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OVERVIEW OF THE US/ CHINA COMPETITION

There was once a time when it was assumed that China would move toward liberal democratic institutions and, with that, pursue a more open capitalist economy. This assumption was based on the argument that as China grew richer through capital investment and market-driven economic expansion, its population's values and outlook would become more Westernized. However, this assumption, common a couple of decades ago, ignored a critical reality—the Chinese Communist Party (CCP) maintains firm control over China and is dedicated to its own values, including leveraging China's sense of history and destiny to sustain its grip on power. As Jonathan Ward attests in *China's Vision of Victory*, the CCP would never allow a turn to liberal democratic values or institutions.

There was also a time, perhaps just a decade ago, when one could safely assume that China's technological advances in the military or industrial sectors were largely based on stolen or appropriated Western technology, and therefore inferior to the capabilities of the United States and its allies. This assumption also ignores China's deliberate strategic policy to "innovate to dominate."²

These assumptions have now been thoroughly debunked, even if some still struggle to internalize the full reality. The current situation and implications are detailed in a series of recent major reports, both official government assessments and independent studies.³ A listing of some of these studies and reports is provided in "For Further Reading" at the end of this article.

The reality is that US national security relies on a strong economy as well as military strength, while China is engaged in both economic warfare and a military build-up that contest US interests. China has a whole-of-nation, global industrial strategy shaped by an approach of "military-civil fusion."

China is now a near-peer competitor to the United States in some domains, a full peer in others, and, alarmingly, a "super-peer" in too many sectors. China's competitiveness is enabled by its robust industrial base and expansive global supply chains. Furthermore, China is now providing military and economic support to Russia, Iran, and North Korea—forming an "Axis of Upheaval," which acts directly and through proxies to threaten US interests worldwide. While the United States spends more than China on defense (when adjusted for purchasing power), China has had considerable

success in military and economic developments, increasing the economic exchange ratio—what it costs the US to respond to the threats posed by China and its Axis of Upheaval. The US needs a strategy to effectively compete with and counter the CCP's momentum toward dominance in both economic and military spheres. Until such a strategy is developed and implemented, China will continue to advance while the United States dithers.

A new US strategy (superseding recent National Defense Strategy pronouncements) must begin with a realistic assessment of the strengths and weaknesses of the rival nations' economic and military might. The strategy must incorporate effective statecraft that leverages America's advantages and requires greater attention to economic statecraft as a core pillar of national security.

CHINA'S ECONOMIC STATECRAFT

China's GDP in 2024 was reported at over \$18 trillion, having grown by 5.0% year over year. By comparison, the US GDP stands at \$29 trillion, growing at 2.8% per year. However, when adjusted for purchasing power parity (PPP), China's effective GDP surpasses that of the US, according to the CIA World Factbook. This suggests that China, as a nation, has a higher level of economic activity from a production-based accounting of GDP, because similar goods and services cost less in China than in the United States.

Driven by industriousness and strategic decision-making, China now controls over 60% of the world's top 100 ports¹⁰ and dominates in technology supporting operations and logistics management, including software for bills of lading and crane control systems.11 In networking technology, Huawei holds approximately 35% of the global market¹² and invests heavily in research and development, far beyond its nearest global competitor.¹³ The CCP made the strategic commitment to dominate global processing of critical materials, and China currently produces roughly 80% of the world's processed minerals such as tungsten, germanium, gallium, lithium, antimony, rare earth elements, and graphite.14 Through its "Belt and Road Initiative," China has secured access to key mining assets, with raw materials shipped to China for processing. China processes nearly all global supplies for 30 elements in the periodic table, including 90% of magnesium and 80% of lithium, tungsten, and nickel.¹⁵ Chinese manufacturers secure their supply chains through this vertically integrated strategy, from raw elements to finished systems and subsystems, although they still lack indigenous capabilities in certain advanced semiconductors—due, in part, to US sanctions. China is considered to have the best commercial nuclear technology for operations at scale, ¹⁶ while US nuclear power generation remains flat with no new large-scale commercial projects.¹⁷ However, the United States is making great strides in developing small modular reactors that have great potential for smaller-scale implementations.

China fuels its investment and development by educating large numbers of students in STEM fields, including many who graduate from Western universities.¹⁸ Each year, China produces roughly 80,000 STEM PhDs—both domestically and internationally—more than double the number of US citizen STEM PhDs.¹⁹ China has particularly emphasized robotics and automation enabling low-labor manufacturing, in response to the country's declining fertility rate and population distribution challenges.

According to Jonathan Ward,²⁰ China's economic statecraft is founded in its ruler's "vision that is geographically and materially grander than anything their forebears could have imagined. Belt & Road is the geographical foundation for their 'Common Destiny for Mankind.' ... The Community of Common Destiny for Mankind is not only an economic concept, but also a security concept. It is a concept of international order built around China's comprehensive national power, far reaching international influence, and growing military power."21 ... "China liberalizing in a western manner places the Communist Party on... 'death ground.'"²²



These investments give China leverage on the global stage to pursue its strategic goals. For example, China has restricted exports of certain materials for military, economic, or retaliatory purposes—essentially employing supply chain warfare.

China's worldwide reach expanded greatly from 2005 to 2025, largely through investments tied to the "Belt and Road Initiative" (BRI).²³ The combined value of these investments, not adjusted for PPP, is around \$2.5 trillion over the period, including \$200 billion invested in US assets, involving equity in corporations and property, often with controlling interests.²⁴ Many of these investments are structured as loans collateralized by rights to critical infrastructure. The 10th Anniversary Belt and Road Forum for International Cooperation in Beijing (October 2023) was attended by representatives from 140 nations and 30 global organizations. At the forum, it was claimed that the BRI has lifted 40 million people out of poverty and generated \$19 trillion in trade value.²⁵ These investments give the CCP tremendous leverage through access rights to vast global critical infrastructure—telecommunications networks, ports, transportation networks, and more.

Strategic investments notwithstanding, China has huge challenges—debt, demographics, and deflation (the "three D's"). ²⁶ Some have speculated that China has reached its peak. ²⁷ These challenges do not negate the leverage it has already attained, but may bode ill for China's path forward. China's financial challenges only motivate the country to export more, manipulating markets in which it has a dominant position—such as 5G telecommunications and critical minerals—undercutting US competitiveness. The United States, however, faces its own challenges.

THE TOOLS OF US ECONOMIC STATECRAFT

The US GDP (\$29 trillion) is the largest in the world. At least 75% of US output is in the services sector: such as healthcare, retail, and hospitality. The United States leads in semiconductor design (though not manufacturing), artificial intelligence technologies, and cloud infrastructure. However, the US lacks a global 5G telecommunications offering, a global port operations company, critical mineral processing capabilities, and robust commercial nuclear development capability—areas it has largely ceded to competitors over the past two decades. Other sectors, such as solar cells and batteries, are also dominated by China, particularly in

processed materials and manufacturing. The global auto industry is now aggressively competitive, challenging US exports of automobiles.²⁸

The US also faces huge challenges, which can be labeled as 2D-I-S: debt, demographics, inflation, and supply chain risk. US debt includes the \$36 trillion national debt and unfunded mandatory spending obligations, such as interest payments, Social Security, and Medicare, which, taken together could approach 600% of GDP—a level far worse than China's.²⁹ The current US fertility rate is around 1.6 (slightly higher than China's but still well below the replacement rate of 2.1).30 The inflation rate has declined from multi-generational highs, with the consumer price index averaging 8% across 2022—the highest levels since the early 1980s. Costs have cumulatively increased by around 25% since 2020. Most importantly, the US faces substantial supply chain vulnerabilities—whether due to limited production capacity or restricted access to raw materials—often relying on single-source suppliers, including many from adversarial nations.31

The US has attempted to address these challenges, but generally in a reactive manner without an integrated global strategy. For example, the US has identified domestic deposits of lithium ore for supply chain resilience, but the US lacks lithium processing plants and currently produces less than 2% of the global supply of processed lithium.³² The US has applied export controls to slow China's development of Al technologies, thus incentivizing China to develop its domestic capabilities.³³ Tariffs applied to China give US developers some breathing room to fund their own developments, but success requires an actual competitive product.34 Tariffs on other countries (e.g., the BRICS) can also encourage them to de-leverage the use of US dollars, influencing global exchange rates and undermining the dollar's status as the world's reserve currency. In the meantime, China has significantly reduced its holdings of US Treasury bonds—from a record peak of \$1.7 trillion in 2014 (when total US debt was only \$17 trillion) to under \$800 billion in 2024—now less than 2.5% of the \$36 trillion US debt.35

The United States is also in the process of reshoring manufacturing for key industries—such as advanced semiconductor manufacturing (via the CHIPS Act)—by awarding grants to specific companies to subsidize construction.³⁶ For some sectors, the idea of "friendshoring" has been suggested, for example, as part of the AUKUS agreements or involving industries in Mexico and Canada.³⁷ However, friendshoring can become an issue if not carefully navigated—for example,

cartel influence in Mexico and China's growing development investment fund in Canada complicate collaborations. All these bilateral and multinational relationships are challenged by tariff policies, which can both promote and frustrate collaborations.



While the US may appear disadvantaged in terms of the tools available for economic statecraft, it retains certain comparative advantages over China. These strengths include a vibrant set of capital markets, a superior technology development ecosystem (innovation), and a diverse network of allies and partners worldwide. The US must develop a coherent strategy that effectively capitalizes on these strengths.

TOOLS BASED ON COMPARATIVE ADVANTAGES

Leverage US Capital Markets

The US has by far the biggest and most mature capital markets in the world, with well over \$100 trillion in equity³⁸ and credit assets.³⁹ These markets can be leveraged to accelerate the adoption of innovation to rapidly expand military capabilities, scale production capacity, revitalize infrastructure, and reinforce supply chains.

Today, approximately 80% of American research and development (R&D) is conducted by academia and commercial companies.⁴⁰ Efforts to tap into this R&D for national security have focused largely on small tech firms co-funded by venture capital. However, much of the national R&D represents investments by large- and mid-size tech companies. Currently, the Department of Defense (DoD) directs a large proportion of its scientific funds for R&D (appropriations 6.1 and 6.2) internally to its own research base—which includes government labs (Research and Development Centers RDECs), and Federally-funded Research and Development Centers (FFRDCs) and University-Affiliated Research Centers (UARCs)—leaving little available for open competition with private technology companies. As a result, DoD underfunds private-sector technology development and transition to production, a shortfall that could be mitigated by effective use of private capital.

Similarly, US national security manufacturing infrastructure is antiquated, and modernizing it has proven slow, even at higher costs. For example, the Shipyard Infrastructure Optimization Program (SIOP) has experienced cost and schedule failures, with costs more than doubling to over \$50 billion with a much longer horizon. Poor and outdated test and evaluation infrastructure also causes delays in development and operational testing. Consequently, the fielding of new weapon systems is delayed, and force modernization and warfighter readiness suffers.

To leverage the US R&D advantage driven by private capital, the DoD must compete for capital on a risk-adjusted return basis. It should use its tools to reduce risk and present competitive returns. These tools include long-term contracts, off-take agreements to guarantee future purchases, take-or-pay agreements, and co-investments. In short, the DoD must present projects to the market-place that can outperform stock buybacks or shareholder dividends and distributions.

De-risk Supply Chains

The US has far too many single-source overseas suppliers, particularly involving companies in adversarial countries. Companies in China are particularly problematic because they can be easily controlled or manipulated by the Chinese government. Sometimes, single-source suppliers are found many layers under the prime integrator—down to the critical materials in a part's chemical composition or lines of software code, whether direct or embedded. This vulnerability is only evident by untangling the bill of materials across hardware, services, and software to identify lower-tier suppliers, thereby exposing the single source.

Manual risk analysis is often too complex and subjective, but automated tools can streamline the process. Many commercial companies use advanced commercial analytical software to assess supply chain risks.⁴² Data are assembled into massive databases as supplier decisions are made at all levels. For the DoD, the Intelligence Community, and even commercial firms, it is important to identify hardware and software suppliers controlled by adversarial nations. This could be accomplished through policies and guidelines outlined in a digitized "supply chain risk assurance playbook," made available to program managers, analysts, and program executives. Ideally, this playbook would be harmonized with digital engineering practices, tagging digital twins during the design and manufacturing process. The use of digital engineering techniques is increasingly important in both government and commercial product development.⁴³

The digital policy playbook should identify vulnerabilities and suggest risk-reducing alternatives. These might include research objectives to develop new solutions using different components and elements. For example, program officers might identify a vulnerability due to the use of antimony (Sb), which is now subject to a Chinese export embargo. It would be useful to identify suitable alternative materials (e.g., alloys) that do not rely on antimony, and the playbook might even suggest potential alternatives. Additionally, global companies and suppliers can be qualified by the government or tagged with risk factors, while critical materials and specialized supplies could be similarly risk-quantified. The resulting risk analysis would benefit the US government, investors, and the broader industrial base.

At the same time, there need to be faster pathways from R&D to productization for alternative sources. Products and materials need to be tested and qualified, and the United States could expand existing military ranges to permit a wider variety of tests and experiments on federal lands. For example, the nation might establish a "caustic zone" (perhaps within the Southwest Range Complex) where critical mineral processing capabilities are developed and pilot quantities produced for defense programs, supported by expedited environmental permitting on federal land.

Press Allies and Partners to Join In

The US enjoys good relations with many countries, suitable as allies and partners, to serve as a bulwark and deterrent against the "Axis of Upheaval." These US alliances can mutually serve both military and economic goals.

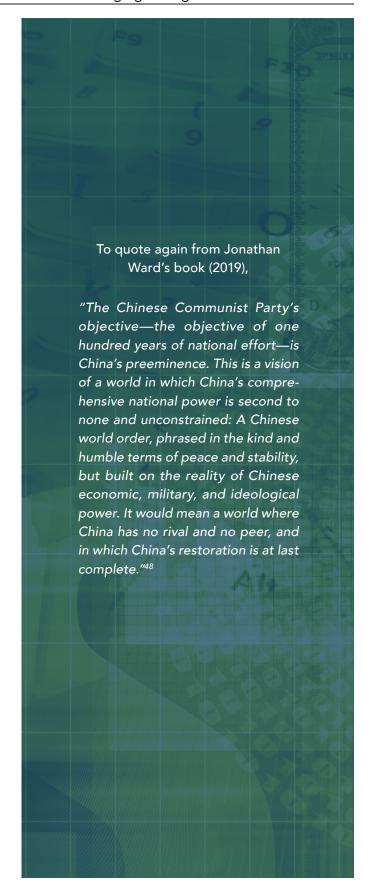
However, the United States generally overestimates the power and commitment of its allies and partners. For example, the European Union's Draghi Report on competitiveness recommended that Europe invest an additional €800 billion per year to reverse its declining industrial base.⁴⁴ Europe's real GDP growth has been anemic of late—0.8% in 2024, with a modest projection of 1.2% in 2025.⁴⁵ Meanwhile, China's approximately 150 bilateral financial agreements associated with its Belt and Road Initiative—many of which are collateralized by rights to critical infrastructure assets—undercut the commitment of many potential partners, often promoting Chinese exports by establishing markets and manufacturing plants outside China.⁴⁶

The AUKUS accords provide a model for cooperation among US allies on both military and economic affairs, 47 albeit involving only the UK and Australia. Other countries have shown keen interest, including Canada, New Zealand, South Korea, and Japan. Global competition requires expanding these types of accords and making them effective. Pillar Two of the AUKUS agreement is an especially poignant example in its embrace of cooperative activities aimed at developing and fielding advanced technologies and capabilities. These partnerships require following up on the NATO members' commitments to increase defense spending. As an incentive, the US defense industrial base should be expanded to include partner defense industrial base companies as prime contractors and key contributors at various tiers of the supply chain for weapons systems development and procurement programs.

THE STUBBORN FACTS

When considering an assessment of the state of the US industrial base against the Chinese industrial base, one must honestly confront the following facts:

- Despite published reports that state that China's defense budget is less than \$300 billion per year compared to the US budget of over \$800 billion, the Chinese military out-invests the US military in research and procurement when adjusted for PPP, even without accounting for the intellectual property it steals every year. Additionally, the Chinese defense budget grew by 7.2% from 2023 to 2024, and similarly from 2024 to 2025, during a period of flat inflation. In contrast, US defense spending has grown closer to 2% nominally, which translates to a decline in real purchasing power.
- The US is home to six of the world's top twelve defense companies (by defense revenue), while China has five. Those six US companies generate twice the defense revenue of those five Chinese companies, but the total revenues are comparable when adjusted for PPP.
- However, those five Chinese companies have nearly 50% more total revenue (commercial plus defense) than the six US companies (before PPP adjustment), demonstrating China's success in a dual-use approach under military-civil fusion.
- China's defense industrial base includes multiple development and production programs for equipment in all domains. These efforts are financed, in part, by CCPprovided working capital, effectively giving China a triple-size defense industrial base compared to the US's (in PPP terms).
- China has assured its supply chains in nearly all strategic areas through binding bilateral financial agreements with nearly 150 nations, securing access to global critical materials, which are then processed in mainland China.
- China has also derisked its energy needs by controlling half of the world's exportable oil production through its influence within the expanded BRICS coalition and Russia's dominant role in OPEC. China also holds a dominant position in solar panel and battery production.



LEVERAGING STRENGTHS

So, how does the United States stop China from achieving an objective that is clearly destructive to US interests and society? The answer must be to exercise tools of economic statecraft—effectively and urgently.

The United States needs an overarching national strategy and doctrine for economic statecraft.⁴⁹ In crafting the strategy and developing the doctrine, the US needs to recognize its strengths and not amplify weaknesses. These strengths include the world's most advanced technology development ecosystem, large and open capital markets, systems and tools that can identify and analyze supply chains, and allies and partners with deep connections to the US in military and economic affairs. Ultimately, this strategy must be implemented across the government and directed by an organization with the authorities to orchestrate and deploy the full range of economic statecraft tools.

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