RETHINKING THE ECONOMIC DIMENSION OF U.S. CHINA STRATEGY

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1 An Emerging Debate

Since the end of the Cold War, U.S. economic policy toward China has been premised on the assumption that expanding trade and investment would have beneficial effects, both on China's external behavior and on the evolution of its domestic economic and political institutions. That country's deepening relationship with the United States, and its broader integration into the global economy would, it was hoped, give it a stake in stability and encourage it to see itself as a "responsible stakeholder" in the existing international system. As its economy developed, China would move away from state-directed planning and place greater reliance on market mechanisms. Finally, as had happened earlier in Europe and other parts of Asia, so too in China economic growth, and the emergence of a new middle class would give rise to irresistible pressure for liberalizing political reforms.

As has become increasingly clear in recent years, these expectations have not been borne out; nor are they likely to be any time soon. To the contrary, the prevailing trends now appear to be running strongly in the opposite direction. China has grown richer, to be sure; by some estimates, the total size of its economy will soon exceed that of the United States. Far from liberalizing and relaxing its grip, however, in the past decade the Beijing regime has become more repressive and more militantly nationalistic. Instead of evolving into a mellow, satisfied, status quo power, China has grown more assertive and is using its increasing economic clout and military power to challenge key aspects of the prevailing regional system and the larger international order. Meanwhile, instead of a steadily increasing reliance on market forces, the Chinese party-state has continued, and in certain respects expanded, its use of quasi-mercantilist policy tools. Among these are:

- subsidies and other forms of support for state-owned enterprises (SOEs);
- restrictions of access by foreign firms to the Chinese market;
- industrial policies aimed at reducing dependence on imports and promoting "national champions" in what are believed to be strategic sectors of the economy, including semiconductors, information technology, and next-generation manufacturing;
- massive, state-directed infrastructure development projects at home and abroad, including under the so-called Belt and Road Initiative; and
- an array of approaches to obtain technology from foreign sources, including compulsory transfer in return for market access, a rapidly expanding flow of mergers, acquisitions, and various forms of investment in advanced industrial countries, and the continuing theft of intellectual property on an unprecedented scale using a variety of means including (but not limited to) cyber espionage.

Even if China were a liberal democracy with a full market economy, the prospect of being surpassed in terms of total GDP would be disconcerting to many Americans, just as it was to many in Great Britain in the 1880s when the United States first assumed its place as the world's largest economy. And even if China and the United States were not engaged in an intensifying military and geopolitical rivalry, citizens, business executives, and policy-makers might have reason to be concerned about the impact of Beijing's trade and industrial policies on the performance and future prospects of the U.S. economy. In this sense, today's worries over China resemble those expressed about Japan in some quarters during the 1980s.

But of course, China is all three things at once: it is big, it deploys a unique and thus far highly successful blend of market-driven and state-directed economic policies, *and* it is an increasingly ambitious and capable strategic competitor. The challenge posed by China is thus unlike any that the United States has previously faced. Over the course of the past decade, a growing awareness of this fact has begun to drive shifts in U.S. military doctrine, force posture, and diplomacy. For a variety of reasons, however, the economic aspects of existing strategy have remained essentially fixed.

Now things seem set to change. In the last few years, there has been a growing sense of unease in many quarters about the past impact and possible future implications of the Sino-American economic relationship. Even before the 2016 presidential election raised the public prominence of these issues, a serious debate had begun over whether, and if so how, the United States should adjust its existing policies for interacting economically with China. The purpose of this report is to map the contours of the emerging debate over these questions by identifying the main alternative approaches to them; examining the logic, assumptions, and evidence that underpin them; and sketching out the differing policy prescriptions to which they give rise.

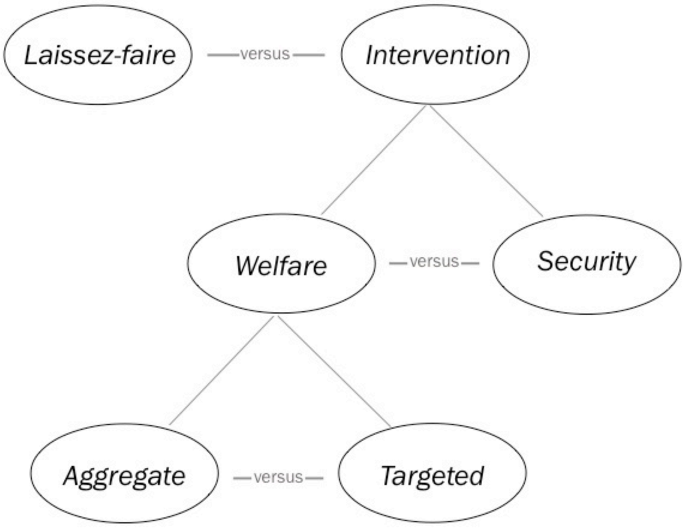

Figure 1: Three Distinctions, Four Schools of Thought

Laissez-Faire vs Interventionism

As a first step, it is possible to distinguish between two broad approaches to economic policy in general, and policy toward China in particular. On one hand, there are those who prefer to place the greatest possible reliance on the working of market forces and to minimize intervention by government. In this view, while the state has legitimate and important roles to play in promoting national prosperity (including ensuring domestic political stability, providing for the common defense, enforcing the rule of law, regulating the money supply, and imposing taxes in ways that do not stifle initiative or harm growth), it should generally strive to remain neutral, avoiding actions that are intended to benefit some sectors, firms, or individuals at the expense of others.

On the other side of this long-standing debate are analysts who believe that, in addition to its basic functions, government must at times be prepared to do more in order to advance the fortunes of particular social groups, economic sectors, and, even at times, of specific firms. Intervention may be justified under various circumstances (some of which are described below) and can take a variety of forms, including tariffs, subsidies, and other measures designed to help domestically based firms survive in the face of what is perceived to be overwhelming or unfair competition from foreign counterparts.

Welfare vs Security

Advocates of intervention can be further divided into two groups: those who focus on maximizing national economic welfare and those whose primary concern is national security. In the broadest sense, welfare refers to the present and future material well-being of the nation as a whole. It is typically measured by one or several of the following indicators:

- the size and rate of growth of GDP and the level and rate of growth of GDP per capita;
- the level and rate of growth in productivity of the national economy;
- the profitability and competitiveness of individual firms and entire economic sectors;
- trends in employment, wages, and incomes in certain sectors and in the economy as a whole;
- the nationwide distribution of income and wealth; and
- levels of debt, public and private, internal and external.

Security is a more amorphous concept involving, at a minimum, the safety of a nation's people and its territory from conquest or attack. The citizens and leaders of a secure nation also have the ability to determine their domestic and international policies freely and without coercion. Great powers like the United States have historically had even broader conceptions of the requirements for security, to include the ability to defend allies and distant interests, promulgate their preferred ideology, and reshape the world (or parts of it) in accordance with their values and their vision of what constitutes a just and secure international order.

The measures of economic capacity relevant to national security include:

- the total size and rate of growth of a nation's GDP in relation to possible competitors (a rough measure of their respective ability to generate increments of military power and to sustain a protracted conflict or peacetime military competition);[1]

- relative levels of technological sophistication in sectors critical to determining the performance of weapons and other military systems;
- ability to ramp up the production of weapons, munitions, and other systems in the event of a large and/or protracted crisis or armed conflict ("surge capacity");
- degree of dependence on imports of inputs needed to sustain the economy in crisis or conflict that may be vulnerable to disruption, including energy, food, and components or other materials necessary for defense production;
- ability to use economic instruments (including financial or trade sanctions) to coerce or impose costs on others and, conversely, low vulnerability to the possible use of such tools by foreign powers;
- ability to use trade, investment, aid, and other economic instruments to shape the long-term domestic political and diplomatic orientation and alignment of other nations; and
- relative invulnerability to espionage or sabotage that may affect all or some of these functions and ability to exploit vulnerabilities of potential rivals.

Aggregate vs Targeted Intervention

While there is some overlap between them, the proponents of intervention for purposes of increasing national welfare can be divided yet again into two distinct sub-groups. Advocates of what might be called aggregate intervention tend to focus on broad measures of current national economic performance, in particular the size of the trade deficit and the overall level of employment in the manufacturing sector. Aggregate interventionists also tend to be especially concerned about the competitiveness and profitability of U.S.-based firms in the industries that have traditionally been the main providers of manufacturing jobs, including steel, aluminum, automobiles, and household appliances.

By comparison, the proponents of targeted intervention are primarily concerned with the viability and possible future performance of U.S.-based companies in newer, high-technology, high value-added industries such as IT, semiconductors, advanced manufacturing, and robotics. A strong position in these areas is considered essential to sustaining future growth and ensuring the competitiveness of U.S. firms in virtually all other industries and every sector of the economy.

The remainder of this report will be devoted to providing a brief overview of the four schools of thought, outlining the position of each on a range of policy issues including the significance of the U.S.-China trade deficit, China's high-tech industrial policies, its foreign direct investment in the United States, regional free trade agreements, and infrastructure initiatives. These findings are summarized in Figure 2.

	Laissez-Faire	Aggregate Intervention	Targeted Intervention	National Security Intervention
Trade deficit	• Not a big concern • Cutting bilateral deficit with China will only increase it with others • To cut overall deficit change macro fundamentals	• Major symptom/ problem • Hurts manufacturing, jobs, growth • Debt is dangerous • Reduce deficit via tariffs and more access to China's market	• Yesterday's problem • Overall balance matters less than composition of trade • Hightech sectors key to growth, prosperity	• Relevant if it slows U.S. growth, and/ or hollows out defense industrial base • Debt could give China leverage
China's Industrial Policies	• Wasteful, unlikely to work • Don't try to imitate	• Part of larger problem	• Have worked in some sectors (solar), could work in others (semiconductors, IT) • U.S. and allies need to counter	• Many targeted industries important for military as well as commercial reasons
Foreign Direct Investment	• Mostly beneficial; avoid restrictions • CFIUS adequate to address national security risks • No "economic security" test	• Often harmful • Restrict via "economic security" test	• Essential piece of Chinese industrial policies; means to acquire tech and gain advantage	• Major cause for concern due to espionage and tech transfer • Current CFIUS process inadequate
Regional Free Trade Agreements	• Global free trade preferable • RCEP is no cause for concern • TPP was okay	• TPP bad for workers, industry • RCEP could further hurt U.S. exports	• Use to set tech standards	• Use to achieve relative gains, keep allies close, and limit China's ability to exert leverage over them.
One Belt, One Road	• Unlikely to pan out • Could promote trade, development • U.S., others should take part	• Not a problem if U.S. firms can participate • U.S. too needs infrastructure development	• Expanded market, stimulus for further development of China's transport and communications industries	• Significant strategic motivations • China aims to create Eurasian sphere, reduce vulnerability to interdiction

Figure 2: Five Issues, Four Schools

2 Four Schools of Thought

Laissez-Faire

Members of this group tend to focus on the broadest measures of national economic welfare and performance: usually the absolute size and rate of growth of U.S. GDP and GDP per capita. In this view, the worries expressed by others over the size of the US-China trade deficit are largely misplaced, and the proposed cures for the supposed problem are worse than the disease. While China is undoubtedly pursuing market-distorting policies, some, such as subsidies that reduce the cost of Chinese exports, may actually benefit U.S. consumers. In any event, in this view trade deficits are ultimately "made in America"; they are the product of decisions by households, firms, and government that determine the overall level of national savings and investment. As long as Americans collectively consume more than they produce (and save less than they invest), the nation as a whole will run a trade deficit with the rest of the world. Taking steps to narrow the trade gap with China (such as imposing tariffs on Chinese goods) without addressing these underlying factors will simply shift some portion of the deficit to other countries. Depending on how it is accomplished (for example, by reducing investment), cutting the overall trade deficit could actually lead to slower future growth.[2]

The United States is able to import more from China (and others) than it exports to them because Chinese (and others) have been willing to hold dollar-denominated assets, including large quantities of U.S. Treasury bonds. Some analysts worry that the United States' external indebtedness could expose it to economic and possible strategic risk. If the Chinese government were to stop buying treasuries, or if it began to sell off some of those it currently holds, U.S. interest rates would rise and growth would slow. It is conceivable that Beijing might threaten to take such action in an attempt to influence U.S. policymakers, and, indeed, in the wake of the 2008 financial crisis, some Chinese analysts and officials mused publicly about doing so.

While they acknowledge it as a theoretical possibility, opponents of intervention are not overly concerned about this prospect. Slower U.S. growth (and a falling dollar) would hurt Chinese exporters and might do at least as much damage to China's economy as it did to the United States. For this reason, as former Secretary of the Treasury Larry Summers put it in 2004, a balance of financial terror exists between the two countries.[3] Strategic motivations aside, there is little economic reason to expect that, after decades of doing so, Chinese or other foreign entities will suddenly become unwilling to buy U.S. stocks and bonds or invest directly in the United States. Indeed, at least for the moment, the sheer size and stability of the U.S. market render it uniquely attractive as a safe haven for foreign investors, thereby sustaining demand for the dollar and preserving its status as the world's preferred reserve currency.[4]

Advocates of laissez faire also generally take a relaxed view of China's high-tech industrial policies. Centrally planned programs of research and investment aimed at gaining an advantage in supposedly "strategic" sectors of the economy are unlikely to work, and, even where they might appear to have been successful (as, for example, in China's recent attempts to dominate the global market for solar panels), they will be extremely costly and wasteful.[5] Because the party-state can sink virtually unlimited resources into its preferred projects, China enjoys a form of "escalation dominance" over other countries, including the United States, that might seek to pursue similar industrial policies. As it has generally done in the past, the federal government would be wise to stay out of the business of "picking winners and losers," concentrating instead on supporting basic science, improving education, protecting intellectual property, ensuring that tax and patent laws encourage productive investment, and, in general, creating conditions conducive to the development of new technologies by far-sighted businesses and entrepreneurs.

Advocates of laissez-faire also generally take a relaxed view of China's high-tech industrial policies.

While the flow of Chinese foreign direct investment (FDI) into the United States has increased markedly in recent years (growing by 200 percent in 2016 over 2015),[6] as compared either to investment by other countries, or to U.S. FDI in China, the stock remains small. Much of the recent expansion is in sectors such as entertainment, real estate, hospitality, and consumer products and services where the prospects for harm either to national security or national economic welfare appear remote.[7] Chinese investors have also helped innovative U.S. companies gain funding when other sources were unavailable.[8] While some adjustment may be warranted, existing processes and mechanisms for reviewing the implications for national security of proposed foreign investments (primarily the interagency Committee on Foreign Investment in the United States, or CFIUS) are adequate to the task. There should be a strong presumption against changes that would increase the risk of meddling by grandstanding politicians, paranoid bureaucrats, or clever commercial actors. Such interference would likely harm welfare by disrupting mutually beneficial flows of investment between the United States and China while doing little to enhance security.[9]

Faith in markets, and skepticism about the utility of intervention by governments, leads to a set of strong inclinations on a range of other issues. In the absence of fresh rounds of global agreements lowering tariffs and non-tariff barriers, regional free trade pacts such as the North American Free Trade Agreement, the Trans-Pacific Partnership (TPP), and the proposed Transatlantic Trade and Investment Partnership (TTIP) may be helpful, on balance and at the margins, in promoting national economic welfare. On the other hand, the less ambitious regional free trade agreements that China favors (including the Regional Comprehensive Economic Partnership, or RCEP, which includes ASEAN countries, India, Japan, China, South Korea, Australia, and New Zealand) are unlikely to divert significant quantities of trade away from the United States and should not therefore be cause for serious concern.

Notwithstanding the ambitious rhetoric that surrounds it, Beijing's One Belt One Road (OBOR) Initiative is also unlikely to pan out in the ways that its boosters claim. The vast bulk of Chinese overseas investment continues to go to advanced industrial economies, where it is assured of earning a good return. Chinese companies are already losing a good deal of money in places with poor governance and they are likely to lose even more if they pour capital into projects across Central Asia and the other less developed areas targeted by OBOR.[10] Assuming that decisions about investment are in the end shaped primarily by cost-benefit calculations, many of the projects mentioned in speeches and featured in glossy brochures will never be built, and some that are will not prove commercially viable. For these reasons, OBOR is unlikely to transform the economic and strategic geography of Eurasia. Because the scale of the entire endeavor will ultimately prove to be much smaller than presently projected, it is also unlikely to provide a solution to China's problems with overcapacity in basic industries like steel, aluminum, and cement.

Advocates of laissez faire tend to see Chinese policymakers as pursuing similar, welfare-oriented goals to their counterparts in other advanced industrial countries. While they may continue for a time to cling to mercantilist, interventionist policies in some areas, China's planners will be compelled eventually to abandon them in favor of more efficient, market-oriented approaches. China's distinctive trade and industrial policies have had significant (and occasionally distorting) effects, but the most important aspect of its economic strategy over the last 40 years was the initial decision to embark on a process of "reform and opening up." Once China abandoned the at-times murderous inefficiency of Maoism and began to integrate into the global economy and to rely more heavily on market forces at home, it was virtually certain to grow. Given the size of its population, it was destined also to become one of the world's largest economies.

Most advocates of laissez faire believe that, barring some catastrophic disruption, China's GDP will soon exceed that of the United States and could eventually grow to more than twice its size.[11] Some acknowledge that, because total economic output is an important determinant of a nation's ability to generate military power, such a development could have worrisome consequences for the security of the United States and its democratic allies. Others are more sanguine, arguing that in order to fulfill its potential, China will first have to undergo wide-ranging political as well as economic reforms. In this view, for China to become the world's leading economic power, it will also have to become a democracy, a transformation that would presumably lessen the prospects of conflict with the United States.

Aggregate Intervention

Proponents of this second school of thought take a much darker view of Chinese strategy, describing it as mercantilist, zero sum, "unfair," and designed to enhance China's growth and increase the strength and productive capacity of its economy while harming those of its trading partners, especially the United States.[12] To aggregate interventionists, the United States' large and persistent bilateral trade deficit with China is the most telling symptom of the distorted and damaging economic relationship between the two countries. Reducing that imbalance is essential to restoring the health of the U.S. economy.

In marked contrast to the advocates of laissez faire, aggregate interventionists believe the bilateral trade deficit is made in Beijing rather than in Washington. For more than two decades now, China has been deliberately boosting its exports to the United States while carefully restricting imports. Currency manipulation has been among the most important of the measures used to achieve these ends but there are others, including subsidies that reduce the cost of exports, and various tariff and non-tariff barriers designed to protect Chinese companies by keeping foreign competitors out of the domestic market. Since its entry into the World Trade Organization in 2001, China has found ways to manipulate WTO processes and procedures, bending the rules to its benefit even when it does not actually break them and at times simply accepting penalties that often come too late to help the targets of its predatory practices.[13]

These policies have had a devastating impact on the U.S. economy. First and foremost, aggregate interventionists claim that cheap imports of manufactured goods have accelerated the deindustrialization of the United States, contributing to the dramatic drop in employment in the manufacturing sector that has taken place since 2001.[14] The loss of manufacturing jobs (often described, in contrast to those in the service sector, as "good jobs at good wages") has contributed in turn to other economic problems, including stagnating middle and working class incomes and growing income inequality, and it is implicated as well in a variety of societal ills, including increased drug abuse, rising suicide rates, and declining average life expectancies.[15]

Aggregate interventionists assert that the trade deficit contributes to slower overall growth through a variety of mechanisms, including its impact on the composition of the national economy. Because manufacturing industries have historically spent substantial sums on research and development, a diminished manufacturing sector is likely to mean less funding for research and development, less innovation, and, in the long run, slower growth.[16]

Last but not least, the capital account surplus that accompanies the trade deficit carries dangers of its own. Chinese entities can use the dollar IOUs they accept in return for their exports to acquire valuable U.S. assets, including successful businesses, new technologies, real estate, and productive farmland. Dollars can also be used to buy influence and to support people and groups that lobby the U.S. government in favor of polices that happen to serve China's interests as well as their own. The United States' external indebtedness also exposes it to the risk of an eventual debt crisis when, for strategic or economic reasons, Chinese investors lose their taste for Treasury bills and other dollar-denominated assets.[17]

To address these actual and potential problems, aggregate interventionists argue that it is necessary for the U.S. government to take action that will shrink the nation's trade deficit with China. This can be accomplished in a variety of ways, including imposing tariffs on Chinese imports or using the threat of loss of access to the vast U.S. market to compel Beijing to cut subsidies, reduce its own tariff and non-tariff barriers and stop manipulating the value of its currency. Although such actions could expose the U.S. government to complaints that it is violating its WTO commitments, requiring federal agencies (and encouraging ordinary citizens) to "buy American" might also help to reduce present imbalances. Other, still more controversial measures that have been suggested to reduce the trade deficit include a policy of "countervailing currency intervention" designed to achieve an orderly decline in the value of the dollar,[18] and a system of "import certificates" intended to limit the dollar value of imports to the value of all exports.[19]

While their primary focus is on finding ways to shrink the bilateral trade deficit and boost U.S. manufacturing, aggregate interventionists have opinions on other issues that reflect these concerns:

- As regards FDI, many would favor broadening the mandate of the Committee on Foreign Investment in the United States to enable it to scrutinize and possibly block proposed acquisitions on welfare or "economic security" grounds as well as for reasons of national security more narrowly defined. Transactions that might give Chinese firms access to technologies that would enable them to gain a competitive edge over their U.S. counterparts should be opposed, even if the companies involved have nothing to do with the manufacture of arms and military equipment.
- Multilateral regional free trade agreements are also to be viewed with suspicion. Those proposed by the United States (TPP) do nothing to address the problem of imbalances with China and would likely serve the interests of corporations at the expense of U.S. workers and nominally U.S. multinationals with overseas operations at the expense of domestically based manufacturing industries. Those advocated by China (like RCEP) could further constrict markets for U.S.-made goods.
- If it is open to participation by U.S. companies, China's massive infrastructure development initiative could be unobjectionable. If it is not, and if OBOR is coupled with free trade agreements that exclude the United States, it could hurt the prospects for

expanding U.S. exports into new markets across Eurasia while further strengthening the position of Chinese exporters. For its part, the United States would do well to learn from China and could benefit from an ambitious infrastructure program of its own, with the work performed by U.S. companies.

Targeted Intervention

As the label suggests, targeted interventionists favor government action to promote the fortunes of U.S. companies, especially those in high-technology, high-value-added sectors (including services as well as manufacturing), while defending them as needed from China's own increasingly ambitious and successful high-tech industrial policies. From this perspective, the aggregate interventionists' concerns with traditional manufacturing industries, currency manipulation, and, even to a certain extent, the bilateral trade deficit are backward-looking and largely beside the point.

The ultimate aim of these policies, made clear in documents like the recently published "Made in China 2025" is to achieve a high degree of autonomy, if not complete autarky, across a range of high-tech industries and to capture a substantial portion of global market share in these industries, boosting the profitability of Chinese firms and increasing the dependence of foreigners on Chinese products.

There can be no doubt that, over the last several decades, China has been able to gain advantage in a range of low to medium tech industries from footwear and furniture to steel to consumer electronics by suppressing the value of the yuan, offering subsidies, welcoming foreign investors, and mobilizing its vast reserve of low-cost labor. But, say the targeted interventionists, these are yesterday's battles. Now China's economic planners seek to propel "national champions" up the value-added chain into positions of dominance in semiconductors, information technology, biotechnology, artificial intelligence, robotics, and next-generation manufacturing. If they succeed, there could be broad implications both for U.S. security and for national economic welfare. An advantage in any of these areas could enable China to produce superior military systems. If it can concentrate the development and production of key components, devices, and materials in laboratories and factories on its own soil, China will be less vulnerable to threat of supply cutoffs or disruptions while potentially putting it in a position where it could exert diplomatic pressure or gain military or commercial advantage by denying access to other countries. New technologies will also promote productivity and fuel economic growth, while the new industries they enable will generate the best high-paying jobs.

An excessive focus on reducing the trade deficit could obscure what is at stake in this new stage of international economic competition. If present trends continue, U.S.-China trade may come more closely into balance, but as analyst Stephen Ezell warns, Americans could find themselves relegated to the position of being "hewers of wood and drawers of water," exporting food, fibers, minerals, and waste paper to China and importing sophisticated products like computers and energy-efficient self-driving cars.[20] What matters most is not so much the balance of trade between the United States and China but its content, and the evolving structure of the two national economies.

China's "indigenous innovation" industrial policies start by using a variety of methods to gain access to cutting edge technologies, including the theft of intellectual property via state-assisted cyber espionage and other means, direct investment in foreign firms (often using capital obtained at low cost from state-controlled banks), and the forced transfer of technology from foreign firms that wish to gain or retain access to the large and fast-growing Chinese market. The state then offers subsidies to encourage the development of domestic production capacity. To ensure a high level of demand, it uses a mix of import restrictions, government procurement regulations, and other rules and guidelines (often ostensibly related to security) that encourage or require Chinese companies and consumers to buy from domestic producers. Chinese manufacturers are then able to sell their products at below market prices in foreign markets, sometimes driving competitors permanently out of business or forcing them to cut profits to the point where they are no longer able to afford the research and development necessary to sustain innovation and maintain a competitive advantage. The ultimate aim of these policies, made clear in documents like the recently published "Made in China 2025," is to achieve a high degree of autonomy, if not complete autarky, across a range of high-tech industries and to capture a substantial portion of global market share in these industries, boosting the profitability of Chinese firms and increasing the dependence of foreigners on Chinese products.[21]

While they differ among themselves on some issues, the advocates of targeted intervention have proposed a number of possible responses to Beijing's initiatives. Protecting against intellectual property theft and punishing those who have profited from it by constricting their ability to sell in the U.S. market may help to slow the illicit outflow of ideas and information that has fueled China's development. New mechanisms are also required to monitor Chinese efforts to extract technology from U.S. companies in return for market access, and new legal authorities may be needed in order to block agreements that could damage national economic welfare as well as national security. Similarly, the rules and procedures for overseeing and reviewing proposed foreign direct investment in the United States must be tightened considerably. Because their actions are almost certainly part of a wider national effort to acquire critical technologies, proposed investments involving Chinese state-owned enterprises should be subject to special scrutiny. Some analysts have proposed that they be banned altogether; others suggest that the United States government should insist on reciprocity, permitting investments in key industries and industrial sectors only when U.S. companies are granted equivalent access in China.[22]

Despite their concerns about the possible effectiveness of Chinese state subsidies and other forms of direct support to high-tech industries, most advocates of targeted intervention stop short of proposing that Washington adopt similar policies. Trying to funnel large quantities of taxpayer dollars to one industry or firm at the expense of others would be controversial, expensive, and unlikely to prove effective, especially in the face of the resources that China, unconstrained by similar inhibitions, could mobilize in response. The advocates of laissez faire are right that the federal government should do more to strengthen the domestic environment for innovation, including expanding support for basic research, strengthening protection of intellectual property, and investing more in scientific and technical education. But targeted interventionists also believe that it will be necessary to devise (or revive) other mechanisms for encouraging domestic development of cutting edge technologies. A recent report on the semiconductor industry suggests, for example, that, as it did during the Cold War, the government could invest in what it calls "moonshots," providing an early market for advanced, innovative products and processes for which commercial demand is weak.[23]

Proposed investments involving Chinese state-owned enterprises should be subject to special scrutiny.

Another point on which there is general agreement among advocates of targeted intervention has to do with the importance of cooperation between the United States and the other advanced industrial countries, all of which are affected to some degree by China's ambitious and aggressive high-tech industrial policies. Especially where Beijing's actions can be shown to clearly violate its WTO commitments, a joint response may have a better chance of success. As China seeks to expand its investments and acquire technologies in the advanced economies, their governments should have good reason to share information, review their respective national regulations, and coordinate policies so as to present a united front. More broadly, by setting high standards and excluding countries that do not yet meet them, free trade agreements such as the TPP could serve as an additional inducement for China to reform. The ultimate objective of all these measures should not be to imitate China or simply to punish it, but rather to encourage its leaders to abandon their statist policies, embrace the market, and become more fully integrated into a truly open global economy.[24]

Intervention for National Security

Since the end of the Cold War, the United States' China strategy has been based on the assumption that welfare and security went together and that potentially painful trade-offs between them were unnecessary. To put the matter somewhat differently, decision-makers believed that the same policies that enhanced the overall performance of the U.S. economy and the well-being of its citizens would also enhance their security. Trade with China would fuel growth on both sides of the Pacific, making all parties better off. And growth would lead eventually to the liberalization of China's political system, thereby greatly reducing the prospects for friction, mistrust, and strategic rivalry with the United States.

Putting aside for the moment the question of their impact on welfare, the policies put in place a quarter century ago have arguably not made the United States more secure; to the contrary, they seem instead to have fueled the growth of a determined and increasingly capable competitor. Advocates of intervention on national security grounds argue that this harsh reality compels a reexamination of the economic dimension of overall U.S. strategy for dealing with China. The outcome of such a reexamination can be thought of as falling somewhere along a continuum. On one hand, it is conceivable that the present posture of openness and interdependence is still the best available option for promoting both security and welfare. At the other extreme, the United States might need to revert to a Cold War-style posture of economic containment, severely constricting flows of trade and investment with China and urging friends and allies to do the same.

Even if it is destined eventually to lose that place to China, the nation's leaders should try to retain this advantage in aggregate resources for as long as possible by pursuing policies that narrow the gap between the U.S. and Chinese rates of GDP growth.

At this point, most national security interventionists appear to believe that the proper approach lies somewhere in between the extremes of complete openness and total closure. In this view, adjustments in current policy are necessary in order to improve security. If some of these can also be shown to be welfare-enhancing, so much the better, but changes will need to be made, regardless of the economic implications. Given uncertainty about the future direction of U.S.-China relations, however, a radical shift in policy is not yet justified.

Those who analyze economic policy from the point of view of national security generally begin by noting that, other things equal, a nation with a larger GDP will have an easier time generating military power and sustaining a protracted conflict or peacetime strategic competition than a nation with a smaller one. Throughout the 20th century, the United States derived considerable strategic benefit from the fact that it had the world's largest economy. Even if it is destined eventually to lose that place to China, the nation's leaders should try to retain this advantage in aggregate resources for as long as possible by pursuing policies that narrow the gap between the U.S. and Chinese rates of GDP growth.

Assuming that an increase in the U.S. growth rate does not lead to an equivalent increase in China's, the most obvious way of doing this would be to boost growth in the United States. Taking steps deliberately designed to slow *China's* growth would be more problematic for diplomatic and domestic political reasons and it is difficult to conceive of U.S. policymakers doing this openly in the absence of some major crisis or disruption in U.S.-China relations. Still, because what matters most in the strategic domain are *relative* gains in national power potential, as opposed to *absolute* improvements in national welfare, such policies could be justified on strategic grounds even if they led to some reduction in U.S. growth.[25]

These observations have implications for thinking about the impact of trade and trade deficits on national security. While many economists would question the assertion that trade deficits are a *cause* of slower growth, many would also agree that there are ways of closing the overall trade deficit (as opposed to the bilateral deficit with China) that could contribute to faster long-term growth, i.e. by adopting tax, spending, and regulatory policies that would reduce the federal budget deficit, increase household savings, and encourage investment.

Imposing tariffs or taking other steps to reduce the imbalance with China alone without adjusting underlying macroeconomic policies would simply shift the trade deficit to other nations. However, if some of these were U.S. friends, allies, or security partners, such a development might be desirable for strategic reasons. If expanded exports to the United States led to faster growth in India, Indonesia, and Vietnam, for example, it would be easier for those countries to afford bigger defense budgets, thereby helping to maintain a favorable balance of power with China. Conversely, if a constriction of the U.S. market led to slower growth in China, the result would either be an increased defense burden (i.e. a larger share of national output devoted to defense) that could force potentially difficult trade-offs with other forms of spending, or a reduction in the pace of Beijing's ongoing military buildup. If it were economically feasible, the optimal approach from a strategic standpoint would be a mix of measures that reduces the overall size of the U.S. trade deficit while shifting the distribution of what remains away from China and toward friendly trading partners.

The possible impact of trade with China on the U.S. industrial base is another potential cause for concern on national security grounds. Over time, competition from low cost imports could reduce or even eliminate domestic capacity for producing metals, materials, and components necessary to manufacture weapons and other military equipment. While this might not matter under normal circumstances, it could pose serious problems in periods of crisis or conflict. Unless it has adequate stockpiles or readily available alternative sources of supply, a disruption in critical imports, due either to the imposition of an embargo or the onset of hostilities, could make it difficult for the United States to sustain or increase arms production. The geographic dispersal of supply chains also raises the risk that China or another hostile foreign power could introduce contaminated components or sub-assemblies into U.S. weapons systems, potentially threatening their performance in wartime.[26]

Existing trade laws permit the U.S. president to provide relief to domestic industries under pressure from foreign competition if their products are deemed essential to national defense. Such action can come either in response to an appeal from industry or as the result of an investigation initiated by executive branch.[27] Proponents of laissez faire point out that claims of defense essentiality can all too easily be abused by protection-seeking industries and by presidents looking to score points with domestic constituencies. Because of concerns that their use might unleash a flood of spurious appeals for protection on national security grounds (and a wave of retaliatory measures by other governments) these provisions have been invoked on only a handful of occasions in recent decades. [28]

Objective answers to the question of whether tariffs or other protective measures are truly necessary for national security are possible. But they would depend on detailed calculations of the requirements for defense mobilization under a variety of different scenarios, including, in the case of China, a protracted, high-intensity conventional conflict. The last time the Defense Department thought seriously about such an eventuality (and then only briefly) was in the early 1980s. At that time, with the globalization of production just beginning to get underway, there were also concerns about the reliability of supply chains. Performing the task of identifying and tracking the shifting sources of key inputs already appeared daunting and, with the end of the Cold War, it also came to seem unnecessary. [29] While the problem has certainly grown in scale and complexity during the intervening decades, so too have capabilities for collecting and analyzing the vast volumes of data that would no doubt be involved. Whether the danger of contamination and manipulation of supply chains is sufficiently great to warrant the cost of addressing it is a strategic rather than a purely economic question.

Despite the fact that they have been discounted by many economists, national security interventionists believe that the risks associated with the capital account imbalances that accompany the trade deficit are also a legitimate cause for strategic concern. To those who remember the history of the Cold War, the thought that a "balance of financial terror" now exists between the United States and China is not reassuring. Such balances can prove delicate and could break down, whether by accident, miscalculation, or as the result of a deliberate decision by one side or the other that the costs of the ensuing catastrophe would be greater for its opponent than for itself. In order to assess the risk of such an eventuality, it is necessary not only to track objective measures of the balance (i.e., the size of China's dollar-denominated reserves) but to gain a better understanding of how decision-makers on both sides assess the likely consequences of a major disruption in their economic relations.[30] While at first glance it would appear preferable not to have as a creditor a country that is also a major strategic competitor, it is possible that under some circumstances Chinese decision-makers might feel even more vulnerable and constrained by financial imbalances than their U.S. counterparts.[31]

In addition to enjoying an advantage in aggregate resources, since the Second World War, the United States has sought, and in many areas of capability has been able to achieve, a significant qualitative edge over potential military rivals. Current efforts to counter China's anti-access/area denial capabilities (the so-called "third offset strategy") rely on acquiring and maintaining such advantages, yet this could turn out to be more difficult in the future than it was in the past. As was true toward the end of the Cold War, many of the relevant technologies are dual-use and are being developed first in the commercial sector.[32] In marked contrast to the Soviet Union, however, China will have ready access to most of these same technologies, whether through the efforts of its own enterprises or as the result of technology transfer from the United States and other advanced industrial countries, using a variety of open and covert means.

In a world in which the technologies themselves are more widely available, the advantage may go to the side that can identify and exploit their strategic potential better and faster than its potential rivals.

If the United States wants to maintain a qualitative edge over China across a wide array of military systems, it will need to accelerate the pace at which it develops and applies relevant technologies while doing what it can to slow the rate at which they diffuse. On the positive side of the ledger, this will require measures designed to promote the general climate for innovation in the United States similar to those supported by the advocates of laissez faire and targeted interventionism, including funding for education and basic scientific research and immigration laws that encourage a continued influx of talent in relevant fields.[33] As during the Cold War, the federal government will also have to support the development of specific technologies deemed critical to national security but where the incentives for private sector investment may be inadequate or where China's own targeted industrial policies threaten to give it a decisive lead. While their motives and precise focus might vary, there would thus be a good deal of overlap between the programs proposed by targeted and national security interventionists. The "moonshots" recommended to spur development of high-end semiconductors may be necessary in other areas as well, perhaps including quantum computing. In addition, as has begun to happen in recent years, the U.S. Defense Department and other government agencies will need to devise new mechanisms for identifying and accelerating the adoption of technologies developed initially for commercial use that can enhance the performance of weapons and other military systems.[34] In a world in which the technologies themselves are more widely available, the advantage may go to the side that can identify and exploit their strategic potential better and faster than its potential rivals.[35]

Slowing the diffusion of strategically relevant technologies from the United States and other advanced industrial nations to China will be more difficult than in the past, and doing so will no doubt have costs, but that does not mean that it is impossible. The United States and its key allies still have a number of important and strategically significant advantages that they should seek to protect, including in the design and fabrication of advanced semiconductors and aircraft engines. Among the measures to be considered here are:

- strengthening cybersecurity to prevent the kinds of penetration and exploitation that have reportedly taken place in recent years;[36]

- strengthening the capacities of domestic counterintelligence agencies to prevent more traditional forms of scientific, technical, and commercial espionage;
- monitoring and, where appropriate, restricting research and educational exchanges;[37]
- broadening the scope of existing procedures for monitoring and restricting Chinese investment in the United States to include activities other than mergers and acquisitions;[38]
- strengthening the government's capacity to oversee and, if necessary, to prevent commercial transactions (including joint ventures and compulsory transfer of technology by U.S. firms seeking access to the Chinese market) that could have harmful strategic consequences but are nonetheless permissible under current law;[39] and
- working with friendly countries to devise a new and more focused system of export controls.[40]

From the vantage point of national security, there are a number of arguments to be made in favor of regional free trade pacts. Even if their economic impact is limited, FTAs can serve as tokens of U.S. commitment to the welfare as well as the security of its friends and allies. By contrast, refusing to enter into such agreements or imposing new restrictions on imports from friendly countries could stir resentment among their populations and weaken long-term ties. Reducing remaining barriers to trade and investment among other Asian countries and between them and the United States can help to reduce the extent to which they become economically dependent on China. As Ashley Tellis has argued, regional free trade agreements that exclude China, such as the now-defunct TPP, NAFTA, and a possible Transatlantic Trade and Investment Partnership, could also generate strategically significant relative gains, increasing growth rates in the United States, its friends, and allies but not China.[41]

It is probably too early to offer a definitive assessment of the strategic implications of China's One Belt One Road initiative. A careful reading of Chinese writings on the subject suggests that, whatever its economic motivations, OBOR is also driven by geopolitical considerations, including a desire to reduce vulnerability to maritime interdiction of energy and resource supplies and the hope that infrastructure development will help stabilize China's authoritarian neighbors, foster closer economic ties to Europe and the Middle East, and provide the logistical backbone for a new Sino-centric regional system in eastern Eurasia.[42] If Beijing can achieve these ends, it would be better situated to compete for influence on a global scale with the United States. On the other hand, if many of China's proposed investments in OBOR do not prove commercially viable, and if Beijing has to defend its projects and personnel in unstable parts of Central and South Asia, the net effect on its strategic position could be decidedly negative. In addition to squandering scarce resources, Beijing would then find itself compelled to divert energy and attention westward, away from the maritime domain where it is now challenging the U.S. and its Pacific allies, and toward its continental frontiers. For these reasons, the United States and its allies should avoid making it easier and less costly for China to attempt to fulfill its ambitious plans for a new Eurasian order.

3 Conclusions

Contrary to the hopes and expectations of the architects of engagement, the United States and China have clearly become geopolitical rivals. Acknowledging this fact does not yield easy answers to the question of whether and if so how the economic aspects of current policy should be changed. But it does mean that strategic considerations can no longer be safely ignored, or wished away with the pleasing assumption that the same approach will simultaneously maximize both welfare and security.

Despite this, the emerging debate over U.S. economic policy toward China has centered almost entirely on welfare considerations, with comparatively little attention paid to issues of national security. While the first three schools of thought sketched out above, and the differences among them, are reasonably clearly defined, the possible arguments for (and against) intervention on national security grounds remain underdeveloped. In order to remedy this situation, it will be necessary to taking the following steps.

Understand the Competitor, and the Competition

Even as they reexamine the role of economic policy in their own strategy, U.S. analysts and policymakers would do well to pay closer attention to the thinking of their Chinese counterparts. Beijing clearly views economic policy as an inseparable component of its grand strategy, and it appears to be more focused on maximizing China's national power than on improving the welfare of its citizens.[43]

Given the nature of its institutions and its governing philosophy, the United States cannot adopt a similar approach, nor should it try. But existing policies have clearly failed to achieve their stated objectives, and long-standing U.S. advantages in material resources are fast eroding. Despite their liberal preferences and beliefs, if they are to craft an effective response, Americans are going to have to try harder to understand the assumptions, objectives, and ambitions of those who see commerce not as an antidote to power politics, but as a continuation of war by other means.

Identify Objectives

A first step toward bringing national security concerns more fully into the broader discussion of economic policy regarding China would be to identify a set of objectives or preferred outcomes. These might include the following:

- Extend the period during which the United States will continue to enjoy an advantage in aggregate resources over China.
- Maintain a lead in developing and deploying technologies that will give U.S. weapons and other military systems a qualitative edge over their Chinese counterparts.

- Reduce the vulnerability of the U.S. economy to possible attempts at coercion while preserving the ability of the United States to use economic instruments to deter or apply pressure to others.
- Promote the growth of friends and allies, minimizing their exposure to economic coercion and strengthening their ties to the United States and to one another.
- Maintain a defense industrial base capable of increasing and sustaining production of arms and other military systems as needed in a range of realistic scenarios.

Specify Policies, Analyze Costs, and Benefits

While these goals may appear desirable in the abstract, there will inevitably be questions about the extent to which they can be achieved, the policies necessary to do so, and their attendant costs and risks (diplomatic as well as economic) and potential benefits (economic as well as strategic). Planners and policymakers need to address these questions as objectively as possible, rather than simply accepting the inevitable claim that the difficulties are too great and the costs too high, or the contrary assertion that the demands of national security should take precedence over all other considerations.

There is always a risk that groups and individuals will use strategic arguments to gain government protection that serves their own narrow interests rather than the interests of the nation as a whole or that measures introduced for purposes of enhancing national security will do serious long-term damage to the economy. But there is a danger too that those seeking to minimize government economic intervention in the belief that this approach is best for the collective welfare will understate or ignore real security challenges.

Examine Policymaking Structures and Processes

Conducting the kind of analysis and planning described above will likely require the creation of new bureaucratic mechanisms in which economic and strategic considerations can be merged more effectively than is currently possible. This will not be easy. Writing in 1978, Samuel Huntington observed that, in the United States, efforts to modulate trade with the Soviet Union in pursuit of strategic objectives faced "formidable obstacles," including "bureaucratic pluralism and inertia; congressional and interest group politics . . . [and] a pervasive ideology that sanctifies the independence, rather than the subordination, of economic power to government."[44] Forty years later, these obstacles remain in place and, if anything, because of the depth and complexity of commercial ties between the United States and China and the lack of consensus regarding the nature of their strategic relationship, they will be more formidable with regard to China than they were with the Soviet Union.

Consider Alternative Scenarios

A serious reexamination of current policies should consider changes that might be difficult to implement or even to contemplate in a serious way today, but which could appear obvious and essential following a major deterioration in U.S.-China relations. In recent decades, Washington has had the luxury of deciding whether or not to impose sanctions or embargos on other countries. But in the future, the United States could find itself on the receiving end of such measures or of more serious acts of economic warfare intended to disrupt and delay mobilization or even to destabilize its economy and society. It would obviously be better to have thought about and prepared for these eventualities in advance rather than trying to improvise a response if and when they occur.

4 Endnotes

1 Some analysts have recently argued that net private wealth, rather than gross national product, is "the single best measure of economic size and of the pool of resources available to its public sector for military or social spending." By this measure, as compared to GDP, the gap between the U.S. and China is large and getting larger. See Derek Scissors, "The Surest Measure of How China's Economy is Losing," *Realclearworld.com* November 29, 2016. http://www.realclearworld.com/articles/2016/11/29/the_surest_measure_of_how_chinas_economy_is_losing_112131.html

2 For a concise summary of these arguments, see Martin Feldstein, "Inconvenient Truths About the U.S. Trade Deficit," *Project Syndicate* April 25, 2017. George P. Shultz and Martin Feldstein, "Everything you need to know about trade economics, in 70 words," *The Washington Post* May 5, 2017.

3 Lawrence H. Summers, "The United States and the Global Adjustment Process," Speech at the Peterson Institute for International Economics, March 23, 2004. https://piie.com/commentary/speeches-papers/united-states-and-global-adjustment-process

4 On the continuing advantages of the dollar, see Eswar S. Prasad, *Gaining Currency: The Rise of the Renminbi* (New York: Oxford University Press, 2017), pp. 150-157.

5 See Eric Ng, "Solar prospects dim as subsidies peter out and overcapacity builds," *South China Morning Post* August 8, 2016.

6 See a report by the National Committee on U.S.-China Relations and Rhodium Group, "New Neighbors: 2017 Update, Chinese Investment in the United States by Congressional District," April 2017, p. 1.

7 For a breakdown of recent Chinese investments by sector, see Thilo Hannemann and Cassie Gao, "Chinese FDI in the U.S.: Tripling Down on America," Rhodium Group, July 22, 2016.

8 See Paul Mozur and Jane Perlex, "China Bets on Sensitive U.S. Start-Ups, Worrying Pentagon," *The New York Times* March 22, 2017.

9 For an overview of the issues, see Theodore H. Moran, "CFIUS and National Security: Challenges for the United States, Opportunities for the European Union," Peterson Institute for International Economics, February 19, 2017. https://piie.com/system/files/documents/moran-201702draft-c.pdf

10 David Dollar, "Yes, China is investing globally – but not so much in its belt and road initiative," *Brookings* May 8, 2017. https://www.brookings.edu/blog/order-from-chaos/2017/05/08/yes-china-is-investing-globally-but-not-so-much-in-its-belt-and-road-initiative/

11 Not all economists share this view. Michael Pettis has argued that China's actual growth rate is already substantially lower than official estimates of around 6.5 percent and that it is headed downwards, perhaps to below 3 percent. If he is right, then the point at which China becomes the world's biggest economy could be pushed out well into the next decade and possibly beyond. Michael Pettis, "My Reading of the FT's '. . . Glimpse of China's Economic Future,'" *China Financial Markets* January 6, 2017. http://carnegieendowment.org/chinafinancialmarkets/66610 If net private wealth is a more appropriate measure of economic weight than GDP, China's ascendancy could be deferred even longer, perhaps indefinitely. Derek Scissors, "Is the U.S. economy actually leaving China behind?" *Realclearworld.com* May 13, 2015. http://www.realclearworld.com/articles/2015/05/13/is_the_us_economy_actually_leaving_china_behind_111189.html

12 A conclusion captured in the title of Peter Navarro, *Death by China: Confronting the Dragon* (New York: Prentice Hall, 2011). Some critics also point out that, in addition to the damage done to foreigners, China's export-promotion policies have favored producers and large industrial interests at the expense of its own workers and consumers.

13 For a skeptical assessment of the WTO's role in shaping China's behavior, see Mark Wu, "The 'China Inc.' Challenge to Global Trade Governance," *Harvard International Law Journal* vol. 57, no. 2 (Spring 2016), pp. 261-324.

14 The extent to which changes in manufacturing employment are due to import competition, automation, or some combination of the two is a subject of ongoing debate among economists. Regarding the apparent role of trade and especially imports from China, see Justin R. Pierce and Peter Schott, "The Surprisingly Swift Decline of U.S. Manufacturing Employment," National Bureau of Economic Research, February 2015; David Acemoglu, David Autor, David Dorn, Gordon H. Hanson and Brendan Price, "Import Competition and the Great U.S. Employment Sag of the 2000s," *Journal of Labor Economics* vol. 34, no. 1, pt. 2 (2015), pp. 141-198; David H. Autor, David Dorn, and Gordon H. Hanson, "The China Shock: Learning from Labor Market Adjustment to Large Changes in Trade," National Bureau of Economic Research, Working Paper 21906, January 2016.

15 See Anne Case and Angus Deaton, "Mortality and morbidity in the 21st century," *Brookings Papers on Economic Activity* March 2017. https://www.brookings.edu/wp-content/uploads/2017/03/6_casedeaton.pdf

16 Regarding the role of manufacturing in the economy as a whole, see Martin Neil Baily and Barry P. Bosworth, "U.S. Manufacturing: Understanding Its Past and Its Potential Future," *Journal of Economic Perspectives* vol. 28, no. 1 (Winter 2014), pp. 3-26. On the possible role of import competition in reducing spending on R&D, see David Autor, David Dorn, Gordon Hanson, Gary P. Pisano, and Pian Shu, "Competition from China reduced innovation in the U.S.," *Vox* March 20, 2017. http://voxeu.org/article/competition-china-reduced-innovation-us

17 For concise recent statements of many of these arguments, see Peter Navarro, "Why the White House Worries About Trade Deficits," *Wall Street Journal* March 5, 2017, and Peter Morici, "How to fix the trade deficit," *MarketWatch* May 1, 2017.

18 See Joseph E. Gagnon, "Curbing the Growth of U.S. International Debt," Peterson Institute for International Economics, March 29, 2017. https://piie.com/blogs/realtime-economic-issues-watch/curbing-growth-us-international-debt

19 Warren Buffett, "Here's How I Would Solve the Trade Problem," *Fortune* April 29, 2016. http://fortune.com/2016/04/29/warren-buffett-foreign-trade/

20 Stephen Ezell, "Trump must fight for the jobs of tomorrow in meetings with China," *The Hill* April 7. 2017.

21 See Jost Wubbeke, Mirjam Meissner, Max J. Zenglein, Jaqueline Ives, and Bjorn Conrad, *Made in China 2025: The making of a high-tech superpower and consequences for industrial countries* (Berlin: Mercator Institute for China Studies, December 2016); U.S. Chamber of Commerce, *Made in China 2025: Global Ambitions Built on Local Protections* (Washington: U.S. Chamber of Commerce, 2017).

22 For a review of many possible options, see Robert D. Atkinson, Nigel Cory, and Stephen J. Ezell, *Stopping China's Mercantilism: A Doctrine of Constructive, Alliance-Backed Confrontation* (Washington: Information Technology and Innovation Foundation, March 2017). Regarding a possible blanket restriction on investment by Chinese SOEs, see U.S.-China Economic and Security Review Commission, *2016 Report to Congress* (Washington: U.S. Government Printing Office, November 2016), p. 507.

23 President's Council of Advisors on Science and Technology, *Report to the President: Ensuring Long-Term U.S. Leadership in Semiconductors* (Washington: Executive Office of the President, January 2017), pp. 21-24. In Europe, where ideological objections to more interventionist approaches are generally weaker, a group of analysts at a German think tank has recently proposed what they describe as "a narrowly targeted industrial policy...focusing on strategic infant industries," starting with the development of European cyber defenses. Wubbeke, *Made in China 2025*, p. 9.

24 See, for example, a report prepared for the U.S. Chamber of Commerce by the Rhodium Group and the Covington law firm, *Preventing Deglobalization: An Economic and Security Argument for Free Trade and Investment in ICT* (Washington: U.S. Chamber of Commerce, 2016).

25 See the discussion in Samuel P. Huntington, "Why International Primacy Matters," *International Security* vol. 17, no. 4 (Spring 1993), pp. 68-83.

26 For a useful overview of these and other related issues, see Julian Snelder, "China: The Pentagon's Great Industrial Challenge," *The National Interest* November 3, 2016. http://nationalinterest.org/blog/the-buzz/china-the-pentagons-great-industrial-challenge-18278

27 See Bureau of Industry and Security, Office of Technology Evaluation, "Section 232 Investigations Program Guide: The Effect of Imports on the National Security," (Washington: Department of Commerce, June 2007). https://www.bis.doc.gov/index.php/forms-documents/section-232-investigations/86-section-232-booklet/file

28 Shortly after taking office, the Trump administration launched investigations into the national security implications of imported steel and aluminum, much of it from China. See Ana Swanson, "Trump administration launches national security investigation into steel imports," *The Washington Post* April 20, 2017; Toluse Olorunnipa, Jennifer Jacobs, and Joe Deaux, "Trump Administration Opens Investigation on Aluminum," *Bloomberg* April 26, 2017.

29 See Aaron L. Friedberg, "The End of Autonomy: The United States after Five Decades," *Searching for Security in a Global Economy* Special issue of *Daedalus* vol. 120, no. 4 (Fall 1991), pp. 69-90.

30 See Daniel W. Drezner, "Bad Debts: Assessing China's Financial Influence in Great Power Politics," vol. 34, no. 2 (Fall 2009), pp. 7-45.

31 These observations apply not only to the financial situation but to the overall trading relationship between the two countries. Chinese strategists appear to have given some thought to the possibility of a major disruption or breakdown in trade and financial flows, and some of the policies that they are currently pursuing may be intended to mitigate the consequences of such a scenario. At least for the moment, their U.S. counterparts evidently regard this prospect as unthinkable; in any event, there is no evidence that they are attempting to wrestle with it.

32 Among the areas identified as of critical importance to the third offset strategy are artificial intelligence, autonomous systems, and human-machine collaboration, all of obvious potential commercial as well as military significance. See Cheryl Pellerin, "Work: Human-Machine Teaming Represents Defense Technology Future," *defense.gov* November 8, 2015. https://www.defense.gov/News/Article/Article/628154/work-human-machine-teaming-represents-defense-technology-future/

33 Regarding the possible benefits of increased spending on basic research in a range of areas, see a Report by the MIT Committee to Evaluate the Innovation Deficit, *The Future Postponed: Why Declining Investment in Basic Research Threatens a U.S. Innovation Deficit* (Cambridge: Massachusetts Institute of Technology, 2015).

34 For a discussion of one such organization, the Defense Innovation Unit Experimental (DIUx), see Fred Kaplan, "The Pentagon's Innovation Experiment," *MIT Technology Review* December 19, 2016. https://www.technologyreview.com/s/603084/the-pentagons-innovation-experiment/

35 See Ashton B. Carter, "Keeping the Technological Edge," in Ashton B. Carter and John P. White, eds., *Keeping the Edge: Managing Defense for the Future* (Cambridge: MIT Press, 2001), p. 145.

36 Ellen Nakashima, "Confidential report lists U.S. weapons system designs compromised by Chinese cyberspies," *The Washington Post* May 27, 2013. https://www.washingtonpost.com/world/national-security/confidential-report-lists-us-weapons-system-designs-compromised-by-chinese-cyberspies/2013/05/27/a42c3e1c-c2dd-11e2-8c3b-0b5e9247e8ca_story.html?utm_term=.f9a4f8d07692

37 A recent U.S. government report identifies "academic solicitation" as among the most common means for attempting to obtain "sensitive export-restricted basic and applied research or classified information." Defense Security Service, *Targeting U.S. Technologies: A Trend Analysis of Cleared Industry Reporting (2016)*, p. 12. http://www.dss.mil/documents/ci/16-08-15_Unclass_Trends_with_cover.pdf

38 Critics note that the current CFIUS process does not cover "greenfield" investments in new ventures or investments in small start-up companies that may be developing strategically-relevant innovations in fields like artificial intelligence, robotics, and bio-technology. See Matthew P. Goodman and David A. Parker, "The China Challenge and CFIUS Reform," *Global Economics Monthly* vol. VI, issue 3 (March 2017). https://www.csis.org/analysis/global-economics-monthly-china-challenge-and-cfius-reform. The Trump administration is reportedly contemplating including China on a list of countries whose proposed investments in the United States would be subjected to additional scrutiny. Saleha Mohsin, "Mnuchin Seeks Greater Scrutiny of Chinese Investments in U.S." *Bloomberg*.com June 14, 2017. https://www.bloomberg.com/politics/articles/2017-06-14/mnuchin-seeks-greater-scrutiny-of-chinese-investments-in-u-s?utm_source=yahoo&utm_medium=bd&utm_campaign=headline&cmpId=yhoo.headline&yptr=yahoo

39 See Paul Mozur and Jane Perlez, "U.S. Tech Giants May Blur National Security Boundaries in China Deals," *The New York Times* October 30, 2015. https://www.nytimes.com/2015/10/31/technology/us-tech-giants-may-blur-national-security-boundaries-in-china-deals.html

40 For one proposal along these lines, see Robert D. Blackwill and Ashley J. Tellis, *Revising U.S. Grand Strategy Toward China* (New York: Council on Foreign Relations, March 2015) , p. 24.

41 Ashley J. Tellis, *Balancing Without Containment* (Washington: Carnegie Endowment for International Peace, 2014), pp. 42-54.

42 See Nadège Rolland, "China's 'Belt and Road Initiative': Underwhelming or Game-Changer?" *The Washington Quarterly* vol. 40, no. 1 (2017), pp. 127-143 and *China's Eurasian Century? Political and Strategic Implications of the Belt and Road Initiative* (Seattle: National Bureau of Asian Research, 2017).

43 While the literature on Chinese economic policy is vast, comparatively little has yet been written on the role of economics in China's grand strategy. For some recent exceptions see William J. Norris, *Chinese Economic Statecraft: Commercial Actors, Grand Strategy, and State Control* (Ithaca: Cornell University Press, 20160 and Timothy R. Heath, "China's Evolving Approach to Economic Diplomacy," *Asia Policy* no. 22 (July 2016), pp. 157-91.

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