

Testimony before the US-China Economic and Security Review Commission

Hearing on Risks, Rewards, and Results: US Companies in China and Chinese Companies in the United States

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1. Introduction

This testimony supports the second panel of these hearings, focusing on the risks and rewards for US companies operating in China. We meet during a period of intense negotiation between China and the United States, prompted by the March 2018 findings of the US investigation “China’s Acts, Policies, and Practices related to Technology Transfer, Intellectual Property and Innovation Under Section 301 of the Trade Act of 1974” (hereafter “Section 301 report”). The investigation found evidence of Chinese practices of forced technology transfer as well as other forms of intellectual property appropriation.

Challenges for US-China economic relations extend well beyond the outcome of the current Section 301 case. China has maintained rapid growth for 40 years by continually adapting its economic institutions and policies to changing internal and external conditions and goals. American companies seeking to serve the Chinese market, therefore, face an ever-evolving policy environment. My testimony provides an overview of US foreign affiliate activity in China and offers perspective on how China has adapted its foreign direct investment (FDI) policies to further its industrial development goals. Other members of this panel shed light on the consequences of these actions for American business interests. A clear message emerging from the panel is that the US Congress should monitor Chinese investment policies and view these actions within the wider context of the overall bilateral relationship. If the US Congress sees fit to counter Chinese practices, the most effective responses will be those taken in concert with allies and that reinforce existing multilateral institutions.

Congressional attention to investment barriers that unduly disadvantage American companies providing goods and services to the Chinese market will benefit the overall health of the US economy. While multinational enterprises are often seen as villains in the rapid decline of US manufacturing employment, they remain an important source of US manufacturing jobs. US parent companies accounted for 22.3 percent of total private industry employment in the United States in 2016, with the largest shares in manufacturing and retail trade.² Multinationals operating in the United States, including those with parents outside the United States, employ 51 percent of the manufacturing workforce.³ US actions that reduce discriminatory foreign

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² These figures are from the Bureau of Economic Analysis (BEA). <https://www.bea.gov/news/2018/activities-us-multinational-enterprises-2016>

³ This figure is taken from Kamal and Lovely (2017, p. 105).

investment barriers will expand sales abroad and benefit workers at home in both the manufacturing and service sectors.

2. China's Use of Foreign Investment for Development Goals

Using foreign direct investment (FDI) as a pathway for technology transfer from advanced economies to less developed economies is not unique to China nor to the present day. Indeed, a number of provisions in World Trade Organization (WTO) agreements mention the need for such transfers to take place between developed and developing countries.⁴ A working group of the WTO is dedicated to understanding the links between trade and technology transfer and finding ways to increase the flow of technology to developing countries. It is widely recognized that foreign investment is an important channel for such flows.

Progressive opening to foreign investment as a means of industrial upgrading is a hallmark of China's economic transition. Despite the presence of only rudimentary market institutions, foreign investment flowed into China soon after its opening in 1978. Liberalization of restrictive trade and investment regimes began at least by the early 1990s and accelerated later in the same decade.⁵ Although economic reforms slowed after 2003, China continued to reduce barriers to foreign investment after its WTO accession.⁶ The 2018 World Investment Report published by the United Nations Conference on Trade and Development (UNCTAD) ranked China as the world's second largest FDI recipient after the United States and before Hong Kong. In 2017, China absorbed \$131 billion of new foreign investment.

China's trade patterns have long been closely tied to foreign direct investment.⁷ Soon after former Chinese communist leader Deng Xiaoping's famous Southern Tour in 1992, foreign invested enterprises (FIEs) supplied more than half of the country's manufacturing exports.⁸ Analysis of data compiled by China Customs indicates that foreign investors remain important to China's export success even after almost 40 years of reform and opening: In 2014, FIEs were the source of 46 percent of Chinese exports to the world. The FIE share of China's exports to the United States was significantly larger, at 60 percent.⁹

Foreign investment has played an outsized role in the development of China's high-technology sector. Foreign-invested enterprises are key to the country's exports of high-tech products to the world, including to the United States. Lovely and Huang (2018) find that in 2016 foreign firms provided 77 percent of Chinese high-tech exports, with 33 percent produced by foreign enterprises other than those funded through Hong Kong, Macau, and Taiwan.

⁴ See, for example the Working Group on Trade and Transfer of Technology, available at https://www.wto.org/english/tratop_e/devel_e/dev_wkgrp_trade_transfer_technology_e.htm.

⁵ Lardy (2002) makes this point and supplies supporting evidence.

⁶ Naughton (2018) discusses the slowdown in reforms after 2003 in the context of China's development goals.

⁷ Foreign direct investment is defined by a threshold of at least 10 percent equity share or equivalent voting power.

⁸ Using data from the 1995 Third Industrial Enterprises Census, Huang (2003) finds that foreign invested enterprises operating in China produced 51.2 percent of the country's manufactured exports. FIE shares are significantly higher than average in a subset of both labor-intensive and capital-intensive industries.

⁹ Calculations and context described in Lovely and Liang (2018).

Foreign investors provide access to innovative technology, advanced management practices, and connections to global supply chains, as well as capital. For example, a recent report for the U.S.-China Economic and Security Review Commission on China's biotechnology industry finds that of the many ways foreign capital flows into the industry, FDI has likely contributed the most to development of Chinese biotech.¹⁰

Chinese industrial policies reflect a clear understanding of these advantages. From the so-called "22 Regulations" in the late 1980s, a major regulatory liberalization applied to foreign investment throughout China, to the current negative list of sectors off limits to foreign investors, China has progressively eased restrictions on inward foreign investment.¹¹ Most recently, at the 2018 Boao Forum for Asia, Chinese president Xi Jinping promised foreign companies greater access to China's market.

3. US Foreign Direct Investment in China

The United States was slower than some other investors in accumulating assets in China, but today American multinational enterprises are important players in the region. As shown in table 1, which provides the top FDI investors in China as of 2015, the official source of 48 percent of FDI stock is Hong Kong, China. The third largest source of investment is Japan, accounting for approximately 6 percent of the stock. The United States was the fifth largest investor, accounting for approximately 4.5 percent of total FDI stock.

The official source of information on foreign affiliates of US companies is the US Bureau of the Census's Bureau of Economic Analysis. The BEA surveys US-owned multinational enterprises (MNEs) with the primary goal of measuring the scale of their direct investment abroad. US investors hold assets in Chinese mining, manufacturing, wholesale and retail trade, and services. Using data from the BEA's Survey of US Direct Investment Abroad, the total assets of US MNE affiliates in China was \$643 billion in 2016.¹² The largest share of these assets, 37 percent, reflects investment in manufacturing activities, while another 28 percent are in finance and insurance.

Sales of goods and services by all US affiliates in China in 2016 totaled \$464 billion.¹³ Of this total, US foreign affiliates supplied \$286 billion to the Chinese domestic market. The magnitude of these sales, and their importance to the United States, can be gauged by comparison to US exports of goods and services to China, which totaled \$170.5 billion in the same year.¹⁴

¹⁰ Gryphon Scientific and Rhodium Group, *China's Biotechnology Development: The Role of US and Other Foreign Engagement* (p. 46, (<https://www.uscc.gov/sites/default/files/Research/US-China%20Biotech%20Report.pdf>)).

¹¹ Branstetter and Lardy (2008) summarize China's progressive opening to foreign trade and investment. The 2017 version of the Chinese government's Catalogue of Industries for Guiding Foreign Investment is available at <http://www.ndrc.gov.cn/zcfb/zcfbl/201706/W020170628553266458339.pdf>

¹² Asset data taken from Table I.B5, available online at <https://www.bea.gov/international/usdia2016p>.

¹³ Sales data taken from Table I.D3, available online at <https://www.bea.gov/international/usdia2016p>.

¹⁴ "US-China Trade Facts," US Office of the Trade Representative, <https://ustr.gov/countries-regions/china-mongolia-taiwan/peoples-republic-china>

American investment in China accounts for a relatively small but growing share of total US multinational activity around the world.¹⁵ US affiliates in China accounted for 2.3 percent of worldwide assets of foreign affiliates of US MNE parents but 7 percent of worldwide sales. Assuming 10 percent annual growth for US sales in China, Deutsche Bank Research (2018) predicts that China will likely become the largest market for US subsidiaries by 2020, accounting for 15 percent of all their sales abroad.

Figure 1 shows the distribution of total 2016 sales of US MNE affiliates in China by major sector. Manufacturing clearly dominates this activity, accounting for 58 percent of total affiliate sales, followed by wholesale trade. Sales in two service sectors where the United States has comparative advantage, finance and insurance and information services, lag far behind manufacturing.

Figure 1 also shows the distribution of total sales of US MNE affiliates in Mexico and Brazil, both large upper-middle income countries. Except for information services, which account for a relatively high sale share in Brazil, the distribution of activity in China looks similar to these comparison countries.

A closer decomposition of US affiliate sales in the Chinese manufacturing sector is possible with the help of figure 2. Within manufacturing, three industries dominate—computer and electronic products, transportation equipment, and chemicals. This dominance reflects the strength of US producers in each of these industries.

Information collected by the US-China FDI Project, headed by the National Committee on US China Relations, suggests that both market conditions and Chinese government policy shape American investment in China.¹⁶ China's information and communications technology (ICT) sector has attracted the most direct investment from the United States, estimated at \$41 billion since 1990. Before China joined the WTO, American IT firms invested in equipment assembly plants. After WTO accession, investment flowed into semiconductor assembly, again following China's comparative advantage in labor-intensive activities. After 2005, investment shifted toward software and IT services and, more recently, into research and development facilities. Reportedly, American companies hold a controlling interest in 70 percent of their total investments in ICT, although the shift toward IT services, which often require a domestic partner, suggests that this share may fall over time.

4. Why do US Firms Invest in China?

From the perspective of foreign investors, direct investment in China offers numerous attractions. Key drivers of foreign investment are the benefits of being close to customers, cost-savings from reduced shipping costs, and offshoring of some production stages to lower labor costs. While offshoring of production from the United States to China clearly occurred,

¹⁵ Branstetter and Foley (2010) report that in 2004 China's share of US nonbank affiliates of nonbank US parent sales and assets were 1.9 percent and 0.7 percent, respectively.

¹⁶ Details in this paragraph are drawn from the US-China FDI Project, a joint effort by the Rhodium Group and the National Committee on US-China Relations, on the ICT industry. <https://us-china-fdi.com/>

especially between 2000 and 2007, much of this activity is performed by enterprises other than the foreign affiliates of US multinational parents. Analysis of US import patterns shows that in 2016, only 25 percent of imports from China were between related parties, a measure that includes trade between US parents and their affiliates.¹⁷ Instead of seeking a low-wage export platform, US investment and affiliate sales patterns indicate that the most important reasons for American investment in China are for proximity to the Chinese market and as a response to investment and trade barriers.

Some production must be undertaken close to consumers, as in the case of restaurants, hotels, and certain entertainment activities. PepsiCo, a food and beverage company, was one of the first multinational companies to enter China, establishing its first bottling plant in Shenzhen, Guangdong province in 1981. Since then, the Chinese market has been an important driver of the company's global growth.¹⁸

Delivery of some business services also requires close contact with customers, often necessitating face-to-face interaction or an on-site presence. IBM, which first installed a computer system in China in 1979, set up a service center in 1983 in Beijing to provide installation and maintenance support for users throughout the country.¹⁹ Its current operations include mainframe sales and service as well as a wide array of business services.

Other investors, such as those producing consumer goods, benefit from proximity to local tastes and preferences and adapt product characteristics accordingly. Procter & Gamble, for example, is the largest consumer products company in China, with annual local sales of \$2 billion. Procter & Gamble entered Mainland China in 1988 by establishing its first joint venture—P&G (Guangzhou) Ltd. headquartered in Guangzhou. P&G China currently has operations in seven Chinese cities and a technical center in Beijing.²⁰

Central and provincial government policies also drive the American presence in China. Trade barriers, both tariffs and non-tariff barriers, induce production inside China. For example, high Chinese tariffs on automobile imports (which have recently been lowered except for US autos because of the trade conflict) engender American investment in motor vehicle production in China.

BEA data confirm that the major destination for goods and services supplied by US affiliates in China is the Chinese domestic market. As shown in figure 3, these affiliates direct 83 percent of their production locally. This local sales share is high in comparison to the average local share over all US foreign affiliates, which as shown in the bottom panel is 59 percent. US affiliates in China do export to other regions, but this activity accounts for only 11 percent of affiliate production, and about two-thirds of these sales are to other US foreign affiliates. These data

¹⁷ The sector with the largest share of related party trade is computer and electronic products, with a related party share of 41 percent, some of which is trade between US-based affiliates of foreign companies and their Chinese-based affiliates. Source of related-party trade data is US Bureau of the Census, with calculations by author.

¹⁸ PepsiCo's Asia, Middle East and North Africa division, which includes China, contributes about 10 percent of the company's net revenues. <https://www.statista.com/statistics/532389/global-net-revenue-of-pepsico-by-division/>

¹⁹ IBM has a rich history of Chinese operations. https://www.ibm.com/ibm/history/exhibits/china/china_ch2.html

²⁰ P&G opened operations in Hong Kong and Taiwan a few years before entering mainland China. <https://www.pghongkong.com/en-us/Company/China.aspx>

indicate that US multinationals make little use of China for production of goods used in US-based activities: They export a relatively low share of affiliate production, 6 percent, to the American market, and most of these goods are sold to their American parent. In sum, evidence suggests that proximity and access to the domestic market are dominant drivers of American investment to China.

5. Changes in Chinese Policies toward Foreign Direct Investment

After the start of “reform and opening” in 1978, the state dramatically reduced funneling of resources into technology upgrades and, as noted earlier, gradually embraced foreign investment. China used market reforms and technological “catch-up” to advance its development, in concert with reduced trade and investment barriers.²¹ More recently, as China faces a declining working-age population, rising wages, and growing competition from other developing economies, it has reshaped its foreign investment policies to conform to its increasingly state-led industrial development.²²

In general, investment barriers have fallen, and most investors face no ownership restrictions. However, even as outright prohibitions on entry and ownership caps have become rarer, the government increasingly relies upon industrial and regulatory policy to induce entry in forms consistent with its innovation strategy. The main instruments used to unite foreign investment and industrial policy are foreign investment entry approval, licensing and regulatory approval, and information technology policies.

a. Entry Approvals

Chinese state or non-state actors may place conditions on foreign investors seeking approval for entry or expansion into new markets. These conditions are not uniform, but rather target activities that advance Chinese development goals. A recent survey of American firms operating in China by the US-China Business Council finds that only 18 percent of responding members report being asked to transfer technology to a Chinese partner. Of these members, 67 percent report that the request came directly from a Chinese company, and 33 percent report the request came from a government entity.²³ Importantly, only 30 percent of those asked to transfer technology report that they did so, while another 50 percent report mitigating the request before transferring technology. These responses clearly show that “forced” technology transfer is limited to particular investments and that companies involved seek ways to minimize the impact.

Recent trends in the mode of entry of foreign investors provide more evidence that Chinese efforts to force technology transfer target particular sectors and firms. As Lardy (2018) reports,

²¹ Chen and Naughton (2016) contend that this hands-off phase ended in 2003, when China returned to “techno-industrial” policies.

²² Using data on firm growth and resource allocation, Lardy (2019) argues that President Xi Jinping has consistently championed state-owned or controlled enterprises, encouraging local political leaders and financial institutions to prop up ailing, underperforming companies that are a drag on China's potential.

²³ Full survey results available from the US-China Business Council (USCBC), 2017 Member Survey, https://www.uschina.org/sites/default/files/2017_uscbc_member_survey.pdf. Unfortunately, the USCBC report provides no details by industry of member.

the share of incoming FDI that occurs in the form of wholly foreign-owned affiliates rose to an average of almost 80 percent in 2008–14 before falling to around 70 percent in the last few years. He notes that, “In a wholly foreign-owned firm there is no transfer of technology, and the foreign firm can take the same steps it would take in any other market to prevent its technology from leaking to domestic firms.” Although this is undoubtedly true for many US affiliates, evidence suggests that some investors face continued requests for technology transfer.

The US Trade Representative’s (USTR) Section 301 report emphasizes foreign ownership restrictions, in particular joint venture (JV) requirements, as a “cornerstone of China’s technology transfer regime” (Office of the Trade Representative 2018, page 23). Three major laws govern foreign investment in China: the Law on Sino-Foreign Equity Joint Ventures, the Law on Sino-Foreign Cooperative Joint Ventures, and the Law on Wholly Foreign-Owned Enterprises.²⁴ Reflecting these major laws, the Ministry of Commerce periodically updates a catalogue for the Guidance of Foreign Investment Industries (the “Catalogue”) to regulate foreign investment in China. The most recent Catalogue contains a list of encouraged industries, a “negative list” of sectors where ownership limits or other investment restrictions apply, and a schedule of prohibited sectors. Examining past changes to this guidance provides some insight into which investments may be subject to forced technology transfer through a joint venture partnership.

Figure 4 illustrates the sorting of Chinese manufacturing sectors into investment policy categories, as defined by the Catalogue. Based on the work of Sheng and Yang (2016), who associate manufacturing activities included in the Catalogue with specific Chinese industries, the figure indicates that the Chinese government adopted a “neutral” stance toward investment in a large share of sectors. Moreover, the share of manufacturing sectors for which foreign investment in one or more activities was prohibited or restricted fell dramatically between 1995 and 2010. Indeed, by 2010, the Chinese government prohibited or restricted foreign investment in less than 10 percent of all industries. Instead, the share of sectors for which the government held an “encouraging” stance rose over time.

While foreign investors in sectors treated as “neutral” by the Catalogue are unlikely to face pressure to form JVs or transfer technology, and investors in sectors listed as “restricted” must form a JV, the situation is far less transparent in “encouraged” sectors. There are explicit limits on foreign ownership shares in some encouraged sectors, even as investors find otherwise favorable entry conditions. For example, ownership restrictions currently remain on investors seeking to manufacture motor vehicles, yet the government may offer foreign manufacturers expedited regulatory approval, access to prepared sites, or locations in desirable free trade zones. These preferences raise the profitability of operating in China and may compensate, to some extent, for forced technology transfer to local partners.

In an investigation of changes over time in the foreign investment Catalogue, Yang Liang, Hongsheng Zhang, and I find that the best predictor of an industry’s movement into the “encouraged” category is its status as a “high-technology” sector by the Chinese government.²⁵

²⁴ The new 2019 Chinese foreign investment law combines and amends these three laws.

²⁵ This investigation is in process. Most recent slides showing this finding are available here: https://www.dropbox.com/s/ds0iqft5xol949c/fdi_llz_slides.pdf?dl=0.

This finding indicates the increasingly innovation-focused nature of China’s foreign investment approval regime. In short, foreign investment policy is closely linked to industrial policy, primarily on a case-by-case and non-transparent basis.

b. Licensing and Regulatory Approvals

Evidence suggests the Chinese government uses licensing and regulatory approval processes to delay or defer entry by US multinationals. In particular, these forms of non-tariff barriers appear to be most restrictive in sectors involving health and safety standards. Government approval procedures can also be used to reveal proprietary technology, as when foreign firms are required to share technical specifications or formulas with local officials.

c. Information Technology Policies

As noted above, foreign investment in high-technology manufacturing is likely to be “encouraged.” Although similar statistics on investment policy toward high-technology services are not available, restrictions on entry and ownership shares are common in these sectors and clearly in line with China’s innovation aspirations and national security policies. In particular, American technology companies find their ability to provide data and other business services to Chinese-based customers severely constrained. ICT investments, as noted by the US-China FDI Project, are heavily impacted by “Chinese cybersecurity rules, national security constraints, industrial policy and counter-terrorism policies.”²⁶ These policies favor domestic companies and often require US firms to enter into joint ventures with Chinese firms to provide services.

6. Implications for Congressional Action

National and multilateral tools are available for seeking change within the current rules-based trading system. Other experts, including my fellow panelists today, have assessed the potential for redress through multilateral institutions, including WTO litigation. Given this coverage, I will focus on an approach that has been underutilized, coordinating the US policy response with key allies. In my view, coordinated action by the small group of technologically innovative nations is likely to result in amended Chinese practices. Moreover, such an approach can be undertaken in a way that is consistent with the rules-based trading system. To promote such coalition building, the Congress should exert greater oversight of Trump administration trade policy.

a. Promote coordination and collective action with American allies.

The goal of Chinese policy is acquisition of advanced technology, and the method is to trade market access for technology transfer. Given this Chinese strategy, US coordination with other innovative nations is necessary to invalidate current “divide and conquer” strategies. American multinational firms face a choice between transferring technology and ceding the Chinese market to competitors. The Section 301 report notes American firms are reluctant to resist unwanted

²⁶ See industry details for the Information and Communications Technology industry, available at <https://us-china-fdi.com/>.

tech transfer requests for fear of losing the Chinese market to firms that will take the deal. There is ample evidence that European and Japanese competitors also face such demands. These firms experience a “prisoner’s dilemma” in that they would be better off resisting such requests but only if they could be sure that other firms would not capitulate, an outcome they cannot insure on their own. The leading innovating nations can overcome this collective action problem by coordinating. A common platform for reporting and responding to such requests would make it more difficult for China or any other nation to play one firm off another. Once a claim of forced transfer is made by a participating nation, outward investment in these technologies would be subject to review by all parties according to a common set of criteria.

Forced technology transfer may also occur where American firms have few outside competitors. For example, in the case of cloud computing, the Section 301 report argues that without the ability to handle data flows for clients inside China, American companies are hindered in their ability to manage data flows for clients worldwide. In the absence of strong non-Chinese service providers, a refusal by American companies to engage on Chinese terms would cede the market to Chinese providers. Again, coordinated action with allies to bar Chinese service providers access to foreign markets (making them unable to serve clients worldwide), would change the payoff to China of its current restrictive policies.

Coordinated action also has the advantage of being amenable to use of traditional trade policy tools, such as anti-dumping and countervailing duties. Even in areas where WTO rules are absent or incomplete, as in certain business services, the world trading system is supported by a willingness to act in a manner consistent with non-discrimination and reciprocity.

b. Remove existing tariffs and tariff threats aimed at American allies

Tariffs recently placed by the Trump administration on washing machines, steel, and aluminum, and the ongoing threat of tariffs on motor vehicle imports create a wedge between the United States and like-minded allies.²⁷ These tariffs suggest that the United States puts its own short-term interests above all else, including a long-term coordinated response to unfair Chinese industrial policies.

It is clear that these tariffs do more harm than good. They have been in place long enough for their corrosive effect to be evident. Prices for washing machines and for steel and aluminum have risen substantially, placing pressure on employment in industries that use these goods as inputs and on households that buy final products.

Equally important, Trump administration tariffs on a wide bundle of US imports from China do little to address the constraints faced by American companies operating in China or seeking entry to the Chinese market. As I have documented elsewhere with Yang Liang, US tariffs levied under Section 301 primarily hit goods shipped from foreign-owned plants operating in China, including those of our allies. They unduly burden American-based manufacturers who rely on

²⁷ My colleagues at the Peterson Institute for International Economics, Chad Bown and Eva Zhang, show that the five sets of tariffs imposed in 2018 alone covered \$303.7 billion, or 12.6 percent, of all US imports in 2017. Detailed description can be found at <https://piie.com/blogs/trade-investment-policy-watch/measuring-trumps-2018-trade-protection-five-takeaways>.

these intermediate and capital goods to remain globally competitive. Lastly, tariffs on goods have no effect on Chinese service providers, even though American companies are facing numerous restrictions that limit competition in the ICT, finance and insurance, and professional service sectors.

c. Invest in American capacity to analyze China-US economic relations

Despite the intense scrutiny given to Chinese treatment of American firms operating in China, including that undertaken for the Section 301 report, there is much we do not know about US firms operating in China. BEA data are an important resource for researchers studying the effects of these activities on the US economy. Unfortunately, the detail they offer is insufficient for investigating many policy-relevant questions.²⁸ In particular, the surveys do not provide information about barriers that deter investment nor business conditions that affect investment returns. Particularly when investigating the profitability of US business operations abroad, these data may present a skewed impression because firms engage in international tax optimization and other strategic behaviors that influence the location of reported income.

The US government also has limited capacity to analyze Chinese trade and investment patterns. Although the US International Trade Commission was one of the first US institutions to obtain and examine detailed information on Chinese trade flows, its resources have eroded over time even as trade tensions have mounted. Similarly, the US government has limited capacity to measure and assess the level of US investment in China, barriers faced by investors, and how these conditions compare to those in other markets. Without a proper understanding of the many ways in which the American and Chinese economies are linked, it is impossible to develop policies that protect American interests while preventing unfair Chinese practices. Congress should shine a light on this strategic weakness and provide resources to build the analytical infrastructure needed for an effective response to our current challenges.

7. Benefits for the US Economy of Reducing Barriers to US Investment in China

Leveling the playing field for US affiliates operating in China will yield benefits for the US economy. Reforms will have both push and pull effects. Chinese removal of ownership caps and reductions in regulatory barriers are likely to induce more foreign investment because MNEs will be able to deploy advanced technology without fear of appropriation. Such reforms can open new sales opportunities in China for US firms that are currently blocked, especially in information technology and services.

Other reforms may decrease American investment flows, however. To the extent that China has used preferential policies to compensate investors for unwanted business restraints, such as ownership caps, industrial policy reforms will reduce the return that some firms are likely to receive through entry. Overall, however, given that American comparative advantage matches

²⁸ To fill in some informational gaps, it is necessary to supplement census data with industry surveys and public testimony or news reports. The Section 301 report itself relied heavily on less formal methods of data collection. For example, to identify Chinese practices regarding technology transfer, the USTR collected evidence from “hearing witnesses, written submissions, public reports, journal articles and other reliable sources” (Office of the United States Trade Representative, March 22, 2018, p. 19).

the areas in which Chinese barriers remain high (e.g., advanced manufacturing, ICT services, financial services, etc.), the level of American investment in China will, *ceteris paribus*, increase.

American investment in Chinese high technology goods-producing and service sectors will benefit American workers. Compared to the offshoring of labor-intensive activities in the 1990s and 2000s, reduced barriers to American foreign investment in high tech sectors are likely to largely stimulate job creation in the United States. In a recent study of offshoring, Oldenski (2012) finds that US multinationals are significantly less likely to offshore a stage of production the more intensively it uses communication tasks and the less intensively that input uses routine tasks. These findings suggest that US-based activities, such as headquarter functions, design, marketing, and research and development, will grow as the United States and its allies successfully reduce Chinese entry barriers. While new jobs in these areas will not replace manufacturing employment lost in earlier decades, they will benefit America's workers by raising the demand for labor in sectors that match US comparative advantage.

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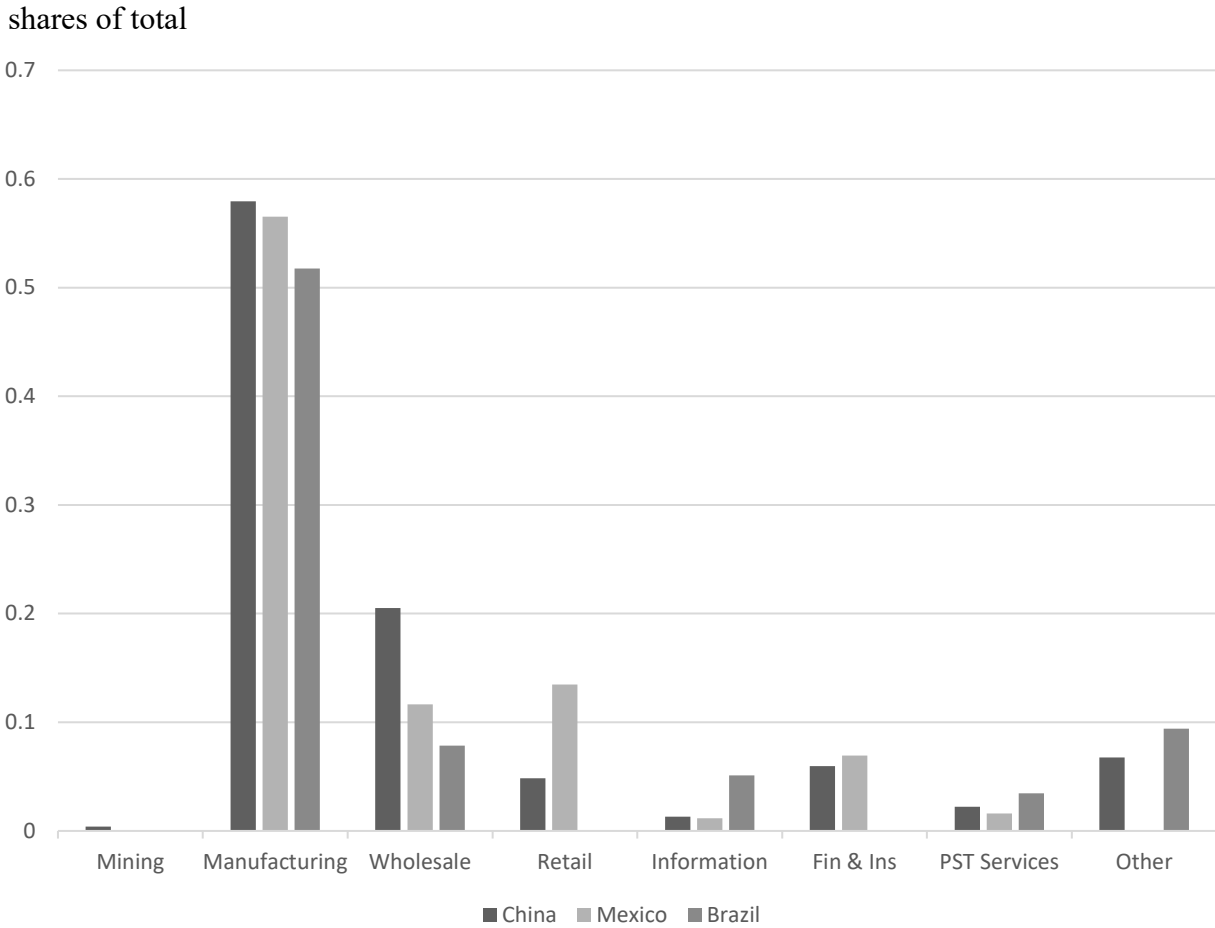
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Table 1 Chinese foreign direct investment (FDI) stock by source, 2015

Country/Region	Share of total FDI (percent)
Hong Kong, China	47.87
British Virgin Islands	8.57
Japan	5.85
Singapore	4.55
United States	4.45
Republic of Korea	3.67
Taiwan, China	3.60
Cayman Islands	1.73
Germany	1.46
Samoa	1.46
United Kingdom	1.13
Netherlands	0.89
France	0.85
Other	13.90

Source: MOFCOM (2016).

Figure 1 Distribution of US affiliate sales across affiliate industries, selected host countries, 2016

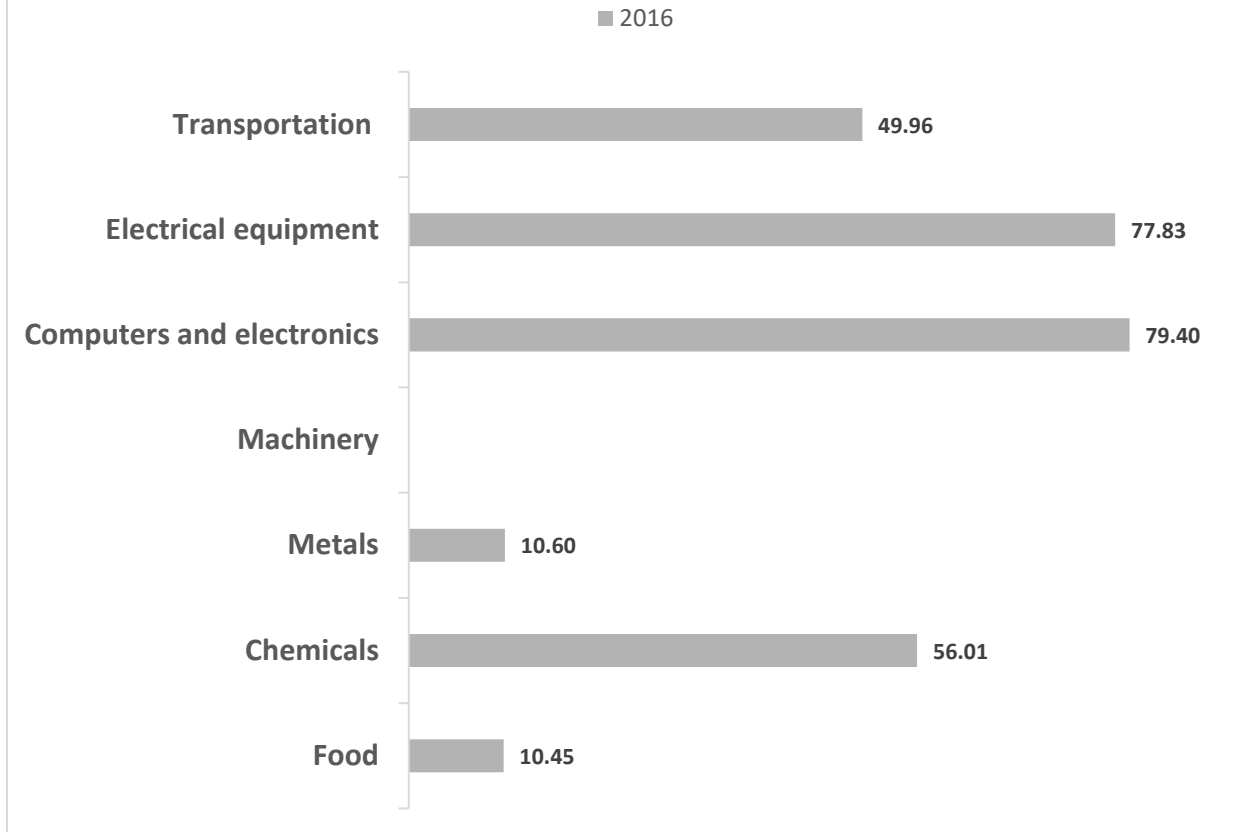


Note: For data confidentiality reasons, the BEA does not provide total sales in some sectors as indicated by a missing bar.

Source: US Bureau of Census, Bureau of Economic Analysis, US Direct Investment Abroad, and calculations by author.

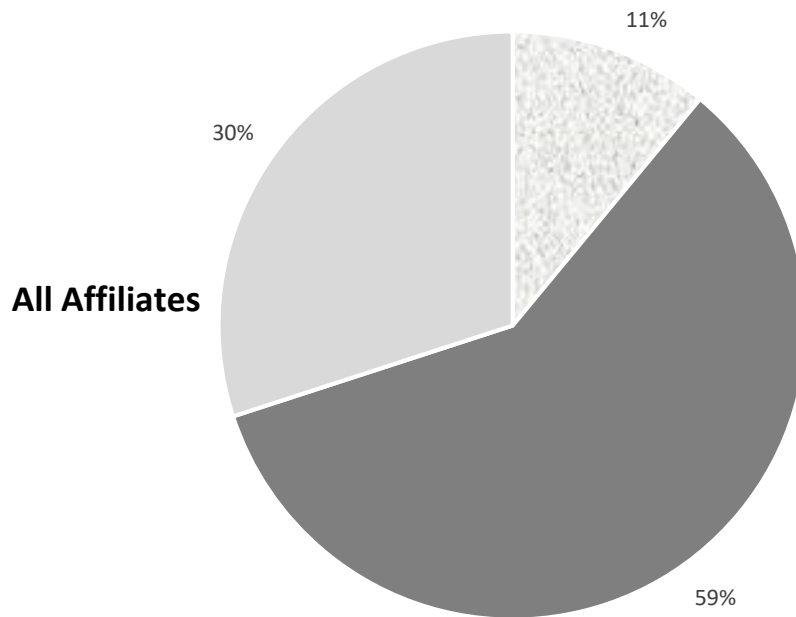
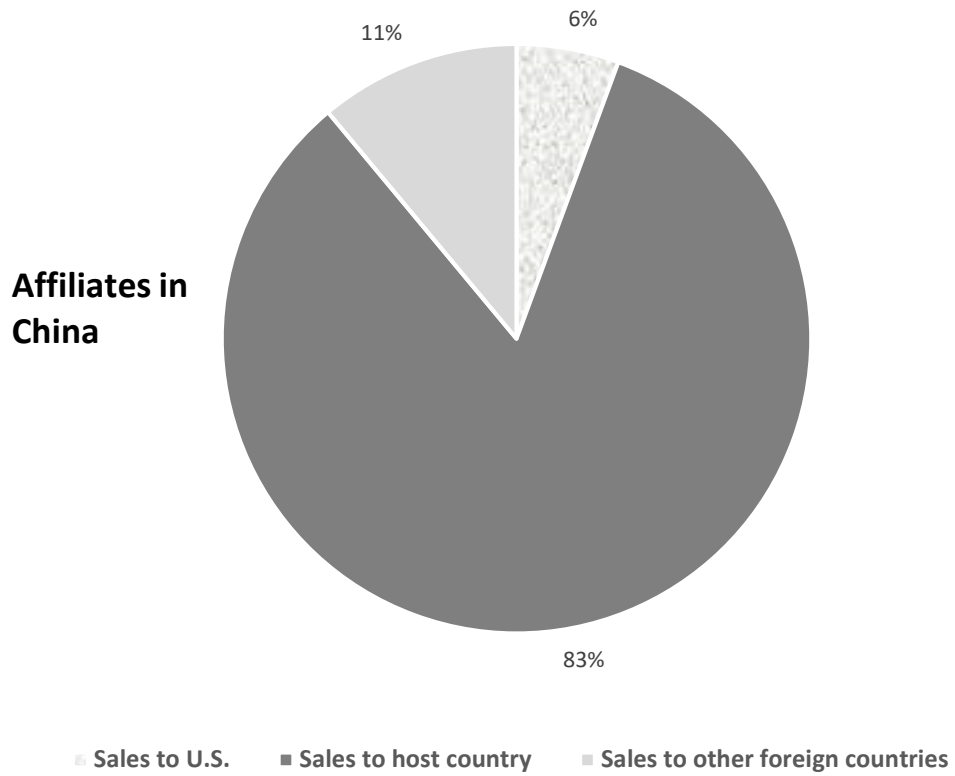
Figure 2 Total sales of US affiliates in China by manufacturing sector of affiliate, 2016

(in billions of dollars)



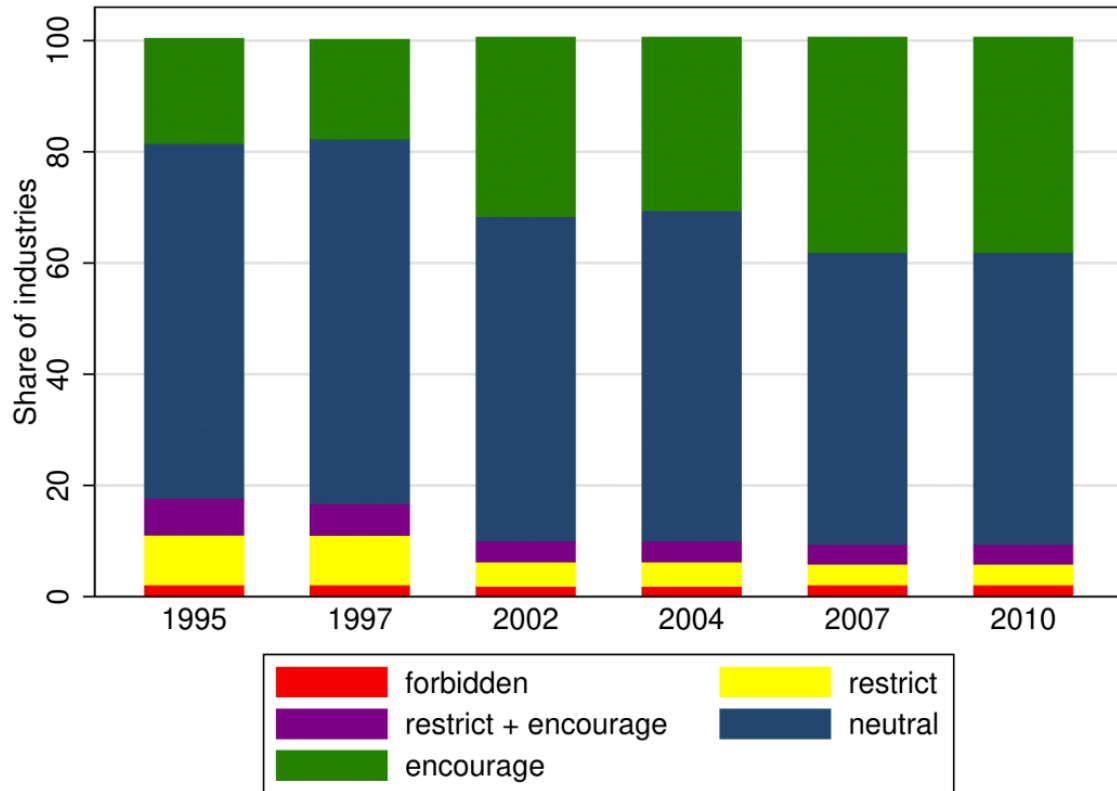
Sources: US Bureau of Census, Bureau of Economic Analysis, US Direct Investment Abroad, and calculations by author. For data confidentiality reasons, information on sales in the machinery industry is not disclosed.

Figure 3 Destination of goods and services supplied by US affiliates in China, 2016



Source: US Bureau of Census, Bureau of Economic Analysis, US Direct Investment Abroad, Table 11.E2, and calculations by author.

Figure 4 Manufacturing industries grouped by Catalogue of Foreign Investment designation, selected years



Source: Policy designation based on Standard Industrial Classification (SIC) four-digit code taken from Sheng and Yang (2016). Grouping and calculations by author.