Helping Hands for Huawei: Dialing into China’s Technology Policy to Understand Its Contemporary Support for Huawei

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1 Introduction

It seems hardly a day goes by that Huawei is not in the news.¹ This is hardly surprising. Huawei is a leading global telecommunications firm, patent powerhouse, and, per most, is at the technological frontier in terms of 5G, a wireless telecommunications standard promising revolutionary changes in speed, capacity, and efficiency (Zhang 2013; Ernst 2017; Fund 2019). Huawei is also a symbol of the spread of non-resource-related outward foreign direct investment (FDI) from the People’s Republic of China (PRC/China) and China’s penetration of the developing world. In addition, as will be documented, over the past 5 years or so the United States has prominently targeted Huawei. What is different from the past is the PRC’s intensified backing for Huawei, in terms of not only strong words but threatening sanctions against firms from countries like the United States, as well as states such as Germany and the United

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W. Zhang et al. (eds.), Huawei Goes Global, Palgrave Studies of Internationalization in Emerging Markets, https://doi.org/10.1007/978-3-030-47564-2_4
Kingdom that appear willing to shun Huawei (Bennhold and Ewing 2020; Chen 2020). This, too, should not surprise, even though Huawei is a private enterprise, albeit one many believe has multiple, close links with the Chinese government (US House 2012; Balding and Clarke 2019).

Huawei is an extensively studied company. Business scholars have chronicled its features. Former employees, political and economic commentators, and specialists in the PRC’s political economy have detailed the factors—for example, business culture, employee compensation, research and development (R&D) spending, and marketing strategy—responsible for its successes (Low 2007; Harwit 2007; Lairson 2010; Zhang 2013; Pawlicki 2017). Yet others have discussed Huawei within the context of government policies toward the information and communication technology (ICT) sector and Huawei’s situation abroad.² Few, though, have examined Huawei within the broader politico-economic milieu. Put differently, they have not considered how variables such as security, political, economic, status, and domestic political considerations operate in tandem to produce the Chinese government policies toward Huawei that we have seen and witness today. This chapter makes use of a qualitative approach, reviewing Chinese government actions and statements, Chinese official media, foreign government documents in the public domain, think tank reports, and leading secondary source literature to identify and expound upon these causal factors.

Huawei is “in the news” ubiquitously and thus warrants attention. Even if it were not, analyzing it within the context of China’s high-technology policies has enduring policy/business value. One reason is that it provides a solid basis for understanding China’s contemporary patronage and protection of Chinese high-tech companies. A second is that it helps us forecast Beijing’s future stance toward Huawei and other Chinese high-tech companies as well as non-PRC multinational corporations (MNCs). A third is that it identifies causal variables that would need to change for China’s policies toward Huawei to change. From an analytical standpoint, probing the Huawei case within a broader context reveals the multitude of factors that shape China’s high-tech policy and its support of its MNCs. It further shows the power of security and political considerations in shaping Chinese domestic and foreign economic policy.
This chapter highlights three powerful factors propelling Beijing’s intense support of technology firms like Huawei. First, the technology sector is critical for China’s international security. Second, advanced technology companies like Huawei are reflections of China’s effort to move up the value-added chain and one component of its effort to address economic challenges such as rising labor costs. Third, the ICT sector has domestic import given the Chinese Communist Party (CCP)/government’s anxieties about domestic information control. Other reasons, not analyzed herein, are that ICT FDI, sales, and services are one of the political tools China is exploiting to deepen its ties with and soft power in other countries (Ellis 2011; Li and Ronning 2013; Cody 2017). In addition, attacks against companies like Huawei are status issues for China as Huawei is a leading Chinese global MNC and top Chinese technology company, and China seems embarrassed by its current place in global value-added chains (China Daily 2014).

This chapter consists of five parts. The next (second) section provides an overview of the PRC’s technology policy including one of its major recent initiatives (“Made in China 2025”) while identifying various drivers of Chinese policy. The third delves into some of Beijing’s measures with respect to the telecommunications sector and some of the specific variables fueling such measures. The part on the telecommunications sector also proffers some material illustrating the ways the Chinese government has supported Huawei. The fourth discusses the contemporary “assault” against Huawei, concentrating on the United States, and reaction of Huawei and the PRC, with a focus on the latter. The fifth section constitutes the conclusion.

## 2 China’s Technology Policy

The PRC’s technology policy from 1949 through the 1970s embodied two central elements, a military (dominant) one focusing on the development of nuclear weapons and missiles/rockets and an economic one involving simple industrial technologies. Relevant drivers include the need to meet the American and Soviet challenge, the desire to boost China’s hard power, the quest for geopolitical influence, the Sino-Soviet
split (which led to an end to Soviet assistance to China), and status considerations (Suttmeier and Yao 2004; Feigenbaum 2017; Gewirtz 2019). After Deng Xiaoping took power in the 1970s, he launched the Four Modernizations, of which Science & Technology (S&T) was one key component. At this time, Chinese elites viewed S&T as a pathway to economic development and strengthening national power and greater status for the country and CCP. Due to resource constraints and China’s relatively backward state with respect to economic and S&T, Beijing’s main foci were setting priorities, supporting practical and realistic innovation ventures, and acquiring technology and know-how from abroad through strategic purchases, enhancing education and research, and boosting exchanges (Fingar et al. 1984; Simon 1989; Gu 1999).

In the 1980s, Beijing put new stress on S&T, seeking progress in spheres such as agriculture, automation, biotech, energy, information technology (IT), robotics, software, among others, to spur economic development and reduce China’s resource needs. China’s measures for improving S&T included increased R&D spending, greater support for as well as the reform of research institutes and university research, and new incentives for more useful R&D. Beijing also welcomed FDI, acquired technology, maintained a porous intellectual property (IP) rights regime (which facilitated the exploitation of foreign technology), and encouraged international exchanges. Finally, it created space for the emergence of private Chinese technology companies, among which were Lenovo (then called Legend) and Huawei (Gu 1999; Larçon and Barré 2009; Feigenbaum 2017). The 1980s witnessed the launch of several major S&T initiatives, among which the most well-known are the 863 Project and the Torch Program. These programs entailed heightened levels and new forms of R&D funding, further changes to the S&T system, efforts to focus research programs, the privatization of S&T, the purchase of foreign technologies, and the creation of high-tech development zones (HTDZs) (Gu 1999; US DOS 2006; Larçon and Barré 2009). In the 1990s, military, not economic, factors gave new impetus to China’s quest for technological development. Among other things, the rapid defeat of Saddam Hussein after his invasion of Kuwait in 1990 highlighted the value of technology because the United States and its allies extensively used it to crush Iraq (Lindsay 2014/15). The marquee government
program for the 1990s clearly was the 973 Program. This and other initiatives reflect Beijing’s continuing efforts to privatize S&T, support basic and applied research, and augment funding for S&T. Aside from military and economic objectives, China sought to leverage S&T for social ends such as healthcare (US DOS 2006).

The 2000s represented a watershed for the PRC’s technology policy, with China intensifying its focus on domestic S&T. One driver was China’s accession to the World Trade Organization (WTO), which escalated competitive pressures on Chinese firms by opening the floodgates to foreign goods and MNCs. It also increased China’s obligations to honor foreign IP rights (IPR) and technical standards. Commensurately, China found itself paying huge amounts in licensing fees, which sliced the already razor-thin profit margins of many Chinese products. These developments provided strong incentives for China to develop Chinese tech and standards. Another cause was the sense among Chinese elites that foreign MNCs would not transfer their best technology to China for access to the China market and indeed that Western MNCs would exploit IPR and standards to dominate markets and Chinese companies (Suttmeier and Yao 2004; Kennedy 2006; Brandt and Thun 2010; Zhao 2010; Williams et al. 2011). Consequential security and political drivers this period including the Color Revolutions in Eastern Europe, South/Southeast Asia, and elsewhere and Edward Snowden’s revelations of extensive American spying activities in conjunction with Chinese leaders dismay at their country’s continuing dependence on foreign technology which they “consider unseemly for a great nation” and unacceptable from a national security standpoint. These represented potent stimuli for China to strengthen its S&T as well as control over ICT and communication networks (Rowen 2008; Chen 2010; Lindsay 2014/15). On a related note, American military modernization, pressure on others not to sell arms to China, democracy promotion, torpedoing of China National Offshore Oil Corporation’s attempt to buy Unocal, and efforts to exclude Huawei from projects fueled a sense that United States was trying to limit China’s rise and that Chinese tech was needed to counter this (Craig 2007; Ernst 2011; Nathan and Scobell 2012).

The general features of China’s technology policy in the 2000s mirrored what had been done in the past. Top CCP and government leaders
at the central and subnational level continuously stressed the importance of improving China’s S&T and developing Chinese technology. Beijing significantly and continuously boosted R&D funding, built large numbers of large HTDZs, and leveraged government procurement funds to support domestic tech. Furthermore, it forced foreign MNCs to transfer technology, launched aggressive industrial espionage initiatives, and pursued numerous initiatives (e.g., participation in international standard setting bodies) to promote Chinese technical standards within and without China. Aside from these measures, Beijing provided rising support for education, particularly science and engineering programs, coordinated private and public S&T actors, and aggressively pursued international cooperation (Suttmeier and Yao 2004; Larçon and Barré 2009; Ernst 2011; Segal 2008; Williams et al. 2011). It should not be overlooked that Beijing enthusiastically supported outward FDI by Chinese technology companies as a pathway to, among other things, acquire IP and know-how, access markets, and gain scale. Support came in the form of easier access to foreign exchange, simplified approval processes, preferential loans, tax breaks, and information services (Blanchard 2019).

The marquee government program for the 2000s was the Medium-and Long-Term Program on Scientific and Technological Development (2006–2020) (hereafter “MLP”). It called for China to become an innovation-oriented society by 2020 and a world leader in S&T by 2050 and emphasized “indigenous innovation” (自主创新). Indigenous innovation meant China should inter alia: increase growth from domestic technology; reduce its dependence on imported technology; garner more patents; set more standards; and have more cited scientific papers in quality journals. The MLP targeted general areas such as agriculture, energy, public security, transportation, and high-tech. Within the realm of high-tech, the government sought progress in aerospace, large integrated circuits (IC), wireless mobile telecommunications, pharmaceuticals, and software. Specific MLP elements included more R&D spending, tax breaks, new standards setting efforts, better IPR (albeit strategically), and more HTDZs. The MLP stressed using government procurement as a way to support domestic technology. The government also squeezed foreign MNCs to transfer technology, establish R&D centers in China, and license IP cheaply. Additionally, the MLP involved S&T system
improvements. The roots of the MLP included an interest in promoting growth and higher incomes, the quest for more sustainable development, a desire to break the monopoly of Western tech MNCs, a stronger sense that foreign companies would not transfer tech, and the perceived demands of twenty-first-century warfare (Cao et al. 2006; Ernst 2011; Wolff 2011).

The early part of the 2010s witnessed the emergence of a new CCP Secretary and President Xi Jinping and other top Chinese party and government leaders. Irrespective, Chinese elites’ strong interest in moving up the ranks of S&T powers, developing more Chinese technology, and reducing their country’s dependence on foreign technology remained powerful. Xi has given numerous speeches stressing the need for China to innovate and control core technologies as well as achieve technological independence. These are pathways to China’s national rejuvenation (read: greater power, glory, and wealth), information security (which has external and internal aspects), countering US pressures (against it as well as Chinese companies), and economic development. To realize these aspirations, the government, at all levels, has been spending more money on R&D, especially in frontier technologies such as artificial intelligence (AI), biotechnology, integrated circuits (ICs), new energy vehicles, and robotics; making strategic equity investments; supporting the growth of Chinese patent portfolios; running numerous S&T megaprojects such as in quantum computing; and undertaking yet more improvements to China’s S&T education system. Beijing further has taken various steps to leverage its rule-making powers, public procurement budget, and technical and diplomatic assets to advance Chinese technology. These include limiting the place of foreign hardware and software in government office; mandating domestic technology in banking, finance, and healthcare when certain information security thresholds are reached; and continuing with industrial espionage activities. Aside from the above, Beijing is pressing other countries to keep their borders open to Chinese FDI and goods and vociferously defending globalization in international venues (Economist Intelligence Unit 2019; Ernst 2017; Segal 2019; Huang 2019; Gewirtz 2019).

The most noteworthy initiative of the 2010s, indisputably, is Beijing’s Made in China 2025 initiative which appeared in 2015. In addition to
the factors previously enumerated above (e.g., a desire to undercut the position of other economic and political powers and ensure information security), the policy draws inspiration from the newest industrial revolution involving AI, big data, cloud computing, robotics, smart sensors in both production and products, and fears of the so-called Middle Income trap (emanating from competitive pressures from both developed and developing countries). This initiative follows in the footsteps of previous programs, but involves a new intensity of leadership rhetoric, massive numbers of demonstration projects, yet more measures to coordinate and focus R&D through the integration of projects, and the setting of ambitious targets regarding R&D spending, the acquisition of innovation patents, use of digital design tools, and domestic versus foreign core technology. Drawing the most attention to date is the government’s allocation of tens of billions of dollars for soft loans and investment funds, creation of informal local content requirements, and strategic use of public procurement to favor the goods and services of domestic firms (Wübbeke et al. 2016).

3 China’s Telecommunication Sector Policies

For Beijing, the telecommunications sector is one having the utmost importance for political and economic reasons. With respect to the former, Chinese leaders have viewed it as critical for national security and survival as well as part of their toolbox for maintaining domestic stability through control of information flows. Illustrative of this, when Huawei founder Ren Zhengfei told former Chinese President/CCP leader Jiang Zemin, “switching equipment was related to national security … a nation that did not have its own switching equipment was like one that lacked its own military,” Jiang replied “‘Well said’”! (Harwit 2007: 326–327). As for economic considerations, China’s domestic telecommunications sector is huge with China having the most wireless and Internet users in the world and, correspondingly, a huge market for telecommunications equipment and services. In addition, a thriving sector
presents opportunities for import substitution (particularly important when China was more capital constrained) and limiting the dominance of foreign firms and licensing fees, boosting exports, and job creation. Beyond this, a healthy ICT sector meant more R&D activities and China’s advancement up the value-added chain, which, in turn, would allow it to capture greater profits.

In line with the above, Beijing has tightly managed the realm of ICT, creating regulatory institutions and domestic telecommunications firms, funding and coordinating R&D, and subsidizing domestic companies. Furthermore, it has controlled and manipulated the entry and involvement of foreign players in telecommunications sub-sectors, such as network equipment and value-added services, and allowed competition as it deems appropriate given China’s needs, domestic capacity, and WTO obligations. Beijing’s aims have included inter alia building up the country’s ICT infrastructure, protecting and nurturing domestic players, attracting capital, garnering technology and know-how, and developing and promoting Chinese standards. Beijing’s specific sectoral measures have included pressuring Chinese telecom firms to use domestic equipment, pushing foreign companies to participate in JVs with designated Chinese partners, and using its anti-monopoly law to force foreign telecommunication sector players to license technology on more liberal terms. Many observers specifically have highlighted how the Chinese government pressured domestic operators to use China’s 3G standard (TD-SCMDA) and delaying the licensing of foreign wireless standards to give TD-SCMDA more space to thrive (Tan 2002; Low 2007; Harwit 2007; Larçon and Barré 2009; Williams et al. 2011; Hsueh 2016).

Interestingly, the telecommunications sector does not appear to garner explicit mention in Made in China 2025. However, the “nine tasks” and “ten key sectors” associated with the plan clearly tie to it, even if indirectly (PRC State Council 2015). As for the “nine tasks,” “improving manufacturing innovation,” “integrating technology and industry,” “strengthening the industrial base,” “fostering Chinese brands,” and “internationalizing manufacturing” all link in some way to the hardware, software, and components of China’s leading advanced telecommunications firms. As for the “ten key sectors,” “new information technology” and “high-end numerically controlled machine tools and robots” likewise do. It also
seems apparent that the smart manufacturing ambitions (e.g., Cloud and big data, smart sensors, and information security) that are integral part of Made in China 2025 relate in some measure to telecommunications (Wübbeke et al. 2016). Beyond this, Made in China 2025 specifically lists domestic content goals for mobile devices (Morrison 2019).

Huawei itself has benefited from government support in numerous ways. First, some of Huawei’s earliest sales were to government customers (Harwit 2007). Second, as numerous analysts have reported, Beijing has provided the company with billions of dollars in loans and export credits through institutions such as the Export-Import Bank of China, China Development Bank, and Sinosure (Harney 2005; Cissé 2012; Zhang 2013). Third, the government has opened doors for Huawei abroad by providing market intelligence; facilitating meeting with relevant government and political elites in countries like Brazil, Ethiopia, and Russia; and supporting the visit of foreign officials to China to Huawei offices (Zhang 2013). Fourth, the government facilitated JVs and marketing and distribution alliances (Low 2007). Fifth, Huawei previously profited from government-orchestrated industry alliances that shared IP and government research institutes designed to exploit telecommunication JVs for technology and knowledge (Lairson 2010). Relatedly, Huawei potentially obtained IP as a result of the PRC’s hacking of other telecommunications companies such as Canada’s Nortel (Scissors and Bucci 2012).

Two years ago, in an interview with *Nikkei Asian Review*, Ken Hu Houkun, one of Huawei’s rotating chairman, stated, in regards to Made in China 2025, “‘we used to have some discussions [about it] over the past few years, but what we are doing now does not have much to do with the 2025 agenda,’” adding “Huawei ‘did not do much research on the Made in China 2025 policy.’” This seems implausible, though, since Made in China 2025 aims for advances in 5G, AI, and semiconductors and Huawei “is deeply invested in the research and development of 5G, AI, and semiconductor technologies,” and Made in China 2025 also seeks Chinese leadership in telecommunications (Li 2018).
4 Hammering Huawei and China’s Responses

An abundant number of publications argue Huawei’s troubles with the United States began in 2003 because of its IP dispute with Cisco, a huge American firm specializing in networking hardware and software. Specifically, Cisco sued Huawei for infringing on five of its patents and copying its operating source code, among other violations. Two years later, RAND Corp., a think tank with close US defense community connections, issued a report stating that Huawei had close links to China’s military, which included obtaining staff and funding from and conducting joint research with it. Several years later, the US Federal Bureau of Investigations interviewed Huawei founder Ren in conjunction with an investigation of Huawei’s suspected violations of the sanctions regime against Iran, which the US later concluded Huawei broke. In 2008, the US government blocked Huawei from acquiring a minority stake in 3Com, which had a long-standing JV with Huawei, reportedly because 3Com sold anti-hacking software to the US military. That same year, evidence emerged Huawei may have helped North Korea build its wireless mobile system in violation of US sanctions directed at Pyongyang (Lahiri and Hui 2019; Pearlstine et al. 2019).

During Barack Obama’s tenure in office, the United States upped its effort to contain Huawei, with the Committee on Foreign Investment in the United States (CFIUS) preventing Huawei, in spring 2010, from buying 3Leaf, a bankrupt server technology company, and even hiring former 3Leaf staff! In early winter, then US Secretary of Commerce Gary Locke requested Sprint Nextel not to give Huawei a chance to bid on a multi-billion-dollar network upgrade contract (Ibid). Two years later, a bipartisan Congressional report recommended banning the use of Huawei products in US government systems and recommended US government contractors not to use Huawei equipment. It further advised that CFIUS block M&A, takeovers, or mergers involving Huawei and recommended that private-sector firms reconsider using goods and services from Huawei (US House 2012). In 2013, the United States banned a select number of government agencies from buying Huawei products...
absent verification by designated government bodies that the products presented no security risk (Selyukh and Palmer 2013). During Obama’s tenure in office, we also saw Australia taking action against Huawei by banning the firm from participating in its nationwide broadband initiative (Pearlstine et al. 2019).

In January 2018, Washington’s concerns allegedly led AT&T and Verizon to drop plans to offer Huawei phones in the United States. The following month, President Donald Trump’s Director of National Intelligence issued the startling recommendation that Americans should not buy Huawei products. In May, the US Department of Defense banned the sale of Huawei products on military bases. Starting in early January 2019, the United States launched a pressure campaign to prevent EU countries like Germany and the United Kingdom from involving Huawei in their 5G networks. In May, the Trump Administration barred US companies from supplying components and software to Huawei and its affiliates without government permission and authorized US government officials to block US companies from doing business with foreign firms (read: Huawei) believed to represent a security threat. Three months later, it was decided that government agencies would have no dealings with Huawei. In November, the US Federal Communications Commission (FCC) denied funds designated for improving communication infrastructure to carriers that use Huawei. One month later, the US House of Representatives passed a bill barring the government from using Huawei’s gear (Lahiri and Hui 2019; Lohr 2019; Stewart 2019; Pearlstine et al. 2019; Keane 2020). Beyond the United States, in February 2018, Australia’s Defense Department stated it would phase out Huawei smartphones, and 5 months later Australia decided not to allow Huawei a role in its 5G networks. Six months after this, New Zealand banned Huawei from participating in its 5G rollout. Around the same time, Japan announced it would not buy equipment from Huawei (Pearlstine et al. 2019; Keane 2020).

By way of background, Huawei response to US government measures has taken multiple forms. For instance, it has filed lawsuits to overturn the US ban against its products and services and the FCC’s refusal to provide funding to carriers using Huawei equipment. It also has routinely criticized the US government for its failure to provide any concrete
evidence of Huawei’s nefarious activities (actual or planned) and, relatively, has repeatedly denied, in media interviews, public statements, and appearances at international fora, any special links with the Chinese government. Beyond this, it has warned of possible job losses and laid off workers at its US offices (Nakashima and Fund 2019; Lahiri and Hui 2019; Stewart 2019; Keane 2020). Our focus, though, is on Beijing’s response to the assault against Huawei and it is to this topic that we now turn.

The first prong of Beijing’s championing of Huawei entails critical statements of US policy and actions by government spokespeople and in official Chinese media such as Global Times. An illustration of the former was a PRC Ministry of Foreign Affairs (MOFA) statement in March 2013, with a spokesperson charging the US action (i.e., the ban on Huawei) “uses Internet security as an excuse to take discriminatory steps against Chinese companies. It is not beneficial to mutual trust between China and the United States nor to the development of trade and economic relations” (Selyukh and Palmer 2013). An example of the latter was a January 2020 editorial in Global Times following the United Kingdom’s decision to allow Huawei a role in its 5G networks. Among other things, the piece touted how the United Kingdom’s decisions constituted a US setback, stressed that US claims about Huawei representing an information security threat were “blatant lies,” and noted the United States should reflect on the error of its ways and cooperate with Huawei to improve its 5G network (Global Times 2020). The second prong consists of threats. For instance, in May 2019, a MOFA spokesperson say China “opposed countries imposing unilateral sanctions on Chinese companies and would take action” (BBC News 2019). The same month, Beijing announced it was preparing an “unreliable entities list” of foreign companies that did not fulfill contracts, stopped supplying Chinese companies for noncommercial reasons, and damaged the “rights and interests of Chinese companies” (Stevenson and Mozur 2019). Similarly, reports indicate Beijing summoned the heads of American technology companies and warned them they would face serious ramifications if they cooperated with Washington against Huawei (Konish 2019). The third prong consists of actual sanctions. For instance, Cisco has found it hard to develop a meaningful business in China, and in 2011 Motorola found its
planned sale of IP to NSN delayed by China after the United States blocked Huawei’s acquisition of 3Leaf (Wagstaff et al. 2013).

5 Conclusion

The motivation for this piece has been to shed light on China’s strong support of Huawei, which is reflected not only in the support it has given Huawei to become the powerhouse it is today but also in Beijing’s three-pronged response to the measures taken against Huawei. It has done this by discussing the features of China’s technology policy generally and with respect to the telecommunications sector specifically. This narrative, though, went beyond detailing the facts to identifying the myriad factors driving Chinese words and deeds. Subsequently, it extensively chronicled US measures against Huawei as well as the reactions of Beijing and, to a lesser extent, Huawei.

This chapter demonstrates that China’s technology policy entails a large number of elements ranging from the programmatic to the regulatory to the financial to the educational to the exploitation of foreign MNCs. More importantly, it demonstrates that the factors driving the PRC’s technology policy are wide-ranging and powerful. They include international political/military considerations such as security, power, and national independence. They encompass economic motivations such as promoting economic growth, gaining export revenues, and capturing a higher share of the value-added chain. They also entail domestic security drivers such as maintaining control over the cybersphere.

The implications of my analysis for businesspeople, policymakers, and students of Chinese political economy are significant. First, it shows the importance of considering security and political factors to understand what is shaping China’s technology policy, its sectoral policies, and its stance toward high-tech companies like Huawei. Second, it implies Beijing will continue to strongly support Huawei and other Chinese high-technology firms and will take action against states and foreign businesses that undermine such Chinese companies. In this respect, the news is not good for foreign companies and states that do not deliver what Beijing wants. Third, my analysis reveals that foreign governments,
international organizations, and/or foreign players would have to address a large number of Chinese concerns, a daunting task, if they want to change the PRC’s policies.

There are a number of issues that this chapter could not address for reasons of space and time and which represent fertile areas for further research. One is the role of ideological/ideational considerations such as status concerns, nationalism, and state-capitalism in shaping Beijing’s technology policy and its measures toward specific technology sectors. Another is the relative importance of the variables identified and the drivers of this. Yet another is whether Beijing would be willing to go as far as it does for Huawei with respect to other Chinese technology companies. After all, many Chinese firms are not in Huawei’s league. Finally, while Beijing has threatened sanctions against others that obstruct Huawei, it does not always follow through. It would be interesting to investigate why as well as to probe what are the circumstances under which Chinese decision-makers opt for more intense responses.

One expert on Chinese technology policy opined state-backed Chinese industrial policies, top-down projects, and strategic schemes are a “pretty consistent theme,” that “such approaches have persisted and cohered across seven decades amid very diverse conditions,” and that “we should expect these ‘strategic’ approaches to remain a persistent feature of the Chinese policy landscape” (Feigenbaum 2017). This chapter has enumerated many reasons supporting these assessments. China’s decision to keep operating a semiconductor factory in Wuhan at the height of the 2020 coronavirus scare brings into ever starker relief the importance China affords to high-technology and why it will continue to support Huawei.

Notes

1. Background on Huawei qua company is available in Larçon and Barré (2009: 146–148); Lairson (2010); and Pawlicki (2017).
2. For examples of the former, see Harwit (2007) and Higgins (2015). This edited volume represents an example of the latter.
3. Except as noted, this paragraph is based on Tang and Lee (2003); Harwit (2007: 316–318); Larçon and Barré (2009: 141, 143); Cissé (2012: 1); Hsueh (2016: 91–95).

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