Testimony before the U.S.-China Economic and Security Review Commission

Hearing on Risks, Rewards, and Results: U.S. Companies in China and Chinese Companies in the United States

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February 28, 2019

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 on a host of issues related to the bilateral economic relationship. These negotiations respond to the findings of the March 2018 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 301report"). The investigation examined alleged Chinese practices of forced technology transfer, intellectual property appropriation, unfair licensing terms, state facilitation of outbound Chinese investment in key US companies, and government support of cyber-enabled theft of proprietary information.

This testimony focuses solely on US foreign direct investment (FDI) in China and issues related to Chinese policies and practices that influence the extent and rewards of these investments for their US parents and for broader American interests. Its scope is limited to direct investment and to Chinese practices that limit entry or the ability of American foreign affiliates to conduct business. It does not cover other aspects of the bilateral economic relationship, most importantly American exports to and imports from China.

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. The official source of information on foreign affiliates of US companies is the US Bureau of the Census' 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. These data are an important resource for researchers studying the effects of these activities on the U.S. economy. Unfortunately, the detail they offer is insufficient for investigating many policy-relevant questions. 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.

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To fill in some informational gaps, it is useful to supplement census data with industry surveys and public testimony or news reports.[2] These less formal methods of data collection also must be used with caution. At a minimum, one must recognize that there is likely to be greater willingness to testify about mistreatment by firms prevented from entering or forced to exit a market than there is for firms engaged in business activities within the host country. Moreover, firms deterred from entry are likely to be absent from the public record. Lastly, there has been only limited opportunity for testimony by foreign investors who thrive under host-country practices. On all counts, selection bias and a lack of relevant data are serious challenges for those seeking a full understand of foreign investors' experiences in China.

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

Using foreign direct investment 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 the World Trade Organization (WTO) agreements mention the need for such transfers to take place between developed and developing countries.[3] 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.[4] Although economic reforms slowed after 2003, China continued to reduce barriers to foreign investment after its WTO accession.[5] The 2018 World Investment Report published by UNCTAD ranked China as the world's second largest FDI recipient after United States and before Hong Kong. In 2017, China absorbed US$131billion of new foreign investment.

China's trade patterns have long been closely tied to foreign direct investment.[6] Soon after Deng Xiaoping's famous Southern Tour, foreign invested enterprises (FIEs) supplied more than half of the country's manufacturing exports.[7] Analysis of China Customs data indicates that the role of foreign investors in China's export success remains large even after almost 40 years of reform and opening: In 2014, FIEs were the source of 46 percent of total Chinese exports to the world.

[2] 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).

[3] https://www.wto.org/english/tratop_e/devel_e/dev_wkgp_trade_transfer_technology_e.htm

[4] Lardy (2002) makes this point and supplies supporting evidence.

[5] Naughton (2018) discusses the slowdown in market reforms after 2003, placing them in the context of China's expanding development goals.

[6] Foreign direct investment is cross-border investment usually defined by a threshold of at least 10 percent equity share or equivalent voting power.

[7] Using data from the 1995 Third Industrial 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.

The share of China's exports to the United States that originates in FIEs was significantly larger, at 60 percent.[8]

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.

Foreign investors provide access to innovative technology, advanced management practices, connections to global supply chains, as well as capital. For example, a recent report for the U.S.-China 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. According to the report, "The establishment of permanent, foreign-owned operations on the ground in China provides opportunities for transfer of IPR, integration into the global supply chains, and overall sharing of expertise and practices."[9]

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.[10] Most recently, at the 2018 Boao Forum, Chinese President Xi Jinping promised foreign companies greater access to China's market, in particular announcing that a 50 percent foreign investment cap on automotive JVs would be lifted by 2022.

3. U.S. Foreign Direct Investment in China

The United States was slower than some other countries 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 US was the fifth largest investor, accounting for approximately 4.5 percent of total FDI stock.

US investors hold assets in Chinese mining, manufacturing, wholesale and retail trade and services. Using data from the BEA's Survey of U.S. Direct Investment Abroad, the total assets of US MNE affiliates in China was $643 billion in 2016.[11] The largest share of these assets, 37 percent, reflects investment in manufacturing activities, while another 28 percent are in finance and insurance. According to a report by the Rhodium Group and the National Committee on

[8] Calculations and context described in Lovely and Liang (2018).
[9] Gryphron Scientific and Rhodium Group (2019, p. 46).
[10] Branstetter and Lardy (2008) summarize China's progressive opening to foreign trade and investment. The 2017 version of the Chinese government's Catalog of Industries for Guiding Foreign Investment is available at http://www.ndrc.gov.cn/zcfb/zcfbl/201706/W020170628553266458339.pdf
[11] This valuation uses the historical cost method.

United States–China Relations, 71 percent of US investments are greenfield, as opposed to acquisitions of existing enterprises, and US investors hold a controlling interest in 68 percent of total assets.[12]

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 US economic relations with China, is aided by comparison to US exports of goods and services to China, which totaled $170.5 billion.[14]

American investment in China accounts for a relatively small but growing share of total U.S. 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. The relatively high ratio of sales to assets in Chinese-based US affiliates reflects both the labor-intensive nature of multinational production in China and the tendency of US firms to hold intellectual property assets outside the region. Assuming 10% annual growth for US sales in China, Deutsche Bank Research (2018) predicts that China will likely have become the largest market for US subsidiaries by 2020, accounting for 15% of all their sales abroad.

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

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 & 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 suggests that both market conditions and Chinese government policy shape American investment into China.[16] The 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,

[12] US–China investment trends reported by the Rhodium Group, April 2018, available at: https://rhg.com/research/two-way-street-2018-update-us-china-direct-investment-trends/ (accessed 2/20/2019). They estimate that between 1990 and 2017, US FDI in China in all industries exceeded US$250 billion.
[13] Asset and sales data taken from Tables I.B5 and I.D3, respectively, available on-line 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
[15] Branstetter and Foley (2008) made this point forcefully using data from 2004, when China's share of U.S. nonbank affiliates of nonbank U.S. parents sales and assets were 1.9 percent and 0.7 percent, respectively.
[16] Details in this paragraph are drawn 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/

into research & 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 U.S. Firms Invest in China?

From the perspective of foreign investors, direct investment into China offers numerous attractions. The most important of these advantages for U.S. firms is proximity to the Chinese market. 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.[17]

Delivery of some business services also require 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.[18] 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 adaptation of product characteristics accordingly. Proctor & Gamble, for example, is the largest consumer products company in China, with annual local sales of US$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.[19]

Transportation costs tip the scale for direct investment in other activities. For example, to serve the expanding Chinese market without the cost of trans-Pacific shipment, Carrier Corporation established its first joint venture in Shanghai in 1987 to produce air conditioning units for the local market.[20] As Chinese building activity accelerated, Carrier increased its production and service presence in the region.

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 the US due to the trade conflict) contribute to American investment in motor vehicle production in China.

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[17] 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/

[18] IBM has a rich history of Chinese operations, including sales, manufacturing facilities and research laboratories. https://www.ibm.com/ibm/history/exhibits/china/china_ch2.html

[19] 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

[20] Carrier today has more than 2,500 employees in China and a network of more than 60 sales and service offices. See https://www.carrier.com/building-solutions/en/cn/about/about-building-solutions/.

BEA data confirm that the major destination for goods and service 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 indicate that US multinationals make little use of China for production of goods used in US-based activities: they export a 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, there was a dramatic reduction in state direction of resources to technology upgrading and, as noted earlier, gradual embrace of foreign investment. China used market reforms and technological "catch-up" to advance its development, in concert with reductions in 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 it foreign investment policies to conform to its increasingly state-led industrial development.[22]

Over the past five years, the Chinese government has shifted its approach to foreign investment approval and mode of entry (wholly owned subsidiary vs. joint venture or contractual venture). Most investment barriers have fallen and most investors face no ownership restrictions. However, even as outright prohibitions on entry and share restrictions have become rare, 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 innovation 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

[21] Ling and Naughton (2016) take this view of China's pre-WTO industrial policy, but 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.

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% 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 effort to force technology transfer targets particular sectors and firms. As Lardy (2018) reports, 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."

Which industries are likely to face continued requests for technology transfer? The USTR's Section 301 report emphasizes foreign ownership restrictions, in particular joint venture (JV) requirements, as a "cornerstone of China's technology transfer regime."[24] Three major laws govern foreign investment into 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.[25] 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. Examination of this guidance provides some insight into which sectors may be subject to forced technology transfer through equity restrictions.

Figure 4 illustrates the sorting of Chinese manufacturing sectors into these various categories. Based on the coding work of Sheng and Yang (2016), who associate manufacturing activities included in the Catalogue with specific Chinese industries, the figure indicates that the share of manufacturing sectors in which foreign investment 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 a neutral or 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, the situation is far less transparent in "encouraged" sectors. There are explicit limitation 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

[23] Full survey results available from the US-China Business Council, 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. There is also no information on how representative this survey is of all US affiliates in China.

[24] Office of the Trade Representative (2018), page 23.

[25] Recently proposed changes to foreign investment rules in China will combine these three laws into one.

in desirable free-trade zones. What is often overlooked is the way in which Chinese development combines industrial policy and FDI approvals.

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.[26] 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, this form of non-tariff barriers appears to be most restrictive in sectors involving health and safety standards.

c. Innovation Policies

As noted above, foreign investment in high-technology manufacturing is likely to be "encouraged." Although similar statistics on high-technology services, such as cloud computing, are not available, restrictions on entry and ownership shares are common 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 to be severely constrained. As noted by the US-China FDI Project, "ICT investments affected by Chinese cybersecurity rules, national security constraints, industrial policy and counter-terrorism policies. These policies favor domestic companies and often require US firms to enter into joint ventures with Chinese firms to provide services."[27]

6. Strategies to Open Opportunities for US Affiliates in the Chinese market

Import tariffs on a wide bundle of US imports from China does 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.[28] They unduly burden American-based manufacturers who rely on these intermediate and capital goods to remain globally competitive. Lastly, they have no effect on Chinese service providers, even though American companies are facing numerous restrictions that limit competition in the ICT, finance & insurance, and professional service sectors.

More effective and less burdensome policies would target attempts by the Chinese to benefit from unfair restrictions placed on US foreign affiliates. Existing national and multilateral tools

[26] 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.
[27] See industry details for the Information and Communications Technology industry, https://us-china-fdi.com/.
[28] See Lovely and Liang (2018).

are available for seeking change within the current rules-based trading system. Key to success is coordination with other advanced nations, which face similar restrictions on their own Chinese-based affiliates. Coordination with other innovative nations is necessary to prevent a "divide and conquer" strategy that offers American investors a choice between transferring technology and ceding the Chinese market to other foreign competitors. Any successful policy will promote "self-enforcement" by aligning US interests with the incentives of individual US firms operating in China.

a. Join with Allies to Prevent Forced Technology Transfer

As shown above, available evidence indicates that China targets particular industries, either to ensure technology transfer or to block competition with its own domestic firms. If the goal is to induce technology transfer, the United States can alter the options open to American corporations facing unreasonable demands. The Section 301 report notes the reluctance of some investors to resist unwanted requests for tech transfer or to complain about unfair policies for fear of being closed out of the Chinese market. Such concerns would be reduced if investors faced less uncertainty about the behavior of technologically advanced competitors. A common expression by all innovative nations of a willingness to combat forced technology transfer would remove the danger companies currently face of losing the whole market by refusing to agree to transfer.

Barred entry to the Chinese market also is viewed as costly even in sectors 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, a common expression of willingness to combat such policies, perhaps by barring 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.

b. Address Chinese Actions at the World Trade Organization

China's accession agreement with the WTO constrains its behavior toward foreign direct investors, but only in limited ways. China's accession protocol states that the country will not condition approval of foreign investment on technology transfer. Firms blocked from investing in the Chinese market because they refuse to transfer technology should support US government efforts to bring challenges to the WTO for remedy. The Section 301 report suggests that American companies are reluctant to challenge publicly technology requests.[29] Two reasons often given for this reluctance are (a) a complaining company may face retaliation in other operations in China, and (b) fear that non-Chinese competitors will make the deal and transfer technology anyway. Both of these concerns imply that a coordinated effort by the United States with other advanced economies, as in recent efforts in concert with the European Union and Japan, is needed to avoid a "prisoner's dilemma" that prevents challenging Chinese technology transfer requests at the WTO.

[29] See the discussion in Office of the Trade Representative (2018), page 22.

While China's accession agreement may be the basis for some challenges at the WTO, it does not prohibit the use of industrial subsidies or other policies to induce technology transfer. The Agreement on Subsidies and Countervailing Measures (ASCM) may provide another avenue for discipline of industrial subsidies used for this purpose. Although the Agreement actually allows most industrial subsidies, it does apply to those that involve a financial contribution by the government and confer a benefit on the receiver. Importantly, the subsidy must be *specific*, meaning that its benefits are available to only certain of the nominally eligible recipients, before it can be contested under the ASCM.[30] Because Chinese incentives to certain foreign investors may meet these requirements, they are potentially actionable through this WTO mechanism.

TRIMs, the Agreement on Trade-related Investment Measures, applies only to measures that affect trade in goods.[31] It explicitly prohibits local content requirements, trade balancing requirements, foreign exchange restrictions and export restrictions (domestic sales requirements). Thus, it is narrow in scope of coverage and does not apply to trade in services. For this reason, the TRIMs agreement is unlikely to be helpful in combating policies that restrict US affiliates activities in provision of IT, financial, or other professional services.

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

Joining forces with our allies and bringing complaints to the WTO will yield benefits for the US economy. Reforms will have both push and pull effects. Removal of ownership caps and reductions in regulatory barriers are likely to induce more investment into China because American MNEs will be able to deploy advanced technology without fear of appropriation. It will open new sales opportunities in areas where US firms are currently blocked.

Some reforms may decrease investment flows, however. To the extent that China has used preferential policies to compensate investors for unwanted business restraints, such as ownership caps, reform may reduce the return that some firms are likely to receive through entry. Overall, however, given that American comparative advantage matches the areas in which Chinese barriers remain (e.g. high technology manufacturing, ICT services, financial services, etc.), the level of American investment into China will, *ceteris paribus*, increase.

American investment in Chinese high technology goods producing and service sectors will benefit American workers. In comparison to the offshoring of labor-intensive activities in the 1990s and 2000s, reduced barriers to American foreign investment in high tech sectors is likely to largely stimulate job creation in the US. 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. Those activities that will grow as the US and its allies successfully reduce Chinese entry barriers will be those that are intensive in communications tasks, such as headquarter functions, design, marketing, and R&D. While new jobs in these areas will not replace production employment lost in earlier decades, they will benefit America's workers by raising the demand for labor in sectors that match US comparative advantage.

[30] For more details, see https://www.wto.org/english/thewto_e/acc_e/1_scm_overall_accession_seminar.pdf.
[31] See https://www.wto.org/english/tratop_e/invest_e/trims_e.htm.

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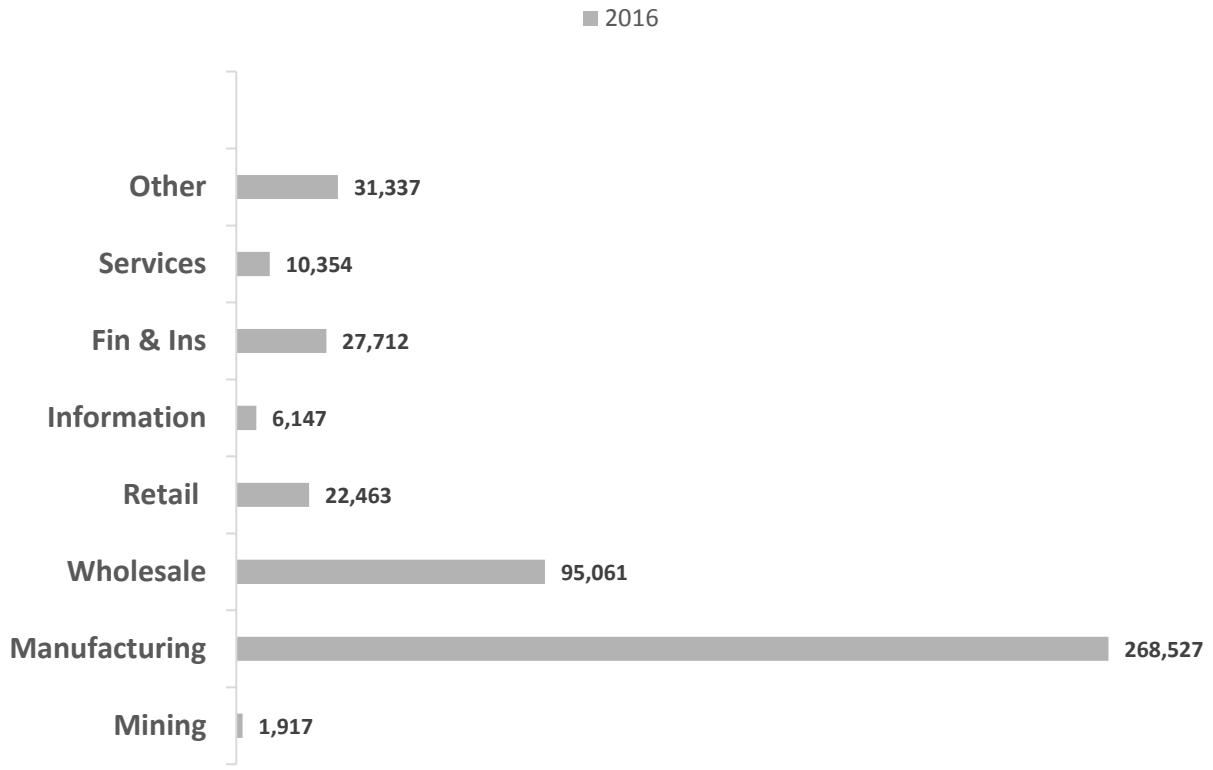
Table 1. Chinese Foreign Direct Investment (FDI) Stock by Source, 2015

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).

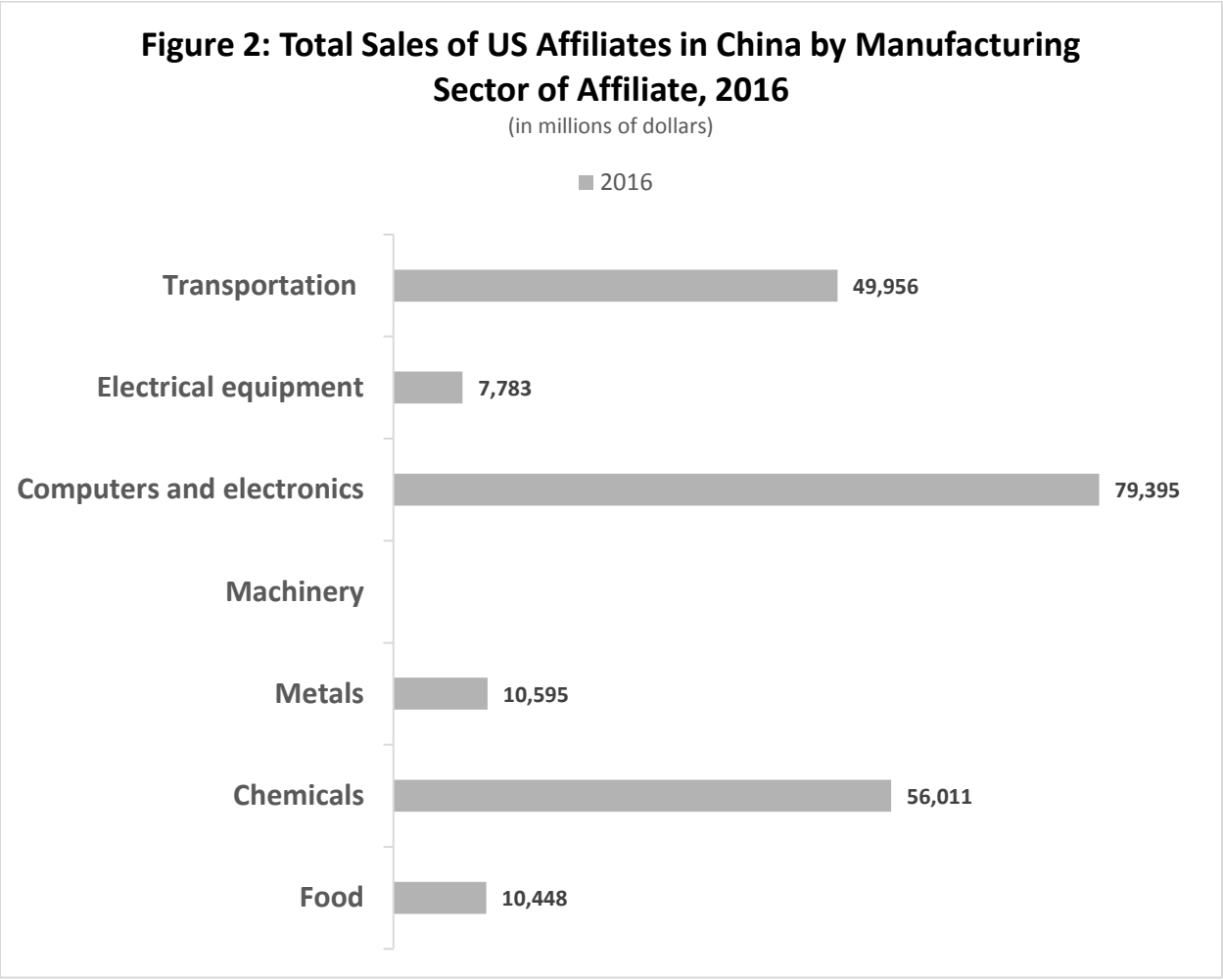
Figure 1: Total Sales of US Affiliates in China by Industry of Affiliate, 2016

(in millions of dollars)



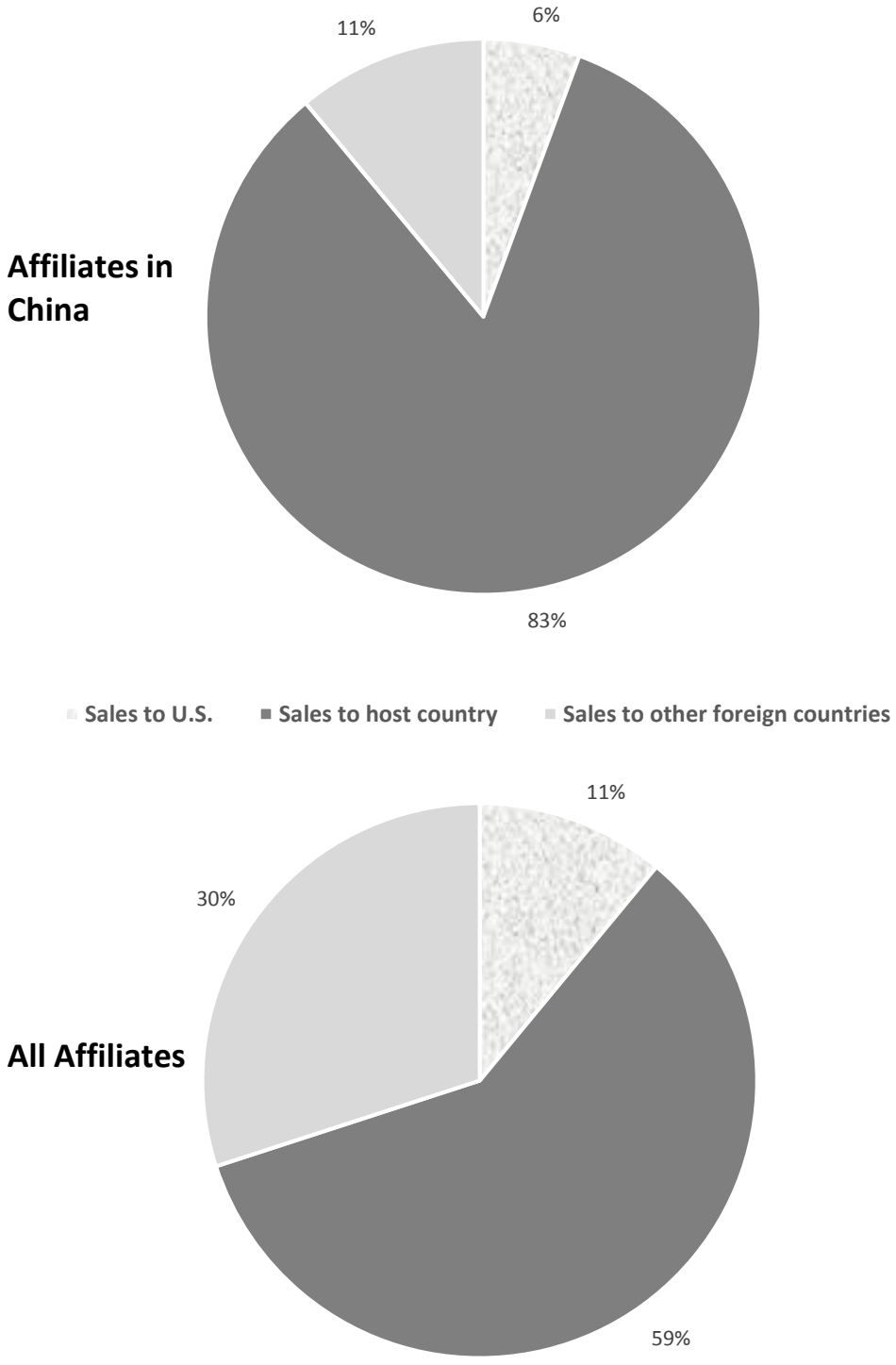
Source: U.S. Bureau of Census, Bureau of Economic Analysis, U.S. Direct Investment Abroad, and calculations by author.

Figure 2: Total Sales of US Affiliates in China by Manufacturing Sector of Affiliate, 2016



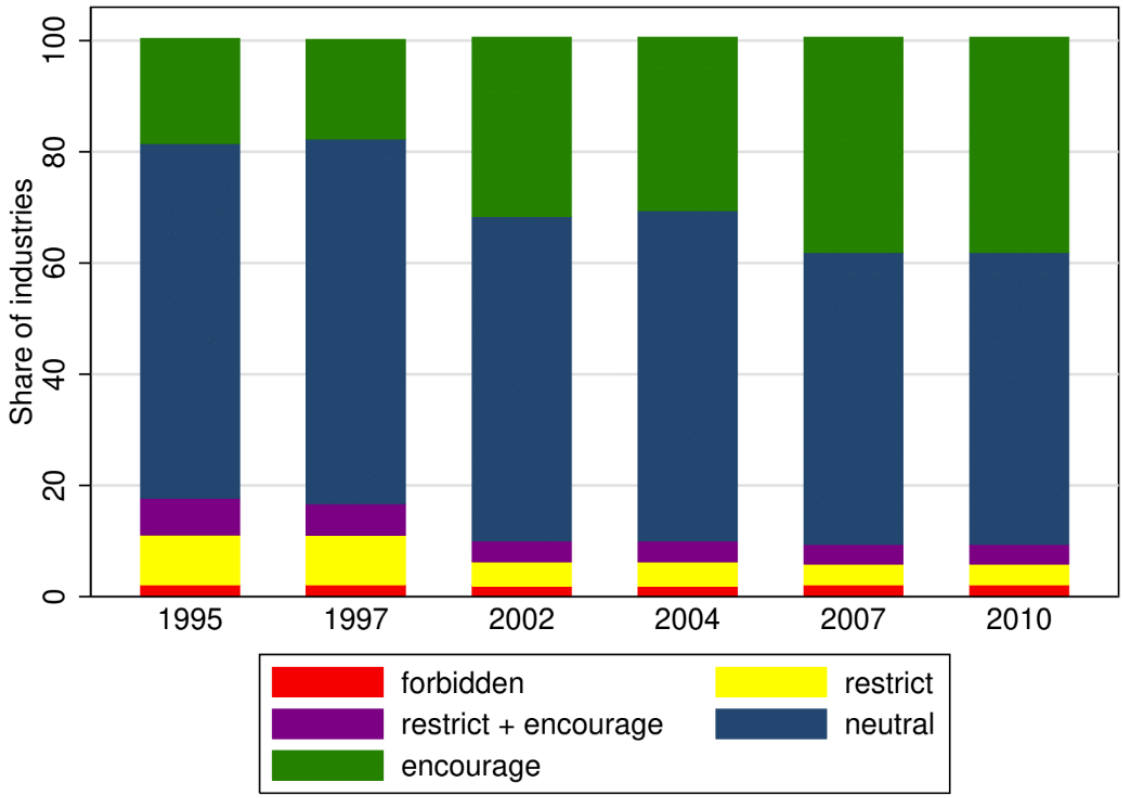
Source: U.S. Bureau of Census, Bureau of Economic Analysis, U.S. Direct Investment Abroad, and calculations by author. Information on sales in the machinery industry not disclosed.

Figure 3: Destination of Goods and Services Supplied by U.S. Affiliates in China, 2016



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

Figure 4: Manufacturing Industries Grouped by Catalog of Foreign Investment Designation, Selected Years (share x 100)



Source: Policy designation at SCIC four-digit taken from Sheng and Yang (2016). Grouping and calculations by author.