights. James Hand-Cukierman and Gloria Lia, "Hong Kong Court Finds WSJ Parent Violated Reporter's Right to Union Role," *Nikkei Asia*, September 10, 2026.

tion on—and pledge to uphold—Hong Kong's national security laws.[46] In 2020, Hong Kong's government revoked one primary teacher's license for lesson material that covered Xinjiang, Tibet, and Hong Kong independence.[47] University academics and students are self-censoring out of fear of prison after a years-long clampdown on peaceful expressions of protest.[48] The Chinese and Hong Kong governments have also tightened control over the appointment and promotion of senior leadership and grant review processes at Hong Kong's universities to ensure ideological alignment with Beijing.[49] Hong Kong's public university student unions have mostly disbanded or been suspended, including those of Lingnan University in August 2026 and Baptist University in late 2025.[50]

Hong Kong Economic and Trade Office Used for Espionage and Transnational Repression

The Hong Kong Economic and Trade Offices (HKETOs), Hong Kong's primary overseas representative offices charged with promoting the city's commercial interests, have furthered the Mainland's security aims abroad. In addition to lobbying foreign governments as an agent of Hong Kong, evidence indicates the offices have facilitated espionage and harassment of overseas Hong Kong democracy activists on behalf of the Chinese government. In May 2026, UK courts convicted two dual Chinese-British nationals of assisting a foreign intelligence service for their activities tracking and harassing a Hong Konger living in London.[51] One individual, an employee of the local HKETO, took directions from Hong Kong authorities and passed information on targets to the second individual, a UK border officer, who used his access to government resources to look up information on Hong Kong and Chinese nationals living in the country.[52] The individuals were sentenced to eight and ten years in prison, respectively.[53] There are currently HKETOs in New York, San Francisco, and Washington, DC, in addition to 12 other international offices.[54]

Beijing Boosts Efforts to Further Align and Integrate Hong Kong with Mainland China

After a mass exodus of foreign firms and expats following Beijing's crackdown and the city's strict lockdown during the COVID-19 pandemic, many analysts became concerned that the Mainland would subsume Hong Kong's business environment just as it had the political environment.[55] Instead, Beijing and Hong Kong have made every effort to preserve Hong Kong's image as an autonomous island so it can serve Beijing's aims on a variety of fronts: expanding use of the RMB for international trade and investment, raising capital for Chinese technology companies, incubating advanced technology research and startups, serving as a testing ground for digital currencies, facilitating sanctions evasion, and enhancing China's role in global finance, including through commodities markets. (For more on China's efforts to enhance its influence in global commodities price discovery, see Chapter 6, "The Price of Everything: China's Bid

to Reshape Global Commodities Markets.") Beijing has introduced various policies outlining its vision for Hong Kong's future, guiding financial sector development, and integrating the city into the Mainland's technology ecosystem.

15th Five-Year Plan Calls on Hong Kong to Support China's Strategic Aims and Help Mainland Firms Expand Overseas

Hong Kong's global competitiveness as a business and financial center has taken on renewed importance for China. Beijing's 15th Five-Year Plan introduced in March 2026 spells out its strategic vision. Whereas the 14th Five-Year Plan placed a heavy emphasis on national security, national consciousness, and people-to-people links between Hong Kong and the Mainland, the 15th Five-Year Plan introduces new ambitions for Hong Kong to become a commodities trading hub, a supply chain services center, and a jumping-off point for Chinese companies going global.[56] It renews the 14th Five-Year Plan's support for Hong Kong in building an innovation and technology center while adding a new reference to accelerate construction of the Northern Metropolis, a technology hub spanning Shenzhen and parts of Hong Kong's less developed New Territories.[57] (For more on the Northern Metropolis, see "Hong Kong Goes All In on Technology Ambitions in Line with Beijing's Vision for a New Innovation Hub" below.) The plan also continues to emphasize the importance of Hong Kong as a logistics and financial services hub.[58]

Hong Kong Takes a Page from the Communist Party, Adopts Central Economic Planning

Beijing and Hong Kong's leadership are working hand-in-glove to ensure Hong Kong's economic priorities serve mainland interests. In an astonishing first for Hong Kong, Chief Executive Lee announced that the city would begin creating five-year plans to align with mainland priorities. Central economic planning—even Beijing's more recent processes that include fewer hard targets—is a paradigm shift for Hong Kong, and one that undermines the very dynamism that led to its success as a free market economy and financial hub.

Hong Kong's first five-year plan, published on September 16, 2026, enshrines its alignment with Mainland economic and security priorities. The plan's foreword emphasizes the "need for Hong Kong to proactively align with national development strategies, and better integrate into and serve the overall national development" even before it mentions objectives like the prosperity of its residents.[59] Its broad objectives include growing Hong Kong's status as a global finance, trade, and technology center; integrating with the Mainland through physical infrastructure and development zones; enhancing the wellbeing and livelihood of Hong Kongers; and adhering to Xi Jinping's wide-ranging definition of national security. These priorities mirror China's own vision for Hong Kong, including the emphasis on social stability and a comprehensive approach to national security.[60] While portions of the plan are devoted to improving access to housing, education, employment, and other forms of support, the majority of the text is devoted to areas where Hong Kong can further mainland ambitions.[61] These areas include:

- *Commodities markets:* Creating a global gold trading, storage, and clearing hub and encouraging the use of RMB-denominated commodity futures and options;[62]
- *Finance and trade:* Expanding the role of offshore RMB for raising capital, conducting cross-border business, and investing;[63]
- *Connectivity with the Mainland:* Integrating physical infrastructure and regulatory frameworks with nearby mainland cities and helping mainland firms expand globally;[64]
- *Technology and innovation:* Strengthening the city's life sciences and healthcare, artificial intelligence (AI) and robotics, and new materials and energy sectors; enhancing scientific and technology collaboration with the Mainland.[65]

City leaders have been in a rush to please Beijing this year. Chief Executive Lee's Five-Year Plan announcement came in February 2026, and the document was published in September 2026—an aggressive timeline compared to the Mainland where five-year planning cycles involve years of discussion and review.[66] Head of the Hong Kong and Macau Affairs Office Xia Baolong visited research institutions, industrial parks, and technology firms in Hong Kong and neighboring cities four times in the first half of 2026, calling for alignment between the two five-year plans and for Hong Kong to serve China's development strategy.[67] In July 2026, Hong Kong's LegCo completed its first trip to the Mainland as an entire body since the handover in 1997 with the aim of better understanding how to align its plan to Beijing's.[68] Their activities included a meeting with Xia Baolong in Beijing, tours of technology firms and factories, and lectures on mitigating national security risks and responding to incidents such as the November 2025 fire.[69]

Other government entities are stepping up to support mainland ambitions as well. Eleven Hong Kong government agencies are supporting mainland companies seeking to expand internationally through the GoGlobal Task Force, launched in October 2025.[70] The program facilitates access to investment, capital, talent, and professional services for mainland firms seeking opportunities in emerging markets.[71] As of May 2026, the task force was assisting 300 mainland firms across financial services, innovation and technology, and other sectors to expand their overseas operations.[72]

China Uses Hong Kong to Pursue Goal of Becoming a "Strong Financial Country"

Hong Kong has the potential to help China achieve its financial system goals where onshore centers like Shanghai have mostly stalled. Xi Jinping laid out a vision and principles for transforming China into a "strong financial country" in October 2023 at the Central Financial Work Conference.[73] According to Xi, such markets should serve the people and the real economy—meaning manufacturing and industry—and must be subject to strict Party control.[74] Xi called for avoiding reckless or "pseudo" financial innovation.*[75] Instead, he focused on stability, effective risk management, and care-

*China has allowed Hong Kong substantial leeway to experiment with cryptocurrency, as is explained in more detail in the textbox below. This leeway does not extend to the Mainland, where China maintains strict prohibitions on trading, mining, and investing in cryptocurrency.

fully calibrated opening to the global system to address an overreliance on debt financing and underdevelopment in capital markets.[76] To achieve these aims, Xi specifically called for more international use of the RMB for trade and investment, internationally competitive institutions, and a financial center to attract foreign investors and increase China's role in global price discovery.[77]

China's onshore financial system has struggled to fulfill many of these objectives due to self-imposed constraints on foreign investment in onshore markets, strict capital controls, lack of rule of law, and limited sophistication of mainland markets. IPOs by value and volume on China's two largest stock exchanges in Shanghai and Shenzhen peaked in 2021 before declining due to poor performance and increasing regulatory scrutiny over new listings.[78] Government bonds made up almost 85 percent of net financing flows in China's onshore debt markets in 2025, while corporate bonds comprised less than 15 percent.*[79]

Hong Kong, with its robust ecosystem of international investment banks and pre-existing links to mainland clientele—and now firmly under CCP control—provides a convenient mechanism for China to achieve Xi Jinping's "strong financial country" directive without eroding Party control.[80] The city has long touted its connections to the Mainland for foreign investors seeking access to China's domestic markets. Now, Hong Kong is serving the opposite role, advertising its ability to help Chinese firms raise capital for overseas expansion. At the same time, Hong Kong is promoting the use of offshore RMB and expanding China's role in commodities trading.†[81]

China has historically depended on Hong Kong for access to global capital markets more broadly. Prior to the introduction of the national security laws, Hong Kong's free market economy, common law heritage, and an independent judiciary provided a stable and predictable environment for international financial institutions to operate.[82] From 2015 to 2024, Hong Kong accounted for between 61 and 73 percent of annual foreign direct investment flows into the Mainland and between 57 and 66 percent of annual outbound direct investment flows.[83] In 2020, U.S. dollar bonds issued in Hong Kong accounted for at least 60 percent of mainland companies' total offshore debt issuance, and the true figure is likely higher given undercounting of offshore affiliates' activity.[84] Although U.S. dollar bond issuance in Hong Kong has fallen from its peak years between 2019 and 2021 due to China's property market collapse and rising offshore interest rates, mainland firms continue to dominate Hong Kong's foreign currency bond markets.[85] Hong Kong also plays a major role in providing access to U.S. dollar payments and clearing. In 2025, Hong Kong Interbank Clearing Limited processed over $21

*The figure includes government and corporate bonds, but not financial institution debt issuances.

†Onshore RMB, also referred to as CNY, is RMB that circulates within mainland China and is subject to strict capital controls. Offshore RMB, also referred to as CNH, is RMB that circulates outside of mainland China. China's central bank, the People's Bank of China (PBOC), manages the supply and demand of onshore RMB to ensure it trades within a specific band to a basket of currencies, including the U.S. dollar. Offshore RMB is freely traded, although the PBOC still intervenes when necessary to defend its value. Hong Kong's own currency is called the Hong Kong Dollar (HKD) and has been pegged to the U.S. dollar since 1983. Logan Wright, "20 Years of Missed Opportunities in China's Exchange Rate Policy," *Rhodium Group*, July 23, 2025; Michael Sutherland, "China's Currency Policy," *Congressional Research Service* (Report No. IF10139), May 24, 2019.

trillion in U.S. dollar payments through Clearing House Automated Transfer System, its real-time gross settlement system.[86]

Through a set of complementary initiatives, Hong Kong authorities are deepening economic integration with the Mainland while preserving capabilities Beijing cannot easily replicate onshore. Rather than relying on any single institution or policy, this strategy spans fundraising and building offshore RMB markets, investment channels, and financial infrastructure to circumvent sanctions, allowing Hong Kong to perform functions that support China's long-term ambitions while remaining connected to global markets. No single one of these functions would mark Hong Kong as indispensable to Beijing; taken together, they show a financial center being methodically repurposed into an instrument of the Mainland's economic and strategic aims. Moreover, much like the CCP's management of provincial governments and state-supported enterprises, Beijing is aligning incentives so that Hong Kong's future prosperity is linked to advancing national priorities. Business leaders insist Hong Kong remains a free market and business-as-usual financial center despite the city's political transformation, even as the city's own policy agenda signals a more active role steering the economy going forward.

Hong Kong's Role as a Global Trading and Logistics Center Helps Chinese Companies Access Global Markets

Hong Kong's role as an entrepot—a trading hub where merchandise is imported, stored, and then re-exported to other countries—is facilitating China Shock 2.0, a flood of subsidized Chinese exports into markets around the world. Hong Kong's exports of products originating in China grew 29 percent through year-to-date July 2026 compared with the same period in 2025.[87] Although some of these transactions could represent goods roundtripping to China for tax purposes or to evade capital controls, it is highly likely that Hong Kong's rapidly accelerating trade volumes are reflective of China's own massive trade surplus.[88] Re-exports to the world excluding China have grown 36 percent, while those to emerging markets in Asia, the Middle East, and Latin America grew particularly quickly, reflecting the impact from China Shock 2.0 on countries in those regions.[89]

Hong Kong is also helping route high-technology goods into China. Over 60 percent of Hong Kong's transshipment trade goes to China, with a large portion consisting of semiconductors and other electronics sourced from Taiwan, South Korea, and the United States.[90] The rise has been so extreme that Hong Kong was Taiwan's number one destination for chip exports through July 2026, the latest available data as of the time of this report.[91]

Hong Kong Facilitates Access to Offshore RMB Financing and Settlement

Hong Kong is leading the development of an offshore RMB financing and settlement ecosystem. China is seeking to increase the use of RMB to reduce its exposure to U.S. dollar sanctions, but it has struggled to encourage wide uptake of the currency outside of select trade partners like Iran and Russia that have lost access to the U.S. banking system.[92] Hong Kong's financial sector, which is already

the largest offshore RMB center, stands to gain if it can capture the lion's share of transaction and issuance fees from greater usage of the currency.[93] A 2025 roadmap from the Hong Kong Securities and Futures Commission and the Hong Kong Monetary Authority (HKMA) named offshore RMB products as one of four major pillars in expanding Hong Kong's role in fixed income and foreign exchange markets.[94] The government's 2026–2027 budget plan also identified expanding offshore RMB services as a way to align with mainland priorities and grow its financial sector.[95]

Table 1: Hong Kong Is Critical to China's Offshore RMB Ecosystem

Payment Settlement	• Hong Kong is already the largest offshore RMB settlement center, accounting for 75 percent of global offshore RMB settlement transactions as of 2023. • Hong Kong banks participate in the Cross-Border Interbank Payment System (CIPS), China's payments messaging and settlement platform. • In July 2026, Hong Kong Exchanges and Clearing (HKEX), which operates Hong Kong's exchanges, announced it would become a direct participant in CIPS, allowing it to access the platform directly to send and receive payments.
Fixed Income	• Hong Kong's offshore RMB bond issuances, known as dim sum bonds, have grown 60 percent from 2022, with growing liquidity in longer-dated maturities.
Equity Investment	• Hong Kong is exploring an offshore RMB venture capital fund to support the operating needs of mainland firms.
Foreign Exchange	• Hong Kong accounts for more than 30 percent of global trades involving the RMB. USD/RMB trades averaged $274 billion daily turnover in April 2026, the largest of any currency pair in the city.
Trade Finance and Working Capital	• HKMA upsized its RMB Business Facility from RMB 100 billion to RMB 500 billion in 2026, allowing banks to provide greater offshore RMB liquidity to their corporate clients.
Interest Rate Risk Management	• Hong Kong comprised 39 percent of average daily turnover for global RMB interest rate derivatives in April 2025. • HKEX launched the first offshore Chinese government bond futures contract, expanding offshore risk management tools for holders of mainland assets.

Source: Various.[96]

Hong Kong Serves as China's Sandbox for Blockchain Innovation

Hong Kong continues to make incremental progress in expanding its digital assets industry, allowing the Mainland to maintain its explicit no-tolerance policy for onshore crypto while taking part in industry developments through limited pilot programs in the city. China effectively banned the crypto industry from operating in the Mainland since 2021, instead throwing its efforts behind a central bank digital currency (CBDC) called the e-CNY

Hong Kong Serves as China's Sandbox for Blockchain Innovation—*Continued*

designed to facilitate RMB transactions without eroding state control over the banking system.[97] Chinese regulators also banned unapproved overseas private RMB-backed stablecoin issuances in February 2026.[98] Beijing's hesitant stance is reflected in the behavior of its own fintech firms—mainland Chinese technology giants that had initially indicated interest in issuing stablecoins in Hong Kong have since backed away from these plans following cooling government sentiment.[99]

Meanwhile, Beijing has allowed Hong Kong to foster its digital assets industry with proactive government regulation and financial sector pilot programs.[100] Since 2020, Hong Kong has granted full operating licenses to 13 crypto exchanges, including two in 2026.[101] The HKMA granted its first two licenses for Hong Kong dollar (HKD)-backed stablecoin issuance to HSBC and a joint venture backed by Standard Chartered.[102] The latter rolled out its HKD At Par (HKDAP) stablecoin for limited pilot use in August 2026.[103] Hong Kong regulators have expanded the scope of permitted services for virtual asset service providers, allowing virtual asset perpetual contracts for institutional investors and digital assets as collateral for leveraged crypto trading.[104] A separate circular from the Hong Kong Securities and Futures Commission permitted virtual asset trading platforms to offer secondary trading of certain tokenized investment funds.[105]

As the regulatory environment takes shape, investors and issuers have adopted blockchain technologies. As of March 2026, total assets under management for tokenized products reached HKD 10.7 billion ($1.4 billion).*[106] Hong Kong has also hosted its first issuances of "digital native" funds and securities, meaning investors hold direct ownership in the assets via the blockchain rather than through a traditional ledger maintained by an intermediary service provider.[107]

For now, Hong Kong's flourishing crypto industry and experimentation with stablecoins are a win-win proposition for the city and for Beijing, which are pursuing separate but aligned aims. Hong Kong is seeking to remain a regionally competitive financial services provider in a rapidly evolving technological environment. Meanwhile, the Mainland's tacit approval of Hong Kong's crypto industry allows it to hedge its exposure to a technology that could transform global banking and payments architecture and plays a key role in sanctions evasion and money laundering.

Hong Kong Serves as a Global Hub for Money Laundering and Evasion of Sanctions and Export Controls in Support of Iran and Russia

Hong Kong's business environment and financial system continue to enable money laundering and sanctions and export control eva-

*This section uses the following exchange rate throughout: $1 = HKD 7.80.

sion on an enormous scale, despite reputational risk. These illicit activities include transactions over sanctioned Iranian, Russian, and Venezuelan oil; North Korean purchases of oil; exports of weapons and dual-use components to Iran and Russia; and laundering proceeds of stolen cryptocurrency on behalf of North Korea.[108] Although Hong Kong claims to follow UN sanctions, Chief Executive Lee expressly stated that Hong Kong would not implement multilateral sanctions on Russia in 2022, and this stance appears to apply to other non-UN sanctions as well.[109]

Hong Kong is a key facilitator of Chinese purchases of Iranian oil and other transactions that prop up the Iranian regime. Hong Kong-flagged ships physically transport the oil via a network of vessels known as the shadow fleet, while Hong Kong-registered shell companies open bank accounts and process payments on behalf of sanctioned entities.[110] For example, out of $9 billion of illicit Iranian payments made in 2024 uncovered from U.S. financial system data, Hong Kong-based companies transacted over half of the total ($4.8 billion).[111] Hong Kong-flagged vessels are also used to facilitate ship-to-ship transfers of sanctioned oil, often turning off their Automatic Identification System transponders to evade detection.[112] Between the April launch of Operation Economic Fury and August 2026, the U.S. Department of the Treasury sanctioned five Hong Kong-flagged vessels and 55 Hong Kong-based entities for their role facilitating financial transactions, oil shipments, and weapons and equipment transfers for the Iranian regime.*[113] Iran also leverages Hong Kong's status as a regional cryptocurrency hub by converting proceeds from its oil sales into crypto via Hong Kong-based entities, laundering millions of dollars before U.S. authorities can target the crypto exchanges.[114] (See "Hong Kong Serves as China's Sandbox for Blockchain Innovation" above for more on Hong Kong's ambitions to become a regional leader in cryptocurrency.)

Hong Kong is also the largest transshipment node for a network of shell companies buying controlled technology from Western manufacturers bound for end users in Russia, fueling Russia's war against Ukraine and, increasingly, its aggression toward other European countries.[115] Hong Kong accounted for $226 million in high-priority technology shipments, such as semiconductors to Russia, from just 29 leading European companies between February 2022 and February 2024.[116] Many of these goods never passed through Europe. Instead, they were manufactured and assembled in countries including China, Malaysia, and Thailand and shipped to unsanctioned entities in Hong Kong, which then forwarded the goods on to Russia.[117] Hong Kong plays a key role in facilitating final sales and forwarding the shipments, the last two stages of the value chain before the goods reach Russia, directly implicating the

*Treasury announced Operation Economic Fury in April 2026, a sweeping set of actions designed to cut off economic lifelines for the Iranian regime, including sanctioning entities involved in Iranian oil sales, blockading Iranian ports, and seizing Iran-linked ships. Treasury escalated its campaign in August with Operation Economic Outcast. White House, *Operation Economic Outcast: Total Isolation of the Iranian Regime*, August 24, 2026; Shelby Holliday, "U.S. 'Economic Fury' Campaign Against Iran Expected to Ramp Up, Officials Say," *Wall Street Journal*, April 21, 2026; U.S. Department of the Treasury, *Economic Fury Targets Illicit Oil Smuggling Network Run by Iranian Regime Elite*, April 15, 2026.

city in export control evasion.*[118] One review of Russian trade data demonstrated that sellers located in the city accounted for 30.9 percent of sales of battlefield goods and 18.1 percent of sales of critical components to Russia between January and October 2023.†[119] Furthermore, Hong Kong was responsible for final shipment (regardless of origin of the seller) of 22.7 percent and 12.9 percent of battlefield goods and critical components, respectively, to Russia over the same timeframe.[120] Collectively, China and Hong Kong account for 75.9 percent of battlefield goods and 66.7 percent of critical components shipped to the country.[121] As discussed in the Commission's *China-Russia Factsheet*, Russia lacks the capability to manufacture advanced semiconductors and other components, making mainland China and Hong Kong pivotal to its ability to continue to attack Ukraine and harass its European neighbors.[122]

Hong Kong's regulatory environment for businesses allows bad actors to adapt to and evade list-based sanctions and export controls. The ability to rapidly dissolve and set up new operating entities means that sanctions targeting individually named firms quickly become obsolete.[123] For instance, even if regulators sanction a vessel's owner for facilitating prohibited oil sales, Hong Kong allows owners to readily transfer it to a new entity, forcing enforcement entities into a game of whack-a-mole.[124] Academic research on vessel re-flagging trends indicates Hong Kong is a particularly good location for this type of activity, as Hong Kong continues to attract sanctioned ship re-flagging.[125] Bad actors use secretarial services to incorporate new firms and avoid detection. Treasury sanctions additional entities on an ongoing basis, but many targeted firms use the same addresses—often tied to unsanctioned corporate service providers—as previously listed entities.[126] Despite know-your-customer regulations and requirements to review high-risk transactions, banks located in Hong Kong have continued to facilitate illegal financial flows, often failing to prevent shell corporations from conducting illicit activities.[127]

Hong Kong Aims to Become Regional Commodities Trading Hub

Hong Kong has launched a comprehensive effort to increase its role in global physical and financial commodities markets. In 2012, HKEX purchased the London Metal Exchange (LME), kickstarting its foray into global commodities trading.[128] (For more on HKEX's ownership of the LME, see Chapter 6, "The Price of Everything: China's Bid to Reshape Global Commodities Markets.") Since then, the LME has opened additional metals warehouses in Hong Kong, deepening the city's position in global price formation.[129] The Hong Kong Financial Services Development Council, a government-appointed

*In September 2026, Bloomberg reported that the Chinese government was holding components from an Australian military F-35 that had been diverted to Hong Kong while being shipped to the United States in late May. While the circumstances of the diversion remained under investigation, it highlights how China likely has high visibility into and control over goods passing through Hong Kong. Anthony Capaccio, "China Is Holding Sensitive F-35 Parts Diverted to Hong Kong," *Bloomberg*, September 24, 2026.

†Battlefield goods refer to the list of 45 six-digit harmonized system (HS) codes on the Common High Priority Items List. Critical components include a wider array of potentially dual-use goods. Olena Bilousova et al., "Challenges of Export Controls Enforcement: How Russia Continues to Import Components for Its Military Production," *Yermak-McFaul International Working Group on Russian Sanctions* and *KSE Institute*, January 2024, 8.

advisory body in charge of advocating for financial sector development, published a roadmap for Hong Kong to become a commodities trading hub in November 2025.[130] In July 2026, Hong Kong launched a new government-owned gold clearing and settlement system, and HKEX waived trading fees on its recently re-launched gold futures contracts for one year.[131]

As noted above, Beijing's 15th Five-Year Plan calls for strengthening Hong Kong's role in global commodities markets. China's control over physical supply chains for commodities is already deeply entrenched in mining, refining, and transportation. Hong Kong seeks to leverage its close links to the Mainland, the world's largest importer of commodities, along with its ability to provide ancillary services like trade finance, shipping, and logistics, to help China challenge the United States and others for dominance over the financial infrastructure that supports price discovery in commodities markets.[132] (For more on China's efforts to increase its role in commodity price formation, see Chapter 6, "The Price of Everything: China's Bid to Reshape Global Commodities Markets.")

With Access to U.S. Capital Markets Narrowing, Hong Kong Is Now Primary Path for Chinese Companies to Access Foreign Capital

Hong Kong's 2025 success in IPOs demonstrates alignment with Beijing's vision for the city. Hong Kong's clearest turnaround in 2025 came from equity capital raising, where a market left in the doldrums in 2022 rebounded to lead the world in IPOs. Even this success, though, does not signal Hong Kong's revival as a global financial hub so much as the intersection of two phenomena. First, mainland Chinese firms have narrower options to access overseas capital markets than in years past. The United States was once a favored location for Chinese companies to IPO but is no longer a viable option for many firms due to increased scrutiny over the use of variable interest entity structures, stringent U.S. audit conditions, and heightened approval requirements from Chinese regulators.*[133] Second, Beijing's focus on expanding support for priority technology sectors has resulted in a willingness to accept foreign non-controlling capital in exchange for internationally accepted valuations.[134] China's onshore financial system cannot fill all of the capital needs of its technology sector.[135] Traditional bank lending to state-favored sectors dominates the mainland financial sector, meaning that private firms and small- and medium-sized enterprises struggle to access capital.[136] China's onshore stock exchanges are not attractive options to access foreign capital due to strict capital controls and an underdeveloped and volatile financial sector.[137] While sector champions such as semiconductor firm CXMT and robotics firm Unitree both chose Shanghai for their IPOs during the summer of 2026, first day trading pops of over 400 percent for each of them reflect the difficulties Chinese underwriters have in assigning accurate valua-

*A variable interest entity (VIE) structure is a contractual arrangement between an offshore holding entity and an onshore business (the VIE) designed to mimic equity ownership. The offshore holding entity lists on a foreign exchange, thereby allowing foreign investment into otherwise prohibited sectors of the Chinese economy. See U.S.-China Economic and Security Review Commission, Chapter 3, Section 1, "U.S-China Commercial Relations," in *2019 Annual Report to Congress*, November 2019, 175–177.

tions in an environment where retail investors lack many attractive investment opportunities.[138]

Listing in Hong Kong now provides a more robust fundraising option for China's advanced technology firms and the best exit strategy for the firms backed by domestic venture capital. Hong Kong's total IPO value climbed from a 22-year low of HKD 46.3 billion ($5.9 billion) in 2023 to HKD 286.9 billion ($36.8 billion) in 2025, making it the best-performing exchange in the world last year by IPO value.[139] Chinese firms dual-listed on mainland and Hong Kong exchanges accounted for almost half of Hong Kong's IPO volume in 2025.[140] Mainland companies also made up 96 percent of Hong Kong IPOs by number in the first half of 2026 compared with only 44 percent in the full year 2018.[141] Listing in Hong Kong first allows firms to receive a valuation outside of the Mainland's speculative markets that is more comparable to their international peers before raising additional capital onshore.[142] Much of this listing activity was driven by firms in technology sectors that are a strategic priority for Beijing, including semiconductors, robotics, healthcare and biotechnology, and AI.[143] Companies headquartered in the Mainland or controlled by mainland interests now comprise around 80 percent of Hong Kong's total market capitalization.[144] The rush of activity continued in the first half of 2026 with a 92 percent increase in volume over the first half of 2025 as mainland Chinese companies in the AI and technology sectors sought to capitalize on investor interest.[145]

Hong Kong's markets are also facilitating the international expansion of Chinese technology firms. Chinese AI powerhouse MiniMax raised $600 million in its Hong Kong IPO in January 2026 after receiving initial investments from Chinese tech giants Alibaba and Tencent as well as Chinese venture capital funds.[146] The company is now exploring a secondary domestic listing.[147] More than 70 percent of MiniMax's sales come from outside China as it seeks to offer lower-cost models compared with U.S. competitors in price-sensitive markets abroad.[148]

Notably, some of these transactions are funding Chinese companies found by U.S. officials to have designated ties to the PLA. U.S. investment banks helped underwrite the Hong Kong IPO for Contemporary Amperex Technology Co. (CATL) in May 2025, which the U.S. Department of Defense designated as a Chinese military company on its 1260H list in January of that year.*[149]

Regulatory changes in both Beijing and Hong Kong have helped sustain the rush by easing the pathway for listings by mainland companies in general and technology companies in particular. China's own domestic stock markets are prone to waves of speculation, and the Mainland has introduced tighter listing requirements for

*UK, U.S., and other non-Chinese financial institutions have also facilitated investment in Chinese companies on or associated with the Treasury Department's Non-SDN Chinese Military-Industrial Complex (NS-CMIC) list, including Hong Kong-listed SenseTime Group Inc. and Semiconductor Manufacturing International Corporation. U.S. persons are generally banned from trading public shares of NS-CMIC-listed entities. However, Hong Kong Watch concluded that these investments are almost all lawful, citing investments in undesignated affiliates, holdings acquired before restrictions took effect, and investment through non-U.S. entities. Thomas Benson and Samuel Bickett, "Through the Cracks: How Loopholes in U.S. Sanctions Let Western Investors Pour Billions into China's Military-Industrial Complex," *Hong Kong Watch*, September 22, 2026, 30–31, 35–36, 42–43, 45, 48.

domestic firms, pushing firms to Hong Kong. In 2023, China also clarified the approval requirements for Chinese companies to list overseas, a move that elevated Hong Kong's role in IPOs given the perceived geopolitical and business risks associated with listing in the United States.[150] Meanwhile, Hong Kong has reduced the market capitalization requirements for listing for special technology sectors and introduced a plan to allow listings at lower revenue thresholds for pre-profit tech companies with dual-share structures and confidential filing for special business models.*[151]

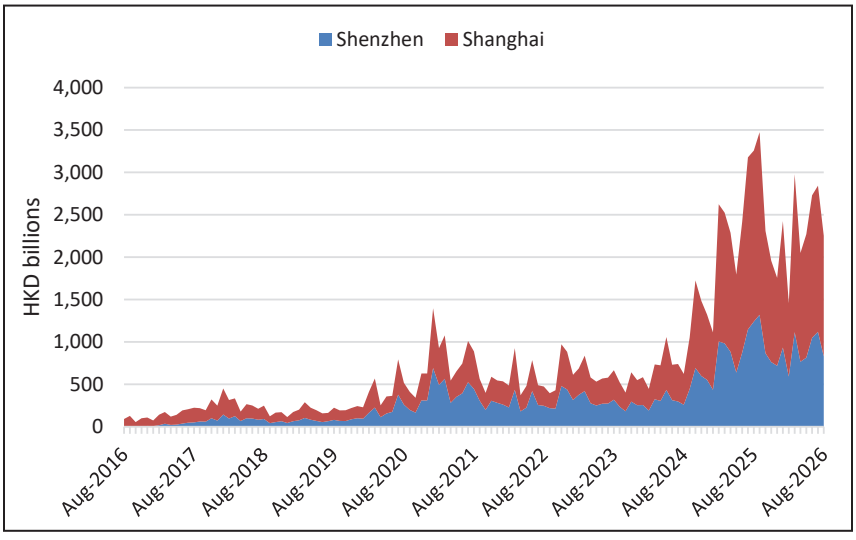
Hong Kong Financial Infrastructure Helps Fund Mainland Technology Stocks

In addition to Hong Kong's role in the IPO market, China uses Hong Kong's financial infrastructure as a conduit through which foreign capital enters China and Chinese capital exits, providing a stable investment environment under conditions that Beijing can still control and calibrate. Offshore investors are able to purchase onshore stocks, bonds, swaps, and exchange-traded funds in the Mainland as well as access certain wealth management products in the Greater Bay Area through the Northbound Connect programs.[152] A similar suite of products exists for mainland residents to invest in Hong Kong's financial markets.[153]

The Chinese government has implemented new mechanisms to funnel the savings of domestic investors through official channels into Hong Kong's stock market. In May 2026, the mainland China Securities Regulatory Commission announced heightened enforcement of regulations that prevent mainland residents from circumventing China's capital controls with overseas brokerage accounts.[154] Regulators are requiring investors to divest overseas stocks and other equities they purchased on the Hong Kong, U.S., and other foreign exchanges through unlicensed fintech platforms within two years.[155] Hong Kong assets subject to these requirements are estimated to be between HKD 86 billion ($11 billion) and HKD 250 billion ($32 billion).[156] Mainland residents will be able to reinvest their capital through official channels such as the Southbound Stock Connect, a program launched in 2014 facilitating purchases of Hong Kong-listed stocks through the Shenzhen and Shanghai exchanges.[157] The switch in platform will give Beijing more control—this channel is subject to a daily trading quota for net buying activity and does not yet allow access to shares sold during IPOs.[158] Although Southbound Stock Connect turnover has fallen from its 2025 peak, activity will likely pick up in the wake of the regulatory crackdown as mainland investors continue to seek access to shares of Chinese tech firms listed in Hong Kong (see Figure 1).[159] The move demonstrates the importance Beijing puts on controlling outbound capital flows.[160]

*Startup founders often favor dual-class share structures that allow them to maintain greater managerial control even after their company is publicly listed. Yantoultra Ngui and Sherin Sunny, "Hong Kong Proposes Easing Rules for Dual-Class Share Listings in Competitiveness Push," *Reuters*, March 13, 2026.

Figure 1: Southbound Stock Connect Monthly Gross Turnover, August 2016–August 2026

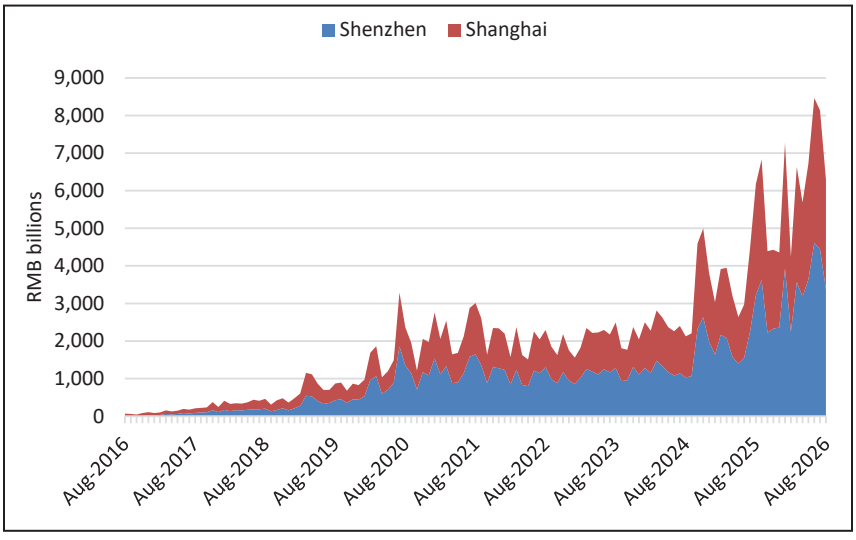


Source: Hong Kong Exchanges and Clearing Limited, via Haver Analytics.

Hong Kong is also supporting valuations in the Mainland as overseas investors pour money into bonds and stocks through Hong Kong's connect programs, which provide individuals in Hong Kong access to capital markets in the Mainland and vice versa. Northbound Stock Connect trading reached a new peak in June 2026 (see Figure 2). Most of the uptick in bond purchases has flowed into policy bank financial bonds (highly liquid funds raised by China's three policy banks) and Chinese government bonds.*[161] These programs allow incremental inflows of more sophisticated foreign capital, encouraging the professionalization of China's onshore markets while maintaining strict control on total volumes via government-set quotas to limit volatility associated with potential outflows.

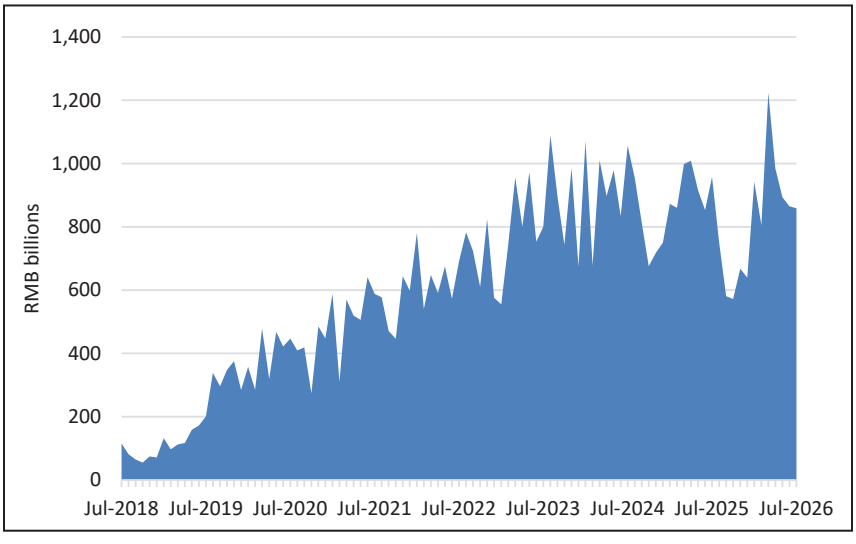
*These banks are China Development Bank, Export-Import Bank of China, and Agricultural Development Bank of China. These state-funded banks are mandated to support China's domestic infrastructure development, poverty relief, cross-border trade and investment priorities, and key agricultural products. "What Are the Policy Banks China Uses to Spur Economy?" *Bloomberg*, June 30, 2022.

Figure 2: Northbound Stock Connect Gross Monthly Turnover, August 2016–August 2026



Source: Hong Kong Exchanges and Clearing Limited, via Haver Analytics.

Figure 3: Northbound Bond Connect Monthly Turnover, July 2018–July 2026



Source: Bond Connect Company Limited, via Haver Analytics.

Hong Kong Goes All In on Technology Ambitions in Line with Beijing's Vision for a New Innovation Hub

Beijing views Hong Kong as a key provider of talent, financial and professional services, and global connectivity to achieve its technology ambitions. In 2019, China's State Council launched the Greater Bay Area (GBA) initiative, a plan to combine Hong Kong, Macau, and nine mainland Chinese cities into one technology and innovation hub.[162] Hong Kong, in collaboration with participating cities, has enhanced its physical transportation links to the Mainland and established industrial parks with a focus on commercializing technology research.[163] Mainland authorities have also eased tax, real estate, employment authorization, and residence regulations to encourage more Hong Kong residents to work across the border.[164] In 2021, then–Chief Executive Carrie Lam announced plans for the Northern Metropolis, a development in Hong Kong's New Territories designed to help alleviate the city's persistent housing shortages while diversifying the economy toward technology.[165]

The Hong Kong government is taking unprecedented steps to back China's technology ambitions and showcase its commitment to five-year plan priorities. The Hong Kong Investment Corporation, an HKD 64 billion ($8 billion) de facto sovereign wealth fund with the mission to bolster the development of the city's technology sector, has directed 47 percent of its investments to portfolio companies located in mainland China and 28 percent in Hong Kong.[166] In May 2026, Hong Kong issued new bonds worth HKD 27.6 billion ($3.5 billion) to help finance the cost of infrastructure projects, including the Northern Metropolis.[167] The Northern Metropolis' location and planned projects are designed to diversify Hong Kong's economy toward innovation and integrate it with adjacent Shenzhen, the headquarters of technology firms such as Tencent, Huawei, and BYD.[168] San Tin Technopole, one of four new zones planned for the development, will provide expanded office space for manufacturing, testing, and research and development and will connect to Shenzhen via a new railway.[169] With almost $30 billion needed just for site clearing and basic infrastructure, Hong Kong plans to use an additional HKD 150 billion ($19 billion) to support development of the Northern Metropolis and other critical infrastructure.[170] These funds will come from a government endowment previously earmarked as a reserve for maintaining the HKD's peg in times of market turmoil.*[171] While the potential withdrawal is only a fraction of the total funds in the reserve, the symbolism of using the money to align with Beijing's pet projects is significant, especially in recent years as Hong Kong's budget has tightened.

So far, Hong Kong has little tangible progress to show for the money it has earmarked to support its technology sector. Progress on the Northern Metropolis has been slow, with Hong Kong residents and developers privately skeptical that it will meaningfully contribute to the city's prosperity.[172] The project's first large-scale land tender received only two bids, one from a consor-

*The HKMA has maintained a currency peg to the U.S. dollar since 1983. The peg requires the central bank to hold a large foreign currency reserve for purposes of buying and selling HKD as needed to maintain steady global supply and demand relative to its pegged currency, the U.S. dollar. Urban Jermann, Bin Wei, and Vivian Yue, "How Credible Is Hong Kong's Currency Peg? Insights from Financial Market Prices," *Federal Reserve Bank of Atlanta*, September 2025.

tium of mainland companies, primarily state-owned.[173] Most of Hong Kong's largest developers did not submit bids, reflecting the complexity of the combination industrial/residential development and skepticism around the potential returns on investment.[174] The chairman of the Hong Kong group that did bid has been a vocal supporter of mainland priorities, including the need to maintain "stability" in Hong Kong and encourage the development of technology and innovation as a new pillar of the economy.[175] He may have been trying to avoid a fate similar to that of Li Kashing, chairman of CK Hutchison, who is perceived as not closely enough aligned with Beijing's priorities and who received major criticism from mainland and Hong Kong press for a proposed sale of its overseas ports holdings to U.S. investors.[176] (For more on CK Hutchison, see Chapter 4, "China's Predatory Diplomacy in Latin America: Broken Promises, Harmful Practices.")

Meanwhile, Hong Kong's economy remains dependent on the financial and logistics sectors, while electronics manufacturers prefer Shenzhen for its physical infrastructure and co-location with component suppliers and other technology firms.[177] Manufacturing employment in Hong Kong made up less than 3 percent of total employment at the end of 2025, while finance, insurance, trade, and other business and professional services accounted for nearly 40 percent.[178] In an independent ranking of startup ecosystems around the world, Hong Kong ranked 29th and was surpassed by Singapore, Seoul, and mainland Chinese cities, including Beijing, Shanghai, Shenzhen, and Hangzhou.[179] Hong Kong has experienced some success in the digital technology sector, but mainly in areas with significant services components—it has become a major regional hub for data centers and undersea cable landing points.[180]

Hong Kong's Economy Is Increasingly Dependent on the Mainland

Mainland interests have come to comprise a much greater share of economic growth in Hong Kong, motivating the city to reorient its economy in support. Beijing's destruction of Hong Kong's civil and political freedoms combined with harsh lockdowns during the COVID-19 pandemic contributed to a large-scale exodus of people and international firms.* Many Hong Kong residents left the city for destinations including the UK, Canada, Australia, and Taiwan, where they could enjoy the political freedoms they had held previously, while foreigners decamped for alternative financial hubs like Dubai and Singapore.[181] Between 2020 and 2022, Hong Kong's population declined by a net 162,000 people from 7.5 million to 7.3 million.† [182] The count of regional headquarters and offices of international firms also shrank by 190 between 2019 and 2022, led by UK and U.S. companies.[183] In their place, mainland firms and citizens have poured into the city. Mainland Chi-

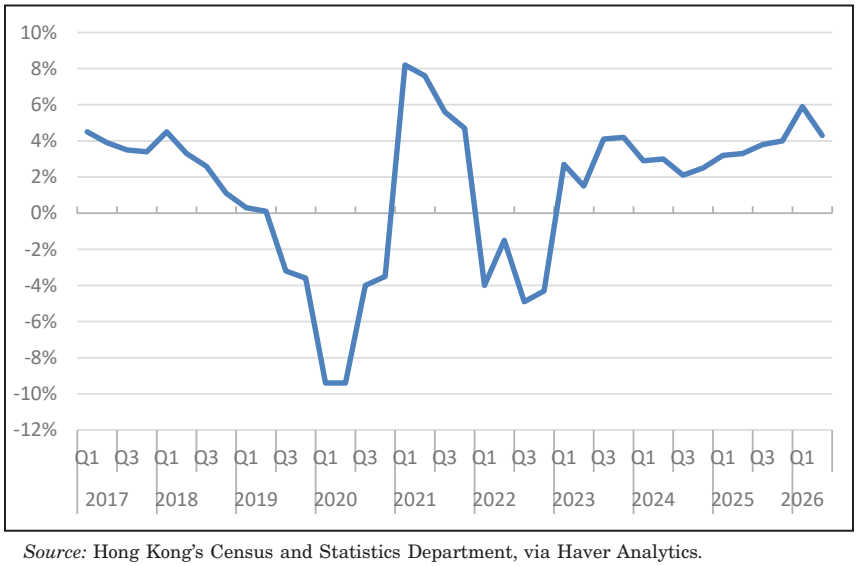
*For more, see U.S.-China Economic and Security Review Commission, "Hong Kong" sections in *2022 and 2023 Annual Report to Congress*.

†Hong Kong's population decline due to emigration is compounded by falling birth rates and an aging workforce. In his 2026 policy address, Chief Executive Lee announced plans to raise the allotted cash bonus and income tax allowances for second children and provide housing tax relief and more favorable mortgage policies for families with newborns. The government will also introduce subsidized daycare centers. Wen Simin, "Hong Kong Raises Cash Bonuses, Tax Breaks to Encourage Larger Families," *Caixin Global*, September 17, 2026.

nese have received most of the visas under the Top Talent Pass Scheme, a new Hong Kong program designed to attract highly skilled labor.[184] In 2025, 29,600 of the total 31,500 recipients were from the Mainland.[185] Mainland companies have accounted for most of the growth in new offices in Hong Kong for overseas companies.* In 2019, mainland companies accounted for 20 percent of the Hong Kong offices with parents outside Hong Kong, while U.S. companies accounted for 15 percent.†[186] Through the end of 2025, the United States' share of the total has shrunk to 14 percent, while the Mainland's share has grown to 30 percent, with almost 1,300 new regional headquarters or offices opening during the preceding six years.[187]

Deepening links to the Mainland provided the base for Hong Kong's economic recovery in 2025 and the first half of 2026. Hong Kong's first quarter real GDP growth rebounded to its highest non-pandemic level since 2011 before slowing slightly to 4.3 percent in the second quarter (see Figure 4).[188] Growth was driven by rising technology exports to and from mainland China, a return in mainland tourists, and domestic consumption.[189]

Figure 4: Hong Kong Quarterly Real GDP Growth, Year-on-Year, Q1 2017–Q2 2026



Source: Hong Kong's Census and Statistics Department, via Haver Analytics.

Hong Kong's economic outlook remains weaker than it was prior to the pandemic, however, and closer ties to the Mainland also expose Hong Kong to risks.[190] Hong Kong's role as a global trade hub is vital to its economic health. In the second quarter of 2026, the total value of re-exports flowing through the city reached 220 percent of GDP, while the trading and logistics industry comprised

*Hong Kong's Census and Statistics Department counts Mainland-based companies as foreign for this data series.

†Companies include those with regional headquarters, regional offices, or local offices in the city.

19 percent of value added for 2024 GDP.[191] In 2025, the Mainland was either the source or destination for 82.4 percent of re-exports through the city, indicating how vital this link is to the city's economy.[192] Export controls or other restrictions on technology shipments to China could impact these trade volumes.

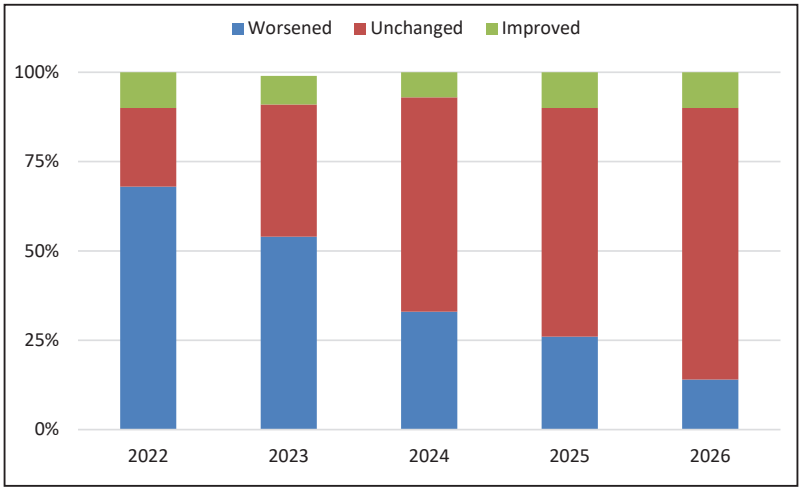
The recent recovery in retail sales is also vulnerable to a slowdown in the Mainland. Hong Kong's overall rebound in retail sales remains largely supported by external visitors to the city, and total retail sales are well below their 2018 peak.[193] In 2025, 76 percent of inbound visitor arrivals to Hong Kong came from the Mainland, but spending per visitor remains well below its pre-pandemic trend.[194] Consumption in mainland China remains depressed after years of slowing wage growth and the impact of falling property values on household wealth. (For more on China's weak consumption, see Chapter 1, "U.S.-China Economic and Trade Relations (Year in Review).")

Some International Firms Elect to Stay in Hong Kong Despite Risks

Defying the expectations of many, at least in 2025 it appeared that firms are now willing to look past the continuing erosion of rule of law in Hong Kong and the integration of the city into the Mainland's security and governance structures. The city has attracted some international businesses back after a large exodus during the height of the COVID-19 lockdowns and crackdown on prodemocracy protestors. Firms engaged in international trade and the financial sector have driven the trend, along with complementary professional services, with foreign regional headquarters or office numbers expanding by 980 from 2024 to 2025.[195] Jane Street, Point72, and Credit Agricole are among the financial firms that have signed or renewed leases in Hong Kong within the past year and a half.[196] Those firms that remain in the city appear to have already factored in the risk associated with operating in Hong Kong. According to the Hong Kong American Chamber of Commerce's annual survey of business sentiment, a significant majority of respondents indicated that their confidence in the city's rule of law remains unchanged from the prior year, while only a small portion reported declining confidence.[197]

Some International Firms Elect to Stay in Hong Kong Despite Risks—*Continued*

Figure 5: How Has Your Company's Confidence in the Rule of Law in Hong Kong Changed over the Last 12 Months? 2022–2026



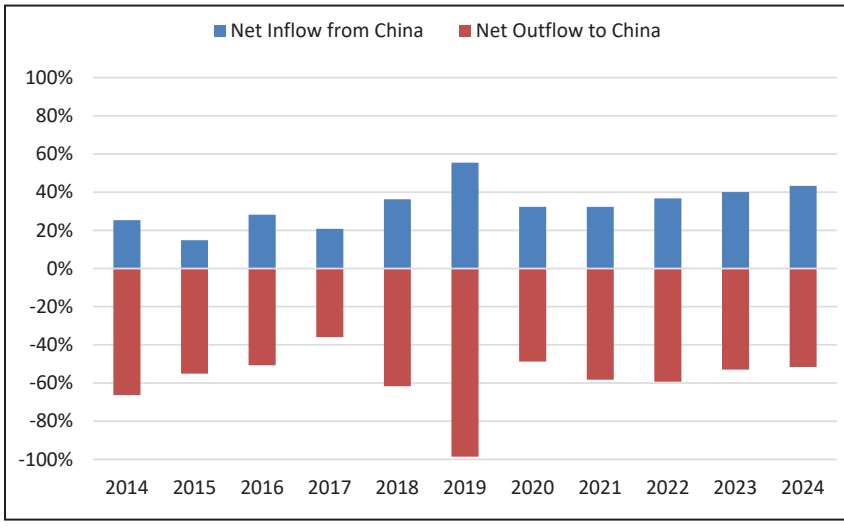
Note: The 2022 and 2023 versions of the survey divided "worsened" into "somewhat worsened" and "worsened a lot" and "improved" into "somewhat improved" and "improved a lot." This chart aggregates those responses.

Source: "2026 Business Sentiment Survey," *American Chamber of Commerce in Hong Kong*, February 2026; 2024 Business Sentiment Survey: Findings Report, American Chamber of Commerce in Hong Kong, January 30, 2024; "2023 Members Sentiment Survey," *American Chamber of Commerce in Hong Kong*, March 2023; "2022 AmCham Hong Kong Business Sentiment Survey," *American Chamber of Commerce in Hong Kong*, January 2022.

Even Hong Kong's financial sector is at risk as Mainland-related business comprises a growing share of local activity. Hong Kong collects a stamp tax on transfers of assets, so its government budget has benefited from the uptick in IPOs and improved stock market performance.[198] However, as discussed above, these IPOs are more concentrated in mainland companies, so they are subject to being cut off abruptly due to policy reversals or new regulatory scrutiny from Beijing.* A growing share of Hong Kong's net inward direct investment flows also depends on the Mainland—a little over 40 percent in 2024 (see Figure 6). Hong Kong's financial system and related professional services draw substantial business from supporting Chinese outbound foreign direct investment.[199] Hong Kong faces two risks from this status. Beijing could decide to clamp down on capital outflows. And, as countries become more cautious in allowing Chinese investment, Hong Kong's role in facilitating these financial flows is likely to come under equal scrutiny.

*Hong Kong's Securities and Futures Commission began heightening scrutiny of banks' level of rigor when carrying out due diligence for IPOs in January 2026. The China Securities Regulatory Commission also flagged certain mainland firms pursuing listings on the Hong Kong Stock Exchange for additional review in the summer of 2026. Zoe SL Chan, "Tighter Scrutiny of Hong Kong IPOs Could Slow Deal Flow, Analysts Say," *South China Morning Post*, September 15, 2026.

Figure 6: Mainland China as a Percentage of Total Direct Investment Flows to and from Hong Kong, 2014–2024

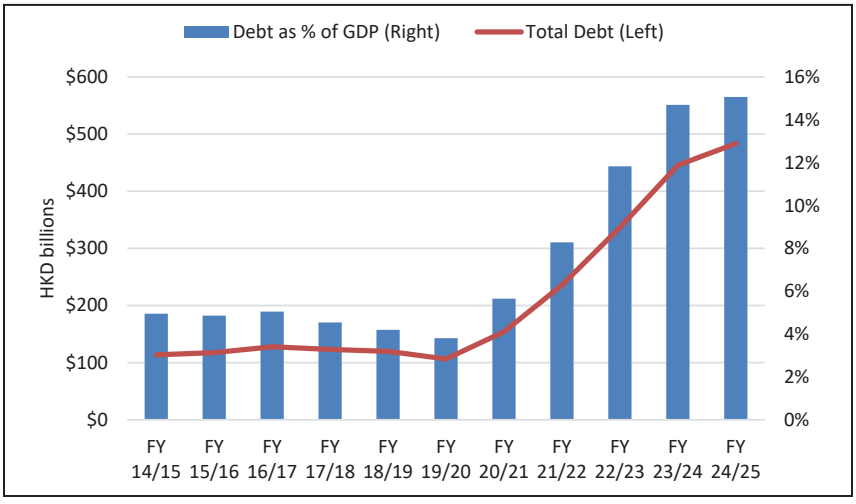


Source: Hong Kong's Census and Statistics Department, via Haver Analytics.

Other weaknesses remain in Hong Kong's economy, including sustained government budget problems and an overhang in real estate markets. Hong Kong's debt has quadrupled since 2020, rising from under 4 percent of GDP in fiscal year (FY) 2019/2020 to over 15 percent in FY 2024/2025 (see Figure 7).* The government maintained a healthy budget surplus since 2004 but has experienced a deficit in five of the last seven years.[200] Hong Kong issued HKD 130 billion ($17 billion) and HKD 156 billion ($20 billion) in new bonds in FY 2024/2025 and FY 2025/2026, respectively, to help cover the gap in funds.[201] Hong Kong raised its bond issuance ceiling from HKD 500 billion ($64 billion) in FY 2024/2025 to HKD 900 billion ($115 billion) in FY 2025/2026 to accommodate future borrowing to fund infrastructure needs.[202] The International Monetary Fund expects the government's consolidated fiscal position to maintain a deficit through 2031 as revenue slows and capital expenditures remain elevated.[203]

*Hong Kong's fiscal year ends on March 31. FY 2019/2020 refers to the year beginning April 1, 2019, and ending March 31, 2020.

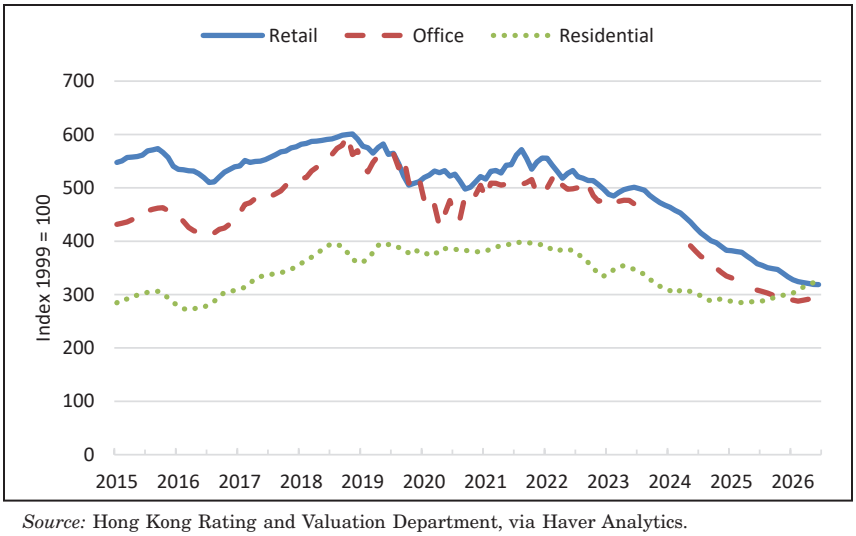
Figure 7: Hong Kong Government Debt Figures Rising, 2015–2025



Source: Hong Kong's Census and Statistics Department, via Haver Analytics.

Hong Kong's fiscal woes were partially due to decreased land sales as the Mainland's property sector malaise spread to the city. Between 2015 and 2021, land sales comprised 20 percent of total government revenue on average.[204] Since 2022, they fell from HKD 143 billion ($18 billion) in FY 2021/2022 to HKD 18.6 billion ($2.4 billion) in FY 2025/2026, less than 3 percent of the total.[205] While residential prices have recovered over the last year, they still remain well below levels in 2019; retail prices continue to decline, while commercial office space prices remain constrained due to a glut of supply (see Figure 8).[206]

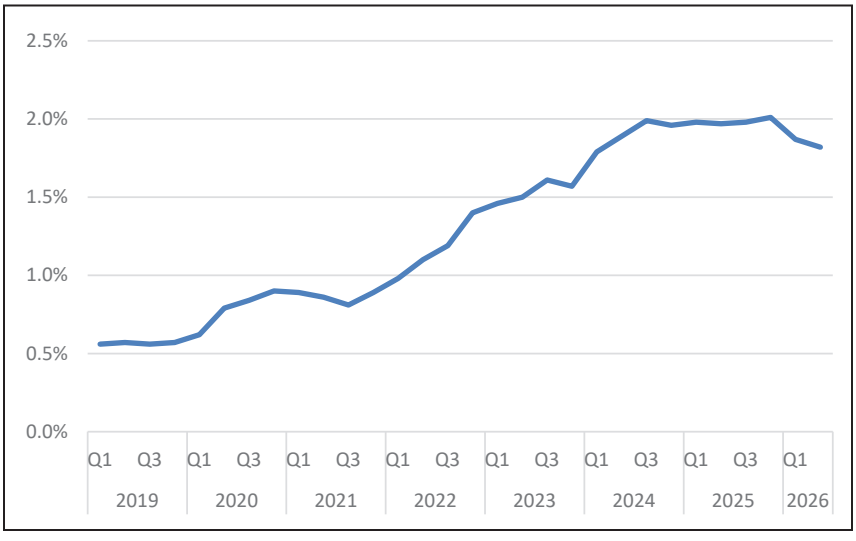
Figure 8: Hong Kong Real Estate Prices, 2015–June 2026



Source: Hong Kong Rating and Valuation Department, via Haver Analytics.

Near-term moves to clean up bad loans to property developers will weigh on growth. The prolonged property downturn has left the banking sector with a backlog of weak credit. The sector has seen the ratio of impaired loans to total assets rising from 0.57 percent at the end of 2019 to 2.01 percent at the end of 2025, before declining to 1.82 percent as of the second quarter of 2026 (see Figure 9).[207] In an effort to clean up their balance sheets, banks are transferring more loans to internal credit groups specializing in resolving bad debt or selling off the portfolios to external buyers.[208]

Figure 9: Impaired Loans as a Percentage of Bank Assets in Hong Kong, Q1 2019–Q2 2026



Note: Impaired loans here are equivalent to Gross Classified Loans, or loans rated substandard, doubtful, or loss under the HKMA's classification system. It excludes special mention loans.
Source: Hong Kong Monetary Authority, via Haver Analytics.

Implications for the United States

Hong Kong held a special status for decades as a largely autonomous jurisdiction with respect for freedom of expression, rule of law, and a market-based economic system. Beijing has reneged on its promise to preserve a significant degree of autonomy for Hong Kong, belying any claim that it will preserve a region's autonomy or respect a diversity of "systems."* Hong Kong's current role as a global financial hub reflects a narrow and instrumental future: **Beijing and Hong Kong's leadership are harnessing the city's financial sector to advance mainland priorities, leveraging its skilled workforce, ties to global financial institutions, and fundraising capabilities to serve China's broader economic and strategic objectives.**

*It is worth noting that Beijing also maintains several theoretically "autonomous" regions host to ethnic minorities—including the Tibet Autonomous Region and the Xinjiang Uyghur Autonomous Region. China similarly does not allow autonomy in these regions but subjugates them to full CCP control.

U.S. firms operating in Hong Kong are now part of a system that advances Beijing's objectives, whether by helping mainland technology firms secure capital, playing a role distributing China's excess goods production to markets around the world, facilitating Hong Kong's status as Beijing's main conduit to global financial markets, or widening the reach of the RMB for global trade and investment. **As Hong Kong becomes more tightly integrated into China's economic strategy while remaining deeply connected to global financial markets, it is becoming a more consequential channel through which Beijing can project economic influence abroad.** Companies still accustomed to treating Hong Kong as an independent global financial center could also unknowingly facilitate the shipment of dual-use items to China, Russia, or Iran.

At the same time, foreign firms and citizens in Hong Kong face heightened risks from both the city's government and Beijing. Though Hong Kong courts and law enforcement have tried to maintain the veneer that Beijing's political takeover has not infected the legal and regulatory systems that govern business, foreigners can no longer rely on the rule of law to protect them. China's concept of national security is all-encompassing, especially when it comes to "external forces," (see U.S.-China Economic and Security Review Commission, "China's New Measures for Control, Mobilization, and Resilience," in *2023 Annual Report*, November 2023, 461, 492–493, 499–501) and foreign operations in the city rely merely on the assumption that it is in Hong Kong's interest not to undermine business confidence. Beijing's evolving economic coercion toolkit also places firms operating under its jurisdiction at greater risk, particularly from its counter-sanctions strategy that may penalize firms for compliance with U.S. economic restrictions.*

It remains an open question whether erosion of the rule of law and commitment to a market-based economy will undermine Hong Kong's financial and corporate sectors, or whether—and for how long—deepened integration with the Mainland will sustain them. The broader implication for the global economy, however, is that greater mainland financial integration with the global economy will heighten exposure to the fiscal risks and financial volatility associated with China's development model. Hong Kong's own deteriorating public finances and its banks' mounting property-linked bad debt already hint at the risks such integration transmits.

Recommendations

- Hong Kong's legal environment is deteriorating—not in a single dramatic event but through continuous, layered legislation that changes business risk year after year. Virtually any legal dispute involving a U.S. firm or its staff could be channeled into a national security case, and only a recurring statutory assessment keeps U.S. businesses informed.

  Congress should require the Secretaries of State, the Treasury, and Commerce to jointly issue an annual Hong Kong Business

*For more on China's evolving counter-sanctions regime, see Chapter 1, "U.S.-China Economic and Trade Relations (Year in Review)."

Advisory informing U.S. firms of the legal, regulatory, financial, and reputational risks of operating in the Hong Kong Special Administrative Region. Each advisory would include the following:

- An assessment of developments over the preceding year, including new legislation, subsidiary regulations, enforcement actions, erosion of the rule of law, sanctions and/or export control evasion activities, and exit restriction risks.
- Updated guidance on risk exposure for personnel, data, intellectual property, and operations.

- The U.S. Department of the Treasury has identified Hong Kong-based entities as key enablers of crypto-facilitated Iranian oil revenue laundering.

  Congress should enact legislation to apply Primary Money Laundering Concern special measures, including correspondent account prohibitions, on Hong Kong Virtual Asset Service Providers that fail to prevent Iranian, Russian, or North Korean cryptocurrency trades.

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COMPREHENSIVE LIST OF THE COMMISSION'S 2026 RECOMMENDATIONS

Part II: China's Efforts to Expand Its Global Power and Influence

Chapter 3: China's Other Front: India and the Future of U.S. Strategy in the Indo-Pacific

1. The Federal Government has spent years building a wall against risky suppliers in strategic sectors. It now needs a purchasing strategy that makes trusted pharmaceutical production commercially viable. The central obstacle is commercial: manufacturers cannot justify investing in alternative sources of active pharmaceutical ingredients (APIs) and key starting materials (KSMs) without confidence that buyers will continue purchasing from them even when cheaper Chinese supply is available.

   To break China's leverage over the supply of essential medicines, Congress should establish a Comprehensive Critical Drug Diversification (C2D2) program built around U.S.-India cooperation. The program should:

   - Establish a pharmaceutical supply chain early warning mechanism for a list of essential medicines to identify APIs, KSMs, and critical intermediates and their production sites; identify single-country and single-facility dependencies; flag emerging disruptions; and direct purchasing and investment toward gaps.
   - Authorize the U.S. Department of Health and Human Services to establish a Federal Trusted Demand Program, including multiyear commitments for essential medicines made with qualifying U.S. or trusted partner APIs and KSMs. The U.S. government should buy finished medicines it needs while making verified sourcing of critical inputs a condition for participation. The U.S. government should also ensure consistent purchase pricing across agencies. The program should:
     - Coordinate how participating agencies verify suppliers and the origins of their critical inputs, including subpoena authority to demand documentation;
     - Have the ability to make multi-year purchase commitments for essential medicines; and
     - Direct the U.S. government to work with providers to address cost disparities of buying medicines under long-term contracts.

- Include an initiative to support public and private investment in API and KSM production in India. For APIs, producers should be mandated to prove minimal and declining reliance on Chinese KSMs to receive the funding. The initiative should, to the maximum extent practicable, require matching funds from India and coordination with Indian producers to withstand predatory Chinese pricing.

2. As the 14th Dalai Lama advances in age, China is preparing to turn his succession into an international contest over legitimacy and will likely use coercive tools to shape its outcome. India, which hosts the Dalai Lama and the Tibetan government-in-exile and shares a longstanding disputed border with China, is the center of gravity in this dispute.

   Congress should make it the policy of the United States that the Gaden Phodrang Trust is the sole legitimate authority to identify and recognize the successor to the 14th Dalai Lama and that the United States will not recognize any successor selected or installed by the Government of the People's Republic of China. To carry out this policy and ensure U.S. government readiness for the Dalai Lama's succession, Congress should direct the Secretary of State to:

   - Lead an internal interagency tabletop exercise on succession scenarios, with participation by the National Security Advisor, the Director of National Intelligence, and the Secretary of Defense, and brief the appropriate congressional committees on its findings within 180 days.
   - Establish a senior-level channel with the Government of India for succession contingency planning, including intelligence sharing on Chinese influence operations, and report to the appropriate congressional committees on its status within 180 days.
   - Conduct Track 1.5 and Track 2 dialogues and tabletop exercises with Indian counterparts on the political and security implications of succession scenarios.
   - Coordinate with allies and partners on a diplomatic response that denies international legitimacy to any successor selected by the People's Republic of China.
   - Counter succession-related influence operations by strengthening the Central Tibetan Administration's cybersecurity and resilience against China's cyber and artificial intelligence (AI)-enabled disinformation campaigns.

   Congress should provide authorizations and appropriations to carry out these activities.

3. China's efforts to constrain India's regional influence and expand its military presence in the Indian Ocean underscore the importance of a stronger U.S.-India strategic partnership. The United States should deepen operational defense cooperation and foster lasting relationships among the next generation of American and Indian leaders.

Congress should:

- Direct the Secretary of Defense and Chairman of the Joint Chiefs of Staff to engage with their Government of India counterparts to strengthen coordination on undersea and maritime domain awareness in the Indian Ocean.
  - These efforts should prioritize moving beyond military exercises toward sustained operational cooperation, including systematic intelligence and surveillance information sharing, coordinated monitoring of Chinese naval and submarine activity, and improved procedures for responding to maritime threats.
- Create an Indo-American Strategic Leadership Exchange Program to forge generational ties among rising leaders in defense, government, business, and academia.

Chapter 4: China's Predatory Diplomacy in Latin America: Broken Promises, Harmful Practices

4. To enhance the capacity of Latin American countries to screen investments for economic and national security risks, Congress should:
   - Direct the Secretary of the Treasury, in coordination with other members of the Committee on Foreign Investment in the United States (CFIUS), to establish a Foreign Investment Rapid Screening Team (FIRST) that trains and embeds in partner governments in Latin America. FIRST assistance should include:
     - Sending delegations to Latin America to develop screening mechanisms for investment and infrastructure projects as well as to train and work alongside procurement officers, auditors, and investment authorities on anticorruption, contract law, and corporate control structures;
     - Extending technical assistance to subnational governments, which often negotiate major investment and infrastructure projects but have limited capacity to assess national security implications;
     - Coordinating with the U.S. International Development Finance Corporation, Export-Import Bank of the United States, Millennium Challenge Corporation, and U.S. Trade and Development Agency to employ investment and technical assistance resources to incentivize partner countries in Latin America to develop investment screening mechanisms and mobilize U.S. and trusted capital as alternatives to untrusted investors;
     - Coordinating with the Secretary of State and organizations such as the National Endowment for Democracy to utilize their core institutes to strengthen the capacity of government and non-governmental organizations to support investment screening and related good governance initiatives.
   - Appropriate funds for the U.S. Department of Commerce's Commercial Law Development Program (CLDP) to develop

model legislation and regulations for strategic investment and infrastructure reviews.

5. The Chinese government has steadily expanded its influence in the multilateral development banks (MDBs), raising its shareholding and voting power, increasing its contributions, and positioning itself to shape lending priorities and institutional governance. The United States has not used its position as a top shareholder, including its unique veto power over certain governance decisions at the World Bank, to effectively advance U.S. interests and hold these institutions accountable. In particular, the United States has a strong interest in ensuring that MDB funds do not disproportionately benefit Chinese firms, yet there is no comprehensive, regularly updated strategy or public accounting of procurement awards to Chinese and U.S. firms across all the MDBs.

   To focus engagement with international organizations—including international financial institutions (IFIs) and other multilateral institutions—on U.S. strategic interests and ensure adequate U.S. voice and representation at IFIs, Congress should:

   - Direct the Secretary of the Treasury, as Chair of the National Advisory Council on International Monetary and Financial Policies, to:
     - Submit to Congress a strategy within 180 days to leverage the U.S. voice and vote at the MDBs—the World Bank Group, the Inter-American Development Bank (IDB) and IDB Invest, the Asian Development Bank, the African Development Bank, and the European Bank for Reconstruction and Development—to counter China's action at IFIs and other multilateral institutions and to advance U.S. and democratic economic priorities, including responding to foreign adversaries' exploitation of IFIs. The strategy shall address, at a minimum:
       - The development of programs to expand participation by U.S. and allied suppliers, and U.S. technology alternatives to Chinese options, in MDB-financed projects and procurements, coordinated with existing commercial advocacy mechanisms, including the U.S. and Foreign Commercial Service and the Advocacy Center;
       - Supplier eligibility criteria grounded in security and technology provenance, together with an assessment of whether such criteria are required under each institution's existing procurement policy or would require action by its Board;
       - A plan to counter exploitation of these institutions by China and other foreign adversaries, addressed by category, including continued borrowing by countries eligible for graduation, concentration of procurement awards, bilateral co-financing vehicles, secondment and staffing, and incorporation of China's technical standards into project specifications; and

        - Measures to ensure transparency around beneficial ownership information for suppliers awarded financed contracts.
    - Meet at least once a quarter with the Secretaries of State and Commerce to discuss U.S. priorities for IFI engagement.
- Amend the annual report required by Section 1701 of the International Financial Institutions Act on International Monetary and Financial Policies (22 U.S.C. §262r) to require for each MDB disclosure of: (a) the value and number of contracts awarded to suppliers registered in the People's Republic of China (PRC) and to suppliers identified as controlled subsidiaries of PRC-domiciled parents, with Hong Kong and Macau reported separately; (b) contracts awarded under section (a) reported as a share of internationally completed procurement and disaggregated by sector and borrower country; and (c) a description of actions taken to heighten scrutiny of state-owned enterprise participation in MDB-financed procurement.
- Restrict travel funding for relevant offices to non-essential expenditures, for example, limiting premium-class travel, reception and event expenses, large delegations, conferences, and new discretionary initiatives, until the Administration nominates senior director positions.

6. Congress should authorize and appropriate dedicated funding, through the Secretary of State, Secretary of Homeland Security, or Secretary of Commerce, to expand the "Rip and Replace" initiative beyond domestic networks to key strategic partner nations and key regions of strategic competition, beginning with Latin America and the Indo-Pacific. The initiative should utilize novel methods and technology from across frontier labs to identify, expose, and harden against weaknesses in Chinese-origin technology and software. It should work with nations to modernize equipment either by replacing certain critical assets within network infrastructure or software to ensure trusted standards are established. Specifically, the initiative should include the following provisions:
    - Replace covered equipment. Building on the $8 million Panama pilot, fund the replacement of non-trusted telecommunications equipment in host nation infrastructure. Assistance should be conditioned on:
        - Host nation operational control of replacement systems and host government concurrence in public announcements;
        - A commitment not to reintroduce non-trusted equipment into assisted networks; and
        - Sustainment included in each project.
    - Assess, harden, and monitor software at scale. Direct the Secretaries of State and Homeland Security, drawing on the Defense Advanced Research Projects Agency (DARPA) and Na-

tional Security Agency (NSA), to apply artificial intelligence (AI)-enabled vulnerability discovery and patching to:

- Triage host nation exposure through analysis of Chinese-origin firmware and software, producing a prioritized queue;
- Identify and remediate vulnerabilities in the software on which replacement networks run, including AI-assisted rewriting of legacy code into memory-safe languages where source code is available; and
- Provide interim detection and monitoring of covered equipment awaiting replacement. Analysis of equipment originating in China should inform prioritization and monitoring.

Congress should authorize and appropriate the multiyear initiative to execute country-level projects and require annual reporting to the committees of jurisdiction on sites remediated, conditions enforced, partner cost-share, and any reintroduction of covered equipment.

7. Congress should make it U.S. policy that China's systematic use of Port State Control inspections and detentions of Panamanian-flagged vessels is economic coercion and authorize the President to take all necessary and appropriate economic actions to counter China and support the Government of Panama in this dispute, including leveraging existing sanctions authorities and initiating referrals to the International Maritime Organization to establish a record of China's weaponization of port access as a tool of geopolitical punishment.

   Congress should further direct the Federal Maritime Commission, which has already flagged the surge in detentions, to investigate the pattern and report findings within 90 days.

8. Congress should provide authorization and the necessary resources to the Secretaries of State, the Treasury, Defense, and Commerce to provide technical assistance to parliaments in Latin America to help draft and pass legislation to increase transparency and cybersecurity related to critical infrastructure through reforms to oversight, information security, and public contracting.

   To expose the cybersecurity risks, lack of investment, and other hazards in infrastructure facilities with Chinese technology and ownership, Congress should:

   - Direct the Director of National Intelligence to produce an annual unclassified assessment of, and brief other nations on, Chinese infrastructure presence across ports, energy, telecommunications, space, and other critical infrastructure sectors in the Western Hemisphere, including:
     - The security and economic risks associated with Chinese ports and equipment in the United States and countries in Latin America, including cybersecurity vulnerabilities, all potential vectors of military use and access, potential for economic lock-in effects and upcharges, and lack of capital investment.

- Direct the Secretary of State, in coordination with the Secretary of Defense, Secretary of Homeland Security, and U.S. Department of Transportation's Maritime Administration, to provide technical assistance to conduct inspections and establish a regional baseline for identifying and remediating vulnerabilities linked to China at strategic maritime chokepoints.
    - Where possible, the Secretary should seek cooperation with host countries for security audits of Chinese equipment and presence, identify highest-risk facilities, and recommend actions to ameliorate risk.

9. Across Latin America and the Caribbean, Chinese-linked criminal networks—money launderers servicing the region's cartels, illicit resource-extraction operations, and other currency channels that move value outside the correspondent banking system—have converged with an expanding PRC law enforcement presence that complicates, rather than supports, partner-nation cooperation with the United States.

   Congress should direct the President to establish and appoint an executive agent to identify, expose, and disrupt Chinese-linked illicit narcotics suppliers, money laundering organizations, cryptocurrency networks, resource extraction networks, and other criminal facilitators in Latin America and the Caribbean. The executive agent should address risks associated with Chinese police and law enforcement cooperation in the region and should focus on the following activities:

   - Disrupting Chinese money laundering networks.
   - Strengthening partner capacity.
   - Addressing risks from Chinese police training and security cooperation in the region.
   - Improving information sharing.

Chapter 5: Active Intercept: China's Efforts to Narrow U.S. Undersea Advantage

10. The Submarine Cable Act of 1888 only allows the United States to prosecute damage to subsea cables that occurs within U.S. territorial waters (i.e., within 12 nautical miles of its coastline) or damage caused by U.S.-flagged vessels wherever they operate. Current law limits the United States' ability to address other intentional damage to subsea cables landing in the United States or owned by U.S. entities. The United States must also address its limited repair ship capacity, which has led regulators to allow foreign adversaries to maintain U.S. cables that connect to the United States from a third country. This means provisions that would expand a trusted repair fleet and would ensure reinsurance for cable repair surge capacity during a crisis.

    To address adversarial attacks on critical U.S. telecommunications infrastructure in international waters, Congress should:

    - Amend the Submarine Cable Act to expand jurisdiction to prosecute acts of intentional sabotage against any critical un-

dersea infrastructure landing in the United States or having any ownership stakes from U.S. entities.

- Strengthen undersea cable repair capacity by:
  - Barring the use of foreign adversaries' repair ships on U.S. cables and directing regulators to take associated action;
  - In a manner consistent with current law, establishing a Pacific Allied Cable Repair Fleet, under which the Secretary of Transportation may enter operating agreements with qualified cable vessels flagged in the United States, and, where necessary, Japan, South Korea, and Taiwan; and
  - Directing the Secretary of Transportation to provide insurance or reinsurance against war risks for foreign vessels engaged in cable installation and repair, in coordination with allied countries when possible.

11. To combat the People's Republic of China's "Transparent Ocean" and undersea modernization efforts, Congress should:
    - Direct the Secretary of Defense, in consultation with the Director of National Intelligence and other relevant departments and agencies, to submit to the congressional defense committees a report, in both unclassified and classified versions, on China's "Transparent Ocean" efforts and associated programs. The reports should assess China's progress toward developing a persistent undersea surveillance architecture enabled by data fusion that integrates sensors and autonomous systems across domains from the seabed to space.

    To ensure the United States maintains its advantage over China in cutting-edge autonomous and semi-autonomous undersea systems, Congress should:
    - Direct the Secretary of Defense to submit to the congressional defense committees a classified report and briefing on its acquisition and program strategy for autonomous/semi-autonomous undersea systems. The report should address U.S. Department of Defense (DOD) capacity to surge production of these systems and detail how these platforms support U.S. Indo-Pacific Command's strategy in a Taiwan contingency.
    - Appropriate funds for DOD to conduct a competitive, multi-supplier uncrewed underwater vehicle (UUV) hull-manufacturing qualification pilot that expands the industrial base beyond established defense contractors.
    - Appropriate funds to expand DOD and other U.S. government agencies' procurement of UUVs. These agencies could include those falling under the U.S. Department of Commerce, U.S. Department of Homeland Security, U.S. Department of the Interior, and U.S. Environmental Protection Agency.
12. To maintain U.S. advantage in undersea surveying and seabed mapping, Congress should authorize and appropriate additional funds to the U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) to expand seabed surveys and mapping operations in the Pacific, with a focus on

working with the governments of the Pacific Island countries to conduct surveys in their exclusive economic zones (EEZs).

- An agreement with a country under this initiative should condition cooperation on prohibiting Chinese research vessel exploratory activity, seabed mapping, and seabed mining in its waters to the maximum extent permitted.

Chapter 6: The Price of Everything: China's Bid to Reshape Global Commodities Markets

13. For over two decades, China has quietly pursued the development of domestic commodities exchanges, and expanded its production and processing of core commodities, becoming a key market maker in many segments and sectors. China is actively working to exert greater influence over global commodities markets with the aim of advantaging its domestic manufacturers and insulating itself against U.S. sanctions. To this end, China is pursuing numerous policies to expand its leverage, growing its domestic commodity exchanges, and opening more "in China for China" commodities trading to foreign participants. In recent years, China established the China Mineral Resources Group and other state instruments to consolidate purchasing of key commodities and has begun leveraging its position as a major buyer in physical markets to compel producers to use its preferred benchmarks and, in some cases, transact in RMB. China is building parallel systems that, absent action, may, over time, reshape the global landscape.

    Congress should direct the U.S. Commodity Futures Trading Commission (CFTC) to monitor Chinese engagement and influence in commodities exchanges and warehousing and provide an annual report to Congress on activity, strategic risks, and efforts to coerce market participants as well as signs of market manipulation. To support this activity, Congress should:

    - Expand CFTC foreign market surveillance and provide the CFTC the direction and, as needed, authority to monitor trading activity on Chinese exchanges, including but not limited to the Dalian Commodity Exchange (DCE) and the Shanghai International Energy Exchange (INE), with particular attention to participant concentration, state-owned enterprise positioning, and coordination among state-owned buyers. Current CFTC jurisdictional limits leave this activity unmonitored, and the China Securities Regulatory Commission does not make these data public.
    - Direct the CFTC to monitor the development of China's futures markets, in particular for semiconductor, battery, renewable energy, and critical industrial materials. Data on commodity pricing are difficult to obtain, particularly in markets where benchmark usage and settlement terms are embedded in opaque, privately negotiated contracts and are not systematically reported. Thinly traded contracts are susceptible to a risk of biased market data, putting U.S. producers at a disadvantage.

- Require disclosure of U.S. financial institution exposure to Chinese exchanges and other non-CFTC-registered foreign exchanges, as appropriate. Dodd-Frank reporting captures most U.S. derivatives activity on domestic and CFTC-registered foreign exchanges; however, many Chinese exchanges, including the INE, fall outside this framework, and these exchanges have not sought CFTC registration as Foreign Boards of Trade, meaning U.S. firms can trade on them without that activity being systematically captured in CFTC reporting.

14. Congress should strengthen the U.S. Department of Agriculture's (USDA) agricultural market intelligence and early warning capacity by directing the Secretary of Agriculture to enhance USDA's capacity to monitor Chinese agricultural commodity markets, supply chain flows, and state reserve management—such as dedicated monitoring of the Dalian Commodity Exchange's price signals and South American logistical flows controlled by Chinese-affiliated entities—and by providing sufficient appropriations to do so.

Part III: China's Technology Ambitions

Chapter 7: Collect, Steal, Buy, Fuse, Monetize: How China Is Turning Data into Assets and Ammunition

15. Data are a strategic asset that can drive scientific discovery, economic growth, and national security, but their value depends on the ability to organize, protect, and use them effectively. The United States needs a coordinated framework that makes data more accessible for legitimate uses, gives Americans control over their personal data, and prevents exploitation by China and other adversaries. An American Data Initiative would advance these goals while providing Americans meaningful control over their personal data.

    Congress should establish an American Data Initiative to put American data to work as a source of national power, while preserving decentralized ownership, giving Americans control over their own data, and keeping their data out of the hands of China and other adversaries. Congress should:

    Organize Federal Data

    - Make the Administrator of General Services the Federal Chief Data Officer, with binding standards authority over all agencies and every agency Chief Data Officer appointed by and reporting to the Administrator, after consultation with the agency head.
    - Direct the Administrator to govern all federal data by sensitivity and value, including in aggregate, and to make Data.gov the catalog of all federal data, open by default, with registered access for non-public data.
    - Direct the Administrator to establish sectoral data foundries that produce AI-ready datasets, beginning with biology and embodied AI.

- Require the Administrator's approval of agency data budgets and bar funding for noncompliant data systems.
- Apply the confidentiality protections of Title 13 to personal data shared through the Initiative and record every access to non-public federal data in a tamper-proof log.
- Give the Government Accountability Office continuous access to those logs and authority to review any access to personal data and require an annual report to Congress with agency scorecards and privacy and civil liberties compliance audited by the Government Accountability Office.

Put Data on the Balance Sheet

- Make it U.S. policy that data held by federal agencies and U.S. businesses are an asset recognized on the balance sheet.
- Direct the U.S. Securities and Exchange Commission to require the Financial Accounting Standards Board to set standards for recognizing data as an asset within two years.
- Direct the Federal Accounting Standards Advisory Board to set comparable standards for federal agencies.
- Direct the Public Company Accounting Oversight Board to set matching audit standards.
- Direct the federal banking regulators to exclude data assets from regulatory capital.
- Condition the Governmental Accounting Standards Board's federal funding on comparable standards for state and local governments.

Let Americans Decide Who Gets Their Data

- Codify the core prohibitions of the U.S. Department of Justice's Data Security Program, including its bars on giving China and other countries of concern and covered persons access to Americans' bulk sensitive personal data and government-related data and its limits on onward transfer, and leave compliance requirements to regulation.
- Direct the President to designate an appropriate Cabinet or agency official to establish a national opt-in program under which data brokers may not sell, license, or share Americans' personal data unless the consumer has opted in through a single federal portal that brokers must check before any transfer.
- Extend the Protecting Americans' Data from Foreign Adversaries Act to require data brokers, under a common statutory definition that applies throughout the Initiative and includes resellers and other intermediaries, to register with the designated official, hold them liable for transfers made without consent, bar transfers to persons under the jurisdiction of China or another foreign adversary regardless of consent, and make these obligations follow the data through every resale.
- Require data brokers, within two years, to obtain consent for personal data they already hold or delete it.

Bring Data Sales Out of the Shadows

- Define the rights in data that companies, governments, and consenting individuals can buy, sell, and license.
- Direct the designated official to register and supervise data exchanges, require data brokers, within two years, to sell personal data only through registered exchanges, and require exchanges to verify data provenance and consumer consent, screen buyers for ties to China and other foreign adversaries, including beneficial ownership and intended use, keep auditable records of every transfer, bar unauthorized resale and improper data combination, bar onward transfers to third countries without equivalent controls, meet security standards, and bar participants under foreign-adversary jurisdiction.
- Direct the Secretary of Commerce to open U.S. data exchanges to participants from allied and partner countries whose governments adopt equivalent consent, provenance, and foreign-adversary screening rules and extend reciprocal access to U.S. participants.

16. In 2024, the Commission recommended that Congress codify the authority established under the "Securing the Information and Communications Technology and Services Supply Chain" Executive Order (ICTS). The Connected Vehicle Rule demonstrates that the ICTS framework can work but it lacks a statutory basis and congressional direction to regularly identify, assess and mitigate risks across high-risk technology sectors.

    Congress should codify the U.S. Department of Commerce's Office of Information and Communications Technology and Services (OICTS) and its ICTS authorities, provide dedicated funding and personnel, and require the office, in coordination with relevant federal agencies, to:

    - Regularly assess categories of foreign-adversary information and communications technologies and services that could expose sensitive U.S. data, enable remote access or control, or compromise U.S. critical infrastructure.
    - Report findings and proposed mitigation measures to Congress and initiate rulemaking for sectors posing national security risks, or explain why regulatory action is unwarranted.

17. To prevent China from stealing American data and harming American companies, Congress should establish a systematic effort against the ecosystem that supplies and monetizes China's cyber intrusions using "hackers for hire" and commercial cyber actors, by taking the following actions:

    - Direct the National Cyber Director, in coordination with the Director of the Cybersecurity and Infrastructure Agency, the Director of the Federal Bureau of Investigation, the Director of National Intelligence, and the Secretaries of State, Treasury, Commerce, and Defense, to publish annually a list of foreign persons that:

- Knowingly supply data, intrusion software, and botnet services to China's state-sponsored cyber actors or "hackers for hire";
- Acquire or commercialize data or intellectual property stolen through those operations; or
- Act as subsidiaries, affiliates, partners, joint ventures, licensees, or significant subcontractors of covered entities.

- Require within the 180-day period after the publication of each annual list:
  - The Secretaries of Treasury and State to determine whether blocking, financial, or visa sanctions are warranted;
  - The Secretary of Defense to determine whether government-wide or defense-specific procurement exclusion is warranted; and
  - The Chair of the Federal Communications Commission, where communications equipment or services are involved, to determine whether Covered List inclusion is warranted based on a determination by an authorized federal entity.
- Establish a program that would allow designated U.S. private sector entities to conduct cyber operations against approved foreign entities.
- Require reporting to the relevant committees of Congress, on: whether sanctions were imposed or list placements made; any identified statutory or resource gaps; enforcement coordination with allies; beneficial ownership and affiliate information; and procurement exposure across federal agencies.

Chapter 8: Silicon to Sovereignty: China's Bid to Control the AI Stack from Wafer to Weights, Part One

18. The growing proliferation and adoption of Chinese open-weight artificial intelligence (AI) models in the United States carries national security implications for sensitive data, cybersecurity, and dependence on Chinese technology. Uncertainty about how these models behave in sensitive applications, what vulnerabilities they may introduce, and whether safeguards can adequately mitigate those risks warrants greater federal scrutiny. Congress should require enforceable protections for sensitive applications before these models become embedded in critical systems and costly to replace.

    Congress should require the Secretary of Commerce, through the Office of Information and Communications Technology and Services (OICTS), in coordination with the Center for Advancing Innovation and Standards for Super Intelligence (CAISSI) and relevant federal agencies, to:

    - Restrict deployment in sensitive applications unless safeguards are demonstrated. Within 180 days, identify sensitive uses—including systems controlling critical infrastructure, performing national security functions, or processing bulk sensitive personal data—and prohibit new deployment of cov-

ered models in those uses absent a time-limited authorization based on independently evaluated safeguards. Authorizations should address the model, its deployment environment, and its access to data, networks, and tools.

- Require identification and mitigation of existing exposure. Direct federal agencies and covered operators in designated sensitive sectors to inventory existing deployments and implement enforceable mitigation or replacement plans within deadlines established by the Secretary.
- Establish continuing security obligations. Require independent security testing, reporting of significant security incidents, reassessment following material modifications, and verification of compliance. Direct the Secretary to restrict or prohibit the commercial provision or deployment of designated models where identified risks cannot be adequately mitigated.
- Reduce strategic dependence. Require providers serving designated sensitive applications to maintain documented capabilities to replace covered models and migrate affected systems and data to alternatives meeting federal security requirements.

Within 180 days, the Secretary should also complete a consolidated assessment, building on existing federal evaluations, the National Telecommunications and Information Administration's (NTIA) open-model assessment, and federal supply-chain restrictions. The assessment should distinguish risks inherent in model weights from those arising from hosting, software, updates, and system integration; identify gaps in testing and verification; and inform subsequent requirements without delaying initial implementation.

Congress should authorize and appropriate funding, information-gathering and enforcement authorities, and penalties for noncompliance. The legislation should provide narrowly tailored exceptions for security research and authorized national security activities and require annual reporting to Congress on deployment exposure, compliance, mitigation effectiveness, and remaining dependencies.

19. Americans should know when the government services they receive and the commercial products they use rely on AI models developed by Chinese companies. Clear disclosure would help consumers, businesses, and investors assess potential risks to data security, privacy, service reliability, and national security.

Congress should make it U.S. policy that Americans know when governments and businesses rely on AI models developed by Chinese companies. Congress should:

- Require federal agencies, and any state or local government or other entity that receives federal funds or federal tax credits, to disclose any use of AI models developed by an entity headquartered in, or organized under the laws of China, or owned or controlled by such an entity, including models fine-tuned

on or derived from them, wherever they are hosted. Disclosure should appear in clear language on their public-facing platforms and in their filings with the federal government.

- Require businesses that use such models in any part of a product or service offered in the United States to consumers or other businesses to disclose that use clearly on their websites and in product documentation and treat failure to disclose as an unfair or deceptive act or practice enforceable by the Federal Trade Commission.
- Require reporting companies, as part of quarterly and annual disclosure filings with the U.S. Securities and Exchange Commission, to disclose as a material business risk the extent of their use of such models.

20. Sustaining U.S. leadership in AI requires reliable access to advanced chips and the manufacturing capacity needed to produce them. Exports to China should not come at the expense of capacity needed to support U.S. AI development and deployment. Requiring auditable exporter certifications would help ensure that export decisions account for these constraints and protect U.S. access to critical capacity.

    Congress should ensure that AI chip exports to China do not divert capacity from the U.S. market, including by amending the Export Control Reform Act of 2018 (ECRA) to condition exports, reexports, or in-country transfers of advanced AI chips to China on exporter certification that they will not divert advanced semiconductor manufacturing or AI capacity from the U.S. market. The legislation should:

    - Cover upstream capacity, including advanced-node wafer fabrication, high-bandwidth memory, and advanced packaging—not finished-chip inventory alone;
    - Require auditable capacity-allocation data submitted to the Bureau of Industry and Security, subject to ECRA record-keeping and enforcement provisions, including criminal penalties for false certification;
    - Require the Bureau of Industry and Security to report annually to the committees of jurisdiction on certifications, validation methods, and exports coinciding with unmet U.S. or allied demand for equivalent capacity; and
    - Prohibit regulatory waivers or narrowing of the requirement without an affirmative national security determination transmitted to Congress for a 30-day review period.

Part IV: Taiwan and Hong Kong

Chapter 9: Taiwan: A Crucial Window for a Critical Partner

21. The People's Republic of China's (PRC) aggressive actions to reshape the Western Pacific and force unification with Taiwan are intensifying. Yet much U.S. and allied contingency planning focuses on large-scale invasion scenarios rather than coercion below the threshold of war. The United States needs a coordinated

playbook with allies and partners for responding to a range of coercive gray zone activities by the PRC in the Indo-Pacific, specifically concerning Taiwan.

Congress should:

- Direct the National Security Advisor to develop a common playbook with allies and partners calibrated to counter multi-domain day-to-day PRC coercion. Departments and agencies involved in executing the playbook should develop tiger teams to address U.S. actions and coalition/allied actions under each area of responsibility. That playbook should provide a unified framework for participating nations to:
  - Share situational awareness and arrange pre-coordinated responses;
  - Counter disinformation and lawfare;
  - Expand combined coast guard operations with Taiwan and regional partners, including through multilateral initiatives; and
  - Support resistance against economic coercion.
- Amend and extend the Taiwan Enhanced Resilience Act to establish a Taiwan Democratic Resilience Initiative led by the U.S. Department of State, implemented through the American Institute in Taiwan in coordination with the Office of the Director of National Intelligence and other appropriate departments and agencies.
  - The Initiative should strengthen U.S.-Taiwan cooperation to support the resiliency of Taiwan's civil society and counter PRC united front activities, election interference, and disinformation campaigns. It should also include information sharing with U.S. allies and partners.
- Direct the National Security Advisor to lead an interagency process to develop a whole of government strategy for deterring, preparing for, and responding to coercive actions by the PRC against Taiwan that are intended to rapidly or substantially alter the status quo, but that fall below the threshold of a large-scale invasion or armed conflict.
  - It should include an assessment of contingency scenarios and for each, provide an assessment of indicators and warnings, likely PRC objectives, decision points, escalation risks, potential effects on Taiwan's access to critical goods and services, and options for coordinated actions with allies and partners.

22. As China's military capabilities expand and the regional balance of power shifts, the risk of conflict in the Western Pacific is increasing. Despite growing defense cooperation among the United States and its allies and partners, the absence of a formal multilateral security framework limits their ability to deter aggression and mount a coordinated response to attempts to alter the regional order by force.

Congress should direct the Secretaries of Defense and State to initiate consultations with U.S. allies on establishing a formal multilateral framework for collective defense in the Western Pacific, building on the multilateral defense cooperation directed by Section 1254 of the fiscal year 2026 National Defense Authorization Act. Where Section 1254 directs operational integration, this framework would institutionalize the political commitment to collective action needed to deter Chinese military aggression and provide the foundation for a Western Pacific Security Pact. The Pact should:

- Build on existing regional defense mechanisms among states with established foundations for expanded multilateral defense cooperation, primarily the U.S.-Japan-Australia-Philippines Defense Cooperation Council, and be positioned to complement multilateral security frameworks such as the Quad and AUKUS. Provide a pathway for accession by other states that share the Pact's principles and possess the willingness and capacity to contribute materially to peace, security, and collective defense in the Western Pacific.
- Establish a common commitment to collective defense under which members recognize that any major threat to, or violent breach of, peace and stability in the Western Pacific—or any military attack upon the members of this framework—threatens their shared security and national interests and commit to coordinate a powerful collective response to deter or defeat aggression and restore regional peace and stability.
- Accelerate the legal and military reforms necessary for collective defense, including combined contingency planning and exercises, integrated command and control, expanded intelligence sharing, reciprocal access, and integrated logistics to enable members to operate effectively as a combined force in crisis or conflict.

23. Beijing is using travel bans and other punitive measures to deter and intimidate foreign lawmakers from engaging with Taiwan, including barring four New Zealand legislators from the People's Republic of China in June 2026. By placing exchanges with Taiwan on the same footing as those with the UK, Canada, and Mexico, Congress would signal that parliamentary diplomacy with fellow democracies is routine, legitimate, and not subject to Beijing's veto.

    The U.S. House of Representatives and Senate, respectively, should establish U.S.-Taiwan Inter-Parliamentary Exchanges, modeled on the established bilateral exchanges with the UK, Canada, and Mexico.

    - Like those bodies, the exchanges would convene regular, structured meetings between members of the U.S. legislative branch and members of Taiwan's Legislative Yuan to discuss trade, security, technology, and shared democratic governance.

24. Taiwan is rapidly scaling its civilian and defense drone industries, building asymmetric capability that will be critical to prevailing in a potential future conflict with the People's Republic

of China. Recent U.S. actions to broadly prohibit foreign drone imports stand to restrict a key market for Taiwan's drone makers and limit mutually beneficial collaboration with U.S. manufacturers.

Recognizing the benefit to U.S. national security of supporting drone industries of allies and partners at risk of conflict with adversarial countries, Congress should direct the Federal Communications Commission to limit its December 22, 2025 addition to the Covered List of uncrewed aircraft systems and their critical components, to systems and components produced by entities owned by, controlled by, or subject to the jurisdiction or direction of a foreign adversary, as defined in 15 CFR § 791.4.

Chapter 10: Hong Kong: Enabler of China's Global Finance and Technology Ambitions

25. Hong Kong's legal environment is deteriorating—not in a single dramatic event but through continuous, layered legislation that changes business risk year after year. Virtually any legal dispute involving a U.S. firm or its staff could be channeled into a national security case, and only a recurring statutory assessment keeps U.S. businesses informed.

    Congress should require the Secretaries of State, the Treasury, and Commerce to jointly issue an annual Hong Kong Business Advisory informing U.S. firms of the legal, regulatory, financial, and reputational risks of operating in the Hong Kong Special Administrative Region. Each advisory would include the following:

    - An assessment of developments over the preceding year, including new legislation, subsidiary regulations, enforcement actions, erosion of the rule of law, sanctions and/or export control evasion activities, and exit restriction risks.
    - Updated guidance on risk exposure for personnel, data, intellectual property, and operations.

26. The U.S. Department of the Treasury has identified Hong Kong-based entities as key enablers of crypto-facilitated Iranian oil revenue laundering.

    Congress should enact legislation to apply Primary Money Laundering Concern special measures, including correspondent account prohibitions, on Hong Kong Virtual Asset Service Providers that fail to prevent Iranian, Russian, or North Korean cryptocurrency trades.

Other Recommendations

The following recommendations build upon the Commission's work in recent years, including research, briefings, fact-finding trips, and conversations with key stakeholders.

27. The Commission reaffirms its 2025 recommendation on post-quantum cryptography. Post-quantum risk is coming faster than the government is acting, and the federal response does not yet match the threat. China is investing heavily in quantum

computing and has demonstrated sustained, large-scale collection against U.S. government networks. What Beijing steals encrypted today, it can read once a cryptographically relevant quantum computer exists. That same capability would also allow adversaries to forge the digital signatures that authenticate federal software, firmware, and certificates. The U.S. Government Accountability Office reports that agencies are only beginning migration, citing gaps in expertise, inventories, funding, and testing plans. At this pace, the government will miss its own 2030 target for critical systems. The government needs to treat this with far greater urgency.

Congress should:

- Require by statute that federal agencies migrate high-value assets, Federal Information Security Modernization Act (FISMA) high-impact systems, and public key infrastructure—including root certificate authorities and code- and firmware-signing systems—to National Institute of Standards and Technology (NIST)-approved post-quantum cryptography within 24 months of enactment. The statute should also set an accelerated, binding schedule for all remaining unclassified systems.
- Establish a dedicated post-quantum migration appropriation, separate from agency cybersecurity budgets, based on agency cost estimates certified by the Office of Management and Budget.
- Fund NIST's Cryptographic Module Validation Program and Cryptographic Algorithm Validation Program at levels sufficient to reduce validation wait times for post-quantum products.
- Require agency heads to certify progress to Congress every six months, with signed waivers for any missed milestone.
- Make crypto-agility and vendor post-quantum roadmaps conditions of federal information technology procurement.

28. People's Republic of China censorship demands on American companies are delivered privately and complied with quietly, leaving Congress, regulators, investors, and the public with no systematic picture of how widely Beijing's speech controls are being exported into the operations of U.S. firms. Mandatory disclosure corrects this information failure at minimal cost: it prohibits no transaction and forces no confrontation with Chinese law, yet it strips censorship demands of the secrecy they depend on, gives every firm legal cover to report rather than forcing each to choose transparency on their own, and equips U.S. policymakers with comprehensive data for trade and human-rights diplomacy.

Congress should:

- Require all U.S. firms operating in or doing business with the People's Republic of China to disclose to the Secretary of State and Secretary of Commerce and to each of the four congressional leaders every order, request, or directive re-

ceived from Chinese government officials or their agents to censor, block, remove, or otherwise suppress free expression, including content directed at users outside China, within one month of each such request.

- Direct the Chair of the U.S. Securities and Exchange Commission to require reporting companies to disclose in annual and quarterly filings every order, request, or directive received from Chinese government officials or their agents to censor, block, remove, or otherwise suppress free expression, including content directed at users outside China.

29. As China expands its activities in space, the United States must be able to move at the speed of relevance to share intelligence with allies and partners in instances where such releases would strengthen collective action vis-à-vis China on space matters, while safeguarding sensitive sources and methods.

    Congress should direct the Director of National Intelligence to work with the Secretary of State and other relevant executive branch agencies to create a process for accelerating the releasability of intelligence related to Chinese space activities to allied and partner nations that can favorably support U.S. competitive posture on space matters.

30. To expand defense technology cooperation and interoperability with trusted countries, Congress should:

    - Make it U.S. policy to establish a standing partner track under AUKUS Pillar II.
    - Direct the Secretary of State to propose the partner track to Australia and the UK.
    - Condition partner track access on security benchmarks the Secretary of State certifies to Congress annually, including protection against access by persons under foreign adversary jurisdiction.

APPENDIX I
CHARTER

The Commission was created on October 30, 2000, by the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001, Pub. L. No. 106–398 (codified at 22 U.S.C. §7002), as amended by:

- The Treasury and General Government Appropriations Act, 2002, Pub. L. No. 107–67 (Nov. 12, 2001);
- The Consolidated Appropriations Resolution, 2003, Pub. L. No. 108–7 (Feb. 20, 2003);
- The Science, State, Justice, Commerce, and Related Agencies Appropriations Act, 2006, Pub. L. No. 109–108 (Nov. 22, 2005);
- The Consolidated Appropriations Act, 2008, Pub. L. No. 110–161 (Dec. 26, 2007);
- The Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113–291 (Dec. 19, 2014); and
- Pub. L. No. 117–286 (Dec. 27, 2022).

22 U.S.C. §7002. United States-China Economic and Security Review Commission

(a) Purposes

The purposes of this section are as follows:

(1) To establish the United States-China Economic and Security Review Commission to review the national security implications of trade and economic ties between the United States and the People's Republic of China.

(2) To facilitate the assumption by the United States-China Economic and Security Review Commission of its duties regarding the review referred to in paragraph (1) by providing for the transfer to that Commission of staff, materials, and infrastructure (including leased premises) of the Trade Deficit Review Commission that are appropriate for the review upon the submittal of the final report of the Trade Deficit Review Commission.

(b) Establishment of United States-China Economic and Security Review Commission

(1) In general

There is hereby established a commission to be known as the United States-China Economic and Security Review Commission (in this section referred to as the "Commission").

(2) Purpose

The purpose of the Commission is to monitor, investigate, and report to Congress on the national security implications of the bilat-

eral trade and economic relationship between the United States and the People's Republic of China.

(3) Membership

The Commission shall be composed of 12 members, who shall be appointed in the same manner provided for the appointment of members of the Trade Deficit Review Commission under section 127(c)(3) of the Trade Deficit Review Commission Act (19 U.S.C. 2213 note), except that—

(A) appointment of members by the Speaker of the House of Representatives shall be made after consultation with the chairman of the Committee on Armed Services of the House of Representatives, in addition to consultation with the chairman of the Committee on Ways and Means of the House of Representatives provided for under clause (iii) of subparagraph (A) of that section;

(B) appointment of members by the President pro tempore of the Senate upon the recommendation of the majority leader of the Senate shall be made after consultation with the chairman of the Committee on Armed Services of the Senate, in addition to consultation with the chairman of the Committee on Finance of the Senate provided for under clause (i) of that subparagraph;

(C) appointment of members by the President pro tempore of the Senate upon the recommendation of the minority leader of the Senate shall be made after consultation with the ranking minority member of the Committee on Armed Services of the Senate, in addition to consultation with the ranking minority member of the Committee on Finance of the Senate provided for under clause (ii) of that subparagraph;

(D) appointment of members by the minority leader of the House of Representatives shall be made after consultation with the ranking minority member of the Committee on Armed Services of the House of Representatives, in addition to consultation with the ranking minority member of the Committee on Ways and Means of the House of Representatives provided for under clause (iv) of that subparagraph;

(E) persons appointed to the Commission shall have expertise in national security matters and United States-China relations, in addition to the expertise provided for under subparagraph (B)(i)(I) of that section;

(F) each appointing authority referred to under subparagraphs (A) through (D) of this paragraph shall—

(i) appoint 3 members to the Commission;

(ii) make the appointments on a staggered term basis, such that—

(I) 1 appointment shall be for a term expiring on December 31, 2003;

(II) 1 appointment shall be for a term expiring on December 31, 2004; and

(III) 1 appointment shall be for a term expiring on December 31, 2005;

(iii) make all subsequent appointments on an approximate 2-year term basis to expire on December 31 of the applicable year; and

(iv) make appointments not later than 30 days after the date on which each new Congress convenes;

(G) members of the Commission may be reappointed for additional terms of service as members of the Commission; and

(H) members of the Trade Deficit Review Commission as of October 30, 2000, shall serve as members of the Commission until such time as members are first appointed to the Commission under this paragraph.

(4) Retention of support

The Commission shall retain and make use of such staff, materials, and infrastructure (including leased premises) of the Trade Deficit Review Commission as the Commission determines, in the judgment of the members of the Commission, are required to facilitate the ready commencement of activities of the Commission under subsection (c) or to carry out such activities after the commencement of such activities.

(5) Chairman and Vice Chairman

The members of the Commission shall select a Chairman and Vice Chairman of the Commission from among the members of the Commission.

(6) Meetings

(A) Meetings

The Commission shall meet at the call of the Chairman of the Commission.

(B) Quorum

A majority of the members of the Commission shall constitute a quorum for the transaction of business of the Commission.

(7) Voting

Each member of the Commission shall be entitled to one vote, which shall be equal to the vote of every other member of the Commission.

(c) Duties

(1) Annual report

Not later than December 1 each year (beginning in 2002), the Commission shall submit to Congress a report, in both unclassified and classified form, regarding the national security implications and impact of the bilateral trade and economic relationship between the United States and the People's Republic of China. The report shall include a full analysis, along with conclusions and recommendations for legislative and administrative actions, if any, of the national security implications for the United States of the trade and current balances with the People's Republic of China in goods and services, financial transactions, and technology transfers. The Commission shall also take into account patterns of trade and transfers through third countries to the extent practicable.

(2) Contents of report

Each report under paragraph (1) shall include, at a minimum, a full discussion of the following:

(A) The role of the People's Republic of China in the proliferation of weapons of mass destruction and other weapon systems (including systems and technologies of a dual use nature), including actions the United States might take to encourage the People's Republic of China to cease such practices.

(B) The qualitative and quantitative nature of the transfer of United States production activities to the People's Republic of Chi-

na, including the relocation of manufacturing, advanced technology and intellectual property, and research and development facilities, the impact of such transfers on the national security of the United States (including the dependence of the national security industrial base of the United States on imports from China), the economic security of the United States, and employment in the United States, and the adequacy of United States export control laws in relation to the People's Republic of China.

(C) The effects of the need for energy and natural resources in the People's Republic of China on the foreign and military policies of the People's Republic of China, the impact of the large and growing economy of the People's Republic of China on world energy and natural resource supplies, prices, and the environment, and the role the United States can play (including through joint research and development efforts and technological assistance) in influencing the energy and natural resource policies of the People's Republic of China.

(D) Foreign investment by the United States in the People's Republic of China and by the People's Republic of China in the United States, including an assessment of its economic and security implications, the challenges to market access confronting potential United States investment in the People's Republic of China, and foreign activities by financial institutions in the People's Republic of China.

(E) The military plans, strategy and doctrine of the People's Republic of China, the structure and organization of the People's Republic of China military, the decision-making process of the People's Republic of China military, the interaction between the civilian and military leadership in the People's Republic of China, the development and promotion process for leaders in the People's Republic of China military, deployments of the People's Republic of China military, resources available to the People's Republic of China military (including the development and execution of budgets and the allocation of funds), force modernization objectives and trends for the People's Republic of China military, and the implications of such objectives and trends for the national security of the United States.

(F) The strategic economic and security implications of the cyber capabilities and operations of the People's Republic of China.

(G) The national budget, fiscal policy, monetary policy, capital controls, and currency management practices of the People's Republic of China, their impact on internal stability in the People's Republic of China, and their implications for the United States.

(H) The drivers, nature, and implications of the growing economic, technological, political, cultural, people-to-people, and security relations of the People's Republic of China's with other countries, regions, and international and regional entities (including multilateral organizations), including the relationship among the United States, Taiwan, and the People's Republic of China.

(I) The compliance of the People's Republic of China with its commitments to the World Trade Organization, other multilateral commitments, bilateral agreements signed with the United States, commitments made to bilateral science and technology programs, and any other commitments and agreements strategic to the United States (including agreements on intellectual property rights and

prison labor imports), and United States enforcement policies with respect to such agreements.

(J) The implications of restrictions on speech and access to information in the People's Republic of China for its relations with the United States in economic and security policy, as well as any potential impact of media control by the People's Republic of China on United States economic interests.

(K) The safety of food, drug, and other products imported from China, the measures used by the People's Republic of China Government and the United States Government to monitor and enforce product safety, and the role the United States can play (including through technical assistance) to improve product safety in the People's Republic of China.

(3) Recommendations of report

Each report under paragraph (1) shall also include recommendations for action by Congress or the President, or both, including specific recommendations for the United States to invoke Article XXI (relating to security exceptions) of the General Agreement on Tariffs and Trade 1994 with respect to the People's Republic of China, as a result of any adverse impact on the national security interests of the United States.

(d) Hearings

(1) In general

The Commission or, at its direction, any panel or member of the Commission, may for the purpose of carrying out the provisions of this section, hold hearings, sit and act at times and places, take testimony, receive evidence, and administer oaths to the extent that the Commission or any panel or member considers advisable.

(2) Information

The Commission may secure directly from the Department of Defense, the Central Intelligence Agency, and any other Federal department or agency information that the Commission considers necessary to enable the Commission to carry out its duties under this section, except the provision of intelligence information to the Commission shall be made with due regard for the protection from unauthorized disclosure of classified information relating to sensitive intelligence sources and methods or other exceptionally sensitive matters, under procedures approved by the Director of Central Intelligence.

(3) Security

The Office of Senate Security shall—

(A) provide classified storage and meeting and hearing spaces, when necessary, for the Commission; and

(B) assist members and staff of the Commission in obtaining security clearances.

(4) Security clearances

All members of the Commission and appropriate staff shall be sworn and hold appropriate security clearances.

(e) Commission personnel matters

(1) Compensation of members

Members of the Commission shall be compensated in the same manner provided for the compensation of members of the Trade Defi-

cit Review Commission under section 127(g)(1) and section 127(g)(6) of the Trade Deficit Review Commission Act (19 U.S.C. 2213 note).

(2) Travel expenses

Travel expenses of the Commission shall be allowed in the same manner provided for the allowance of the travel expenses of the Trade Deficit Review Commission under section 127(g)(2) of the Trade Deficit Review Commission Act.

(3) Staff

An executive director and other additional personnel for the Commission shall be appointed, compensated, and terminated in the same manner provided for the appointment, compensation, and termination of the executive director and other personnel of the Trade Deficit Review Commission under section 127(g)(3) and section 127(g)(6) of the Trade Deficit Review Commission Act. The executive director and any personnel who are employees of the United States-China Economic and Security Review Commission shall be employees under section 2105 of title 5 for purposes of chapters 63, 81, 83, 84, 85, 87, 89, and 90 of that title. [Amended by P.L. 111–117 to apply section 308(e) of the United States China Relations Act of 2000 (22 U.S.C. 6918(e)) (relating to the treatment of employees as Congressional employees) to the Commission in the same manner as such section applies to the Congressional-Executive Commission on the People's Republic of China.]

(4) Detail of government employees

Federal Government employees may be detailed to the Commission in the same manner provided for the detail of Federal Government employees to the Trade Deficit Review Commission under section 127(g)(4) of the Trade Deficit Review Commission Act.

(5) Foreign travel for official purposes

Foreign travel for official purposes by members and staff of the Commission may be authorized by either the Chairman or the Vice Chairman of the Commission.

(6) Procurement of temporary and intermittent services

The Chairman of the Commission may procure temporary and intermittent services for the Commission in the same manner provided for the procurement of temporary and intermittent services for the Trade Deficit Review Commission under section 127(g)(5) of the Trade Deficit Review Commission Act.

(f) Authorization of appropriations

(1) In general

There is authorized to be appropriated to the Commission for fiscal year 2001, and for each fiscal year thereafter, such sums as may be necessary to enable the Commission to carry out its functions under this section.

(2) Availability

Amounts appropriated to the Commission shall remain available until expended.

(g) Applicability of chapter 10 of title 5

The provisions of chapter 10 of title 5 shall apply to the activities of the Commission.

(h) Effective date

This section shall take effect on the first day of the 107th Congress.

(Pub. L. 106–398, § 1 [[div. A], title XII, § 1238], Oct. 30, 2000, 114 Stat. 1654 , 1654A–334; Pub. L. 107–67, title VI, §§ 645(a), 648, Nov. 12, 2001, 115 Stat. 556; Pub. L. 108–7, div. P, § 2(b)(1), (c)(1), Feb. 20, 2003, 117 Stat. 552; Pub. L. 109–108, title VI, § 635(b), Nov. 22, 2005, 119 Stat. 2347; Pub. L. 110–161, div. J, title I, Dec. 26, 2007, 121 Stat. 2285; Pub. L. 113–291, div. A, title XII, § 1259B(a), Dec. 19, 2014, 128 Stat. 3578.)

Amendments

2022—Subsec. (g). Pub. L. 117–286 substituted "chapter 10 of title 5" for "FACA" in the heading and "chapter 10 of title 5" for "the Federal Advisory Committee Act (5 U.S.C. App.)" in text.

2014—Subsec. (c)(2). Pub. L. 113–291 added subpars. (A) to (K) and struck out former subpars. (A) to (J) which described required contents of report.

2007—Subsec. (c)(1). Pub. L. 110–161 substituted "December" for "June".

2005—Subsec. (g). Pub. L. 109–108 amended heading and text of subsec. (g) generally. Prior to amendment, text read as follows: "The provisions of the Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to the Commission."

2003—Pub. L. 108–7, § 2(b)(1)(A), inserted "Economic and" before "Security" in section catchline.

Subsec. (a)(1), (2). Pub. L. 108–7, § 2(b)(1)(B), inserted "Economic and" before "Security".

Subsec. (b). Pub. L. 108–7, § 2(b)(1)(C)(i), inserted "Economic and" before "Security" in heading.

Subsec. (b)(1). Pub. L. 108–7, § 2(b)(1)(C)(ii), inserted "Economic and" before "Security".

Subsec. (b)(3). Pub. L. 108–7, § 2(b)(1)(C)(iii)(I), which directed the amendment of introductory provisions by inserting "Economic and" before "Security", could not be executed because "Security" does not appear.

Subsec. (b)(3)(F). Pub. L. 108–7, § 2(c)(1), added subpar. (F) and struck out former subpar. (F) which read as follows: "members shall be appointed to the Commission not later than 30 days after the date on which each new Congress convenes;".

Subsec. (b)(3)(H), (4), (e)(1), (2). Pub. L. 108–7, § 2(b)(1)(C)(iii)(II), (iv), (D)(i), (ii), which directed insertion of "Economic and" before "Security", could not be executed because "Security" does not appear.

Subsec. (e)(3). Pub. L. 108–7, § 2(b)(1)(D)(iii)(II), inserted "Economic and" before "Security" in second sentence.

Pub. L. 108–7, § 2(b)(1)(D)(iii)(I), which directed the amendment of first sentence by inserting "Economic and" before "Security", could not be executed because "Security" does not appear.

Subsec. (e)(4), (6). Pub. L. 108–7, § 2(b)(1)(D)(iv), (v), which directed the amendment of pars. (4) and (6) by inserting "Economic and" before "Security", could not be executed because "Security" does not appear.

2001—Subsec. (c)(1). Pub. L. 107–67, § 648, substituted "June" for "March".

Subsec. (e)(3). Pub. L. 107–67, § 645(a), inserted at end "The executive director and any personnel who are employees of the United States-China Security Review Commission shall be employees under section 2105 of title 5 for purposes of chapters 63, 81, 83, 84, 85, 87, 89, and 90 of that title."

APPENDIX II
BACKGROUND OF COMMISSIONERS

The Honorable Randall Schriver, Chair

Mr. Randall Schriver is the Chairman of the Board of the Institute for Indo-Pacific Security (IIPS) and a partner at Pacific Solutions LLC. He is also on the Board of Advisors to the Sasakawa Peace Foundation USA and the Board of Directors of the US-Taiwan Business Council.

Just prior, he served for two years as the Assistant Secretary of Defense for Indo-Pacific Security Affairs where he led a team of nearly one hundred professionals and was the principal advisor to the Secretary of Defense on matters related to the Indo-Pacific region.

Prior to his Senate confirmation, Mr. Schriver was one of five founding partners of Armitage International LLC, a consulting firm that specializes in international business development and strategies. He was also CEO and President of IIPS (formerly the Project 2049 Institute), a non-profit research organization dedicated to the study of security trend lines in Asia. He was also an adjunct lecturer for Stanford University's "Stanford-in-Washington" program where he taught a quarter long course on U.S. foreign policy every fall and spring for fourteen years.

Previously, Mr. Schriver served as Deputy Assistant Secretary of State for East Asian and Pacific Affairs. He was responsible for China, Taiwan, Mongolia, Hong Kong, Australia, New Zealand, and the Pacific Islands. From 2001 to 2003, he served as Chief of Staff and Senior Advisor to the Deputy Secretary of State. From 1994 to 1998, he worked in the Office of the Secretary of Defense, including as the senior official responsible for U.S. bilateral relations with the People's Liberation Army and the bilateral security and military relationships with Taiwan.

Prior to his civilian service, he served as an active duty Navy Intelligence Officer from 1989 to 1991, including a deployment in support of Operation Desert Shield/Desert Storm. After active duty, he served in the Navy Reserves for nine years, including as Special Assistant to the Chairman of the Joint Chiefs of Staff and as an attaché at U.S. Embassies Beijing and Ulaanbaatar.

Mr. Schriver hails from Oregon and received a Bachelor of Arts degree in history from Williams College and a Master of Arts degree from Harvard University. He has won numerous military and civilian awards from the U.S. government and was recently presented with the Department of Defense Medal for Distinguished Public Service (highest civilian award). While at the State Department he was presented with the Order of the Propitious Clouds by the President of Taiwan for service promoting U.S.-Taiwan relations. He is married to Jordan Schriver, and is father to Lucas, Rory, Brody, and Mae.

Chair Schriver was reappointed by Senate Republican Leader John Thune for a term expiring December 31, 2027.

Mike Kuiken, Vice Chair

Mike Kuiken is a Distinguished Visiting Fellow at Stanford University's Hoover Institution and serves as Vice Chair of the U.S.-China Economic and Security Review Commission.

In the private sector, Mike is the Managing Member of Silver Valley Strategies, where he advises founders, CEOs, and investors on geopolitical and government strategies. He is an advisor to the Special Competitive Studies Project (SCSP) and a member of Anthropic's National Security and Public Sector Advisory Council. He serves on the boards of the National Defense Industrial Association and the Planetary Science Institute. His writing has appeared in the Financial Times, Newsweek, and the Boston Globe.

Mike previously served as Senate Majority Leader Schumer's National Security Advisor. He was a 'Gang of Eight' staffer for over seven years. He architected the legislative strategy to pass the CHIPS and Science Act and played a key role in establishing the Senate's Artificial Intelligence Insight Forums. Prior to the Leader's office, Mike spent over a decade on the Senate Armed Services Committee, a career that began with the late Senator Carl Levin.

His work has spanned the most consequential challenges of the post-9/11 era—from the wars in Afghanistan and Iraq to today's strategic competition with China. He has shaped U.S. responses to the Arab Spring, Russia's invasion of Ukraine, economic statecraft, and strategic cyber competition, working on the ground in over 85 countries to bring a frontline perspective to national policy.

Mike earned his B.A. in Political Science and Economics from Calvin University and his M.A. in International Commerce and Policy from George Mason University.

Vice Chair Kuiken was reappointed to the Commission by Senate Democratic Leader Chuck Schumer for a term expiring December 31, 2027.

Hal Brands

Dr. Hal Brands is the Henry A. Kissinger Distinguished Professor of Global Affairs at the Johns Hopkins School of Advanced International Studies (SAIS) and a senior fellow at the American Enterprise Institute. He is also a columnist for Bloomberg Opinion and a senior advisor at Macro Advisory Partners. He is the author, co-author, or editor of many books, including *The Eurasian Century: Hot Wars, Cold Wars, and the Making of the Modern World* (2025), *The New Makers of Modern Strategy: From the Ancient World to the Digital Age*, *Danger Zone: The Coming Conflict with China* (2022), co-authored with Michael Beckley, *The Twilight Struggle: What the Cold War Teaches Us about Great-Power Rivalry Today* (2022), *The Lessons of Tragedy: Statecraft and World Order* (2019) co-authored with Charles Edel, *American Grand Strategy in the Age of Trump* (2018), *Making the Unipolar Moment: U.S. Foreign Policy and the Rise of the Post-Cold War Order* (2016), *What Good is Grand Strategy? Power and Purpose in American Statecraft from Harry S. Truman to George W. Bush* (2014), *Latin America's Cold War* (2010),

From Berlin to Baghdad: America's Search for Purpose in the Post-Cold War World (2008), and T*he Power of the Past: History and Statecraft* (co-edited with Jeremi Suri, 2015). In addition, his work has been published in *Foreign Affairs*, *Foreign Policy*, the *Wall Street Journal*, the *Washington Post*, and many other outlets.

Hal has previously served as Special Assistant to the Secretary of Defense for Strategic Planning, a member of the Secretary of State's Foreign Affairs Policy Board, and lead writer for the Commission on the National Defense Strategy for the United States. He has consulted with government offices and agencies in the intelligence and national security communities.

Hal has spoken on geopolitics and foreign affairs to audiences—in government, in academia, and in the private sector—around the world.

Commissioner Brands was appointed by Senate Republican Leader Mitch McConnell for a term expiring December 31, 2026.

Taylor Budowich

Taylor Budowich is the president of The Sovereign Advisors, a discreet D.C.-based public affairs and crisis communications firm. He previously served as Deputy Chief of Staff and Cabinet Secretary for President Donald J. Trump, overseeing communications, cabinet affairs, speechwriting, and the Office of Public Liaison. In this role, he led communications strategies during pivotal early moments of the administration, including the President's first address to a Joint Session of Congress, the rollout of transformative tariffs on "Liberation Day," Operation Midnight Hammer, the launch of the Department of Government Efficiency (DOGE), AI initiatives, and responses to dynamic global challenges such as trade disputes with China.

Through his oversight of the White House Office of Public Liaison, he spearheaded the administration's engagement with critical industries on issues like artificial intelligence, chip manufacturing and supply, and efforts to onshore key sectors, as the office serves as the primary representative to major companies and CEOs. He also traveled as part of the President's delegation to the Middle East, NATO summits, and the United Nations General Assembly.

Before joining the White House, Budowich founded and directed MAGA Inc., a pro-Trump super PAC that raised and spent hundreds of millions on advertising and voter mobilization during the 2024 presidential campaign. He earlier served as the spokesperson for President Trump and Director of Communications for Save America PAC, Trump's post-2020 political vehicle, and as chief of staff to Donald Trump Jr. during the 2020 campaign. At the start of his career, he was executive director of the Tea Party Express PAC.

Budowich studied at the American University in Cairo before evacuating during the 2011 Egyptian revolution. Through his work in super PACs, campaigns, and in government, he has played a key role in shaping Republican campaign strategies, amplifying conservative messaging, and advancing the MAGA movement's impact on national elections and policy.

Commissioner Budowich was appointed by Speaker Mike Johnson for a term expiring December 31, 2027.

Joshua Hodges

Josh Hodges is a seasoned national security and foreign policy expert with nearly two decades of experience across the White House, Congress, the executive branch, international development, and business. His career has been defined by tackling some of the more challenging problems facing national security, advancing U.S. strategy in the Western Hemisphere, and urging efforts to counter the economic and geopolitical influence of the People's Republic of China.

In the private sector, Hodges is a Partner at Ridgeline Advocacy Group, where he advises CEOs, businesses, and investors on geopolitical, government, and crisis communications strategies. Additionally, he is a Visiting Fellow at Stanford University's Hoover Institution, specializing in biosecurity, and serves on Anthropic's National Security and Public Sector Advisory Council.

Hodges served as Special Assistant to the President and Senior Director at the National Security Council (NSC), where he led U.S. initiatives to expose and push back on China's malign activity across the Americas and the Caribbean. In that role, he was the U.S. government's lead on regional economic strategies designed to reduce dependency on China-backed financing until Trump left office in January 2021.

In the 118th Congress, Hodges returned to Capitol Hill as National Security Advisor to Speaker of the House Mike Johnson, holding Congress's most senior national security staff position. During his tenure, Congress played a more assertive role in foreign policy considerations and he helped shape priorities in response to multiple global crises, including support for Israel, countering expanding Russian aggression, U.S.-China strategic competition, and security threats from the southern border.

He has also served as Deputy Senior Director for Information Statecraft at the NSC, acting Assistant Administrator for Latin America and the Caribbean at USAID, and held senior positions at the Department of Energy's National Nuclear Security Administration. He has also served at the Inter-American Development Bank on the President's executive team supporting U.S. private sector investment strategies designed to increase U.S. business opportunities and reduce dependency on China-backed financing.

With deep experience at the intersection of diplomacy, development, and defense, he is recognized for his expertise at crafting thoughtful courses of action that combat America's adversaries' ambitions and secure U.S. interests in an era of renewed great power competition.

Hodges has chaired interagency working groups, testified before Congress, and developed whole-of-government responses to emerging threats. He was raised in Mexico and is fluent in Spanish. He holds a master's degree in National Security and Strategic Studies from the Naval War College and a B.A. in International Affairs from LSU.

Commissioner Hodges was appointed by Speaker Mike Johnson for a term expiring December 31, 2026.

Leland R. Miller

Leland Miller is the CEO of China Beige Book, where for nearly two decades he has run the world's largest private macroeconomic survey of China's economy and financial system.

A noted authority on these issues, trade dynamics, and U.S.-China technology competition, Miller is a frequent commentator on media outlets such as CNBC, Bloomberg TV, CNN, and FOX Business, and his work is featured regularly in the *Wall Street Journal*, *New York Times*, *Financial Times*, *Washington Post* and many others.

Before co-founding China Beige Book in 2010, he was a capital markets attorney based out of New York and Hong Kong and worked on the deal team at a major investment bank. He holds a law degree from the University of Virginia School of Law, where he was Hardy C. Dillard fellow and editor-in-chief of the International Law Journal; a master's degree in Chinese History from Oxford University; a B.A. in European History from Washington & Lee University; and a graduate Mandarin language fellowship from Tunghai University (Taiwan). An elected life member of the Council on Foreign Relations, he returned to W&L as the Williams School's Executive-in-Residence in 2015.

Commissioner Miller was reappointed by Speaker Mike Johnson for a term expiring December 31, 2027.

Reva Price, Chair Emeritus

Reva Price is the former Director of Outreach and Senior Advisor for former Speaker of the House Nancy Pelosi. During her more than seventeen-year tenure with Speaker Pelosi, Commissioner Price played a central role across the spectrum of domestic and foreign policy issues. She handled key aspects of several foreign policy portfolios with particular emphasis on China as well as the Middle East. She was also responsible for building relationships with a varied and wide segment of groups, coalitions, and non-governmental organizations, strengthening communication and awareness of the Speaker's priorities and activities to the American people. She was reappointed to the Commission by House Democratic Leader Hakeem Jeffries for a term expiring December 31, 2026.

Prior to working on Capitol Hill, Commissioner Price spent more than two decades working for non-profit organizations in Washington, DC engaged in both domestic and international affairs. She advocated for her organization's policy priorities to the Congress, the Administration, and International Organizations including the OSCE and the United Nations. She is a graduate of the State University of New York at Binghamton.

Livia Shmavonian

Livia Shmavonian is a leading voice in shaping trade and international economic security policy. An expert on issues at the intersection of economic and national security, Livia has navigated complex geopolitical issues, including building and maintaining secure and resilient supply chains, addressing non-market economy practices, unfair labor, and supporting U.S. firms facing trade barriers.

Livia previously served as Director of the White House Made in America Office, Senior Advisor to the Under Secretary for International Trade at the Department of Commerce, Democratic Staff Director of the Senate Finance Subcommittee on Trade, Customs, and Global Competitiveness, and Senior Advisor to Senator Bob Casey.

As Director of the Made in America Office, Livia led administration-wide oversight of domestic content laws and standards and worked extensively with the National Economic Council, National Security Council, and executive branch agencies on international competitiveness, including on critical supply chains, non-market economy practices, and emerging technologies.

Her work has spanned serving as a key advisor on U.S. negotiations and high-level engagement between U.S. officials, foreign governments, and stakeholders. Livia shaped the Finance Committee's work on the multifaceted economic and national security challenges posed by China, including through hearings on overcapacity and China's economic coercion practices, leading the development of policy on outbound investment screening.

Livia earned her B.A. in Political Science and International Relations from UC Davis and her M.P.P. from Georgetown University.

Commissioner Shmavonian was appointed by Senate Democratic Leader Chuck Schumer for a term expiring December 31, 2026.

Chris Slevin

Chris Slevin advises companies, foundations, and nonprofits on the intersection of workforce and technology issues. He served as Chief of Staff at the U.S. Department of Commerce under Secretary Gina Raimondo where he led Commerce through the agency's expanded role in technology and national security and managed a nearly ten-fold budget increase through the execution of new legislation, including the CHIPS and Science Act. President Biden had earlier appointed Chris as Deputy Assistant to the President for Legislative Affairs, where he focused on passage of bipartisan infrastructure legislation, veterans health legislation, and the CHIPS and Science Act. Earlier he served in the U.S. Senate as a senior policy advisor for Senator Sherrod Brown and Senator Cory Booker. Chris was Vice President for the Economic Innovation Group and began his policy career at Public Citizen as communications and deputy director of its global trade division.

Commissioner Slevin was appointed by House Democratic Leader Hakeem Jeffries for a term expiring December 31, 2026.

The Honorable Jonathan N. Stivers

Commissioner Jonathan Stivers has more than 25 years of high-level foreign policy experience in the Congress and the Administration specializing in U.S.-China relations, Asian affairs, national security, trade and economics, international development, and human rights.

Jon currently is the U.S. Director at the Committee for Freedom in Hong Kong (CFHK) Foundation. He recently served as the Minority Staff Director on the House Select Committee on the Strategic Competition Between the U.S. and Chinese Communist Party and as a Professional Staff Member on the House State-Foreign Op-

erations Appropriations Subcommittee overseeing the budgets for the State Department and the U.S. Agency for International Development (USAID). He also served as the Staff Director on the Congressional-Executive Commission on China where he spearheaded the Uyghur Forced Labor Prevention Act and legislation on Tibet and Hong Kong while leading a staff of 14 researchers and analysts in support of annual reports and policy recommendations.

In the Obama Administration, Jon served as the USAID Assistant Administrator for the Bureau for Asia. In this Senate-confirmed position he managed a budget of approximately $1.2 billion in foreign assistance and led a staff of approximately 1,200 development professionals in 32 countries in East Asia and the Pacific Islands, South Asia, and Central Asia. He testified before Congressional committees on almost two dozen occasions on topics related to the Asia-Pacific Rebalance policy, China's Belt and Road Initiative, and on health, development, humanitarian, and democracy promotion initiatives in the region.

Prior to the Executive Branch, Jon served as Senior Advisor to Speaker Pelosi for 15 years. He played a leadership role on numerous foreign policy initiatives related to China and the Asia-Pacific region, trade, currency manipulation, and human rights while serving in the offices of the Speaker, Democratic Leader and Whip. In addition, he was a Senior Legislative Assistant to Rep. Pelosi when she was the Ranking Member of the State-Foreign Operations Appropriations Subcommittee and Jon was a leader in the effort to defeat China PNTR/WTO accession. He also worked in the Office of the Democratic Whip for former Rep. David Bonior (MI).

Jon earned a Master of International Policy and Practice from The Elliott School of International Affairs at The George Washington University in Asian Affairs and a Bachelor of Arts from James Madison College at Michigan State University in International Relations.

Commissioner Stivers was reappointed by House Democratic Leader Hakeem Jeffries for a term expiring December 31, 2027.

Michael Castellano, Executive Director

Mike Castellano joined the Commission as Executive Director in May 2024. Previously, he was serving as Senior Advisor to the Under Secretary of Commerce for Industry & Security (BIS), where he led various special projects and stakeholder outreach relating to export control policy and the Information and Communications Technology and Services (ICTS) authority for the Office of the Under Secretary.

Mike spent the prior 20 years focused heavily on international trade policy, including extensive work on China. Ten of those years were as Vice President, Government Relations at the Walt Disney Company, focusing on Disney's international policy agenda. While working for Disney he served on the International Trade Advisory Committee for Intellectual Property, advising the Department of Commerce and the U.S. Trade Representative on international trade policy. Before Disney, Mike spent ten years on Capitol Hill. Six of those years he worked for the Senate Majority/Minority Leader ending as Senior Counsel & Senior Policy Advisor, where he was responsible for issues of international trade and related international

economic policy, including a significant focus on China, intellectual property rights and cyber security (commercial side), among other areas. The previous four years Mike worked dual-hatted as Trade Counsel for the Committee on Ways & Means (Minority) and Tax & Trade Counsel for a senior Member on Ways & Means, covering a wide range of international trade policy and tax issues.

Mike started his career clerking for Judge Francis Murnaghan of the U.S. Court of Appeals for the Fourth Circuit, followed by a stint practicing international trade law at petitioner's law firm Dewey Ballantine, LLP. He received his J.D. magna cum laude from Harvard Law School, M.A.L.D. from the Fletcher School of Law and Diplomacy, and B.A. with honors in political science from Johns Hopkins University.

APPENDIX III

PUBLIC HEARINGS OF THE COMMISSION

Full transcripts and written testimonies are available online at the Commission's website: *www.USCC.gov.*

February 16, 2026: Public Hearing on "India, China, and the Balance of Power in the Indo-Pacific" Washington, DC

Commissioners present: Hal Brands (Hearing Co-Chair); Joshua Hodges; Mike Kuiken, Vice Chair; Reva Price; Hon. Randall Schriver, Chair; Livia Shmavonian; Chris Slevin; Hon. Jonathan N. Stivers (Hearing Co-Chair).

Witnesses: Tanvi Madan, Brookings Institution; Sameer Lalwani, Special Competitive Studies Project; Lindsey Ford, Center for a New American Security; Soumya Bhowmick, Observer Research Foundation; Tarun Chhabra, Hoover Institution; Chan Harjivan, Duke University.

March 2, 2026: Public Hearing on "Part of Your World: U.S.-China Competition Under the Sea" Washington, DC

Commissioners present: Taylor Budowich; Joshua Hodges; Mike Kuiken, Vice Chair (Hearing Co-Chair); Leland R. Miller; Reva Price; Hon. Randall Schriver, Chair (Hearing Co-Chair); Livia Shmavonian; Chris Slevin; Hon. Jonathan N. Stivers.

Witnesses: Vice Admiral Richard Seif, U.S. Naval Submarine Forces; Rear Admiral Mike Brookes, Office of Naval Intelligence; Rear Admiral Michael Studeman, U.S. Navy (Ret.); Michael Horowitz, University of Pennsylvania; Jason Hsu, Hudson Institute; Seaver Wang, The Breakthrough Institute; David Calhoun, Baron Public Affairs; Andrew S. Erickson,* U.S. Naval War College.

*Submitted material for the record.

March 19, 2026: Public Hearing on
"China's Expanding Interests in Latin America: Development, Leverage, Coercion, and Crime"
Washington, DC

Commissioners present: Hal Brands; Joshua Hodges (Hearing Co-Chair); Mike Kuiken, Vice Chair; Leland R. Miller; Reva Price (Hearing Co-Chair); Hon. Randall Schriver, Chair; Chris Slevin; Hon. Jonathan N. Stivers.

Witnesses: Margaret Myers, Inter-American Dialogue; Parsifal D'Sola, Andrés Bello Foundation–China Latin America Research Center; Victoria Chonn Ching, Atlantic Council; Francisco Bencosme, independent expert, formerly with U.S. Agency for International Development; Ramon Escobar, Actum; Henry Ziemer, Center for Strategic and International Studies; Vanda Felbab-Brown, Brookings Institution.

April 16, 2026: Public Hearing on
"Pricing the Future: China's Ambitions for Commodity Derivatives Markets"
Washington, DC

Commissioners present: Hal Brands; Taylor Budowich (Hearing Co-Chair); Joshua Hodges; Mike Kuiken, Vice Chair; Leland R. Miller; Reva Price; Hon. Randall Schriver, Chair; Livia Shmavonian (Hearing Co-Chair); Hon. Jonathan N. Stivers.

Witnesses: Johannes Petry, Goethe University Frankfurt; Martin Chorzempa, Peterson Institute for International Economics; Susan Stroud, No Bull Agriculture; Ian Lange, Colorado School of Mines; Michelle Brouhard, Kpler; John Fan,* Griffith University.

April 30, 2026: Public Hearing on
"Taking a Bigger Byte: China's Expanding Strategy for Data Dominance"
Washington, DC

Commissioners present: Hal Brands; Joshua Hodges; Mike Kuiken, Vice Chair; Leland R. Miller (Hearing Co-Chair); Reva Price; Hon. Randall Schriver, Chair; Livia Shmavonian; Chris Slevin (Hearing Co-Chair); Hon. Jonathan N. Stivers.

Witnesses: Nigel Cory, Crowell Global Advisors; Joseph Lin, Twenty; Andrew Lohn, Center for Security and Emerging Technology; Gregory Falco, Cornell University; Chris Miller, Tufts University; Diane Staheli, MIT Lincoln Laboratory; Edward You, EHY Consulting LLC; Yves Moreau,* University of Leuven.

*Submitted material for the record.

APPENDIX IIIA

LIST OF WITNESSES TESTIFYING BEFORE THE COMMISSION

2026 Hearings

Full transcripts and written testimonies are available online at the Commission's website: *www.USCC.gov*.

Alphabetical Listing of Witnesses Testifying before the Commission

Witness Name	Witness Affiliation	Hearing Date
Bencosme, Francisco	independent expert, formerly with U.S. Agency for International Development	March 19, 2026
Bhowmick, Soumya	Observer Research Foundation	February 16, 2026
Brookes, Mike (Rear Admiral)	Office of Naval Intelligence	March 2, 2026
Brouhard, Michelle	Kpler	April 16, 2026
Calhoun, David	Baron Public Affairs	March 2, 2026
Chhabra, Tarun	Hoover Institution	February 16, 2026
Chonn Ching, Victoria	Atlantic Council	March 19, 2026
Chorzempa, Martin	Peterson Institute for International Economics	April 16, 2026
Cory, Nigel	Crowell Global Advisors	April 30, 2026
D'Sola, Parsifal	Andrés Bello Foundation–China Latin America Research Center	March 19, 2026
Erickson, Andrew S.*	U.S. Naval War College	March 2, 2026
Escobar, Ramon	Actum	March 19, 2026
Falco, Gregory	Cornell University	April 30, 2026
Fan, John*	Griffith University	April 16, 2026
Felbab-Brown, Vanda	Brookings Institution	March 19, 2026

*Submitted material for the record.

Alphabetical Listing of Witnesses Testifying before the Commission—*Continued*

Witness Name	Witness Affiliation	Hearing Date
Ford, Lindsey	Center for a New American Security	February 16, 2026
Harjivan, Chan	Duke University	February 16, 2026
Horowitz, Michael	University of Pennsylvania	March 2, 2026
Hsu, Jason	Hudson Institute	March 2, 2026
Lalwani, Sameer	Special Competitive Studies Project	February 16, 2026
Lange, Ian	Colorado School of Mines	April 16, 2026
Lin, Joseph	Twenty	April 30, 2026
Lohn, Andrew	Center for Security and Emerging Technology	April 30, 2026
Madan, Tanvi	Brookings Institution	February 16, 2026
Miller, Chris	Tufts University	April 30, 2026
Moreau, Yves*	University of Leuven	April 30, 2026
Myers, Margaret	Inter-American Dialogue	March 19, 2026
Petry, Johannes	Goethe University Frankfurt	April 16, 2026
Seif, Richard (Vice Admiral)	U.S. Naval Submarine Forces	March 2, 2026
Staheli, Diane	MIT Lincoln Laboratory	April 30, 2026
Stroud, Susan	No Bull Agriculture	April 16, 2026
Studeman, Michael (Rear Admiral, Ret.)	U.S. Navy	March 2, 2026
Wang, Seaver	The Breakthrough Institute	March 2, 2026
You, Edward	EHY Consulting LLC	April 30, 2026
Ziemer, Henry	Center for Strategic and International Studies	March 19, 2026

*Submitted material for the record.

APPENDIX IV
LIST OF RESEARCH MATERIAL

Contracted and Staff Research Reports Released in Support of the 2026 Annual Report

Disclaimer

The reports listed in this appendix were prepared to support the ongoing research and deliberations of the Commission. They have been posted to the Commission's website to promote greater public understanding of the issues addressed by the Commission in its ongoing assessment of U.S.-China economic relations and their implications for U.S. national security, as mandated by Public Law No. 106–398, and amended by Public Laws No. 107–67, No. 108–7, No. 109–108, No. 110–161, No. 113–291, and No. 117–286. The posting of these reports to the Commission's website does not imply an endorsement by the Commission or any individual Commissioner of the views or conclusions expressed therein.

Contracted Reports

China's Gray Zone Threats to Trans-Pacific Undersea Cables
Prepared for the Commission by Andrew Yeh, Zack Liao, Owen Au, and Athena Tong
China Strategic Risks Institute
September 2026
https://www.uscc.gov/research/chinas-gray-zone-threats-trans-pacific-undersea-cables

The Dalai Lama's Succession: Geopolitical Implications and Policy Recommendations for Congress *(adopted by the Commission as a product of the full Commission)*
Prepared for the Commission by Michael Schiffer
Sankhara Strategies, LLC
August 2026
https://www.uscc.gov/research/dalai-lamas-succession-geopolitical-implications-and-policy-recommendations-congress

China's Management of Electromagnetic Spectrum Resources
Prepared for the Commission by Eric Hundman, Ma Bruzzese, Devon Johannesen, John van Oudenaren, and Linda Yang
BluePath Labs, LLC
March 2026
https://www.uscc.gov/research/chinas-management-electromagnetic-spectrum-resources

Commission Spotlights

Protecting Americans from China-Linked Scam Centers: An Update on Emerging Trends
March 2026
https://www.uscc.gov/research/protecting-americans-china-linked-scam-centers-update-emerging-trends

Staff Research Reports, Issue Briefs, and Backgrounders

AI Technology Stack Glossary
October 2026 (Periodically updated)
https://www.uscc.gov/research/ai-technology-stack-glossary

Enabling Iran: A Timeline of China's Role During and After Operation Epic Fury
September 2026 (Periodically updated)
https://www.uscc.gov/research/enabling-iran-timeline-chinas-role-during-and-after-operation-epic-fury

China's Position on Russia's Invasion of Ukraine
August 2026 (Periodically updated)
https://www.uscc.gov/research/chinas-position-russias-invasion-ukraine

China-Russia Fact Sheet: A Short Primer on the Relationship
Written by Joseph Federici, Morgan Peirce, Emma Sampson, and Jessica Chai
August 2026
https://www.uscc.gov/research/china-russia-fact-sheet-short-primer-relationship

The People's Republic of Data: How China Is Turning Data into Capital
August 2026
https://www.uscc.gov/research/peoples-republic-data-how-china-turning-data-capital

PRC in International Organizations
April 2026 (Periodically updated)
https://www.uscc.gov/research/prc-international-organizations

Two Loops: How China's Open AI Strategy Reinforces Its Industrial Dominance
Written by Ngor Luong
March 2026
https://www.uscc.gov/research/two-loops-how-chinas-open-ai-strategy-reinforces-its-industrial-dominance

China-Iran Fact Sheet: A Short Primer on the Relationship
Written by Graham Ayres, Rachael Burton, Joseph Federici, Nicole Morgret, and Lyndi Tsering
March 2026
https://www.uscc.gov/research/china-iran-fact-sheet-short-primer-relationship

China-Venezuela Fact Sheet: A Short Primer on the Relationship
Written by Joseph Federici, Nicole Morgret, Benton Gordon, and Graham Ayres
January 2026
https://www.uscc.gov/research/china-venezuela-fact-sheet-short-primer-relationship

Vying for Quantum Supremacy: U.S.-China Competition in Quantum Technologies
Written by Joseph Federici with contributions from Matthew Dagher-Margosian
November 2025
https://www.uscc.gov/research/vying-quantum-supremacy-us-china-competition-quantum-technologies

Made in China 2025: Evaluating China's Performance
Written by Daniel Blaugher and Benton Gordon with contributions from Matthew Dagher-Margosian
November 2025
https://www.uscc.gov/research/made-china-2025-evaluating-chinas-performance

China's Facilitation of Sanctions and Export Control Evasion
Written by Graham Ayres and Lyndi Tsering
November 2025
https://www.uscc.gov/research/chinas-facilitation-sanctions-and-export-control-evasion

China Bulletins

The Commission periodically publishes a China Bulletin written by Commission staff. The Bulletins are accessible on the Commission's website at: *https://www.uscc.gov/research*

China 201

The Commission periodically publishes China 201s, a series of concise, substantive briefs that draw from the Commission's previously published Annual Reports to Congress. China 201s are accessible on the Commission's website at: *https://www.uscc.gov/research/china-201*

APPENDIX V

CONFLICT OF INTEREST AND LOBBYING DISCLOSURE REPORTING

The Commission seeks to hold itself to the highest standards of transparency in carrying out its mission. In accordance with its policy for avoiding conflicts of interest, Commissioners who believe they have an actual or perceived conflict of interest must recuse themselves from the source or subject matter of the conflict. There were no recusals by Commissioners from any portions of the 2026 Report cycle.

Lobbying disclosure reports filed by any Commissioners who engage in "lobbying activities" as defined by the Lobbying Disclosure Act in connection with their outside employment activities may be accessed at *https://lda.gov/system/public/*.

APPENDIX VI

ACRONYMS AND ABBREVIATIONS

A2/AD	anti-access/area denial
AD/CVD	antidumping and countervailing duty
ADIZ	air defense identification zone
AECA	Arms Export Control Act
AFSL	Anti-Foreign Sanctions Law
AGI	artificial general intelligence
AI	artificial intelligence
AmCham	American Chamber of Commerce
API	active pharmaceutical ingredient
APT	advanced persistent threat
ART	Agreement on Reciprocal Trade
ASEAN	Association of Southeast Asian Nations
ASIA	Autonomous Systems Industry Alliance
ASICs	application-specific integrated circuits
ATP	assembly, test, and packaging
AUKUS	Australia, the United Kingdom, and the United States
AUV	autonomous underwater vehicle
AVIC	Aviation Industry Corporation of China
AWS	Amazon Web Services
BCCs	biotechnology companies of concern
BIS	Bureau of Industry and Security
BOIN	Blue Ocean Information Network
BRI	Belt and Road Initiative
BRICS	Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Indonesia, Iran, and the United Arab Emirates
C4ISR	command, control, communications, computers, intelligence, surveillance, and reconnaissance
CAC	Cyberspace Administration of China
CAS	Chinese Academy of Sciences
CATL	Contemporary Amperex Technology Co., Limited
CBDC	central bank digital currency
CBRC	China Banking Regulatory Commission
CCAC	Central Cyberspace Affairs Commission
CCG	China Coast Guard
CCP	Chinese Communist Party
CCTV	closed-circuit television
CCZ	Clarion-Clipperton Zone
CDB	China Development Bank
CDMO	contract development and manufacturing organization

CEIEC	China National Electronics Import & Export Corporation
CELAC	Community of Latin American and Caribbean States
CENTCOM	U.S. Central Command
CEO	chief executive officer
CERT-In	Indian Computer Emergency Response Team
CETC	China Electronics Technology Group Corporation
CFIUS	Committee on Foreign Investment in the United States
CFTC	U.S. Commodity Futures Trading Commission
CIPS	Cross-Border Interbank Payment System
CISA	Cybersecurity and Infrastructure Security Agency
CJEOC	Central Joint Emergency Operation Center
CLTC	China Satellite Launch and Tracking Control General
CMC	Central Military Commission
CME	Chicago Mercantile Exchange
CMLN	Chinese money laundering network
CMRG	China Mineral Resources Group
CNC	computer numerical control
CNGB	China National GeneBank
CNY	Chinese yuan
COFA	Compact of Free Association
COMRA	China Ocean Mineral Resources Research and Development Association
CoWoS	chip-on-wafer-on-substrate
CPEC	China-Pakistan Economic Corridor
CPPCC	Chinese People's Political Consultative Conference
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CPU	central processing unit
CSRC	China Securities Regulatory Commission
CSSC	China State Shipbuilding Corporation
CSSTA	Cross-Strait Services Trade Agreement
CUDA	Compute Unified Device Architecture
DAS	distributed acoustic sensing
DCE	Dalian Commodity Exchange
DDoS	distributed denial-of-service
DFC	U.S. International Development Finance Corporation
DOD	U.S. Department of Defense
DOJ	U.S. Department of Justice
DPP	Democratic Progressive Party
DPRK	Democratic People's Republic of Korea
DRAM	dynamic random-access memory
DUV	deep ultraviolet
e-CNY	digital renminbi
EAR	Export Administration Regulations
ECFA	Economic Cooperation Framework Agreement
ECRA	Export Control Reform Act of 2018
EDA	electronic design automation
EEZ	exclusive economic zone

ELN	National Liberation Army
EO	Executive Order
ESI	Export Similarity Index
EU	European Union
EUV	extreme ultraviolet
EV	electric vehicle
Eximbank	Export-Import Bank of China
FAI	fixed asset investment
FBI	U.S. Federal Bureau of Investigation
FCC	U.S. Federal Communications Commission
FDI	foreign direct investment
FDPR	Foreign Direct Product Rule
FPGAs	field-programmable gate arrays
FTA	free trade agreement
FTC	U.S. Federal Trade Commission
FY	fiscal year
FYP	Five-Year Plan
G7	Group of Seven
G20	Group of Twenty
GaAs	gallium arsenide
GaN	gallium nitride
GB	gigabyte
GBA	Greater Bay Area
GDP	gross domestic product
GECC	Global Export Controls Coalition
GEOINT	geospatial intelligence
GFEX	Guangzhou Futures Exchange
GIS	geographic information system
GPS	Global Positioning System
GPU	graphics processing unit
GSI	Global Security Initiative
GWh	gigawatt-hours
HBM	high-bandwidth memory
HIMARS	High Mobility Artillery Rocket System
HKD	Hong Kong dollar
HKETO	Hong Kong Economic and Trade Office
HKEX	Hong Kong Exchanges and Clearing
HKMA	Hong Kong Monetary Authority
HNDL	harvest now, decrypt later
HS	Harmonized System
HTS	Harmonized Tariff Schedule of the United States
HUMINT	human intelligence
ICBC	Industrial and Commercial Bank of China
ICDF	International Cooperation and Development Fund
ICS	industrial control systems
ICT	information and communications technology
IDB	Inter-American Development Bank
IEC	International Electrotechnical Commission
IJOP	Integrated Joint Operations Platform
ILD	International Liaison Department
IMF	International Monetary Fund
InAs	indium arsenide
INDUS-X	India-U.S. Defense Acceleration Ecosystem

INE	Shanghai International Energy Exchange
InGaAs	indium gallium arsenide
InP	indium phosphide
IODEX	Platts Iron Ore Index
IoT	Internet of Things
IP	intellectual property
IP	internet protocol
IPO	initial public offering
ISA	International Seabed Authority
ISO	International Organization for Standardization
ISPs	internet service providers
ISR	intelligence, surveillance, and reconnaissance
ISRO	Indian Space Research Organisation
IT	information technology
ITAR	International Traffic in Arms Regulations
ITU	International Telecommunication Union
IUU	illegal, unreported, and unregulated
KMT	Kuomintang
KSM	key starting material
LAC	Line of Actual Control
LCC	Littoral Combat Command
LegCo	Legislative Council
LiDAR	light detection and ranging
LLDPE	linear low density polyethylene
LLM	large language model
LME	London Metal Exchange
LPU	Landing Platform Utility
MAC	Mainland Affairs Council
MFN	most favored nation
MIIT	Ministry of Industry and Information Technology
MOD	Ministry of Defense
MOF	Ministry of Finance
MOFCOM	Ministry of Commerce
MOU	memorandum of understanding
MPS	Ministry of Public Security
MSRA	Master Ship Repair Agreement
MSS	Ministry of State Security
MW	megawatts
MWh	megawatt-hours
NATO	North Atlantic Treaty Organization
NDA	National Data Administration
NDAA	National Defense Authorization Act
NDRC	National Development and Reform Commission
NFRA	National Financial Regulatory Administration
NIH	National Institutes of Health
NSB	National Security Bureau
NSFC	National Natural Science Foundation of China
NSL	National Security Law
NTD	New Taiwan dollar
NYMEX	New York Mercantile Exchange
OECD	Organisation for Economic Co-operation and Development
OFDI	outward foreign direct investment

OPEC	Organization of the Petroleum Exporting Countries
OSINT	open-source intelligence
OSNS	Office for Safeguarding National Security
PACE	primary, alternate, contingency, emergency
PADFAA	Protecting Americans' Data from Foreign Adversaries Act
PBOC	People's Bank of China
PCB	printed circuit board
PII	personally identifiable information
PLA	People's Liberation Army
PLI	Production Linked Incentive
PNT	position, navigation, and timing
PoS-2	Power of Siberia 2
PP	polypropylene
PRA	price reporting agency
PRC	People's Republic of China
PTA	purified terephthalic acid
PVC	polyvinyl chloride
PX	paraxylene
QFI	qualified foreign investor
R&D	research and development
RAN	radio access network
RCEP	Regional Comprehensive Economic Partnership
REE	rare earth element
RF	radio frequency
RMB	renminbi
RORO	roll-on roll-off
ROV	remotely operated vehicle
ROW	rest of world
SAIL	South Atlantic Inter Link
SAMR	State Administration for Market Regulation
SCO	Shanghai Cooperation Organization
SCOMET	Special Chemicals, Organisms, Materials, Equipment, and Technologies
SCS	Social Credit System
SEC	U.S. Securities and Exchange Commission
SGX	Singapore Exchange
SHFE	Shanghai Futures Exchange
SiC	silicon carbide
SIGINT	signals intelligence
SLTE	submarine line terminal equipment
SME	semiconductor manufacturing equipment
SMIC	Semiconductor Manufacturing International Corporation
SoC	system-on-chip
SOE	state-owned enterprise
SOUTHCOM	U.S. Southern Command
SPV	special purpose vehicle
SSBN	nuclear-powered ballistic missile submarine
SSGN	nuclear-powered guided missile submarine
SSN	nuclear-powered attack submarine
TAR	Tibet Autonomous Region
TB/s	terabytes per second

TECHINT	technical intelligence
TFP	total factor productivity
TOPS	trillions of operations per second
TPP	total processing performance
TPU	tensor processing unit
TRA	Taiwan Relations Act
TSF	total social financing
TSMC	Taiwan Semiconductor Manufacturing Company
TWh	terawatt-hour
UAE	United Arab Emirates
UAS	unmanned aerial system
UAV	uncrewed aerial vehicle
UFWD	United Front Work Department
UK	United Kingdom
UN	United Nations
UNAM	National Autonomous University of Mexico
UNCLOS	UN Convention on the Law of the Sea
USGS	U.S. Geological Survey
USN	United States Navy
USV	uncrewed surface vessel
UUV	uncrewed underwater vehicle
VC	venture capital
WAIC	World Artificial Intelligence Conference
WAICO	World AI Cooperation Organization
WDO	World Data Organization
WSDRC	Whole-of-Society Defense Resilience Committee
WTO	World Trade Organization
YTD	year-to-date

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