
Chinese Firms in the US-China Trade War

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How have Chinese firms responded to the US-China Trade War? The trade war between the world's two leading economies is first and foremost a political war. China, since its accession to the World Trade Organization (WTO) in 2001, grew by 2010 to supersede Japan as the second-largest economy in the world and is now positioned to challenge the leadership of the United States in the multilateral trading system. Against this backdrop, the US-China trade war tests the limits of the multilateral trading system under the WTO. Can the multilateral trading system continue to flourish if its two largest economies are engaged in a trade war, imposing tariffs on each other's exports and affecting supply chains as a result? This paper examines how Chinese firms have responded as the US imposed tariffs against imports from China. Responses can vary, from tariff-jumping FDI into the United States to shifting production to Southeast Asia, or even diverting economic exchange to other markets such as Europe. Even though the Phase One trade agreement, which was signed on 15 January 2020 and entered into effect the next month, on 14 February 2020, was expected to improve trade tensions, the US government has kept in place restrictive measures against Chinese firms, with more than 950 Chinese entities subject to sanctions.¹ In September 2022, the Biden administration announced it would maintain the tariffs imposed on Chinese imports pending an extended review.²

This chapter analyzes the shifts in the investment patterns of Chinese firms since 2010, focusing on changes since the official outbreak of the US-China trade war on 1 July 2018. The analysis tests four hypotheses concerning the response of Chinese firms. One is that Chinese firms have increased investments in the United States, much like the tariff-jumping investment activity observed in the 1980s during the US' trade conflict

¹ *Politico*, 13 January 2022.

² www.bloomberg.com/news/articles/2022-09-08/biden-delays-decision-on-china-tariffs-put-in-place-by-trump.

with Japan (Belderbos, 1997; Blonigen, 2002). Second, Chinese firms also have incentives to shift investments and consequently production to Southeast Asia, especially to those countries that have close economic links with the United States, and can help Chinese firms to avoid tariffs at the center of the trade war. The third possibility is that Chinese firms may direct greater attention to markets outside the United States, especially Europe, predated by extensive investments already undertaken after the global financial crisis in 2008 (Ma and Overbeek, 2015; Meunier, 2019). Finally, the fourth possibility is that China has turned inward to leverage its own massive population and the market opportunities it provides. This is akin to the trend of ‘reshoring’ or bringing production back to a firm’s home country.

This analysis focuses on Chinese firms’ investment activities, with the expectation that investment decisions shape firms’ trading activities down the line. Data from the fDi Markets database on investment projects, which provides real-time information on greenfield foreign direct investment (FDI) projects around the world, are employed to investigate patterns in Chinese foreign direct investment in the years 2010–2020. The time frame covers the pre-trade war years 2010–2017 and the first three years of the trade war 2018–2020. Though the trade war does not officially start until July 2018, the trade tensions accompanying the International Trade Commission investigation were evident in the media and broader public domain. The analysis thus seeks to capture some of the behavior of Chinese firms in their investment activities that respond to these tensions and also anticipates the official actions to follow. As a contribution to this volume on China’s 20 years in the WTO, this chapter contributes to our understanding of China as the world’s second-largest economy, as a WTO member with obligations to comply with the rules of the multilateral trade regime, and its ability to influence trade and investment patterns in responding to its trade conflict and competition with the United States.

In terms of the main findings of this inquiry into Chinese firms’ investment activities before and after the onset of the US-China Trade War, the results indicate the following patterns:

- In terms of major investment destinations, the US, India, and Indonesia were the top three destinations before the trade war. Since 2018, however, the top three greenfield investment destinations have shifted to countries such as Russia and Brunei. The United States, though still a major investment destination, experiences a sharp drop in greenfield investment from Chinese firms

- On sectoral patterns, real estate; coal, oil, and gas; and metals remain the top three sectors for Chinese firms' greenfield investment. Overall, however, there is a general decline in average annual Chinese overseas investments since 2018
- In investment activities, manufacturing, electricity, and construction are the top areas of investment activity, with investment in manufacturing rising sharply since 2018
- Chinese greenfield FDI has been concentrated in East Asia and Europe, which has seen significant gains with the onset of the trade war. Sub-Saharan Africa replaces South Asia as the third most popular investment destination for Chinese firms
- Over-time patterns across the regions show that the percentage of Chinese greenfield FDI declines for the US and rises for Europe in 2019. Chinese investment also increases substantially for East Asia and the Pacific in 2020 following a dip in 2019

I The Timeline

This section provides a brief chronology of the unfolding of the trade war. One general observation to offer at the start is that the US-China trade war is the formalization of a trade conflict that had already been ongoing since the beginning of this century. Trade tensions were apparent well before the election that brought Donald Trump to the White House. Signs that the trade conflict between the United States and China would be given greater attention were evident during Donald Trump's campaign. At a campaign stop at Alumisource, a metals recycling facility, in Monessen, Pennsylvania in June 2016, Trump delivered his jobs plan speech, in which he described China's accession to the World Trade Organization (WTO) as an event that enabled the 'greatest jobs theft in history'.³ As part of his agenda to 'Make America Wealthy Again,' Trump laid out his plans, upon his election as President, to activate Sections 201 and 301 of the Trade Act of 1974 and Section 232 of the Trade Expansion Act of 1962. He intended to impose tariffs on Chinese exports to the United States, thus responding to 'illegal activities' in China's trade. Trump's speech also referred to the trade deficit with China, which had reached \$800 billion by this time.⁴

³ www.politico.com/story/2016/06/full-transcript-trump-job-plan-speech-224891.

⁴ A fact check on this figure confirmed the accuracy of this statement, though the figure would be lower, at \$500.361 billion, if taking into account services, where the US had a trade surplus. www.npr.org/2016/06/28/483883321/fact-check-trumps-speech-on-the-economy-annotated.

Donald Trump made good on his promise in Monessen, Pennsylvania. Once elected as President of the United States, Trump's first act in office, on 1 February 2017, was to withdraw the United States from the Transpacific Partnership (TPP) Agreement. He subsequently signed two executive orders in the next two months. They provided for stricter enforcement of tariffs imposed as part of anti-subsidy and anti-dumping measures. They also provided a full review of the United States' trade deficits and their causes. At his first summit in April 2017 with Chinese President Xi Jinping at Trump's Mar-a-Lago estate in Florida for a 24-hour visit, the two leaders agreed to 100 days of trade talks to address their differences on the United States' trade deficit with China. The talks led to an agreement on 11 May 2017, which provided market access for American beef producers, credit rating services, and credit card providers. For China, the agreement provided market access to the United States for Chinese producers of cooked poultry. This trade deal was beneficial for some US industries; however, it did not resolve broader structural issues at the center of US-China trade relations. These structural issues included China's requirements for technology transfer and the broader concerns and perception of US firms of unequal market access. The 100 days of trade talks, which ended on 19 March 2017, did not yield an agreement that addressed these structural problems in US-China trade relations.

On 14 August 2017, the Trump administration requested a Section 301 investigation on China to launch the US' first direct trade measure. The United States Trade Representative's (USTR) office announced the 'Initiation of Section 301 Investigation; Hearing; and Request for Public Comments: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation under Section 301 of the Trade Act'.⁵ Rather than focusing on dumping or other quantitative dimensions of Chinese exports to the United States, the investigation was directed instead at China's behind-the-border practices in its trade regime.

In early 2018, while the USTR investigation was in progress, the Trump administration took additional trade measures, beginning with approval of global safeguard tariffs on imports of residential washing machines and solar cells and modules.⁶ Tariffs under global safeguard measures were to be imposed on washing machines for three years. In the first year, there would be a 20% tariff on the first 1.2 million machines, and a tariff of 50%

⁵ Docket No. USTR-2017-0016.

⁶ USTR Press Release 22 January 2018.

would be imposed on machines above that number. For solar cells and modules, tariffs were approved for four years. There would be a tariff of 30% in the first year but it would be brought down to 15% by the fourth year. However, the approved measure also allowed for up to 2.5 gigawatts of unassembled solar cells to be imported annually with no tariffs. The approval and adoption of these global safeguard measures were the result of an earlier investigation that had already been ongoing. This investigation was undertaken by the independent and bipartisan U.S. International Trade Commission (ITC) under Section 201 of the US Trade Act.⁷ The ITC investigation determined that imports of washers and solar cells and modules during the years 2012–2016 were ‘a substantial cause of serious injury’ to domestic producers. The recommendation of the ITC report was to apply global safeguard tariffs on these products. The global safeguard tariffs were officially to be applied to all trade partners. However, it was apparent that these safeguard tariffs were specifically targeting imports from South Korea and China.⁸

In March 2018, the Trump administration adopted additional protectionist trade measures. President Trump signed two proclamations on 8 March for tariffs on imports of steel and aluminum, and these tariffs were implemented approximately two weeks later, on 23 March. The proclamations exempted Canada and Mexico as partners of the North American Free Trade Agreement (NAFTA). Imports of steel from the rest of the world were to be charged with a tariff of 25%, and imports of aluminum were subject to a tariff of 10%.⁸ These tariffs were imposed with the Trump administration’s activation of Section 232 of the Trade Expansion Act of 1962. Under this provision, for reasons of national security, tariffs were allowed to be imposed for an indefinite period of time. The invocation of Section 232 justified the tariffs imposed on the imports of steel and aluminum as critical sectors for defense munitions and economic security as well as the protection of these domestic industries.

With the signing and implementation of these proclamations, Trump was fulfilling one of his key campaign promises, that is, to address unfair

⁷ USTR Factsheet on Section 201 Cases.

⁸ The ITC report named, in particular, Lucky Goldstar (LG) and Samsung. These firms had shifted their production of washing machines to China, Mexico, and then to Thailand and the Philippines to avoid anti-dumping duties that were earlier applied to them. Chinese firms producing solar cells and modules had also similarly shifted production earlier to Taiwan and then to Singapore, Malaysia, Korea, and Germany to avoid countervailing and anti-dumping duties that had been imposed on them. Argentina, Australia, Brazil and South Korea were later exempted from the steel tariff. Argentina and Australia were later exempted from the tariff on aluminum as well.

trade practices from trade partners. As such, the tariffs were strongly supported by pro-Trump groups. At the same time, the protectionist measures caused significant conflicts within both the Trump administration and the Republican Party. From the House of Representatives, 107 Republican members signed a letter in opposition to the tariffs. Gary Cohn, who was director of the National Economic Council, disputed with the Trump administration and subsequently resigned from his appointment. On the day before the tariffs on steel and aluminum were to take effect, the Trump administration, on 22 March 2018, announced the conclusion of the USTR's Section 301 investigation of China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation, which had earlier been initiated through the US Trade Representative Robert Lighthizer. With the conclusion of the investigation, the Trump Administration announced also the trade measures to be taken specifically against China. The Memorandum signed by Donald Trump provided for three policy actions to be implemented to address 'China's acts, policies, and practices involving the unfair and harmful acquisition of U.S. technology'.⁹ First, the Memorandum directed the US Trade Representative to initiate a case under the WTO dispute settlement mechanism. The case would involve a trade dispute over China's discriminatory technology licensing practices. Second, the Memorandum provided for an *ad valorem* duty of 25 per cent to be applied to Chinese exports to the United States. Products listed to be subject to this tariff included aerospace, information and communication technology, and machinery. Finally, the Memorandum also confirmed the investigation's recommendation that the U.S. Treasury Department, in cooperation with other relevant Departments and agencies, design a set of restrictions to combat China's investment strategy, which invariably sought to acquire sensitive technologies from the United States.

With the conclusion of the USTR Section 301 investigation and the subsequent proclamations adopting the recommendations of the report, the Trump Administration implemented the first set of China-specific tariffs on 6 July 2018. This day is regarded as the official start of the US-China Trade War. The trade conflict progressed with an escalation and exchange of tit-for-tat tariffs, all in all, a series of four rounds until September 2019. The Trump administration imposed significant tariffs on Chinese imports into the United States. Bown (2019) and Bown and Zhang (2019) estimate that through the reciprocal imposition of tariffs, the trade-weighted

⁹ USTR Section 301 Fact Sheet.

average tariff rate increased more than six times in two years. In the following year, on 15 January 2020, the US and China successfully negotiated and signed the phase one agreement to suspend current tariffs on each other's exports. According to Chad Bown, who has been tracking trade flows throughout the trade war, tariffs remained high in March 2021. These higher tariffs appear to be the 'new normal' even with the signing and implementation of the phase one trade agreement (Bown, 2021).¹⁰

II Scholarship on Chinese Investment

Existing studies on Chinese foreign direct investment have highlighted how different Chinese investors are from investors from advanced industrial countries, especially those from the west (Buckley et al., 2007; Cheung and Qian, 2009; Han et al., 2014; Kang and Jiang, 2012; Ross, 2015; Yan et al., 2020). A common finding from these studies is that Chinese firms' overseas investment activities do not readily conform to the characteristics of the prevalent 'eclectic' paradigm in studies of investment (Dunning, 2000, 2001). The eclectic paradigm distinguishes between market-seeking, resource-seeking, strategic assets-seeking, and efficiency-seeking investments. Chinese investors organize their businesses in ways that are distinct and different from the investment activities of firms from the advanced industrial countries of the west. Chinese firms appear to favor long-term profits over short-term profits. This is observable, in particular, in investments in infrastructure, which inherently require a long horizon for reaping economic gains (Alon et al., 2014). Wei's (2010) study also notes that Chinese firms seek to exploit the country-specific advantages of investment locations more so than their own internal firm-specific advantages. This finding has been further supported by Wu's (2005) firm-level survey. Studies have also found that Chinese firms are less averse to the risks of investing in countries that have problems with political stability, social stability, and economic vitality (Chen et al., 2015, 2018; Li-Ying et al., 2013). The explanation may be that Chinese investors do not rely on local networks or institutions in carrying out their economic activities. Rather, Chinese firms are more inclined towards utilizing the network of home country firms in the host country, that is, other Chinese firms that are already established in the host country (Li et al., 2017; Peng, 2012). Finally, highlighting the role of the home country government, Chinese investors overseas are strongly supported by the institutional and policy support

¹⁰ www.piie.com/system/files/documents/piie-chart-us-china-war-up-to-date.pdf.

of the Beijing central government. In this, the characteristics of Chinese firms' overseas investment activities are more consistent with 'institutional' approach to understanding foreign direct investment (Yang and Stoltenberg, 2014).

In the twenty-first century and in the years before the onset of the US-China trade war, China's overseas investment had been rapidly increasing. In the twentieth century, China's position in the global investment landscape was as a major recipient of FDI. China was not a major outbound investor, recording low levels of foreign direct investment. China shifted to a net investor in 2015 when its outward foreign direct investment exceeded foreign direct investment inward (Yan et al., 2020). Even as China's trade tensions with the United States were worsening, Chinese firms, both state-owned and private firms, remained active in their overseas investment activities. As noted above, consistent with the institutional paradigm of investment, Chinese firms' overseas investments received policy support from the central government, through both domestic policies and international economic agreements. Jiang (2010) notes that the Chinese government's various bilateral and plurilateral free trade agreement projects provided important institutional support and facilitated Chinese firms' investment activities. On the domestic front, the central government actively encouraged Chinese firms to invest overseas by introducing in 2001 its 'Go Out' policy (Buckley et al., 2007; Wei, 2010).

The Xi Jinping government's launch of the Belt and Road Initiative in 2013 also provided strong incentives for Chinese firms to coordinate their overseas expansion. The Chinese government's Belt and Road Initiative (BRI), formerly the 'One Belt One Road' initiative, is regarded as a key indicator of China's increasing assertiveness on the international stage (Chaisse and Matsushita, 2018; Cheng, 2016; Huang, 2016; Kim, 2022; Pencea, 2017). The BRI can be regarded as Beijing's grand strategy in the service of national interest. It emphasizes economic statecraft to further China's influence, both in the Asian region and globally (Callahan, 2016) to promote international economic cooperation centered on China. As such, BRI is compatible with Beijing's overall policy of encouraging and incentivizing Chinese firms to expand their economic presence overseas.

The impact of the US-China trade war so far has been strong and far-reaching. Amiti et al. (2020) advanced expectations that the trade conflict would lead to lower investment in 2020. This decline would be due to the shocks on the stock market from policies of the two adversarial countries, which would depress returns to capital. Scholarship has also linked the trade conflict with the impact of uncertainty on the stock

market (Cai et al., 2020; Chengying et al., 2021). Wang et al.'s (2021) study also investigated the effect of the trade conflict on stock market movements. They found that Chinese private firms experienced the most negative reactions on the stock market, much more so than state-owned firms. As expected, Chinese firms directly impacted by the Trump administration's imposition of tariffs were especially vulnerable. Other studies such as Itakura (2020) as well as Li (2018) utilized computable general equilibrium models (CGE) to estimate the effect of the trade war on tariffs, investment, and productivity. Li found that the trade war had a negative impact on China's trade. Itakura's study found that both the United States and China had a lower gross domestic product (GDP), imports, and outputs as the trade war escalated. Itakura's analysis also showed that the trade war's impact on global value chains was even more significant. As the CGE model was further refined to account for agent-specific import demands, there was a drop in bilateral trade and a contraction of the global gross domestic product. Subsequent scholarship has largely corroborated the findings of studies using these simulations, focusing on the effects of the exchanges of tariffs between the United States and China on third parties that conduct trade along the international supply chain. Studies have found that third countries that are linked to China in the supply chain and also subject to US tariffs have been especially affected (Mao and Görg, 2020; Wu et al., 2021). The products from China subject to US tariffs were also likely to be intermediate inputs for goods produced in the United States. Such third countries were thus hurt downstream along the global supply chain. EU, Canada, and Mexico, the United States' closest trade partners, have been identified as the third parties most negatively affected by the trade conflict.

It should also be noted that the US-China trade war is more than a trade conflict. It is, more broadly, a political war, a competition between the world's leading economy and a rising challenger that is the second-largest economy in the world (Chong and Li, 2019; Kim, 2019; Liu and Woo, 2018). Concerns about the US' own hegemonic decline may well have sparked the US' initiation of the trade war by imposing the first set of tariffs. The trade conflict has effectively politicized China's sustained trade surplus with the United States, directing more attention to unfair trade practices that have resulted in the loss of jobs and China's acquisition of technology from the United States. Trade practices of Chinese firms and the Chinese central government have given rise to worries about national security and the standing of the United States as the leading economy in the world. On the other side, scholarship from China has even argued that

the trade war is the Trump administration's attempt to place obstacles in the way of China's rise (Lai, 2019). In China's foreign economic activities, Beijing pursues economic statecraft that involves the promotion of export-related foreign direct investment, security in the supply of national resources, building up the competitiveness of Chinese firms' competitiveness, and maintaining strong and positive political ties with countries that are recipients of Chinese investment (Wei, 2010).

Finally, much of the existing scholarship has focused attention on the parties themselves, the United States and China, and how the trade conflict has impacted their trade. Chad Bown (2021) has tracked both the tariffs imposed by the two countries and their impact on bilateral trade. Tariffs and the resulting trade flows have been especially important since the negotiation and signing of the phase one agreement. The agreement was signed on 15 January 2020 and entered into effect on 14 February 2020.¹¹ As of 1 March 2021, Bown reported that Chinese tariffs on imports from the United States averaged 20.7%, and US tariffs on imports of Chinese goods averaged 19.3%. On the actual impact on US-China trade, as of 1 January 2021, 66.4% of US imports from China were subject to tariffs, and China imposed tariffs on 58.3% of goods imported from the United States. Bown's analysis of China's purchase commitments under the phase one agreement, namely to purchase US\$200 billion worth of goods from the United States over two years and expected to reduce the US' trade deficit with China, fell significantly short of the goal. In fact, China's imports of goods from the United States were lower in 2020 than in 2017 and thus did not meet phase one targets. The COVID-19 pandemic may have affected these numbers. Nevertheless, even by July 2021, Bown's analysis reported that China's imports from the United States were still 30% lower than the phase one target, though this was still an improvement over 2020 when China's imports from the United States were 40% short of the phase one target.¹²

III Patterns in Chinese Investment, 2010–2020

This section reports patterns of greenfield investment by Chinese firms, with a view to the hypotheses elaborated in the above sections of this chapter. As noted earlier, the analysis draws on data on greenfield investments obtained from the FDI Markets database, which provides real-time

¹¹ US-China Trade War Tariffs: An Up-to-Date Chart.

¹² US-China phase one tracker: China's purchases of US goods.

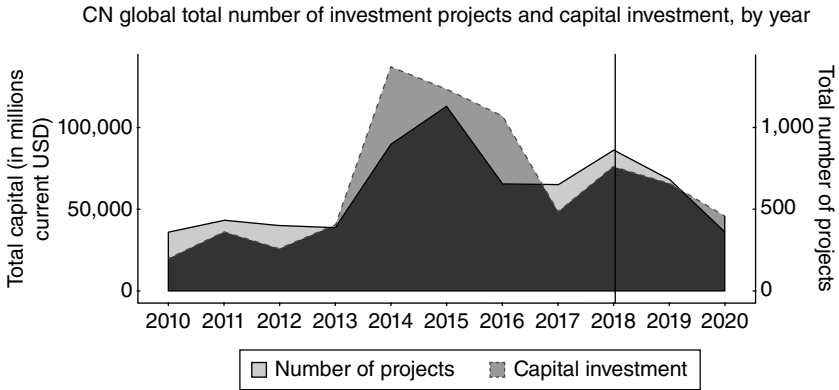


Figure 21.1 Chinese greenfield FDI, 2010–2020

information on cross-border investment flows by project and by firm.¹³ The database includes a wide range of supplementary information at both the project and firm levels. The findings reported below take a descriptive approach to highlight the changes, if any, of patterns in the greenfield investment activities of Chinese firms since 2010. Firm-level data are aggregated at the national level to compare changes across states that are recipients of Chinese investments.

Figure 21.1 reports overall patterns in Chinese greenfield FDI in the years 2010–2020, inclusive. The data include both the total value of capital investment in current US dollars and the number of projects that have been undertaken by Chinese firms. For both the value of greenfield FDI and the number of projects, Figure 21.1 shows that Chinese firms' investment worldwide has declined since the onset of the trade war. The investment did peak in the years 2013–2017; however, there is a downward trend that is correlated with the time of the Trump administration.

The data indicate two interesting patterns in the investment behavior of Chinese firms. First, there is some anticipatory effect for the private sector ahead of the official start of the trade war in July 2018. There is a drop in the value of investment, and the number of projects also plateaus in 2017, as Trump begins his term and initiates Section 301 investigations against China. The launch of investigations signals the Trump administration's intent to fulfill earlier campaign promises to address China's unfair trade practices. The private sector may well have taken anticipatory action by

¹³ www.fdimarkets.com/.

holding back investments. Second, the decline in investment activity by Chinese firms is notable already in 2018 and before the onset of the COVID-19 pandemic. Chinese firms invest less and in fewer projects in the years 2018 and 2019, with a further drop occurring in 2020, which is the first year of the pandemic. Thus, in addition to an anticipatory decrease in Chinese investment dollars and the number of projects in 2017, the subsequent two years marking the first and second of the trade war also show a downward trend in Chinese firms' investment activities. This pattern can also be associated directly with the trade war itself as it takes place before the onset of the COVID-19 pandemic.

With respect to the hypotheses concerning the increasingly inward orientation of the Chinese economy, Figure 21.1 provides indirect evidence. Figure 21.1 shows global totals for the value and number of projects in Chinese greenfield FDI, which have been declining since 2017. Assuming that the capital for investment available to Chinese firms has not changed significantly, one possibility is for this capital to be redirected to the domestic market. Though this claim would be stronger with data directly on Chinese firms' domestic investment activities, the patterns in global investment activities suggest the possibility of such a re-direction inward.

Investment destinations for Chinese firms also see a dramatic change before and after the official onset of the trade war in 2018. Figure 21.2 provides information on the top ten recipients of Chinese greenfield FDI, divided between the periods before and after the start of the trade war. In the years preceding the trade war, the top destination for investment by Chinese firms was the United States. This was followed by India, Indonesia, Malaysia, and Pakistan. Four Asian countries were thus among the top five recipients of Chinese greenfield in the pre-2018 years. This pattern shifts significantly in the years 2018 and later. Though the data are drawn only from three years, Figure 21.2 shows that Russia became the top recipient of Chinese greenfield FDI once the trade war began. Russia is followed by Brunei and, in third place, is the United States. The top ten recipients also include three other Asian countries, namely Indonesia, the Philippines, and India.

In terms of old and new destinations for Chinese greenfield FDI, the pre-trade war years include Malaysia, Pakistan, Egypt, South Africa, and the United Kingdom, which are not among the top ten recipients in 2018 and later. From Europe, the United Kingdom is displaced by Germany, in Africa, South Africa is displaced by Nigeria, and in Asia, Brunei, the Philippines, and Kazakhstan now figure among the top ten investment destinations for Chinese firms. The United States, India, Indonesia,

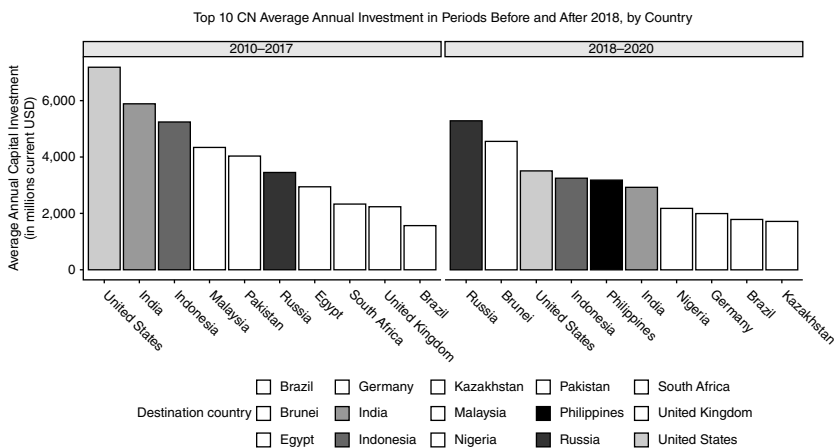


Figure 21.2 Top ten recipients of Chinese greenfield FDI, 2010–2020

Russia, and Brazil, though their ranking in terms of the value of capital investment received has shifted, remained among the top ten destinations for Chinese greenfield FDI.

(i) Sectoral Patterns

Figure 21.3 reports the top ten sectors in which Chinese firms have invested in the years 2010–2020, inclusive. The fDi Markets database classifies each project as belonging to one of 39 sectors. Figure 21.3 reports the sectors that received the largest capital investments from Chinese firms on an annual basis, between the periods 2010–2017 and 2018–2020. For the years 2010–2017, the top sectors for Chinese greenfield investment were real estate; coal, oil and gas; metals; renewable energy; automobiles original equipment manufacturing (OEM); communications; transportation and warehousing; chemicals; food and beverages; and electronic components. With the onset of the trade war, greenfield investment in coal, oil, and gas greatly increased while greenfield investment in real estate declined significantly in the amount of capital investment though it still remained among the top three sectors. Electronic components became the sector with the fourth-highest average annual greenfield FDI from Chinese firms, followed by communications, transportation and warehousing, automobiles OEM, textiles, and chemicals.

Overall, there was significantly less investment in automobiles OEM, and chemicals. Though transportation and warehousing ranked lower

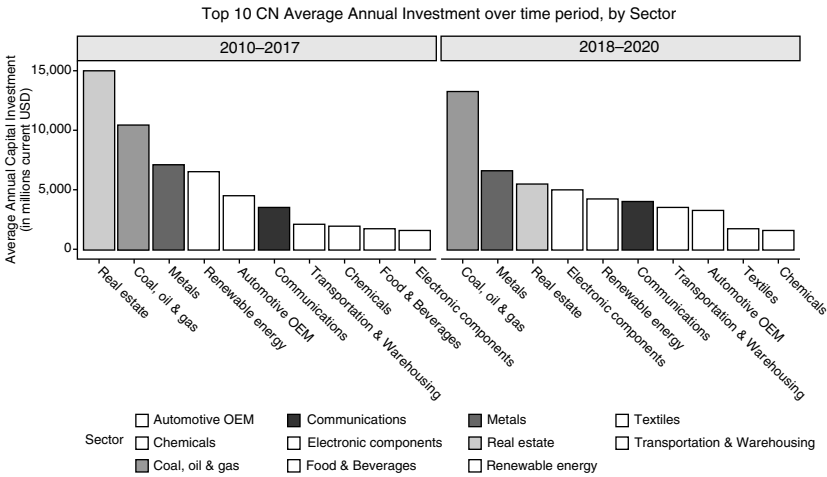


Figure 21.3 Chinese greenfield FDI by sector, 2010–2020

(seventh) in the trade war years, the average annual greenfield investment in this sector is higher in the value of the capital investment. Between the two periods, food and beverages, which ranked ninth in greenfield FDI, is replaced by investment in textiles in the first three years of the trade war. Food and beverages was the only sector that dropped out of the top ten from the pre-trade war years. Otherwise, the top ten sectors for Chinese greenfield FDI remained the same between the two periods though their relative ranking has shifted.

(ii) Type of Activities

Figure 21.4 reports the different types of business activities associated with Chinese firms’ greenfield FDI projects. The fDI Markets database relies on a proprietary industry classification system that combines the industry or sector classification above with its closely associated business activities. Specifically, every project is classified as belonging to a particular cluster, sector, sub-sector and business activity. There are a total of 39 sectors, 270 sub-sectors, 17 clusters, and 18 business activities. A business activity refers to the actual function of a project’s operations.

In Figure 21.4, the pre-trade war years’ top ten business activities were, ordered according to the value of annual capital investments made by Chinese firms: manufacturing; construction; electricity; extraction; logistics, distribution and transportation; research and development; information, communication, and technology (ICT) and internet infrastructure;

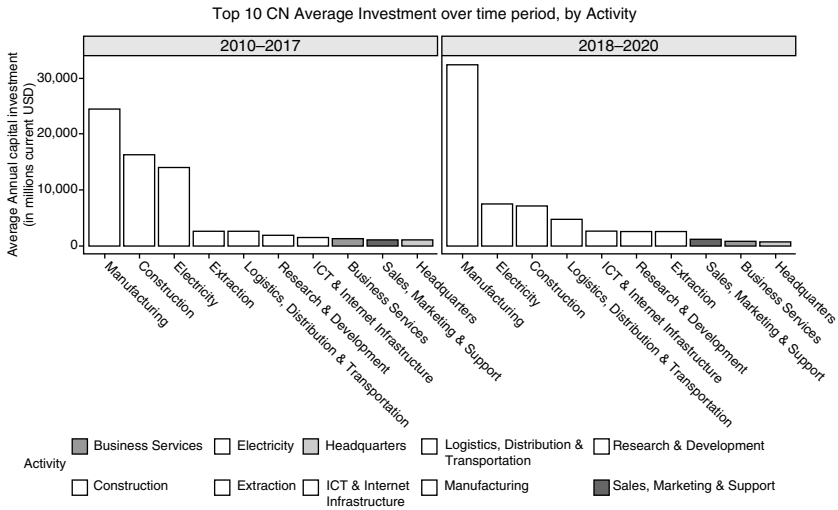


Figure 21.4 Chinese greenfield FDI activities, 2010–2020

business services; sales, marketing and support, and headquarters. In the years 2018 and later, manufacturing remains the top function and sees a significant boost in investment; electricity and construction remain within the top three functions but see a significant decline and a shift in ranking that makes them more or less equal in terms of the dollar value of capital investments. Extraction falls to seventh in capital investments as the trade war gets under way, while logistics, distribution, and transportation; ICT and internet infrastructure; and research and development, in this order, become more prominent as the functions undertaken in investment projects. The last three in the top ten functions of investment projects in the trade war years are sales, marketing, and support; business services; and headquarters. Interestingly enough, these last three functions are those that are not directly associated with production but rather come at the end of the production process as goods are moved to the market or an organizational function (headquarters) for the firm in locating their investments.

Overall, there is no change in the most common functions of Chinese greenfield FDI projects. The top ten business activities remain the same before and after the onset of the trade war. What has shifted is a sharp rise in manufacturing activities as the main function of Chinese FDI projects, substantial declines in construction and electricity as business activities in investment projects, and an increase in business activities associated with logistics, distribution, and transportation, ICT and internet infrastructure, and research and development. The shifts in these business

activities may be a consequence of the COVID-19 pandemic, as the pandemic intensified electronic commerce and brought physical challenges in the delivery of international trade.

(ii) *Regional Patterns*

Figure 21.5 reports Chinese greenfield FDI across the eight regions of the world. Between the years 2010–2017, before the onset of the trade war, the regional distribution of Chinese greenfield FDI was as follows, in order of average annual capital investment: East Asia and the Pacific; Europe, South Asia, North America; Middle East and North Africa, Latin America and Caribbean, sub-Saharan Africa, and Central Asia.

Between the years 2018–2020 and the onset of the trade war, both East Asia and the Pacific and Europe saw large increases in Chinese FDI and also remained top destinations. Sub-Saharan Africa displaced South Asia as the third among regions receiving Chinese FDI, and Latin America and the Caribbean displaced North America as fourth among the regions in hosting Chinese investment. Chinese investments in South Asia fell steeply, from third to sixth among the regions. Chinese greenfield FDI in North America fell significantly and ranked fifth among the regions in the trade war years between 2018 and 2020. Similarly, Chinese investments in the Middle East and North Africa fell sharply in the amount of capital investment and from fifth to seventh among the eight regions. Finally, Central Asia remained last in rank among regions in receiving Chinese FDI; however, Figure 21.5 does indicate a rise in the average annual capital investment by Chinese firms in this region for trade war years, 2018–2020.

The regional patterns provide preliminary empirical support for the argument that Chinese firms have diverted their investment activities away from the United States, the adversary in the US-China trade war. Average annual capital investment in greenfield FDI from Chinese firms has declined in North America, which moved from the fourth to fifth most popular destination between the two periods, 2010–2017 and 2018–2020. There is also a notable drop in the quantum of investment as indicated in Figure 21.5. At the same time, Figure 21.5 shows large increases in Chinese FDI in East Asia and the Pacific, Europe, sub-Saharan Africa, and Central Asia. The patterns indicate that investments have intensified in regions that were already important destinations for Chinese FDI. East Asia and the Pacific and Europe have remained the top two regions for Chinese greenfield FDI. What is equally interesting to note is that sub-Saharan

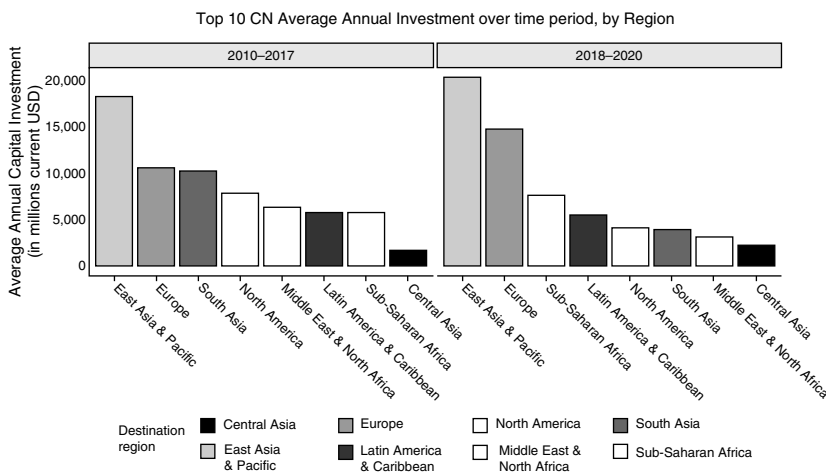


Figure 21.5 Chinese greenfield FDI by region, 2010–2020

Africa and Central Asia have also become more prominent as regional destinations for investment. Sub-Saharan Africa moved from sixth to third among the regions. Central Asia, though it is still ranked last among the regions, shows a significant increase in Chinese greenfield FDI in the trade war years.

(iv) Regional Patterns over Time

The distribution of Chinese FDI across the regions can be more closely examined on an annual basis across the years of the analysis sample. They provide more detailed information on how Chinese greenfield FDI activities have evolved between the pre-trade war years and since 2018. Figure 21.6 illustrates these over-time trends across the eight regions as discussed in the previous section. The figures capture FDI in each region as a percentage of total Chinese greenfield FDI, as contrasted with the trends in the value of the annual average capital investment that is presented in Figure 21.5.

Beginning with Central Asia, the region in terms of the percentage of total Chinese greenfield FDI sees a slight decline as the trade war begins. The high values of Chinese greenfield FDI that were observed in Figure 21.5 for East Asia and the Pacific are most notable for the period 2019–2020. For the first year of the trade war, 2018, there is a sharp drop

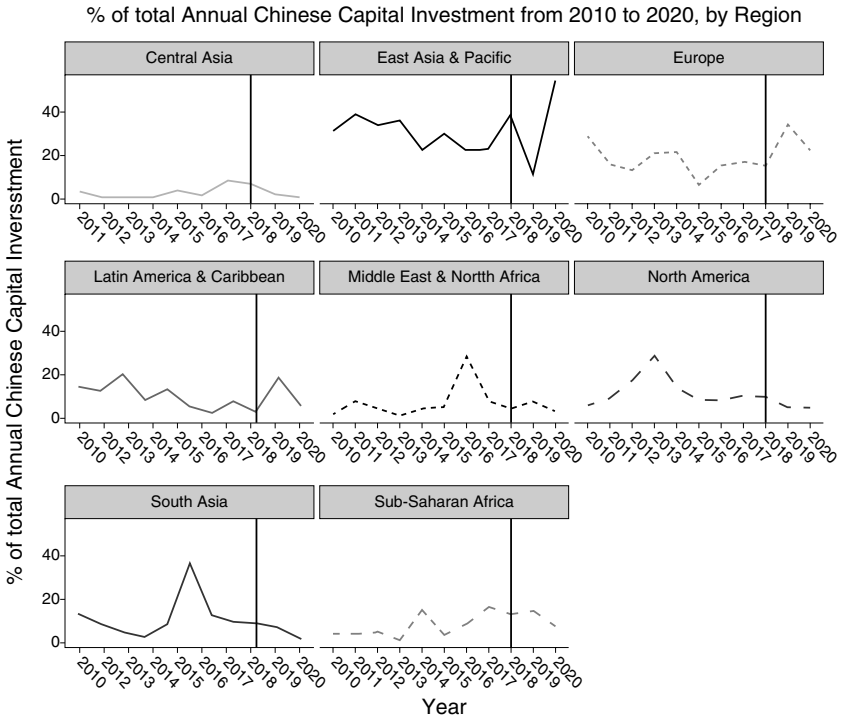


Figure 21.6 Longitudinal trends in Chinese FDI by region

in Chinese greenfield FDI in East Asia and the Pacific. The opposite pattern can be observed in Europe. Chinese greenfield FDI surged in 2018 but declined in the following year. There is nevertheless an overall upward trend in Chinese greenfield FDI in Europe. This trend is similar to Latin America and the Caribbean, where Chinese investment increased in the first year (2018) of the trade war but declined in the second year (2019). The Middle East and North Africa show no discernible change in the percentage of total Chinese FDI that they received. Following a significant decrease in 2017, Chinese investment levels out for the subsequent years as the trade war officially begins.

Chinese greenfield FDI patterns for North America are perhaps the most interesting. Figure 21.6 shows that Chinese greenfield investment peaked in 2013 but declined significantly in subsequent years. The onset of the trade war shows a further decline in Chinese investment, and it remains at the same level in 2019. In South Asia, the peak in Chinese

greenfield FDI occurs in 2015; thereafter, the region receives far less Chinese investments and continues its decline through the trade war years. Finally, sub-Saharan Africa, though it does not receive a large percentage of Chinese greenfield investments, does show a consistent upward trend beginning in 2015. The trade war has maintained higher levels, but with a slight decline in 2019.

Overall, the longitudinal patterns in Chinese greenfield FDI reported in Figure 21.6 corroborate much of the distribution of Chinese FDI across the regions as reported in Figure 21.5. They provide more granular information on changes in Chinese greenfield FDI on an annual basis. They also apply a different measure of importance in the location of Chinese greenfield FDI, using the percentage of total Chinese greenfield FDI each year.

(v) *Investment Locations*

Figure 21.7 provides a visualization of Chinese FDI around the world, allowing for a comparison between the pre-trade war years and trade war years 2018–2020. The circles, in size and shade, represent the size of average annual capital investments made by Chinese firms. The maps put together information on both total Chinese greenfield FDI and their concentration in particular countries. As noted in Figure 21.1, overall Chinese greenfield FDI has declined with the onset of the trade war. The highest average in Chinese foreign capital investment before the trade war is recorded for the United States in the years 2010–2017, represented by the darkest large circle. In the years 2018–2020, there is no comparable level of Chinese greenfield FDI anywhere in the world.

In terms of regional concentration, average annual capital investments appears steady for Latin America. There is a greater distribution of greenfield FDI in Africa; that is, the map for 2018–2020 shows many more circles that indicate that Chinese firms have disbursed their investments in more countries with overall lower capital investments. Chinese greenfield FDI has also declined for Asia, though the value of average annual capital investments remains large relative to other regions. In Europe, the trade war resulted in some concentration of Chinese greenfield FDI as there are several larger circles representing larger values in capital investment. Consistent with information in previous figures, average annual capital investment in Chinese greenfield FDI has increased significantly in Russia in the trade war years 2018–2020, relative to the previous period, 2010–2017.

Average Annual Chinese Foreign Capital Investment
(in millions current USD)

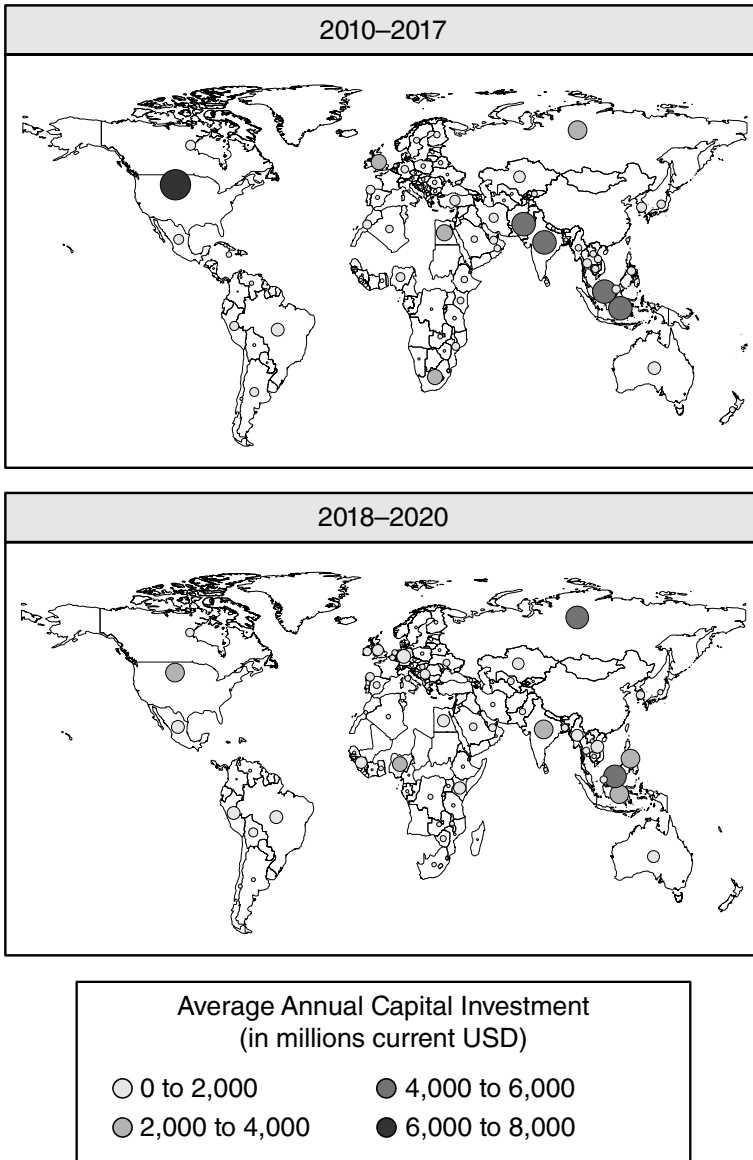


Figure 21.7 Map of Chinese greenfield FDI, 2010–2020

IV Conclusion

This chapter has examined China, a WTO member of twenty years that has grown to be the world's second-largest economy. The focus has been on Chinese investment, a key economic activity that is very closely related to trade, and how it has shifted since the onset of the trade war with the United States, the world's largest economy. This trade conflict extends well beyond the economic realm, of course, as it is emblematic of the political rivalry between the United States and China.

The analysis has examined several dimensions of China's investment activities, utilizing project-level data available on greenfield investments that reflect how Chinese firms have responded to the trade conflict. One notable behavior that is identifiable from the data is that investment patterns indicate some degree of anticipation from the private sector. That is, overall investment patterns drop sharply before the actual start of the trade war. The decline coincides more closely with the start of the Trump Presidency in the United States and the initiation of the Section 301 investigation. The overall pattern suggests that Chinese firms, and possibly firms more generally, respond first to the overall political climate and do so well ahead of concrete policy changes. Other notable changes in Chinese firms' investment patterns include regional distribution. Asia's attractiveness as an investment destination grows with the escalation of trade tensions, but also notable is the increased diversion to Europe for locating Chinese investment. There is a marked decline in greenfield investment in the United States, and Russia emerges as an important recipient of Chinese greenfield investment. Manufacturing, electricity, and construction continue as mainstays of Chinese investment choices, and similarly, real estate; coal, oil, and gas; and metals are top investment sectors for Chinese firms.

As the trade war continues to unfold, there has been a change in the executive office in the United States, with President Biden taking up office in 2021. The Biden administration appears largely to have continued with its predecessor's trade policy stance toward China. China also had its eighth trade policy review, as per the conditions of its accession to the WTO in 2001. While this chapter has identified some patterns in the investment activities of Chinese firms before and after the onset of the US-China trade war, there is much that remains uncertain about the role of both actors as the world's largest economies and members of the World Trade Organization.

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