Perspectives on Chinese Investment in the United States

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According to the National Committee on U.S.-China Relations and the Rhodium Group, Chinese direct investment into the U.S. has grown rapidly over the past fifteen years: breaking \$100 million in 2004, \$1 billion in 2010, \$10 billion in 2014, and reaching a peak of \$47 billion in 2016. This growth was particularly dramatic during the years 2015 to 2017 when, prompted by a slowing Chinese economy, unstable financial markets at home, and encouragement by the Chinese government, Chinese companies, most of them privately-owned, invested over \$90 billion in the United States.

The speed and scale of such investments raised concerns in the United States. The opaque governance structures of several of these companies gave rise to anxieties that several nominally private Chinese investors may have been closely tied with an increasingly assertive Chinese Party-State.

As companies, particularly a few large private enterprises, took on billions in Chinese state bank-financed debt to acquire assets often unrelated to their core business operations abroad, the Chinese government grew concerned as well. The resulting regulatory tightening in both the U.S. and China led to a significant decrease of Chinese investments in the U.S. in 2017, with the value of newly announced deals dropping by 90 percent.² Several of the most acquisitive Chinese firms of the previous two years began rapid divestments to pay off debts.³

While the buying spree of 2015 to 2017 may have come to an end, Chinese-owned companies in the U.S. still employ over 100,000 people and generate tens of billions of dollars of economic

¹ "The U.S.-China FDI Project," accessed February 7, 2019; link: https://us-china-fdi.com/; in comparison, annual U.S. FDI into China had ranged between \$10-15 billion since 2009.

² Hanemann and Rosen, "Chinese FDI in the US in 2017: A Double Policy Punch," Rhodium Group (January 17, 2018), link: https://www.rhg.com/research/chinese-fdi-in-the-us-in-2017-a-double-policy-punch/.

³ "HNA, Under Pressure From Beijing, to Sell Its Overseas Empire," WSJ (September 7, 2018), link: https://www.wsj.com/articles/chinas-hna-to-exit-deutsche-bank-stake-under-pressure-from-beijing-1536307095?mod=article_inline.

activity each year.⁴ Some have become partners of local institutions and governments in the creation of jobs and the provision of links to Chinese markets. Others are seeking to upgrade knowledge or technology that may help them compete in an intensely competitive Chinese market.

At a time of heightened U.S.-China strategic tensions, it is important to remember how the U.S. had benefited and may continue to benefit from investments by Chinese businesses. It is important also to understand the challenges faced by private Chinese entrepreneurs dealing with their own government and an increasingly intrusive Party-State. If the United States truly wishes to "pursue a future of peace and prosperity" with the "enduring friendship between the American people and the Chinese people," as concluded by Vice President Mike Pence in his October 2018 *Remarks on the Administration's Policy Toward China*, it should seek means to work cooperatively with Chinese entrepreneurs interested in investing in the United States and not shut them out of American markets.

To understand the opportunities—and the potential risks—of Chinese investment in the United States, it helps to have a grasp of the relationship between business and government in China, and to have a nuanced understanding of the quite different types of Chinese enterprises that have invested, or may seek to invest, in the United States. A history of one private firm, the Wanxiang Group and its investments in the U.S., drawn from a series of Harvard Business School cases on the company, may serve as an example of how the United States can benefit from private Chinese enterprise.

Brief Overview of the Relationship between Private Business and the State in China

For much of the last millennium, China has had a largely market-driven economy, led by private, largely family-based, enterprises. The People's Republic of China was founded in 1949 on the model of the Soviet Union as a centralized, planned economy, and all private enterprises were nationalized by the end of 1956.⁵ For the first time since the Tang dynasty (618-907 CE), all land became state property. But the period of absolute state domination of the economy was short (compared to that of the Soviet Union) and catastrophic in economic terms. Forms of private enterprise began to return in the 1980s. In 1992 the Chinese government declared China a "socialist market economy with Chinese characteristics."

Over the course of the past four decades of "reform and opening," the private sector in China has grown enormously and has returned to its historically central role. Even according to President

⁴ "Close Up: Chinese Investments in America," Marco Polo, accessed February 7, 2019, link: https://macropolo.org/know-the-numbers/.

⁵ The nationalization of industrial assets began before 1949 under the former Nationalist Government; by 1949, two-thirds of Chinese industry had already been nationalized.

Xi Jinping, who has emphasized the continued importance of state-led enterprise, by the end of 2017, there were more than 91 million registered private business entities in China with 165 trillion RMB (approximately 24 trillion USD) in registered capital. This accounted for over 50 percent of tax revenue, 60 percent of GDP, 70 percent of product innovations, 80 percent of urban employment, and 90 percent of the total number of registered businesses in China.⁶

But the state sector, although much diminished in size and capacity, has indeed not gone away. Since the beginning of China's post-1978 reform era, the Communist Party of China has insisted that the state retain control of the "commanding heights" of the Chinese economy. These included monopolies or near-monopolies by state-owned enterprises (SOEs) in banking, telecommunication services, energy, heavy industry, and infrastructure. The state, through local government, continues to own all of the land in the name of "the people," and land and rental markets are mediated by local officials.

Of course, in many countries the government controls strategic industries such as railroads, airports, or energy-related industries. In China, however, a legacy of the pre-reform era is that national, provincial, and municipal state-owned enterprises can play important roles in sectors ranging from shipping to construction to tobacco to dairy to wine. As vested interests concerned with protecting their markets, they can erect significant obstacles to both private Chinese and foreign enterprise.

Despite being less efficient than private enterprises, including having a return on asset of 3.9 percent compared to private enterprises' 9.9 percent, SOEs receive over 50 percent of loans from the state-controlled banking sector. The stock exchanges in China were set up in the 1990s primarily as a means of recapitalizing SOEs. By the end of 2017, companies with a government entity as the controlling stakeholder accounted for nearly one-third of all listed firms in China. Companies with more than 20 percent government ownership accounted for 40 percent of total market capitalization on Chinese stock exchanges and 50 percent of revenue of listed companies. Even the most successful private business leaders sometimes complain that in the eyes of the government, their businesses will always be "adopted sons," second favorites to the "real sons," the SOEs, when it comes to opportunities and resources.

In a political system where judges at all levels of government report to the Communist Party's Political Legal Commissions of the same level, the legal rights of private businesses vis-à-vis the

^{6&}quot;习近平:在民营企业座谈会上的讲话," Xinhua (November 1, 2018), link: http://www.xinhuanet.com/politics/2018-11/01/c_1123649488.htm.

⁷ Rosen et al, "Missing Link: Corporate Governance in China's State Sector," Asia Society (November 2018); "Reform of China's ailing state-owned firms is emboldening them," The Economist (July 2017), link: https://www.economist.com/news/finance-and-economics/21725293-outperformed-private-firms-they-are-no-longer-shrinking-share-overall.

⁸ Ibid

⁹ Ibid

government or SOEs cannot be adequately protected through the judicial system. Faced with the Chinese Party-State's control of capital and key resources and the lack of protection from an independent judiciary, private Chinese businesses must find ways to work around, or with, the Party-State.

Private enterprise has flourished especially in sectors where state-owned actors are absent. Take finance: State-owned banks historically have not given loans to private enterprises or individuals. In recent years, new forms of financial companies and peer-to-peer lending platforms (e.g. China Rapid Finance) have emerged to fill an important need. Or take cross-provincial commerce: China has historically been not one national economy but a series of large economic "macroregions." Even within those, there has been in the Communist era significant protectionism in cross-provincial trade. And without a strong system of commercial law, it has been difficult for entrepreneurs to conduct business with people from far away who do not share personal ties. Alibaba, by taking on much of the risk of long-distance commerce between businesses, has done more to promote trade and investment across China's internal borders than any government ministry.

Despite stereotypes to the contrary, the Chinese Party-State is not a monolith of unified interest. When private businesses cannot work around the government, some were able to find able and entrepreneurial partners in the vast central and local bureaucracies. For example, the government of the county-level city of Kunshan in Jiangsu Province streamlined its bureaucracy to attract foreign direct investment and help both Chinese and international businesses succeed in Kunshan and navigate bureaucracy across China. As a result, Kunshan grew into one of the richest towns of China. Its per capita GDP rose from under \$1,500 in 1992 to \$19,000 by 2011. Neighboring Zhejiang Province, which had been relatively neglected by the PRC's state-sector investments as the native province of former Nationalist leader Chiang Kai-shek, is also well-known for being supportive of private businesses. Both Jiangsu and Zhejiang had for centuries been among the most entrepreneurial places on earth, and they are again today.

Once successful, private business leaders may seek political insurance by joining the Communist Party or—in the case of heads of the largest enterprises—be "elected" (selected) to join either the National People's Congress, China's nominal legislature, or the Chinese People's Consultative Conference, an advisory body that some call China's "consultative democracy." (Election to these bodies is not something one can easily turn down.) The annual sessions of the "Two Congresses" had become one of China's biggest gathering of billionaires. According to the

¹⁰ For more detailed information, see HBS case: Abrami et al, "China Risk Finance: Riding the Wave of China's Financial Services Industry," Harvard Business School Publishing (July 2, 2012).

¹¹ This is a central reason why most private businesses in China are funded initially by family, friends, and hometown supporters.

¹² For more detailed information, see Kirby et al, "Kunshan, Incorporated: The Making of China's Richest Town," Harvard Business School Publishing (May 8, 2013).

Hurun Report, which tracks China's super-rich, 153 out of the roughly 5,000 members of either body at the national level had a collective net worth of \$650 billion. These positions grant formal, albeit nominal, status within the political system and thus give some level of access to key party and government leaders. These and other successful entrepreneurs are expected to give back to state and society through ever-increasing levels of philanthropy and by supporting government priorities in their businesses and their investments.

However, there are limits as to what private entrepreneurs are willing to do to support government priorities at the expense of their own business interests. The Belt and Road Initiative, launched by President Xi Jinping in 2013, has received tepid response from the private sector. To be seen as contributing to a major government initiative, companies began publicizing any activities they had related to "Belt and Road countries" or "near-Belt and Road countries," designations that seem to mean anywhere outside North America and Japan. Actual investments by private businesses in the less-developed Belt and Road countries were dwarfed by their investments in more developed countries. He when they do happen, private investments in Belt and Road countries tended to move towards more developed markets like Israel, Singapore, and South Korea. When surveyed by Deloitte in 2017, private businesses were still much more enthusiastic about future investment in the U.S. and other mature markets than less-developed Belt and Road countries, where investments carry greater risk.

Relying too heavily on state bank financing for growth can also carry risks for Chinese businesses. Anbang Insurance, the Dalian Wanda Group, and the HNA Group began their aggressive international expansion with the support of the state banks, indicating implicit backing from a government eager to see Chinese companies internationalize. They also became victims of sudden changes in government policy, when support for internationalization turned to worries about excessive capital outflow and financial risks brought on by excessive levels of corporate debt. Chairman Wu Xiaohui of Anbang Insurance Group, and one-time grandson-in-law to Paramount Leader Deng Xiaoping, was arrested and sentenced to prison. Dalian Wanda and the HNA Group were both ordered to divest from non-core assets and pay off debts.

A truly negative example of the intersection of state and private interests is the case of CEFC China Energy, a nominally private firm founded by a Mr. Ye Jianming in 2002 that grew to number 222 on the Fortune 500 list by 2017 by positioning itself as China's international oil and gas deal broker. How Ye managed to start the company in a sector that had been entirely controlled by the state is still unclear. What seemed to be clear, however, is that the success of

¹³ "China's Parliament Is a Growing Billionaires' Club," NYT (March 1, 2018), link: https://www.nytimes.com/2018/03/01/business/china-parliament-billionaires.html.

¹⁴ Joy-Perez and Scissors, "The Chinese state funds Belt and Road but does not have trillions to spare," AEI (March 2018).

¹⁵ Ibid

^{16 &}quot;新阶段 新机遇 "一带一路" 倡议纵深发展背景下对外投资的趋势和解决方案," Deloitte (2018).

the company depended in large part on the ties Mr. Ye has made to military figures, several of whom were on his board of directors, and his ability to secure government blessing and state bank financing for his international deals. Ye may have been able to secure some of his military and government ties by pretending to be the grandson of a founding military figure of the PRC, Marshal Ye Jianying.

One can safely conclude that CEFC was never a purely "private" firm, but either an extension of the military or of the leading energy SOEs, a product of "bureaucratic capitalism." What is less clear is why government support of the firm evaporated in 2018. Ye is now under arrest and his company has been taken over by state-owned entities. One of Ye's associates has recently been convicted in the U.S. of violating the Foreign Corrupt Practices Act.¹⁷

Policies change along with politics in China just like they do elsewhere. The national champions of one day may become sacrificial lambs the next. Having to do business in a country with a powerful Party-State without becoming too reliant on its largess is a central challenge for many business leaders in China.

One company that seemed to have done well in this regard and has also become a major Chinese investor in the United States is the Wanxiang Group.

Wanxiang's Journey in China and in the U.S.¹⁸

What became the Wanxiang Group, one of China's largest manufacturers of automobile parts, was established in 1969 by Mr. Lu Guanqiu as a farm tool repair shop attached to a People's Commune in rural Hangzhou, Zhejiang Province. 1969 was perhaps the worst year in Chinese history to start a business. Mao Zedong's Great Proletarian Cultural Revolution was at its height, and anyone suspected of harboring capitalist thoughts could be brutally persecuted. But the farming commune where Lu and his family lived was dirt poor, and people needed new livelihoods to make ends meet. Commune leaders turned a blind eye to Lu's entrepreneurial activities whenever they could.

Even though Lu built the tool shop from scratch with \$500 in capital he had gathered, he had to register it under the commune since there was no such thing as private property under the political order of the day. Despite having to source his own scrap metal to make the farm tools

¹⁷ "Former Hong Kong minister Patrick Ho Chi-ping convicted in US court on 7 of 8 counts in bribery and money-laundering case," South China Morning Post (December 7, 2018), link: https://www.scmp.com/news/hong-kong/law-and-crime/article/2176601/patrick-ho-convicted-us-court-7-8-counts-bribery-and.

¹⁸ This section draws extensively from three Harvard Business School cases written on The Wanxiang Group between 2008 and 2018, of which William Kirby is either the lead or co-author: "Wanxiang Group: A Chinese Company's Global Strategy (A), (B), (C)," Harvard Business School Publishing (July 2008, January 2013, January 2018).

because Lu's operation was not covered under the production plans of the state planned economy, Lu's products excelled in quality compared to those produced by state factories. But it still took four years for his products to be accepted by a state company for distribution. This first break gave Lu access to state allocations of raw material and a state-sanctioned channel to sell them in the province.

By the time China began its reform and opening in the late 1970s and early 1980s, Lu had set his eyes on producing universal joints to meet the state's growing demand for trucks. He introduced performance-based compensation schemes to his "township and village enterprise" (TVE), nominally owned by the town collective but actually controlled and managed by Lu, to both improve product quality and production levels. The high quality of Lu's products allowed the TVE to become one of three supplier of universal joints for government factories. By the mid-1980s, the company was making 19 million RMB (~2 million USD) per year. The company was formally privatized in the 1990s and its auto-parts division was listed on China's Shenzhen Stock Exchange. Throughout this period the company devoted significant resources to talent recruitment, equipment upgrades, and research and development, which enabled it to venture beyond universal joints to become an all-around auto-parts maker.

Being a capitalist entrepreneur in an evolving but still officially communist country, whether by choice or necessity, Lu became party member in 1984. Wanxiang also had an in-house Communist Party Committee. But with Lu as its Party Secretary and his son Lu Weiding being gradually groomed as his successor, no one had any doubt that Wanxiang was at its core a family business—the kind of Chinese family enterprise that was the leading engine of China's economic growth in the pre-Communist period.

With a profitable and ever-expanding core business, Wanxiang never became overly dependent on state financing, even as it diversified into other markets like finance, real estate, agriculture, natural resources, and clean technology. Despite being frequently cited by the government as a model private enterprise and a market leader in auto-parts manufacturing, Wanxiang was never a hand-picked national champion, and the markets in which it competed were driven by market forces, with a wide range of domestic, foreign, and joint-venture competitors.

Wanxiang became the first Chinese supplier to an American auto-parts manufacturer in 1984, selling to the Zeller Corporation. It did not begin building a U.S. presence until 1993, when Lu's son-in-law Ni Pin took leave from his economics Ph.D. program at the University of Kentucky and registered a 100 percent owned subsidiary of Wanxiang in the state. Wanxiang America was born and became headquartered in Elgin, Illinois, just outside Chicago.

¹⁹ Lu would be selected as delegate to the 13th and 14th Communist Party Congress and a delegate to the 9th, 10th, and 11th National People Congress (China's national legislature).

Establishing a subsidiary in the U.S. allowed Wanxiang to export directly to U.S. auto-parts suppliers and eventually the automakers themselves. Meanwhile, ever-increasing demand by the Big Three U.S. automakers (GM, Ford, and Chrysler) for less expensive auto parts had created major consolidations in the industry. To expand its footprint in the U.S., Wanxiang began acquiring distressed assets.

Wanxiang relied on the salesforce and brands of acquired companies to expand its customer base in the United States. To help acquired companies grow, Wanxiang sent their low value-added manufacturing processes to China while retaining high value-added processes in the U.S. to achieve better economies of scale. Chinese and American managers would exchange visits on how to improve efficiency and create synergies. Performance targets and product standards would be set by Wanxiang, but day-to-day management of acquired companies was left to local management. Profits made by Wanxiang America were retained in the U.S. to be reinvested either in existing businesses or to finance the acquisition of new ones.

None of this was risk-free. Wanxiang invested heavily in the U.S. automotive sector in the first decade of the 21st century when virtually no one else was doing so. Had the sector collapsed in the financial crisis (as certainly seemed possible in 2008), Wanxiang would have been a major loser. In retrospect, its acquisitions saved thousands of U.S. jobs in the American heartland.

Just as Wanxiang Group diversified into industries beyond auto parts in China, so would Wanxiang America's investments in the United States. By the early 2010s, Wanxiang America became a major investor in real estate, solar energy, and electric vehicles (EV) in the U.S. It became known in 2012 as the winner of the bid to acquire the bankrupt A123 Systems, a U.S. developer and manufacturer of advanced lithium-ion batteries used in EVs that had received over \$250 million in U.S. federal and local financial support in the past. Wanxiang also acquired the bankrupt Fisker Automotive, maker of an electric luxury sports vehicle, in 2014.

Clean technology and new energy vehicles have become new focus areas for Wanxiang outside auto parts. Since the 1990s, Lu Guanqiu had dreamt of building EVs at Wanxiang. Wanxiang already manufactured most of the components of an electric vehicle. A123 helped Wanxiang fill its knowledge gap in EV batteries.

Upon acquiring A123, Wanxiang began optimizing the company's supply chain and facilitating its access to the growing EV market in China. Additional manufacturing capacity was built for A123 in China to supply batteries to power cars required to have engine start-stop systems to meet new fuel efficiency standards. In 2016, A123 was certified by the Chinese government to receive subsidies to produce EV batteries for the Chinese market, a perk only available to Chinese companies and their subsidiaries with significant manufacturing capacity in China. With the help of Wanxiang, A123 managed to make a profit in 2014 and continues operations today in Waltham, MA, Hopkinton, MA, and Livonia, MI, as well as in China and Europe.

With a \$1 billion cash injection from Wanxiang, the former Fisker Automotive was renamed Karma Automotive, and moved its production site from Europe to California. It launched the electric luxury sports vehicle Karma Revero in the U.S. in May 2017 after extensive troubleshooting in design and industrial processes.

Wanxiang has received approval from the Chinese government to build facilities in China that can produce 50,000 EVs per year when completed. It also has ambitions to build a "clean energy city" outside Hangzhou in Zhejiang Province, not far from where Lu Guanqiu founded the company. The city would host sustainable living and office spaces, clean energy generation and storage sites, as well as manufacturing facilities for EVs and components.

But Wanxiang is far from alone in its clean energy and EV ambitions. Domestic Chinese automakers like BYD and Geely, foreign joint-ventures in China, and industry leaders like Tesla, encouraged by the market created by government policies and subsidies, are all producing or have plans to produce EVs in China. China has overtaken the U.S. in both new EV registration and EV stock. In 2016, Chinese OEMs made 43 percent of the world's EVs and China accounted for 40 percent of worldwide EV sales. ²⁰ Despite the jobs they are creating in both China and the U.S., the future of Wanxiang's clean technology investments is far from secure.

By 2018, Wanxiang America owned 21 manufacturing facilities across 12 states in the U.S. and employed 9,000 Americans. Outside of business, Wanxiang has become a partner to the University of Chicago and Northwestern University, setting up professional development programs and fellowships for the students of those universities to study in China in part to learn about green technology industries there.²¹

On October 25, 2017, Chairman Lu Guanqiu passed away in his hometown outside of Hangzhou. In China, Jack Ma, founding Chairman of Alibaba Group and perhaps one of China's most internationally known entrepreneurs, lauded Lu for being a trailblazer for entrepreneurs like himself, and he called on people to carry on Lu's entrepreneurial spirit. Many Chinese national leaders also sent wreaths to Lu's funeral in Hangzhou.

²⁰ "Global EV Outlook 2017," The International Energy Agency (2016); "Dynamics in the Global Electric Vehicle Market," McKinsey Center for Future Mobility (2017).

^{21 &}quot;Wanxiang America President Congratulates UChicago Students for Success in China," University of Chicago press release (2013); Students Work on Green Energy in China through New Wanxiang Program, University of Chicago press release (not dated); "Wanxiang America Corporation: Exploring and Growing Together," Northwestern University Corporate Engagement website (February 28, 2017); links:

 $[\]frac{https://careeradvancement.uchicago.edu/content/wanxiang-america-president-congratulates-uchicago-students-success-china; \\ https://careeradvancement.uchicago.edu/content/students-work-green-energy-china-through-new-wanxiang-program; \\ https://corporate.northwestern.edu/highlighted-partnerships/archive/wanxiang-america-corporation.html.$

More important for our purposes: Another memorial was held for Lu Guanqiu in Chicago, attended by Bruce Rauner, the Republican Governor of Illinois, and Rahm Emanuel, the Democratic Mayor of Chicago. Both Rauner and Emanuel thanked Lu and Wanxiang for the employment opportunities they created in Illinois as a private company and the links they provided to China.²²

While Wanxiang stands out as a business that has been praised by Republicans, Democrats, Chinese Communists, and Chinese entrepreneurs alike, it is but one of the hundreds of Chinese businesses creating employment with their investments in the U.S. To gain deeper access to the vast U.S. market or acquire brands, expertise, or technology that would allow them to be better positioned in China and other international markets, other private Chinese businesses such as Haier and the WH Group (formerly known as Shuanghui) have acquired well-known U.S. businesses like GE Appliances and Smithfield Foods, becoming major employers of Americans in the process, and creating opportunities for growth for the United States and China. Companies with less than 20 percent government ownership have accounted for 75 percent of the \$139 billion of Chinese investment in the U.S. since 1990.²³

Challenges and Opportunities

The United States can and must be wary of opaque, allegedly "private" enterprises like CEFC China Energy that may be direct extensions of Chinese government organs. U.S. regulators and businesses should scrutinize Chinese companies, private or state-owned, whose ability to expand abroad depends primarily on having access to state financing instead of winning customers in competitive markets.

But the United States must have the confidence to partner with the rapidly growing and diverse entrepreneurial private sector that has emerged in China over the past four decades. Demand from a Chinese market that faces enormous challenges (for example in healthcare, education, and the environment) is driving Chinese investments abroad to invest in potential solutions. Americans, too, may very well benefit one day from the results of these investments.

And, since some Chinese state-owned enterprises are global leaders in their markets, there are opportunities also to do business with a broad range of Chinese firms. Massachusetts Governor Charlie Baker recently toured the Springfield, Massachusetts plant of CRRC, the world's largest manufacturer of rolling stock. This has been the largest industrial investment in generations in Springfield, which had once been a center of American rail manufacturing. The new CRRC MA

²² "鲁冠球先生追思会在芝加哥举行," Xinhua (November 2017), link: http://news.xinhuanet.com/world/2017-11/20/c_129745200.htm.

²³ "The U.S.-China FDI Project," accessed February 7, 2019; link: https://us-china-fdi.com/.

Corporation will build modern subway cars in Springfield to replace the aging stock on Boston's MBTA, America's oldest subway system.²⁴

Far away from China, it is sometimes easy for Americans to think of "China" and "the Chinese" as a unified, undifferentiated competitor. But "China" is not one market. China has not one but thousands of local governments, with quite different capacities and interests. And China is home to an extraordinary range of entrepreneurial cultures: Businesspeople in Zhejiang are not like their counterparts in Harbin, any more than a Boston banker is like a Texas oilman. We are indeed in a competitive world, but we also have, as Vice President Pence reminded us, a rich history of cooperation as a foundation for the future.

One final thought: At the heart of American anxieties about China is the fear that China will in time outpace the United States in technology. In a highly competitive world, the best way to ensure American leadership is a strong system of higher education. I am presently completing a book on the past and future of research universities. It compares a set of German, American, and Chinese universities—leaders of the 19th, 20th, and (maybe?) 21st centuries. The Chinese government in recent years has devoted ever-growing resources to build "world class universities" with "world class academic disciplines." In contrast, state funding for public universities in the U.S. has dropped since the 2008 recession in all but four states. Per-student spending is 45 percent less in 2018 than it was in 2008. Hundreds of thousands of Chinese students still come to the United States for university because, frankly, this is one industry in which the United States is still preeminent. That is why we attract so many of the world's best students to our shores, including some 370,000 Chinese a year, and we benefit greatly from this talent.

But no one stays on top by standing still. In this competitive world, our challenges are as much at home as they are abroad. In education as in business, investment at home is a prerequisite for success abroad.

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²⁴ "Springfield's CRRC begins shipping cars to Boston, plans for Philadelphia, Los Angeles projects," MassLive (February 7, 2019), link: https://www.masslive.com/business/2019/02/springfields-crrc-begins-shipping-cars-to-boston-plans-for-philadelphia-los-angeles-projects.html.

²⁵ Mitchell et al, "Unkept Promises: State Cuts to Higher Education Threaten Access and Equity," Center on Budget and Policy Priorities (October 4, 2018), link: https://www.cbpp.org/research/state-budget-and-tax/unkept-promises-state-cuts-to-higher-education-threaten-access-and.