



**Statement Before the  
House Committee on Financial Services,  
Subcommittee on Monetary Policy and Trade**

***“Evaluating CFIUS:  
Challenges Posed by a Changing Global  
Economy”***

A Testimony by:

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## **Introduction and Main Points**

Thank you for the invitation to appear before the committee. I have been asked to share my views about Chinese industrial policy, trends in technology flows, and the implications for American policy to limit diffusion of advanced technologies to China that could harm U.S. national security, including the role of CFIUS.

### **I. Summary**

I want to make four points today.

First, although highly wasteful and inefficient, Chinese industrial policy has been relatively effective at facilitating both the domestic development of technology in China as well as the acquisition of foreign technology from the United States and elsewhere. All signs point to China further strengthening its industrial policy apparatus and not engaging in substantial marketization and liberalization in the coming years.

Second, although the US-China relationship has many problematic elements, economic ties on balance have and continue to benefit the American economy, including companies, workers, and consumers. At the same time, the US and China have conflicting security interests in the Asia-Pacific, creating the difficult situation in which the economic and security components of the relationship are to some extent contradictory. I expect this tension will also persist well in to the future.

Third, American technology reaches China through a wide variety of channels, including investment, trade, employment, and education. Constraining technology diffusion in one area does not stop its diffusion via other means.

And fourth, American policies taking these three factors into account would require the US to: 1) Focus on technology that could harm American national security that China does not already have and would have difficulty developing domestically; 2) Take into account that technology diffusion occurs via multiple routes, and that some routes are easier to regulate than others; 3) To be successful, the United States needs to expand coordination of its technology control policies with those of its allies; and 4) Adopt policies that are highly targeted so that they do not hurt the vibrancy of the American economy.

My written and oral testimony seek to elaborate on these four points.

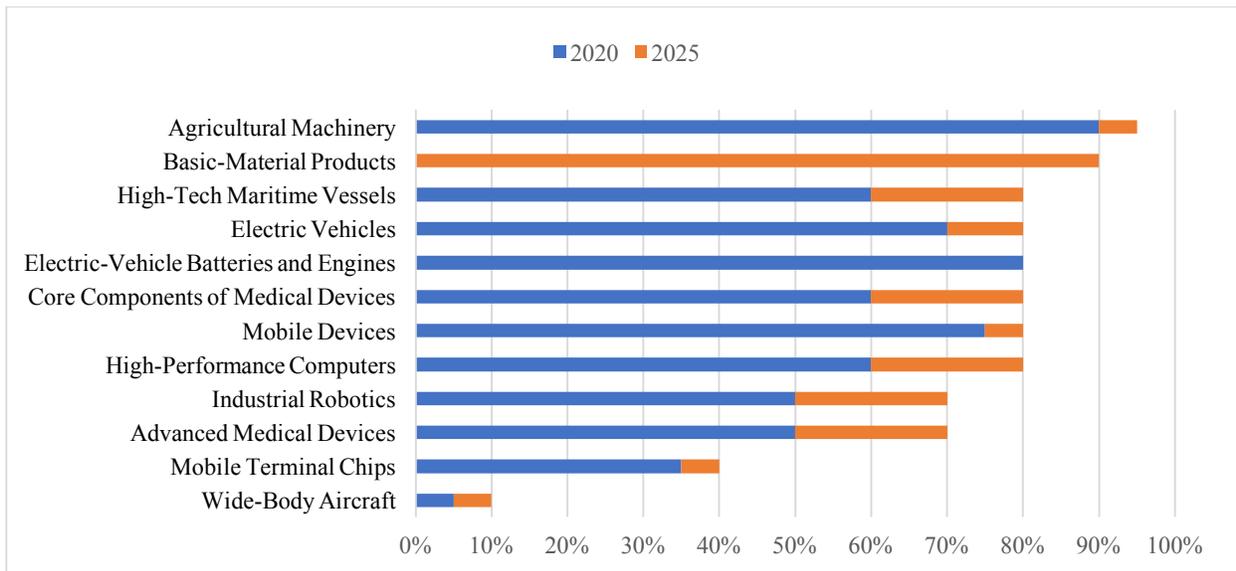
### **I. The State of Chinese Industrial Policy**

2018 marks the 40th anniversary of China's launching of the Era of Reform and Opening Up. Compared to the autarkic state socialist system in which the country found itself at the end of the Cultural Revolution, four decades later China's economy is far more marketized and open. Private firms account for the large majority of the country's employment, profitability, and economic growth. The vast majority of prices for final goods and services are set by the market, and the financial system is large and diverse. China's average tariffs have fallen from 14.1% in

2001 to 4.2% in 2016, the country is the largest recipient of foreign direct investment (with over 520,000 foreign-invested firms in China), and China is the fastest growing source of outward direct and portfolio investment.

That said, the Chinese state is far from a neutral referee of a competitive marketplace. Rather, its consistent goal has been to use state authority to not only further the overall growth of the economy but to promote specific companies, sectors, and regions. Although China's leadership in the late 1990s and early 2000s made a genuine effort to marketize the economy and sought WTO entry to pursue that goal, their successors have not maintained the same commitment. Under the leadership of Hu Jintao and Wen Jiabao (2002-2012), China reinvigorated the industrial policy apparatus and ramped up state-directed investment in priority sectors and projects. Under their watch China set forth the goal of "indigenous innovation," which still holds today, of making industrial policy's chief aim the development and acquisition of more advanced technology by domestic actors in order to raise productivity and make China more competitive internationally.

**Figure 1: Selected Domestic Market Share Targets of *Made in China 2025***



Source: China Ministry of Industry and Information Technology.

Note: The government set targets for 2020 and 2025 for most technologies, but not all. Hence, some denote only a single target.

Since Xi Jinping assumed power in late 2012, several trends have emerged. First, China has only intensified its industrial policy efforts. China's goals are far more ambitious than in the past, as it aims to have Chinese firms become dominant in just about every area of advanced technology imaginable. The 13th Five-Year Plan calls for a rapid growth in R&D spending, the number of patents, and the contribution of science & technology to the economy, and identifies over 200 technologies deserving support. *Made in China 2025*, a strategy document issued in 2015 and a high-priority component of the 13th Five-Year Plan, sets forth high targets for the local firms'

market share in China of technologies and supply chains by 2025, such as 80% for electric vehicles, 70% for industrial robotics, and 70% for advanced medical devices (see Figure 1).<sup>1</sup>

Second, the scale of Chinese initiatives and investment has grown enormously, with spending on research and development (R&D) in 2016 reaching over \$232 billion. Direct government funding is growing, but more important is how the state increasingly utilizes policy levers to induce banks, other financial institutions, companies and research institutes to target their own spending in priority sectors established by policymakers.<sup>2</sup>

Third, industrial policy is far more strategically coordinated than ever before. Local experimentation has declined in favor of centralization. The top leadership is more than ever utilizing “leading small groups” overseen by the Party and State Council (China’s cabinet) leadership to reduce inter-bureaucratic conflicts and raise the likelihood that investments address the country’s technology gaps. Relatedly, under Xi there is greater emphasis on coordinating the development of dual-use technologies, so that products and services created in a commercial environment are available for adoption by China’s military, domestic security, and intelligence organizations.<sup>3</sup> During the implementation process, the various tools of industrial policy are increasingly coordinated with each other. Priority sectors and companies are supported through fiscal stimulus, tax reductions and holidays, access to low-cost or free land, low-interest credit, easier access to securities markets, patent approvals, discriminatory technical standards, antitrust policy directed against disfavored competitors, privileged government procurement, limits on market access, and other preferential policies.

And fourth, China has expanded efforts to have globalization serve the country’s industrial policy goals. In addition to sending millions of students abroad over the last few decades to obtain advanced degrees in engineering and science, Chinese financial institutions and companies have ramped up outward investment and acquisition of overseas companies. According to the Rhodium Group, Chinese investment in the United States was at least \$46 billion in 2016 and \$26.4 billion in the first three quarters of 2017. The leading sectors of Chinese US investment in Q3 were in health and biotech, financial and business services, basic materials, and other high-tech. Looking globally in 2017, the overall level of outward investment declined somewhat as a result of China’s fears about capital flight and corruption, but among deals being made recently, a higher proportion involve Chinese state-owned companies and

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<sup>1</sup> Jost Wubbeke et al., *Made in China 2025: The Making of a High-Tech Superpower and Consequences for Industrial Countries* (Berlin: Mercator Institute for China Studies, December 2016); *China Manufacturing 2025: Putting Industrial Policy Ahead of Market Forces* (Beijing: European Union Chamber of Commerce in China, March 2017); and *Made in China 2025: Global Ambitions Built on Local Protections* (Washington, DC: U.S. Chamber of Commerce, September 2016).

<sup>2</sup> Scott Kennedy, *The Fat Tech Dragon: Benchmarking China’s Innovation Drive* (Washington, DC: Center for Strategic and International Studies, August 2017): 19.

<sup>3</sup> Xi Jinping personally heads the Central Commission on Civilian-Military Integration Development. Christopher K. Johnson, Scott Kennedy and Mingda Qiu, “Xi’s Signature Governance Innovation: The Rise of Leading Small Groups,” CSIS Commentary, October 17, 2017, <https://www.csis.org/analysis/xis-signature-governance-innovation-rise-leading-small-groups>.

financial institutions and are in materials and high-tech sectors (telecom, media, computing).<sup>4</sup> Finally, as part of this effort, Chinese companies have opened up R&D centers in Silicon Valley and other high-tech hubs, and are hiring talent from other companies and straight out of universities to help them strengthen their own innovation capacity.

Looking ahead, there is every indication that China plans to continue along the current path in which industrial policy is intensively used to serve economic and strategic goals. And that is because despite all the waste that is created through extensive government intervention, the broader record, at least from the leadership's point of view, is "good-enough" success. The economy has grown faster longer than any other economy in history, and Chinese companies are gradually moving up the value-added chain and claiming more market share in China and abroad. And although there is concern about protectionism by the United States, Europe and their advanced industrialized neighbors, China believes it can continue to use its large market as leverage to obtain technology and knowhow from others for the foreseeable future.

## II. The Benefits and Challenges in the US-China Economic Relationship

The economic relationship with China has created both benefits and problems for the American economy. Industrial policy certainly puts American companies at a disadvantage in China and in third markets. And given China's size, to the extent that Chinese successes are the product of subsidies and other distortions, this could challenge the health of not only individual competitors, but supply chains and business models that operate in a competitive environment where the participants face hard budget constraints. That said, to date, the American economy has on balance benefited from our relationship with China. Trade in goods and services is over \$600 billion per year and two-way investment has risen substantially, all of which not only creates profits for companies, but employment for millions of workers, and less expensive goods for consumers. The relationship would be more beneficial if China would reduce its discriminatory policies, but the best way to deal with this problem is to find ways to constrain Chinese industrial policy, not shutdown the economic relationship.

The operating logic of American security policy is different, which is to safeguard the United States as much as possible. Fairness and balance are not typical principles of this effort. Whereas there may be technology transfers that are entirely reasonable when seen through a commercial lens, they may be entirely unreasonable when viewed in the context of national security. The United States faces a conundrum because the US-China economic relationship is so large and China is moving up the value-added chain so quickly in ways that may be reasonable, even if not welcome from a market competition perspective, but far more worrisome from a national security perspective. Chinese efforts in semiconductors, quantum computing, artificial

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<sup>4</sup> See the Rhodium Group's "China Investment Monitor," <http://rhg.com/interactive/china-investment-monitor>; Daniel H. Rosen and Thilo Hanemann, "Trump Heads to China – Is Chinese Investment Still Headed Here?" Rhodium Group, November 3, 2017, <http://rhg.com/notes/trump-heads-to-china-is-chinese-investment-still-headed-here>; and Thilo Hanemann, Adam Lysenko and Cassie Gao, "Tectonic Shifts: Chinese Outbound M&A in 1H 2017," Rhodium Group, June 27, 2017, <http://rhg.com/notes/tectonic-shifts-chinese-outbound-ma-in-1h-2017>.

intelligence, advanced materials, biologics, energy storage, aeronautics and space, and other areas may be headaches for American companies, but they are much greater concern for those responsible for ensuring America's national security.

### III. Technology Diffusion to China

Another important element of China's technology engagement with the world is that it occurs via many different avenues. The various pathways include:

1. Attracting foreign investment in China.
2. Chinese investment abroad, both greenfield and M&As, including minority stakes.
3. Imports.
4. Hiring foreigners to work in Chinese companies and research institutes.
5. Sending Chinese students abroad to study (which totaled 4.6 million between 1978 and 2016).<sup>5</sup>
6. Theft of foreign technology through cyber and other means.

Two consequences emerge from this fact. First, Chinese companies that desire acquiring technology have many routes to success. If the investment route is blocked, they can look to imports, poaching employees, hiring students, or other means. Similarly, if a technology exists in multiple countries but not in China, they can also benefit from differences in regulatory environments and levels of vigilance between jurisdictions.

And second, governmental authorities may benefit from deals and interactions that are entirely commercial or private. Not all of the elements of international technology acquisition are all part of a single, unified industrial policy. Much trade and investment is entirely private and does not involve approval by China's industrial policy apparatus or national security bureaucracy. This is particularly true for R&D centers – in both directions – as well as overseas students. That said, it is certainly possible that originally entirely private activity could be identified and utilized by China's authorities to serve China's domestic and national security goals.

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<sup>5</sup> This data is from China's Ministry of Education, <https://mp.weixin.qq.com/s/5764saZiSyFlnH6um46Jtg>. According to the US-based Institute of International Education, in 2016, there were 328,500 Chinese students studying in the United States, of which 140,300 were in science and engineering programs: <https://www.iie.org/Research-and-Insights/Open-Doors/Data/International-Students/Places-of-Origin>, and <https://www.iie.org/Research-and-Insights/Open-Doors/Data/International-Students/Fields-of-Study/Fields-of-Study-by-Place-of-Origin/2015-16>.

#### **IV. Implications for American Policy**

The above discussion about trends in Chinese industrial policy, the contradictions between promoting the US-China economic relationship and American national security, and the multiple paths by which China acquires technology are directly relevant to the current discussion in the United States about whether to reform its system to ensure that foreign investment does not harm American national security. It certainly makes sense for the U.S. Congress to consider reforming the operations of the Committee on Foreign Investment in the United States (CFIUS), but given the above discussion, I suggest that policymakers keep several points in mind that emerge from this analysis.

First, the United States should focus on limiting transfer of technologies that could harm American national security that China does not already possess and is not likely to develop internally. CFIUS's current focus on military-related technologies and critical infrastructure seems to be working relatively well. It may make sense to expand the scope of CFIUS to include certain kinds of data, but this determination should be made based on guidance from American national security professionals.

Second, to the extent CFIUS's mandate is expanded to other forms of investment, it may be most appropriate to consider having CFIUS review even investments where foreign parties obtain only a minority stake, particularly in cases of high-priority technologies. Obtaining majority stakes may not be necessary for Chinese and other foreign parties to obtain access to technologies which affect American national security. Some have suggested that this change would lead to a "slippery slope" that would induce misuse or retaliation by other countries against American investment and weaken the global economy. I am less concerned about this outcome as long the United States is careful and transparent about the need for this shift. On the other hand, I would not support expanding CFIUS's ambit to include outward American investment. Although certainly an avenue for important technology transfer, one that may increase in the years ahead, taking this step would likely be impractical. CFIUS currently reviews 100-150 cases per year; moreover, these cases all occur within a common jurisdiction well known to American regulators (their own). Expanding its coverage to outward US investment could raise that number to several thousand per year, certainly far more than could be effectively managed by the committee even if its resources were significantly expanded. And trying to gain understanding about each deal across many different regulatory environments would be beyond daunting.

Third, given that CFIUS needs should be reformed and not revolutionized, the United States should consider other policy and legislative options to address other potential weaknesses in oversight of American technology transfer to China and elsewhere. Particular focus should be placed on updating American export control rules, not only for physical technologies and intellectual property but for American employees who are then recruited by foreign industry.

Fourth, American efforts to constrain inappropriate technology diffusion to strategic rivals requires it to expand coordination with its allies in Europe and Asia. Differences in American policy and regulation differs from its allies can and have been exploited by jurisdictions subject

to technology controls. Globalization of manufacturing and innovation is likely only to expand in the future, and so policy coordination must increase simultaneously.

And fifth, although it is important to protect the United States from the unwise transfer of technologies to countries that pose a security challenge to America, the United States also gains tremendous strength from having an economy open to flows of goods, services, people, and ideas. This is not just a nice-sound goal, but central to maintaining America's hard and soft power. Hence, policymakers should be careful that any steps taken to adjust technology investment have a net positive effect on the American economy and its potential future for high-productivity growth.