

Marcellus

POLICY ANALYSIS

Spring 2021 - Marcellus Policy Analysis No. 9

Economic Statecraft and U.S.-China Strategy

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EXECUTIVE SUMMARY

In the last ten years, a hawkish view on China among U.S. foreign policy makers has replaced the counter-terrorism national security paradigm, with a renewed focus on great power competition in the emerging and critical technology space. A prior view positioned China as a developing economy whose inclusion in the U.S.-led international global order by means of trade and institutional participation would lead to eventual democratization. However, China's rapid development and ongoing commitment to its Leninist-authoritarian political model has displaced this approach with one greatly skeptical of Chinese evolution away from the political status quo. China is now viewed as a fully emerged "tiger economy" accused of a range of malign actions intended to undermine the leading position of the United States and its allies, including forced technology transfers, unfair trade practices, theft of intellectual property (IP), cyberattacks, and coercive and retaliatory market behaviors. U.S. reactions to the Chinese threat have included ever-expanding trade, financial and supply chain actions, designed to control risks to U.S. national security in emerging technologies critical to global power projection of the future.

Despite China's increasing threat, it remains one of U.S.'s most significant trading partners, complicating U.S. national security objectives used to balance China's growing global influence. Also complicating the paradigm are structural issues in the Chinese economy, including an aging population, rising debt levels, and an opaque business environment relying on state support. As a result, the "New Cold War" foreign affairs paradigm presents a dangerous slippery slope by initiating unpredictable retaliatory actions and risking a permanent cooling of cooperation with China on a range of strategic issues instrumental to a secure global future, such as climate change and global pandemics. In fact, "success" in great power competition defined by weakening Chinese economic vitality would impact the trajectory of the entire interconnected global economy, including that of the United States. China has simply become "too big to fail."

To advance U.S. national security interests using tools of economic statecraft thus requires a careful balancing act that tempers Chinese great power competitive advantage in key areas of concern, without undermining Chinese economic balance. U.S. foreign policy makers should refrain from losing sight of China as a crucial strategic partner in a range of areas of cooperation, while using control actions to ameliorate strategic threats to U.S. national security in areas such as critical supply chains, protection of intellectual property and cybersecu-

riety. Additionally, a major part of the China strategy should focus within by re-investing in the U.S. emerging technology industrial ecosystem by supporting technological innovation and research-to-market development, and a robust educational system drawing global talent. Equally important is the on-going active engagement with allies and global partners to define and disseminate technology standards based on liberal international values promoting democracy, freedom, and an open, well-regulated market.

The Chinese Threat in Global Technological Competition

The “Fourth Industrial Revolution”

Chinese leadership has embraced the idea of the “Fourth Industrial Revolution,” introduced at the World Economic Forum, that describes national success predicted in the next few decades in areas of disruptive technological innovation in artificial intelligence, big data, quantum, and biotechnology that would define the global superpowers of the future.¹ According to China hawks and recent assessments of the US national security community, China stands at a historic window of opportunity, capable of replacing the United States as a global leader in key emerging technologies that will define the power landscape of tomorrow, such as high speed internet (5G networks), sensors, telecommunications, AI, robotics, and smart city infrastructure.² To achieve success in the race to the top in this crucial period, Chinese leadership has focused state support on R&D investment and industrial policies that would advance technological development in areas of emerging technologies, develop robustness of its manufacturing capabilities and centrality to global supply chains, as well as implement growing influence on global governing bodies setting technology standards.³

China’s Development Plan

China has implemented a number of science, business, and technology development national plans to achieve a leadership role in the Fourth Industrial Revolution. Starting in 2006, China’s trajectory in science and technology development included plans for indigenous innovation and absorption of imported technologies. In 2010, China promulgated the Stra-

tegic and Emerging Industries (SEI) program, aimed at identifying revolutionary emerging technologies to surpass international competitors. The program included next generation information technology, high end equipment manufacturing, new materials, new energy vehicles, energy efficient technologies, and new energy. The “Made in China 2025 Plan” targeted high-tech industries, information technology, smart manufacturing, and other emerging technologies for indigenization. The plan relied on the premise that current Chinese manufacturing capabilities and centrality to the global supply chains in key technologies gives China a tremendous competitive advantage that can override U.S. research and development capabilities in high-tech products in the future.⁴ The goal of the plan was to strengthen the domestic supply chain by reducing reliance on foreign components and firms. Additionally, the plan aimed to win global market share by elevating local high-tech companies over foreign competitors through a quota system, presumably to push out or displace leading competitors like the US.⁵

In 2016, China moved forward under the Innovation-Driven Development Strategy (IDDS) that identified a coming technological revolution and aimed to correct China’s weaknesses in order to set it on a path to global leadership. The program uses legal and illicit channels to acquire foreign technology know-how, and encompasses the SEI plan, the Made in China 2025 plan, the Internet Plus plan, military-civil fusion policies, and the Artificial Intelligence plan.⁶ Most recently, China’s National People’s Congress appropriated \$1.4 trillion in the next five years to build 5G networks, install cameras and sensors to develop smart cities, and utilize the smart city network in manufacturing.⁷

China Wants a Seat at the Table

In the last ten years, China has advanced efforts to use its growing economic influence to position its representatives in global technology standards-setting institutions. China currently has leadership responsibilities in global standards bodies like the Third Generation Partnership Project (3GPP) and the International Telecommunications Union (ITU).⁸ In 2020, China released its “Standard 2035 Plan” to advance Chinese-defined technology standards globally. Additionally, under the Belt and Road Initiative (BRI),

a non-formal arrangement that relies on bilateral deals with developing nations, China's lending and infrastructure development project have allowed it to use its leverage as a financier to influence technology standards and install its own technology systems or provide funding for them in developing nations.⁹

A Global Incumbent or a Paper Dragon?

Contracting GDP

Despite China's economic growth and success in key technological development, its path towards global superpower status is complicated by structural problems obscured by a repressive state that uses control over the press to promote narratives of economic success and hide areas of failure. China's rapid growth, stemming from resource-intensive manufacturing, exports and the use of low-paid labor, is reaching its limits¹⁰ due to a declining and aging labor force,¹¹ diminishing returns and productivity, and rising debt incurred to sustain rapid development.¹² In the past decade, China's debt more than doubled, reaching over three hundred percent of GDP in 2019. High debt levels make it harder to invest in transitioning from low-end manufacturing to high-value added production, which is key in continuing its upward economic trajectory.¹³ In 2020, China's GDP contracted 6.8 percent, the worst economic performance since 1992, and the first contraction of the Chinese economy since the Mao era, in part due to growing debt at local government and national levels.¹⁴

Demographics

Due to falling marriage and fertility rates, China's working age population has fallen steadily since 2011, while the proportion of retirees (people over 60) has risen from 10.4% in 2010 to 17.9% in 2018. Some estimates show that by 2050, one third of China's population will enter retirement, coupled with warnings from the Chinese Academy of Social Scientists' that China's pension fund can go into the red by 2035.¹⁵ These demographic trends can limit the vibrancy of the economic market as fewer working age adults participate in the labor market and consumption, putting further pressure on China's economic growth.¹⁶

Banking Sector Risks and Opportunities

China's banking sector is facing a heavy debt burden and under-capitalization exacerbated by market distortions such as government subsidies, local content requirements, and market access restrictions to foreign firms.¹⁷ In addition to prior accumulated debt, the Chinese government has instructed banks to advance loans in order to keep struggling companies afloat during the COVID-19 pandemic.¹⁸ To resolve the debt crisis, China's strategy includes welcoming foreign capital - Chinese securities are now being included in global investment indices, allowing Chinese firms access to billions in foreign capital.¹⁹ However, the structure of the authoritarian state, an economy distorted by state support, and a regulatory system that is incapable of eliminating bad actors continues to challenge investors seeking fair business dealings and stability in the market.²⁰ As a result, the increasingly intertwined Chinese financial global integration and lack of compliance with financial auditing standards for U.S.-listed Chinese companies can lead to increased levels of risk for American firms and the entire global financial system.

China's current financial system is dominated by state-owned banks favoring state-owned enterprises and privileged companies, leaving other Chinese firms without recourse in times of economic contraction. To support "outsider" firms, a shadow banking sector has emerged to fill the financing gap, resulting in increasing financial risk across China's financial ecosystem.²¹ Partially regulated since 2016, government controls on shadow banking have been eased as a result of the COVID-19 pandemic and the dire state of companies that cannot get state-supported loans, demonstrating an on-going structural problem in times of economic crisis.

Because of China's increasing reliance on global financial capital, there is a tremendous opportunity to connect participation in the markets controlled by U.S. and allies to increased financial and national security standards and regulations and to strengthen a beneficial trade relationship with China. Despite an increasingly contentious relationship, in 2020 the U.S. and China signed a Phase One agreement, securing China's commitment to provide greater market access for foreign financial services, as well as to buy \$468 billion of U.S. products and services in the next two

years.²² The agreement also included commitments from China not to elicit technology transfer under duress, provide stronger intellectual property (IP) protection for U.S. firms, and reduce non-tariff barriers to trade for U.S. agricultural products.²³

The Trade Connection

Financial and trade interconnectedness in the globalized world economy between China and the U.S. is significant and continues to grow. In 2020, China was the largest U.S. goods trading partner, and the third largest U.S. export market, as well as the largest source of U.S. imports.²⁴ In particular, China's government is heavily involved in both purchasing and financing for top U.S. exports critical to national security, including aircraft, semiconductor chips and related equipment, as well as agricultural products.²⁵ In turn, China is heavily reliant on American semiconductor designs and licenses for its semiconductor supply chain.²⁶ Additionally, recent estimates show that U.S. investors hold \$100 billion of Chinese debt and \$1.1 trillion of Chinese equities, while Chinese investors hold \$1.4 trillion in U.S. debt and \$720 billion in U.S. equities. China is also the second largest foreign holder of U.S. Treasury securities, at \$1.05 trillion as of 2020.²⁷ As a result, discrepancies in U.S.-China trade markets or in various critical supply chains can have immediate negative effects on American trade and business interests, as well as on the supply of key goods needed to sustain the American economy and national security.

China's Research Progress

China's political system, modeled on a Leninist-authoritarian model, regularly introduces ambitious research plans in every aspect of the economy as part of its propaganda machine. Despite concerted state efforts to advance China's research and development capacity, China continues to lag in a number of key areas. Chinese firms continue to remain dependent on foreign technologies and Chinese R&D-to-sales revenue spending is four times below U.S. firms.²⁸ China's research sector also suffers from widespread fraud, with China leading the world in retractions of scientific articles.²⁹ Additionally, widespread corruption has resulted in two thirds of the R&D output being lost to the "cost of doing business."³⁰

In electronic design automation (EDA) (software tools and capital equipment crucial to the development of semiconductors that are integral components in a range of products, including cell phones, driverless cars, 5G infrastructure, artificial intelligence, and F-35 fighter jets), the U.S. and its allies significantly outpace China in crucial production capabilities. EDA tools are dominated by U.S. companies Cadence, Synopsys, and Mentor Graphics. Additionally, American semiconductor capital equipment production accounts for fifty two percent of the global industry in 2018.³¹ The U.S. also monopolizes production in areas critical to semiconductor manufacturing – optional mask-making lithography, bevel edge removal, gate stack tools, and ultra-high dose doping equipment, while maintaining a near monopoly in high-end products in areas of etch, metrology, and inspection.³² In contrast, Chinese vendors are not globally competitive with the American producers in these areas. In 2019, the three Chinese suppliers of wafer fabrication equipment (AMEC, NAURA, and ACM) held total global market share of 1.2%, while the other six top global suppliers account for 73.3% of the global market (including 39.1% for U.S. firms and 16.7% for China's competitor and U.S. ally Japan).³³

U.S. Tools of Economic Statecraft

Trade Controls

Between 2018 and 2021, the Trump Administration has actively addressed concerns regarding Chinese great power competition by using tools of economic statecraft and other policies to target most pressing risks to U.S. national security. In 2018, the U.S. imposed tariffs on Chinese imports amounting to \$250 billion, as a result of a conclusion by the U.S. Trade Representative that the Chinese government engages in and promotes forced technology transfers, cybersecurity hacks to gain access to U.S. IP and trade secrets, discriminatory licensing practices, as well as state-funded acquisitions of U.S. assets.³⁴ Starting in 2020, Presidential Executive Orders have sanctioned Communist Chinese Military Companies (CCMCs), Military End Users and Chinese Military Intelligence End Users (MIEUs), citing their connection to the Chinese military industrial complex and its military-civil fusion policies, Chinese hostile activity in the South China Sea, and human rights abuses in

Xinjian province. Additionally, Congress has enacted The Export Controls Act, which extended permanent legal export controls on commercial and dual-use items that have civilian and military applications in key emerging and foundational technologies, and cyber items critical to U.S. national security, including cybersecurity, artificial intelligence (AI), machine learning, autonomous vehicles, 3D printing, semi conductors, robotics, nanotechnology.³⁵ The Department of Commerce's Bureau of Industry and Security Export Administration Regulations (EAR) have also prohibited the unlicensed export, re-export, and transfer of certain commodities, software, and technology items to China if they are intended for military end uses.³⁶

To counter Chinese competition in the telecommunications industry, including development of 5G networks, a range of U.S. economic and trade tools have targeted major Chinese telecommunications giants Huawei and ZTE to prevent China's implementation of 5G technology in the U.S., allied countries and globally. Huawei and ZTE were placed on the U.S. Dept of Treasury Entity List in 2019 for violating U.S. trade sanctions on Iran and North Korea, and Huawei was placed on the Entity list for actions anti-theftical to US national security.³⁷ Building on these actions, Section 889 of the 2019 National Defense Authorization Act prohibited the federal government from contracting with any entity using telecommunication equipment from five Chinese companies including ZTE and Huawei.³⁸

Capital Markets

In the area of capital markets, the Holding Foreign Companies Accountable Act requires Chinese firms that apply to be listed on U.S. stock exchanges to report ties to the government and authorizes delisting actions in case of state ties that may impact the free market. As of a November 2020, Executive Order 13959 prohibits U.S. persons from purchasing or selling publicly traded securities, or their derivatives of Chinese military companies (CCMCs).³⁹ Additionally, in 2019, the U.S. blocked China Mobile and China Telecom, the main telecommunication providers in China, from participation in the U.S. market, cutting off their access to U.S. and global capital.

Investments

In response to increasing Chinese threats to U.S. national security from foreign investment in U.S. firms, Congress has increased the authority of the Committee on Foreign Investment in the U.S. (CFIUS) to conduct reviews of transactions with Chinese firms, with a particular focus on technology, infrastructure and data (TID) businesses in the U.S. that have Chinese links.⁴⁰

Supply Chains

Most recently, President Biden's February 2021 Executive Order on America's Supply Chains has identified a wide range of supply chain threats, including semiconductor manufacturing, high-capacity batteries such as electric-vehicle batteries, strategic materials used in weapons production such as rare earth elements, as well as critical healthcare items.⁴¹ The Executive Order instructs executive agencies to reassess their operations in order to identify and counteract these threats using a variety of economic and other policy tools.

Semiconductor Chips

To undercut the development of domestic Chinese semiconductor production, the U.S. has used tools of economic statecraft to influence the market behavior of Taiwan Semiconductor Manufacturing Co. (TSMC), a Taiwan-based semiconductor giant supplying a significant percentage of Chinese chips. TSMC controls close to half of the world's chip manufacturing capacity, making it the world's largest chipmaker. Along with Japanese Samsung, TSMC is also one of the world's only two companies able to produce five-nanometer chips crucial to semiconductor development.⁴² TSMC designs chips for many of the world's top technology companies, including Apple, and provides chips for national security purposes, such as American guided missiles. The company is supported by 60% sales from the United States, and 20% sales from China, mainly from Chinese telecommunications giant Huawei.⁴³

In May 2020, U.S. regulations from the Department of Commerce have resulted in TSMC cutting off Huawei as a customer in favor of continuing U.S.

business, resulting in a 13% loss of total revenue for TSMC,⁴⁴ and the effective cutting off of Huawei from its major supply of semiconductor chips necessary for its survival. The Huawei ban coincided with a \$12 billion investment by TSMC in a fab in Arizona, indicating the company's choice in favor of the U.S. in the China-U.S. semiconductor trade conflict.⁴⁵ In addition to specific targeting of TSMC and Huawei, in 2018 the U.S. implemented a 25% tariff on Chinese semiconductors to further undercut U.S. support of the Chinese semiconductor industry.⁴⁶

Despite their swift and targeted nature, U.S. actions against Huawei have not been immediately effective in achieving U.S. national security objectives due to the interconnectedness of the global information technology supply chains. When Huawei was sanctioned in 2019, it faced removal from the Google App Store, a critical feature for Android phones outside of China, as well as being cut off from legally using American software to design chips once Huawei's licenses expired. Because the expiration date was two years out, Huawei's ability to compete globally in 5G equipment production was not immediately curtailed. Additionally, Huawei was able to revert to its past designs and to use other chip suppliers for production.⁴⁷ To close this loophole, May 2020 revisions to the U.S. sanctions Entity List prevented American capital from investing in goods or services used in Huawei's chip manufacturing supply chain.⁴⁸ Despite this update, Huawei continues to possess its production capabilities for several years into the future, giving the company time to regroup and find alternatives to the U.S.-dominated semiconductor supply chain.

Chinese Retaliatory Actions

Chinese responses to U.S. economic and trade actions have included reducing dependence on Western economies and retaliating against U.S. individuals and companies complying with U.S. regulations. Additionally, China has enacted its own export controls, foreign investment reviews, and implemented extraterritoriality blocking. In 2019, China passed a new Export Control Law, cataloguing prohibited and restricted export technologies and created an Unreliable Entity List. The law states that any company or individual in any global jurisdiction that endangers Chinese national security can be held legally liable in China. In January 2021, China's Ministry of Com-

merce (MOFCOM) issued "Rules on Counteracting Unjustified Extraterritorial Applications of Foreign Legislation," which prohibited firms from complying with any foreign rules and regulations that restrict transactions with Chinese firms, in an attempt to prevent U.S. secondary sanctions.⁴⁹

In 2019, China placed sanctions on U.S. Senators and Congressional committees due to U.S. sanctions over the Hong Kong crisis. Additionally, in January 2021, the Chinese government retaliated by sanctioning former Trump administration officials, including former Secretary of State Mike Pompeo and former National Security Advisor Robert O'Brien, prohibiting Chinese companies and organizations associated with these officials from doing business in China.⁵⁰ These actions can have a chilling effect on future career choices of U.S. officials who may otherwise vie for employment with U.S. firms that rely on Chinese business. China has also taken actions against U.S. Allies. In 2020, China placed restrictions on Australian imports due to the Australian government's calls for the origin of the COVID-19 pandemic and Chinese interference in Australian politics.⁵¹ Most recently, China passed a law to counter U.S. and EU sanctions by identifying individuals or entities involved in anti-Chinese actions and threatening denial of entry into or expulsion from the country.⁵²

Chinese Reactions to the Semiconductor Conflict

U.S. actions to isolate Huawei from dominating the global 5G equipment industry have pushed China to invest heavily in building out its domestic supply chain in integrated circuits.⁵³ Chinese leadership has called for decoupling from dependency on American technology and for ensuring robust supply chains at the Chinese Communist Party's (CCP's) Central Economic and Financial Working Group meeting held in April 2020.⁵⁴ In August 2020, the Chinese government provided new tax breaks for integrated circuits capital equipment producers (that make microchips components for semiconductors) and called on local governments to prioritize production of IC equipment and materials, in addition to previously promoted high-end chips.⁵⁵ China's 14th Five-Year Plan for 2021-2025 included \$1.4 trillion for high-technology industries, including the semiconductor supply chain. The goal of the plan was to de-Americanize the tech-

nology supply chain, in contrast to the previous plan that focused solely on increased domestic chip production.⁵⁶ Additionally, China's revision of its existing 2014 integrated circuits Megaproject Big Fund, a pool of money to develop domestic capital equipment production, has significantly increased spending from the original 4.2% of the fund total. The fund now targets a single semiconductor vendor Giga-da with twenty times more investment capital compared to prior years, when funds were spread over fourteen different equipment and semiconductor firms.⁵⁷ Finally, after TSMC chose to comply with U.S. regulations and cut off new designs of semiconductor supplies to China, Beijing exhibited a show of force by flying fighter jets eight times over Taiwan in the month following, showing the immediate threat to a crucial U.S. semiconductor trade partner. A potential hot conflict in Taiwan can have significant effects on the U.S. semiconductor supply chain, including missile production and cost of popular consumer items like iPhones.⁵⁸

U.S. actions against Huawei have led to a range of response options for the state-owned company, ranging from legal to extralegal. Faced with the threat of being cut off from chip design and new chip production capabilities, Huawei's choices currently include resorting to cyber-hacking to gain licenses to chip production capabilities, or creating shell companies that disguise purchase orders through intermediary firms.⁵⁹ A longer term alternative is to use Chinese government support to de-Americanize the production line by prioritizing and supporting Chinese equipment vendors. For example, state-owned Shanghai IC R&D Center is currently being promoted to produce two types of chips by the end of 2022. However, it is unclear if these plans will in fact create a stable supply chain able to sustain the insatiable production demands for chips needed in an expanding emerging technology ecosystem and crucial to maintaining and expanding Chinese global 5G infrastructure.⁶⁰ As a result, alternative sources of design, domestic or foreign, continue to be a consistent need for Huawei once the operating licenses run out.

The Future of U.S. Economic Statecraft China Strategy

Address Strategic Risk While Focusing on Strategic Engagement

The U.S. should identify clear key areas of strategic cooperation and risk vis-a-vis China in order to utilize both sticks and carrots to manage the U.S.-China strategic competition and avoid a zero-sum paradigm. A long-term goal for the U.S.-China strategic collaboration should be working together on addressing future global challenges like climate change and global pandemics, coming to an acceptable common understanding of global technology standards and red lines, as well as maintaining the stability of global markets.

The U.S. should utilize its leverage in global international trade, financial markets and technology capabilities to influence China in choosing globally accepted standards in line with U.S. values and interests where change is possible.⁶¹ For example, the U.S.-China Commission, a body that supports the U.S. government in providing research about the Chinese competition, has generated a list of standards that China can be compelled to adopt to ameliorate current risks to financial markets, and to create more transparency in the area of emerging technology development and implementation. One such standard is the principle of reciprocity, which would allow mutual access to information, such as financial and research data, market access and regulatory parity, including companies' ability to participate in trade, investment, financial market transactions, cross border capital transfer, freedom for foreign press in China, and protection of intellectual property.⁶² Although some of these may be red lines for the Chinese government, such as the ability of journalists and online media to operate in China without undue restrictions, others can create islands of compromise crucial to the stability of the global economy that can benefit both China and the United States. On-going U.S.-China connections can and will continue to create opportunities for leverage, while over-use of penalties can break down cooperation and generate risks to U.S. trade relationships with China, and the U.S. ability to engage in a balanced pressure approach to shape global financial and technology standards of the future.

Evaluate and Limit Tools of Economic Statecraft

U.S. foreign policy makers should limit economic foreign policy tools against China to address areas of strategic threat, such as key technologies and rare earth minerals used to develop technology parts, emergency healthcare equipment and medicine, as well as weapons and dual-use technologies that can be used on the battlefield. New economic tools should be thoroughly evaluated based on a combination of security, strategic and business concerns with inputs from the security establishment, industry leaders, and the U.S. diplomatic arm. Because economic tools like sanctions are often politically easier to pass than to rescind, the U.S. should carefully evaluate them to limit their use strategically in order to avoid trade wars and tit-for-tat actions that can harm U.S. business and strategic interests.

Increase Resilience and Diversity of U.S-critical Supply Chains

The U.S should focus on ensuring key domestic supply chains are diverse and resilient, eliminating reliance on China in supply chains crucial for national security, health, and development of technology systems. Investing in domestic and Allied capability rather than using punitive actions to destroy industry of a global market opponent interconnected with American businesses can secure the American economy, while preventing adverse effects of destabilizing a critical trade partner and global economic leader. To that end, President Biden's 2020 "Executive Order on America's Supply Chains" sets a priority of developing future policy to re-shore critical supply chains, work with allies to identify alternative supply chain routes, and maintain domestic stockpiles of key materials.⁶³ The U.S. has already advanced domestic proposals to re-shore and diversify supply chains through low-interest loans, corporate tax cuts, and paying 100% of re-shoring expenses, with Taiwan's TSMC plant in Arizona serving as an example of this effort.⁶⁴ In 2018, the Better Utilization of Investments Leading to Development Act was passed by Congress to offer alternatives to Chinese global development projects. To address over-reliance on Chinese-produced technologies and components parts, U.S. and foreign firms have begun significant investments in domestic

production capabilities. For example, Korean companies aim to spend \$18.9 billion on integrated circuits production in 2021, while the EU has plans to spend EURO 35 billion. As a result, companies that previously relied on Chinese demand can shift to U.S., EU and foreign demand.⁶⁵

To date successes of "re-shoring" manufacturing away from China include Taiwan's attempts to ensure a "non-red supply chain" in telecommunications, electronics, and machinery by incentivizing Taiwanese manufacturing firms to return to the island. Taiwan has achieved re-storing \$33 billion in investments by utilizing a centralized office at the Ministry of Economic Affairs (MOEA) to advance a set of policy tools including tax credits and subsidies, rent assistance, cheap financing, land acquisition, and simplified reinvestment options.⁶⁶ Other collaborative ventures to create resilience in allied supply chains include the U.S. Infrastructure Technology Assistance Network, the Transaction Advisory Fund and the Blue Dot Network with Japan and Australia, aiding these countries in achieving independence in technology infrastructure development.⁶⁷

Advance U.S. Industry from Within by Re-Investing in R&D

Current data shows that the U.S. spends 0.61% of GDP on R&D, compared to China's 2.5% of GDP.⁶⁸ The U.S. should increase spending on research and development in lagging areas such as critical national infrastructure (5G), as well as science, technology, engineering, math, and artificial intelligence (AI), to keep pace with China and to catalyze domestic industry. Additionally, the U.S. should focus on creating research-to-market pipelines through federal incentives in key industries in order to compete with China's government-wide approach to research and development.

Advance Global Leadership in Technical and Financial Regulatory Standards

The U.S. focus should be on improving its influence in advancing global technical and financial regulatory standards that align with U.S. values and national security interests. U.S. policymakers should engage members of academia, business, and the legal profes-

sion with identifying and defining these standards and work collaboratively with China to define red lines and to find a workable equilibrium of standards that can be used globally for emerging technologies. To achieve U.S.-focused standards development, prior recommendations include creating an interagency Executive Committee on Technical Standards tasked with coordinating U.S. policy priorities on international standards, supported by high level appointees from Departments of Commerce, State, Defense, Energy and the office of Science and Technology Policy.⁶⁹ Existing efforts to this end include the 2019 bipartisan “Championing American Business Through Diplomacy Act” passed by Congress, which empowers the State Department to coordinate interagency efforts to promote U.S. business values including high quality, transparency, and agility in foreign markets through diplomacy, as a way to counteract global Chinese economic influence.⁷⁰ Active work with allies and global trade partners to establish and utilize global standards across the global supply chain can serve to solidify a “status quo” used as a model by other countries. Finally, the U.S. and its global trading partners can use their leverage in trade relationships and leadership in financial markets to request compliance with a set of regulatory standards as a pre-requisite for participation.

Conclusion

China is inextricably linked to the U.S. via trade, financial markets, and global supply chains. As a major global producer and user of the world’s energy and one of the world’s most populous countries, China can also be a crucially important partner in countering future environmental threats and global pandemics. In contrast, China’s belligerent status can significantly impact much needed cooperation and dialogue on a range of issues that will define the landscape of the future. Retaliatory actions from China can impact the U.S. economy, undermine the success of key industries, and harm smooth flows of critical supply chains before alternative routes are established. Further, an economically or politically stumbling China can cause an unpredictable and catastrophic impact on global financial markets, U.S. business and trade interests, and the security balance in Asia.

As a result of the interconnected relationship with China, to counteract national security threats from

Chinese great power competition, especially in the emerging technology space, the U.S. must achieve a careful balance of controls and cooperation. Identifying areas of cooperation and areas of national security competition is a critical first step that can prevent over-reactions causing unintended consequences. Strengthening U.S. domestic capabilities is equally important, including re-investing in domestic research and development capabilities, and strengthening global manufacturing supply chains to achieve self-reliance. Finally, the U.S. must take on an active leadership role in developing, negotiating and implementing global technology standards and identifying red lines in order to ensure that the development and use of emerging technologies complies with democratic and free market values.

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