

## Shifting IP Battlegrounds in the U.S.—China Trade War

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### ABSTRACT

Intellectual property (“IP”) represents one of the main controversies of U.S.—China trade relations in the past three decades and remains one of the core issues behind the two countries’ recent trade frictions. This Article provides an overview of the current IP debates between the two largest economies in the world. It illustrates the transformation of the Chinese government’s role from inactive IP law enforcer to active facilitator of access to and acquisition of foreign technologies. This study further explains how China’s approach to learning western technologies has transformed from low-end imitation to gaining a controlling stake in foreign companies via joint ventures or outbound investments. More importantly, this Article discusses the legal and policy implications of the IP issues in this trade war. I argue that the recent IP trade war represents the struggle for global technological leadership as well as a new institutional competition in the post-Cold War era. Moreover, China’s “economic aggression,” as the United States understands it, has caused a number of unsolved issues for the international IP regime, which include the justification of China’s controversial IP policies for the purpose of industrial catch-up as well as the evidentiary and legal bases for holding China liable for its economic aggression in relation to IP.

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## INTRODUCTION

*To win the commanding heights of the 21st century economy, Beijing has directed its bureaucrats and businesses to obtain American intellectual property—the foundation of our economic leadership—by any means necessary. Beijing now requires many American businesses to hand over their trade secrets as the cost of doing business in China. It also coordinates and sponsors the acquisition of American firms to gain ownership of their creations. Worst of all, Chinese security agencies have masterminded the wholesale theft of American technology—including cutting-edge military blueprints. And using that stolen technology, the Chinese Communist Party is turning plowshares into swords on a massive scale. . . . We'll continue to take action against Beijing until the theft of American intellectual property ends once and for all. And we will continue to stand strong until Beijing stops the predatory practice of forced technology transfer. We will protect the private property interests of American enterprise.*

—Mike Pence, Vice President of the United States<sup>1</sup>

*The US has many structural problems of its own, but it always regards other countries as a scapegoat for its own problems and makes unwarranted charges. The US accuses China of IP theft and . . . [forced] technology transfer, which is a gross distortion of history and reality. During China's reform and opening up, many foreign companies conducted sound technical cooperation based on their own interests with Chinese companies, which is typical market contract behavior and foreign companies received substantial returns, as is known to all. The US ignored all those basic facts and placed blame on China, which is a denial of property right, credit awareness, spirit of contract and market rules.*

—Gao Feng, Spokesman of Ministry of Commerce, People's Republic of China<sup>2</sup>

The trade tension between the world's two largest economies, the United States and China, has escalated to a significant degree over the past two years, drawing extensive international attention. The Trump administration has adopted a hardline China policy, with a rising tide of animosity in the United States toward China since at least early 2018.<sup>3</sup> Among other points of contention, intellectual property (“IP”) issues have primarily been driving the most recent trade dispute between the two countries.<sup>4</sup> The conflict has escalated since the spring of 2018, when President Trump indicated his intention to impose sanctions on China under Section 301 of the

1. Mike Pence, *Remarks by Vice President Pence on the Administration's Policy Toward China*, WHITEHOUSE.GOV (Oct. 4, 2018), <https://perma.cc/VJ6T-ALKU>.

2. *Regular Press Conference of Ministry of Commerce*, MINISTRY COM. CHINA (June 21, 2018), <https://perma.cc/R6CY-3APB>.

3. See, e.g., Sahashi Ryo, *Keeping the Lid on US-China Trade Tensions*, NIPPON (Feb. 7, 2019), <https://perma.cc/3GU2-B6P6>.

4. See, e.g., Rachel Brewster, *Analyzing the Trump Administration's International Trade Strategy*, 42 FORDHAM INT'L L. J. 1419, 1423 (2019); see also Jack Rasmus, *Trump's Déjà Vu China Trade War*, 9 WORLD REV. POL. ECON. 346, 354 (2018) (stating that technology transfer in China is the main issue in the trade war); Jason Z. Yin & Michael H. Hamilton, *The Conundrum of US-China Trade Relations Through Game Theory Modelling*, 20 J. APPLIED BUS. & ECON. 133, 135 (2018) (stating that China's IP practices are among the major flashpoints in the U.S.—China trade war).

Trade Act, in response to China's controversial IP practices.<sup>5</sup>

IP issues have played an important part in U.S.–China trade relations, and IP disputes between these two countries were described as a “war” long before the current trade war began two years ago.<sup>6</sup> Like many other latecomers to industrialization, China needs capital flows and technology transfers from the developed world, as these are essential for the country's economic growth.<sup>7</sup> Nonetheless, with its rapid economic and technological development, China's approach to obtaining IP from U.S. companies has generated extensive attention and criticism. The White House has asserted that China's economic growth “has been achieved in significant part through aggressive acts, policies, and practices that fall outside of global norms and rules (collectively, ‘economic aggression’).”<sup>8</sup> In particular, the United States alleges that China's recent IP and technology strategy demonstrates this “economic aggression.”

With the swelling trade fractions between these two countries, the very nature of the IP issues has transformed: from a focus on piracy and counterfeiting in China to concerns about the alleged systematic theft of high-end technologies from the United States. Foreign investors have criticized China for adopting coercive policies that force them to transfer technologies to local companies,<sup>9</sup> and western countries have been increasingly concerned with China's active approach to obtaining foreign technologies.<sup>10</sup> China's attitude toward these claims has shifted over the past year. Initially, the country denied all such allegations, but after several rounds of negotiations with the United States, China amended its Foreign Investment Law, Anti-Unfair Competition Law, and Trademark Law, as well as certain regulations governing the import and export of technologies and Chinese–foreign joint ventures, in response to the United States' claims of unfair IP practices.

This Article explores why the United States has adopted an unprecedentedly strong position on China's IP practices and whether China's legislative responses have appropriately addressed the longstanding IP disagreements between these two major world economies. More importantly, it addresses the legal and policy implications of IP issues in the current trade dispute. I wish to make it clear that I do not aim to provide an exhaustive account of the trade war between these two countries, nor do I intend to discuss the previous U.S.–China IP disputes from the past three decades. This Article focuses on the recent IP issues in the trade war that

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5. See, e.g., Ryo, *supra* note 3.

6. See, e.g., GORDON C.K. CHEUNG, *INTELLECTUAL PROPERTY RIGHTS IN CHINA* 32–33 (2009). See also Weighou Zhou, Comment, *Pirates Behind an Ajar Door, and an Ocean Away: U.S.–China WTO Disputes, Intellectual Property Protection, and Market Access*, 25 TEMP. INT'L & COMP. L.J. 139, 140–41 (2011) (“When it comes to [intellectual property rights], disputes or even threats of sanctions have become the norm during U.S.–China trade talks.”).

7. See, e.g., Assafa Endeshaw, *A Critical Assessment of the U.S.–China Conflict on Intellectual Property*, 6 ALB. L.J. SCI. & TECH. 295–96 (1996).

8. WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *HOW CHINA'S ECONOMIC AGGRESSION THREATENS THE TECHNOLOGIES AND INTELLECTUAL PROPERTY OF THE UNITED STATES AND THE WORLD* (2018), <https://perma.cc/H6G9-5M38>.

9. See *infra* Part I.A and Part I.B.

10. See *infra* Part I.C and Part I.D.

are relevant to the two powers' overall economic relations and longtime discussions on IP protection and practices.

This Article proceeds as follows. Part I illustrates the current U.S. claims against China in the trade war regarding unfair IP practices. The Office of the United States Trade Representative (“USTR”) identified four categories of China’s contentious IP practices in 2018, namely: unfair technology transfer, discriminatory licensing restrictions, state-backed outbound acquisition of equity and technologies, and IP theft by cyber intrusion. The USTR asserted that each category of China’s IP practices had been unreasonably detrimental to the U.S. economy.

Part II examines China’s recent legal reforms in response to the U.S. claims regarding unfair IP practices. In addition to lifting foreign ownership restrictions, China enacted the Foreign Investment Law to forbid forced technology transfer. It also amended its Trademark Law and Anti-Unfair Competition Law to strengthen IP protection. Nonetheless, these reforms still fail to address some of the concerns raised by the USTR, particularly cyber intrusions and state-backed outbound investments in high-tech companies and IP. Additionally, some foreign investors doubt whether China is really determined to eliminate unfair IP practices via the enforcement of these new laws.

Part III provides novel analysis of the IP issues in the recent trade war. This trade war is partly a result of the technological competition between the two countries. One may pessimistically believe that the IP trade war is inevitable because both countries need to pursue their strategic interests in terms of technology and innovation. I contend that the central issue of the IP disputes between these two countries has shifted, from China’s inactive enforcement of U.S. companies’ IP to its active involvement in acquiring IP and confidential information from U.S. companies. Furthermore, China’s approach to acquiring new technologies from the western world has shifted from low-end imitation to obtaining advanced technologies through corporate control. I also argue that the current trade war represents not only the dual economic and technological rivalry between these two countries but also, more importantly, the competition between two different institutions. The United States has seriously contemplated the best way to interact with China’s idiosyncratic political economy—an economy in which the state is intertwined with both a political party and the country’s major economic sectors. Finally, I contend that IP law may not be the only nor the best approach to solving these issues. Given the wide range of the issues identified by the USTR and the increasingly active role played by the Chinese government in international economic activities, public international law might be an appropriate venue for coping with disagreements associated with unfair IP practices.

## I. CURRENT U.S.—CHINA IP DEBATES

On August 14, 2017, U.S. President Donald Trump issued a memorandum to the USTR stating that:

China has implemented laws, policies, and practices and has taken actions related to intellectual property, innovation, and technology that may encourage or require the

transfer of American technology and intellectual property to enterprises in China or that may otherwise negatively affect American economic interests. These laws, policies, practices, and actions may inhibit United States exports, deprive United States citizens of fair remuneration for their innovations, divert American jobs to workers in China, contribute to our trade deficit with China, and otherwise undermine American manufacturing, services, and innovation.<sup>11</sup>

President Trump instructed the USTR to “determine, consistent with section 302(b) of the Trade Act of 1974 (19 U.S.C. 2412(b)), whether to investigate any of China’s laws, policies, practices, or actions that may be unreasonable or discriminatory and that may be harming American intellectual property rights, innovation, or technology development.”<sup>12</sup> This 2017 memorandum led to the USTR’s extensive investigation of China’s IP practices and consequently initiated the recent U.S. IP war against China. On March 22, 2018, the USTR published a Section 301 Report detailing U.S. concerns regarding China’s IP practices, in accordance with Section 301 of the Trade Act of 1974.<sup>13</sup> With the increasingly fierce trade disputes between the two countries, the USTR published another report on China’s controversial IP practices on November 20, 2018.<sup>14</sup> This section provides an overall picture of the major U.S. criticisms regarding China’s IP system.

#### A. UNFAIR TECHNOLOGY TRANSFER

Many developing countries have incentive schemes to attract foreign direct investments (“FDI”), with the goal that such investments would benefit the technological capabilities of the host country.<sup>15</sup> As a result, these developing countries, more often than not, use regulations or other policy tools to press foreign firms to share their technologies with domestic actors in exchange for market

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11. Addressing China’s Laws, Policies, Practices, and Actions Related to Intellectual Property, Innovation, and Technology, 82 Fed. Reg. 39,007 (Aug. 17, 2017).

12. *Id.*

13. OFFICE OF THE U.S. TRADE REPRESENTATIVE, FINDINGS OF THE INVESTIGATION INTO CHINA’S ACTS, POLICIES AND PRACTICES RELATED TO TECHNOLOGY TRANSFER, INTELLECTUAL PROPERTY, AND INNOVATION UNDER SECTION 301 OF THE TRADE ACT OF 1974 5–6 (Mar. 22, 2018), <https://perma.cc/6ELQ-42VZ> [hereinafter USTR, 2018 SECTION 301 REPORT].

14. OFFICE OF THE U.S. TRADE REPRESENTATIVE, UPDATE CONCERNING CHINA’S ACTS, POLICIES AND PRACTICES RELATED TO TECHNOLOGY TRANSFER, INTELLECTUAL PROPERTY, AND INNOVATION (Nov. 20, 2018), <https://perma.cc/A4JE-XHZ6> [hereinafter USTR, UPDATE CONCERNING CHINA’S ACTS, POLICIES AND PRACTICES].

15. See, e.g., Xiaolan Fu & Carlo Pietrobelli, *The Role of Foreign Technology and Indigenous Innovation in the Emerging Economies: Technological Change and Catching-Up*, 39 WORLD DEV. 1204, 1208 (2011); see also Daniel Gervais, *TRIPS and Development*, in INTELLECTUAL PROPERTY, TRADE AND DEVELOPMENT 3, 54 (Daniel Gervais ed., 2007) (“In certain countries [technology transfer and FDI] have become major stepping stones for domestic innovation.”); Bernard M. Hoekman, Keith E. Maskus & Kamal Saggi, *Transfer of Technology to Developing Countries: Unilateral and Multilateral Policy Options*, in GLOBALIZING INFORMATION: THE ECONOMICS OF INTERNATIONAL TECHNOLOGY TRADE 167, 170 (Keith E. Maskus ed., 2014) (“Investment by multinational enterprises . . . may provide developing countries with more efficient foreign technologies and result in technological spillover.”).

access.<sup>16</sup> China is no exception. However, China’s approach to technology transfers from foreign investors has been contentious.<sup>17</sup>

The USTR and the U.S. Chamber of Commerce claimed that China had used foreign ownership restrictions to facilitate *de facto* technology transfers from U.S. companies to their Chinese partners.<sup>18</sup> Such restrictions not only delay the entry of foreign products into the Chinese market but also facilitate the access of Chinese companies to foreign technologies and confidential information.<sup>19</sup> Although foreign businesses normally prefer to invest in China through the structure of a wholly-owned foreign enterprise (“WFOE”),<sup>20</sup> China’s *Catalogue of Industries for Guiding Foreign Investment* (“*Foreign Investment Catalogue 2017*”) (外商投资产业指导目录[2007年修订])<sup>21</sup> and other regulations, such as *Special Administrative Measures (Negative List) for the Access of Foreign Investment* (外商投资准入特别管理措施[负面清单]),<sup>22</sup> require foreign companies that seek to invest in certain industries to enter into cooperative agreements, such as joint venture (“JV”) agreements, with Chinese partners. For example, according to the *Foreign Investment Catalogue 2017*, in the exploration and development of both oil and natural gas and medical institutions, foreign enterprise investors are required to form contractual joint ventures (“CJV”) or equity joint ventures (“EJV”) with Chinese firms.<sup>23</sup> The Chinese party must be the controlling shareholder in joint ventures that involve: (1) the selection and cultivation of new varieties of crops and production of seeds; (2) the manufacturing of commercial aircrafts; (3) the construction and operation of nuclear power plants; and (4) basic telecommunications services.<sup>24</sup> Moreover, the Chinese party’s investment cannot be lower than fifty percent in the automobile manufacturing business, whereas foreign investment cannot exceed fifty percent in the business of value-added telecommunications services.<sup>25</sup> Once a U.S. or foreign company forms a joint venture with a Chinese company, it has no choice but to provide both IP and confidential information to the partnering Chinese company.<sup>26</sup>

Furthermore, according to the USTR’s 2018 Section 301 Report,

the Chinese government uses its administrative licensing and approvals processes to

16. See, e.g., Andrew B. Kennedy & Darren J. Lim, *The Innovation Imperative: Technology and US–China Rivalry in the Twenty-First Century*, 94 INT’L AFF. 553, 557 (2018).

17. See, e.g., USTR, UPDATE CONCERNING CHINA’S ACTS, POLICIES AND PRACTICES, *supra* note 14, at 23–24.

18. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 19–20, 27.

19. See, e.g., WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *supra* note 8, at 6.

20. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 27.

21. See *id.* at 23–26.

22. 外商投资准入特别管理措施(负面清单)(2019年版) [Special Administrative Measures (Negative List) for the Access of Foreign Investment (2019)], Order No. 25 of the National Development and Reform Commission and the Ministry of Commerce of the People’s Republic of China (June 30, 2019) (China) [hereinafter 2019 Negative List].

23. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 26.

24. *Id.*

25. *Id.*

26. See, e.g., USTR, UPDATE CONCERNING CHINA’S ACTS, POLICIES AND PRACTICES, *supra* note 14, at 23–27; WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *supra* note 8, at 6.

force technology transfer in exchange for the numerous administrative approvals needed to establish and operate a business in China. . . . China uses discretionary and non-transparent administrative reviews and licensing processes to pressure technology transfer or force the unnecessary disclosure of sensitive technical information.<sup>27</sup>

The White House similarly claims that “Chinese industrial policy features a wide range of coercive and intrusive regulatory gambits to force the transfer of foreign technologies and IP to Chinese competitors, often in exchange for access to the vast Chinese market.”<sup>28</sup> Such findings are supported by surveys conducted by the U.S.—China Business Council,<sup>29</sup> the American Chamber of Commerce in China,<sup>30</sup> the American Chamber of Commerce in Shanghai,<sup>31</sup> and the European Chamber of Commerce in China.<sup>32</sup> Although top Chinese leaders have repeatedly promised to end this practice, the United States and other foreign partners indicate that it remains active.<sup>33</sup> Moreover, during administrative approval procedures, many foreign investors are required to share confidential information relevant to proprietary technology with government officials.<sup>34</sup> Such practices have significantly increased the IP infringement risk for foreign investors. This so-called “forced technology transfer” has been the key IP issue driving tension between the United States and China in the current trade war.<sup>35</sup>

## B. DISCRIMINATORY LICENSING RESTRICTIONS

The second claim posited by the United States is that China has restricted foreign entities in negotiating market-based licensing terms with Chinese companies.<sup>36</sup> Notably, China imposes mandatory contract terms for contracts in which one party is a foreign licensor, and these mandatory terms discriminate against foreign IP owners.<sup>37</sup> According to the USTR’s 2018 Section 301 Report,

27. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 19–22; *see also* WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *supra* note 8, at 6–7 (similarly describing China’s discriminatory approval process to force the transfer of technologies and IP).

28. WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *supra* note 8, at 5.

29. USTR, UPDATE CONCERNING CHINA’S ACTS, POLICIES AND PRACTICES, *supra* note 14, at 23.

30. WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *supra* note 8, at 5; USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 22–23.

31. USTR, UPDATE CONCERNING CHINA’S ACTS, POLICIES AND PRACTICES, *supra* note 14, at 23.

32. Julie Wernau, *Forced Tech Transfers Are on the Rise in China, European Firms Say*, WALL ST. J. (May 20, 2019), <https://perma.cc/4G3J-CF2C>.

33. *See, e.g.*, WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *supra* note 8, at 6.

34. *See, e.g.*, USTR, UPDATE CONCERNING CHINA’S ACTS, POLICIES AND PRACTICES, *supra* note 14, at 25.

35. *See, e.g.*, Wernau, *supra* note 32 (“Forced technology transfer is a central sticking point in the continuing U.S.—China trade fight.”); Brewster, *supra* note 4, at 1423; Karen Yeung & Sidney Leng, *US-China Trade War: Can China Meet US Demands on IP Theft and Forced Technology Transfer*, S. CHINA MORNING POST (Feb. 25, 2019), <https://perma.cc/G2X6-AES4> (“One of the primary demands from the United States is for Beijing to strengthen intellectual property protection and stop forcing the transfer of technology.”).

36. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 48.

37. *See generally id.* at 48–61.



China's imposition of mandatory adverse licensing terms is reflected in official measures that impose a different set of rules for imported technology transfers originating from outside China, such as from U.S. entities attempting to do business in China, compared to separate rules for technology transfers occurring between two domestic companies. The mandatory requirements for importation of foreign technology are discriminatory and clearly more burdensome than the domestic requirements . . . These restrictions benefit domestic entities at the expense of foreign competitors, including U.S. competitors, because the mandatory terms are only imposed on technology import contracts and do not govern technology contracts between two domestic parties.<sup>38</sup>

These discriminatory licensing restrictions mostly appear in the *Regulations of the People's Republic of China on the Administration of the Import and Export of Technologies* ("TIER 2011") and the *Regulations for the Implementation of the Law of the People's Republic of China on Chinese Foreign Equity Joint Ventures* ("JV Regulations 2014").<sup>39</sup> For instance, Article 24(3) of the TIER 2011 provided that the licensor (normally a foreign entity for a technology import contract) was liable for any claims of "infringing [a third party's] lawful rights" made against the licensee resulting from the use of the licensed or transferred technology.<sup>40</sup> Parties were not allowed to negotiate otherwise.<sup>41</sup> Article 27 of the TIER 2011 mandated that, as between the licensor and licensee, all improvements belonged to the party making the improvement.<sup>42</sup> Article 29 of the TIER 2011 restricted the terms of technology import contracts by prohibiting a number of clauses.<sup>43</sup> In particular, Article 29(3) provided that a technology import contract could not contain clauses restricting the transferee from improving the technology supplied by the supplying party, or restricting the receiving party from using the improved technology.<sup>44</sup> This mandatory provision enabled the Chinese licensee to own severable improvements without a license from the U.S. licensor.<sup>45</sup>

Another example is Article 43 of the *JV Regulations 2014*, which stipulated that the term of the technology transfer agreement was normally limited to ten years<sup>46</sup>—however, the Chinese joint venturer (the technology importer) could continue to use

38. *Id.*

39. *See id.* at 48–49.

40. Regulations of the People's Republic of China on the Administration of the Import and Export of Technologies (promulgated by the St. Council, Dec. 10, 2001, effective Jan. 1, 2002, amended Jan. 8, 2011), art. 24(3) (Chinalawinfo). The TIER 2011 provisions discussed in this paragraph were amended in March 2019, *see infra* Part II.B.

41. *Id.*

42. *Id.* art. 27.

43. *Id.* art. 29.

44. *Id.* art. 29(3).

45. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 49–50.

46. Regulations for the Implementation of the Law of the People's Republic of China on Chinese Foreign Equity Joint Ventures (promulgated by the St. Council, Sept. 20, 1983, effective Sept. 20, 1983, amended Feb. 19, 2014), art. 43(2)(iii) (Chinalawinfo). This provision was subsequently removed, *see infra* Part II.C.

the subject technology even after the agreement expired.<sup>47</sup> Article 41 of the *JV Regulations 2014* provides that the technology introduced by JVs must be “applicable and advanced, such that the JV’s products generate significant social and economic benefits in the domestic market or are competitive in the international market.”<sup>48</sup> That article could operate together with Article 4(3) of the *JV Regulations 2014*, which provides that government authorities may not approve an application establishing a JV if the project “is not in conformity with the development of China’s national economy.”<sup>49</sup> The USTR asserts that Chinese officials may use this requirement “to pressure foreign firms to transfer the latest and most advanced versions of their technologies, restricting their freedom to deploy the technology as they choose, and notwithstanding any intellectual property infringement concerns the firm may have.”<sup>50</sup>

However, where a technology transfer agreement is entered into by two domestic parties, the parties have the freedom to negotiate the licensing terms with one another. Similar restrictions in the *TIER 2011* and *JV Regulations 2014* do not apply to technology transfers in purely domestic JVs. Instead, according to Article 354 of the PRC Contract Law, “[t]he parties to a technological transfer contract may, in accordance with the principle of mutual benefit, stipulate the method for sharing any subsequently improved technological result obtained from the patent exploitation or utilization of the technical know-how.”<sup>51</sup>

In March 2018, the United States filed a request for consultations with China in the WTO, alleging that China’s *TIER 2011* and *JV Regulations 2014* established discriminatory technology licensing.<sup>52</sup> The dispute advanced to the panel stage in January 2019. The United States indicated that these restrictions violated Article 3(1) (national treatment) and Article 28 (exclusive rights conferred) of the Agreement on Trade-Related Aspects of Intellectual Property Rights (“TRIPS”).<sup>53</sup> On June 3, 2019, the United States requested that the panel suspend its proceedings until December 31, 2019.<sup>54</sup> On June 12, 2019, the panel informed the WTO Dispute

47. *Id.* art. 43(2)(iv).

48. *Id.* art. 41.

49. *Id.* art. 4(3).

50. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 50.

51. 中华人民共和国合同法 [Contract Law of the People’s Republic of China] (promulgated by the Nat’l People’s Cong., Mar. 15, 1999, effective Oct. 1, 1999), art. 354 (Westlaw China). *See also* USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 53 (“The PRC Contract Law also provides a default position for parties to domestic technology transfer agreements such that, should the parties fail to agree on how to determine ownership of any improvements, or if the contractual language regarding improvements is vague, then the default is that neither party owns any improvement made by the other party to the contract. This default provision only provides a non-mandatory backstop position for technology transfer contracts, as well as a position from which to negotiate such contracts, yet such flexibility is only available to companies transferring technology domestically.”).

52. China—Certain Measures Concerning the Protection of Intellectual Property Rights, Request for Consultations by the United States, WTO (Mar. 23, 2018), <https://perma.cc/55UP-FCK2>.

53. China—Certain Measures Concerning the Protection of Intellectual Property Rights, Request for Consultations by the European Union, DS542, WTO (June 1, 2018), <https://perma.cc/29HH-CR3A>.

54. *Id.*

Settlement Body of its decision to grant the request made by the United States and to suspend its work.<sup>55</sup> This new development suggests that the two countries have started to negotiate to resolve this issue, which has been reflected in the 2019 amendments of the *TIER* and *JV Regulations*.<sup>56</sup>

The United States is not the only trading partner that has raised the issue of China's discriminatory licensing restrictions. Japan's Ministry of Economy, Trade, and Industry expressed the same concerns in its 2016 Annual Compliance Report.<sup>57</sup> In June 2018, the European Union requested consultations in the WTO over China's discriminatory IP restrictions in the *TIER 2011* and *JV Regulations 2014*.<sup>58</sup> Similar to the U.S. claims mentioned above,<sup>59</sup> the main argument of the European Union is that these restrictions violate a number of China's treaty obligations, particularly its WTO Accession Protocol and Article 3(1) (national treatment) and Article 28 (exclusive rights conferred) of the TRIPS.<sup>60</sup>

### C. STATE-BACKED OUTBOUND ACQUISITION OF EQUITY AND TECHNOLOGIES

Investing in foreign technologies has been China's main strategy for economic and technological development.<sup>61</sup> The USTR has criticized the Chinese government for using state-owned enterprises ("SOEs") and outbound foreign direct investment ("OFDI") to shape and facilitate technology-focused investments in the United States and Europe through the acquisition of equity and IP in seven technology sectors, namely: automotive, aviation, electronics, energy, health and biotechnology, information and communication technology, and industrial machinery (including robotics).<sup>62</sup> According to the USTR,

the Chinese government directs and unfairly facilitates the systematic investment in, and acquisition of, U.S. companies and assets by Chinese companies to obtain cutting-edge technologies and . . . IP . . . and generate large-scale technology transfer in industries deemed important by state industrial plans. The role of the state in directing and supporting this outbound investment strategy is pervasive . . . . The market-distorting acts, policies, and practices of the Chinese government in technology-focused sectors impose significant costs and risks on U.S. industry. They undermine the ability of U.S. technology companies to innovate and adapt, and threaten the long-term competitiveness of U.S. industry.<sup>63</sup>

The USTR has also expressed serious concerns regarding Chinese venture

55. *Id.*

56. *See infra* Part II.C.

57. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 54.

58. China—Certain Measures on the Transfer of Technology, Request for Consultations by the European Union, DS549, WTO (June 6, 2018), <https://perma.cc/29HH-CR3A>.

59. *See supra* text accompanying note 53.

60. China—Certain Measures on the Transfer of Technology, Request for Consultations by the European Union (Revision), DS549 Rev.1, WTO (Jan. 8, 2019), <https://perma.cc/DH5W-GW6J>.

61. *See, e.g.*, Kennedy & Lim, *supra* note 16, at 563.

62. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 62–66, 101–47.

63. *Id.* at 65–66.

capitalists' heavy investment in U.S. sectors, such as artificial intelligence, robotics, augmented and virtual reality, and financial technologies.<sup>64</sup> The USTR has asserted that:

[a]vailable evidence indicates that the Chinese government has created and supported a web of entities that have established a presence in Silicon Valley and other U.S. technology centers to invest in high-technology U.S. startups and engage in a variety of [venture capital] investment related activities, to further the industrial policy goals of the Chinese government.<sup>65</sup>

Although equity investments and IP acquisitions are normal transactions in the market economy, what concerns the United States most is that such technology-focused OFDI in China is not driven by market factors.<sup>66</sup> These investments are, instead, guided and supported by the state.<sup>67</sup> The U.S. Chamber of Commerce has similarly expressed that Chinese outbound investments and acquisition of foreign technologies are tied to China's industrial policy.<sup>68</sup> Professors Jeffrey N. Gordon and Curtis J. Milhaupt call such Chinese acquirers the "national strategic buyer[s] . . . whose objective is to further the interests of a nation-state in the pursuit of national industrial policy or perhaps national security concerns."<sup>69</sup>

The Chinese government has used OFDI to fulfill its "Going Out" strategy and to speed up the acquisition of core technologies from the western world.<sup>70</sup> The government has declared, in several official documents—such as the *Guiding Opinion on Promoting International Industrial Capacity and Equipment Manufacturing Cooperation*, released in 2015;<sup>71</sup> the *Information and Communications Industry Development Plan (2016–2020)*, released in 2016;<sup>72</sup> *Next Generation Artificial Intelligence Development Plan*, released in 2017;<sup>73</sup> and *Made in China 2025*, released in 2015<sup>74</sup>—that its strategy of technology development through international cooperation should focus on international mergers and acquisitions, equity investment, venture capital, and the establishment of research and development ("R&D") centers abroad. The backing of state-owned banks, state-

64. USTR, UPDATE CONCERNING CHINA'S ACTS, POLICIES AND PRACTICES, *supra* note 14, at 42–43.

65. *Id.* at 46.

66. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 63 ("China's OFDI is . . . driven by non-market factors. . . . These factors stem from the Chinese government's extensive intervention . . . to achieve industrial policy objectives.").

67. *Id.* at 63–66.

68. U.S. CHAMBER OF COMMERCE, MADE IN CHINA 2025: GLOBAL AMBITIONS BUILT ON LOCAL PROTECTIONS 23–24 (2017), <https://perma.cc/D9VV-GPJQ>.

69. Jeffrey N. Gordon & Curtis J. Milhaupt, *China as a "National Strategic Buyer": Toward a Multilateral Regime for Cross-Border M&A*, 2019 COLUM. BUS. L. REV. 192, 198 (2019).

70. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 64–70. *See also id.* at 147 ("China's acts, policies, and practices are unreasonable because they are directed and supported by the government, and unfairly target critical U.S. technology with the goal of achieving dominance in strategic sectors.").

71. *See id.* at 69.

72. *See id.* at 68.

73. *See id.* at 67.

74. *See id.* at 79.

backed funds, and state-owned capital dividends has financially facilitated this “Going Out” strategy and the consequent OFDIs.<sup>75</sup> As many China experts have indicated, the party-state can allocate the resources of domestic financial institutions to fulfill its policy goals when it deems necessary.<sup>76</sup>

The USTR has claimed that China has used its outbound investment approval system to implement its strategic goal of acquiring overseas advanced technologies. Chinese government agencies, such as the National Development and Reform Commission, the State Administration of Foreign Exchange, and the Ministry of Commerce, can easily encourage the private sector to invest in the strategic technology sector by selectively approving their outbound investment applications.<sup>77</sup> As a result, the Chinese OFDIs have systematically been made in alignment with government industrial policies, such as those set forth in *Made in China 2025* and the *Belt and Road Initiative*.<sup>78</sup>

Moreover, the USTR’s 2018 Section 301 Report specifically pointed out that the Chinese government and the Chinese Communist Party (“CCP”) have directed SOEs to undertake various overseas investments in order to fulfill China’s industrial policy goals.<sup>79</sup> The USTR’s claim can be understood in the context of China’s unique political economy, which relies on the relationship between the party-state and SOEs. The government and CCP have controlled SOEs’ management and investment decisions via the State Council’s State-owned Assets Supervision and Administration Commission (“SASAC”).<sup>80</sup> Each level of the government has replicated this arrangement and has its own SASAC, subject to central SASAC supervision.<sup>81</sup> Top SOE executives are normally CCP members, rotating between SOE and government positions and subject to the CCP Organization’s review.<sup>82</sup> Additionally, the government and the CCP can guide the decisions of private companies via the CCP committees in those enterprises, which is a unique corporate governance structure in China.<sup>83</sup> The government has also influenced the outbound investment decisions of private enterprises through the above-mentioned administrative approval systems,<sup>84</sup> the available investment finance,<sup>85</sup> and pressure from the CCP.<sup>86</sup>

75. *Id.* at 65, 67, 69, 80, 88, 90–94.

76. *See, e.g.*, Mark Wu, *The “China, Inc.” Challenge to Global Trade Governance*, 57 HARV. INT’L L.J. 261, 275 (2016) [hereinafter Wu, *China, Inc.*].

77. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 71–77.

78. *Id.* at 77.

79. *Id.* at 80–85.

80. *Id.* at 81–84; Wu, *China, Inc.*, *supra* note 76, at 272–73.

81. Wu, *China, Inc.*, *supra* note 76, at 272.

82. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 84.

83. *See, e.g.*, WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *supra* note 8, at 11.

84. *See supra* text accompanying notes 77–78.

85. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 87–89.

86. *Id.* at 87–89. *See also id.* at 103 (“Even when undertaken by companies in which the government does not own an observable controlling stake, the transactions identified are frequently guided and directed by the state. CCP members often act as board members and officers of these companies, and are responsive to state directives.”)

A major challenge to substantiating such claims lies in the fact that some of the controversies seem to result from transactions or actions between private parties. For example, the acquisitions of shares and IP are typically viewed as market activities governed by private law regulations, instead of as the subjects of trade disputes. Since the United States has argued that these transactions are part of China's unfair IP practices, it needs to prove that the party-state has planned and directed these transactions in an unfair way.<sup>87</sup> However, it is never easy to prove the intent of a Chinese government policy with respect to these transactions in order to show causation. Nor is it simple to prove that a Chinese acquirer has either purely economic motives in the transaction or national strategic ones.<sup>88</sup> A unit of the U.S. Department of Defense has also described the difficulties in seeing China's overall technology agenda from individual transactions:

[China's] principal vehicles [for technology transfer] are investments in early-stage technologies as well as acquisitions. When viewed individually, some of these practices may seem commonplace and not unlike those employed by other countries. However, when viewed in combination, and with the resources China is applying, *the composite picture illustrates the intent, design and dedication of a regime focused on technology transfer at a massive scale.*<sup>89</sup>

The current approach adopted by the United States is to assume that most Chinese parties involved in the transactions are SOEs, which are controlled by the party-state—therefore, the conclusion is that all transactions were made as part of a Chinese conspiracy.<sup>90</sup> This approach is similarly adopted in the USTR's claims concerning cyber intrusions initiated by Chinese companies.<sup>91</sup> While this approach is plausible for understanding the operation of the party-state and state capitalism in China, it is still controversial for determining “which Chinese enterprises, banks, and entities should be considered an extension of the state.”<sup>92</sup> Therefore, it is not surprising that the Chinese government has officially claimed that all outbound investments made by Chinese enterprises are a natural result of business globalization, instead of a government scheme.<sup>93</sup> Furthermore, private transactions

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87. Cf. Wu, *China, Inc.*, *supra* note 76, at 265 (noting the difficulties in determining “whether an entity is associated with the state” under WTO rules).

88. See, e.g., Gordon & Milhaupt, *supra* note 69, at 198.

89. MICHAEL BROWN & PAVNEET SINGH, DEF. INNOVATION UNIT EXPERIMENTAL, CHINA'S TECHNOLOGY TRANSFER STRATEGY: HOW CHINESE INVESTMENTS IN EMERGING TECHNOLOGIES ENABLE A STRATEGIC COMPETITOR TO ACCESS THE CROWN JEWELS OF U.S. INNOVATION 16 (2018), <https://perma.cc/F6MM-WAQL>.

90. See, e.g., USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 80–81 (citing Xi Jinping's description of “the role of SOEs as extensions of the Party-state, and clarified that SOEs are ‘important forces to implement decisions of the CCP and ‘major strategies,’ such as industrial ‘Going Out’ strategies to ‘enhance overall national power, economic and social development, and people's wellbeing’”).

91. *Id.* at 168 (citing the U.S. Department of Justice's indictment asserting Guangzhou Bo Yu Information Technology (Boyusec), a Chinese firm involved in cyber intrusions against three U.S. firms, had links to the Chinese government).

92. Wu, *China, Inc.*, *supra* note 76, at 301.

93. See, e.g., INFO. OFFICE OF THE STATE COUNCIL IN CHINA, THE FACTS AND CHINA'S POSITION

conducted outside China are made voluntarily by both contracting parties. The U.S. companies that sold shares or IP to Chinese companies did not enter into deals as a result of any coercion, nor were these transactions subject to Chinese laws. Even if the Chinese party in such agreements was an SOE, the Chinese government or other SOEs could not unilaterally make these transactions happen without the agreement of the U.S. companies. Therefore, China could argue that it should not be held solely liable for its outbound investments in U.S. companies and IP. Part of the USTR's explanation of the unfairness is that:

[f]oreign companies become more susceptible to Chinese acquisitions because of the difficult investment and market access environment in China; and . . . Chinese firms are willing to bear losses in foreign markets both for their investments and sales as a cost of acquiring foreign proprietary technology, in part because the Chinese government will make up a portion of their loss.<sup>94</sup>

This explanation seems plausible from a reciprocal perspective. However, it confusingly mingles state-backed acquisition with market access and other legal concepts. While China's state-backed acquisition of foreign IP and equity may constitute an unfair trade practice, it is not directly relevant to the country's restriction of foreign investment. In other words, the fact that a U.S. firm has difficulties in accessing the Chinese market does not necessarily mean that it would be "more susceptible to Chinese acquisitions."<sup>95</sup> After all, this U.S. firm can always develop revenue models and investment portfolios in jurisdictions other than China. Furthermore, the legal issue arising from the fact that "Chinese firms are willing to bear losses . . . in part because the Chinese government will make up a portion of their loss"<sup>96</sup> lies in whether certain forms of government subsidies are prohibited by the WTO,<sup>97</sup> which is a separate issue to be discussed.<sup>98</sup>

#### D. IP THEFT BY CYBER INTRUSION

The United States has consistently claimed that the Chinese government conducts and facilitates cyber intrusion into the U.S. network to acquire confidential information from U.S. firms, including "trade secrets, technical data, negotiating positions, and sensitive and proprietary internal communications."<sup>99</sup> The USTR's 2018 Section 301 Report asserted that "cyber theft [has become] one of China's preferred methods of collecting commercial information because of its logistical

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ON CHINA—US TRADE FRICTION 38–39 (2018), <https://perma.cc/FYF3-X4MY>.

94. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 149.

95. *Id.*

96. *Id.*

97. Agreement on Subsidies and Countervailing Measures art. 5, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1869 U.N.T.S. 14 [hereinafter SCM Agreement].

98. *See infra* text accompanying notes 334–349.

99. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 153.

advantages and plausible deniability.”<sup>100</sup> Although President Xi Jinping and President Barack Obama reached a consensus regarding cyber-enabled theft of IP and confidential business information in September 2015,<sup>101</sup> the United States has continuously detected cyber intrusions from China targeting American firms.<sup>102</sup> The claims made by the USTR are primarily based on reports issued by professional cybersecurity or Internet companies, such as McAfee, Verizon, and Mandiant,<sup>103</sup> and on the U.S. Department of Justice (“DOJ”) indictment against five officers of China’s People’s Liberation Army General Staff Department, Third Department (“3PLA”) for cyber intrusions and economic espionage against U.S. companies.<sup>104</sup>

In its 2013 report, the cybersecurity firm Mandiant specifically pointed out that 3PLA, normally known by its Military Unit Cover Designation as Unit 61398, was then staffed by hundreds or even thousands of people who had stolen data from at least 141 organizations, 115 of which were from twenty major business sectors in the United States.<sup>105</sup> The USTR has asserted that many U.S. victims were from industries that China had identified as strategic priorities.<sup>106</sup> In May 2014, the DOJ charged five 3PLA officers with cyber intrusions into the computer systems of six American firms: Westinghouse Electric Company, SolarWorld Americas, Inc., United States Steel Corporation, Allegheny Technologies, Inc., Alcoa Inc., and the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Services Workers International Union.<sup>107</sup> According to the indictment, the cyber intrusions were conducted when each of the victims was dealing with its Chinese business, and each firm acted in an industry that the Chinese government had prioritized for development.<sup>108</sup> The DOJ alleged that the defendants hacked into the victims’ computer systems to steal confidential information for the victims’ Chinese competitors, including SOEs.<sup>109</sup> The DOJ also stated that Chinese firms, including SOEs, had hired 3PLA to provide information technology services, which the DOJ suspected included stealing confidential information from their U.S. competitors.<sup>110</sup> The USTR further claims that China conducts physical IP theft together with cyber

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100. *Id.*

101. *See, e.g.*, Kennedy & Lim, *supra* note 16, at 570.

102. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 154.

103. *Id.* at 154–57.

104. *Id.* at 157–63; *see also* Jyh-An Lee, *The Red Storm in Uncharted Waters: China and International Cybersecurity*, 82 UMKC L. REV. 951, 955 (2014) [hereinafter Lee, *China and International Cybersecurity*] (noting that “[t]he indictment was the first criminal charge against foreign officers in the United States”).

105. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 155–57.

106. *Id.* at 156.

107. *Id.* at 157.

108. *Id.*

109. *Id.* at 157–58.

110. *Id.* at 158. *See also id.* at 164 (“[A]ccording to U.S. government information, China National Offshore Oil Corporation (CNOOC), a state-owned enterprise, submitted formal requests to Chinese intelligence services seeking intelligence information on several U.S. oil and gas companies and on U.S. shale gas technology.”).



intrusions via insiders.<sup>111</sup> An increasing number of cases in the United States involve Chinese government agents recruiting employees at target companies to transfer commercially confidential information to China.<sup>112</sup>

In summary, the USTR has claimed that the Chinese government has conducted and supported cyber-enabled theft and intrusions into the commercial networks of U.S. companies. This claim is in line with the White House’s accusation that “China engaged in cyber-enabled economic espionage and trillions of dollars of intellectual property theft.”<sup>113</sup> This line of allegations reveals U.S. concerns that hacking and stealing American IP has become an important strategy by which China seeks to maintain its economic growth and that China’s cyber capability poses a serious threat to the American economy. Nevertheless, there is always an “attribution problem” associated with determining the origin of cyber intrusions.<sup>114</sup> Legal questions concerning attribution are also complicated technical questions.<sup>115</sup> It is exceedingly difficult to track the real location of hackers because they may route through “cyber safe havens” or multiple machines in multiple countries.<sup>116</sup> In other words, sophisticated hackers can easily mask their identity and location, and even mislead attribution investigations with little cost.<sup>117</sup> It is also difficult to establish whether a state is behind a cyberattack.<sup>118</sup> Therefore, some experts describe attribution as “perhaps the most difficult problem” in cyberspace.<sup>119</sup> Even if proof of attribution is possible, it requires enormous amounts of time, expertise, investigation, and investment in other resources.<sup>120</sup> Therefore, any efforts to hold the cyber intruders

111. USTR, UPDATE CONCERNING CHINA’S ACTS, POLICIES AND PRACTICES, *supra* note 14, at 15–22.

112. *Id.* at 15–19.

113. THE WHITE HOUSE, NATIONAL CYBER STRATEGY OF THE UNITED STATES OF AMERICA 2 (2018), <https://perma.cc/HJ6Q-XBCV>.

114. See, e.g., Lee, *China and International Cybersecurity*, *supra* note 104, at 964; Amir Lupovici, *The “Attribution Problem” and the Social Construction of “Violence”: Taking Cyber Deterrence Literature a Step Forward*, 17 INT’L STUD. PERSP. 322, 330 (2016); Lorraine Finlay & Christian Payne, *The Attribution Problem and Cyber Armed Attacks*, 113 AM. J. INT’L L. UNBOUND 202, 203 (2019); Delbert Tran, Note, *The Law of Attribution: Rules for Attributing the Source of a Cyber-Attack*, 20 YALE J. L. & TECH. 376, 386–87 (2018); see also Kennedy & Lim, *supra* note 16, at 567 (“[A]tribution [of an act of cyber espionage] to a particular actor or even a particular country is an inherently uncertain enterprise.”).

115. See, e.g., Christian Payne & Lorraine Finlay, *Addressing Obstacles to Cyber-Attribution: A Model Based on State Response to Cyber-Attack*, 49 GEO. WASH. INT’L L. REV. 535, 556–57 (2017).

116. Lee, *China and International Cybersecurity*, *supra* note 104, at 964; Finlay & Payne, *supra* note 114; see also Tran, *supra* note 114, at 389 (“[U]sers can employ a number of techniques and program applications to hide their trail of online activity. To the extent that any user’s IP address is logged in any activity that they perform on the internet, users have the option of using proxy servers or onion-routing tools such as Tor to mask their IP addresses when acting online.”).

117. Finlay & Payne, *supra* note 114, at 203.

118. See, e.g., Lupovici, *supra* note 114, at 329; Finlay & Payne, *supra* note 114, at 203; Tran, *supra* note 114, at 390.

119. Tran, *supra* note 114, at 387 (quoting P.W. SINGER & ALLAN FRIEDMAN, *CYBERSECURITY AND CYBERWAR: WHAT EVERYONE NEEDS TO KNOW* 73 (2014)).

120. See, e.g., Jon R. Lindsay, *Tipping the Scales: The Attribution Problem and the Feasibility of Deterrence Against Cyberattack*, 1 J. CYBERSECURITY 53, 56–58 (2015).

liable will face significant evidentiary hurdles.<sup>121</sup>

Although the USTR was aware of the commitment made by President Xi Jinping and President Barack Obama to address cyber-enabled theft of IP in September 2015,<sup>122</sup> as well as the subsequent decrease in cyber intrusions from China,<sup>123</sup> the USTR has not admitted that the decrease occurred due to President Xi's commitment to President Obama. Instead, the USTR maintains that China's intrusions into U.S. commercial computer networks and theft of IP did not actually cease.<sup>124</sup> On the other hand, although many believe that China possesses the most aggressive cyber-intrusion capabilities in the world,<sup>125</sup> the country has continuously claimed to also be a victim of cyber intrusions and other hacking activities.<sup>126</sup> The claims made by both countries reveal not only international power dynamics in cyberspace but also the difficulties in achieving mutual trust based on evidence.

## II. CHINA'S RESPONSES

U.S.–China trade interactions have played a vital role in the modernization of China's IP regime.<sup>127</sup> Therefore, it is important to observe whether the trade war will further reshape China's IP laws and practices. Although China has denied most of the United States' claims,<sup>128</sup> especially those of forced technology transfer for foreign investors seeking to enter the Chinese market,<sup>129</sup> the country has gradually

121. See, e.g., Payne & Finlay, *supra* note 115, at 557.

122. See *supra* text accompanying notes 101–102.

123. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 169.

124. USTR, UPDATE CONCERNING CHINA'S ACTS, POLICIES AND PRACTICES, *supra* note 14, at 11–12.

125. See, e.g., Lee, *China and International Cybersecurity*, *supra* note 104, at 954.

126. See, e.g., *id.* at 957; Jyh-An Lee, *Hacking into China's Cybersecurity Law*, 53 WAKE FOREST L. REV. 57, 59 (2017) [hereinafter Lee, *Cybersecurity Law*].

127. See, e.g., ANDREW C. MERTHA, THE POLITICS OF PIRACY: INTELLECTUAL PROPERTY IN CONTEMPORARY CHINA 54 (2005); Naigen Zhang, *Intellectual Property Law Enforcement in China: Trade Issues, Policies and Practices*, 8 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 63, 63 (1997); see also Endeshaw, *supra* note 7, 273 (noting that China established specialized IP courts because of continuous pressure from the United States); Robert L. Ostergard, Jr., *Economic Growth and Intellectual Property Rights Protection: A Reassessment of the Conventional Wisdom*, in INTELLECTUAL PROPERTY, TRADE AND DEVELOPMENT: STRATEGIES TO OPTIMIZE ECONOMIC DEVELOPMENT IN A TRIPS-PLUS ERA 3, 30 (Daniel J. Gervais ed., 2d ed. 2014) (“Under the threat of trade wars with the United States, the Chinese government increased the protection afforded IP under its laws and stepped up enforcement of existing laws.”); Peter K. Yu, *From Pirates to Partners: Protecting Intellectual Property in China in the Twenty-First Century*, 50 AM. U. L. REV. 131, 140–51 (2000) (describing how the United States used Section 301 and other trade sanctions to induce China to enhance its IP protection).

128. See, e.g., INFO. OFFICE OF THE STATE COUNCIL IN CHINA, *supra* note 93, at 29–39; see also Kennedy & Lim, *supra* note 16, at 567 (“[T]he Chinese government does not admit to state sponsorship [of cyber espionage.]”); Lee, *China and International Cyber Security*, *supra* note 104, at 957 (“The Chinese government has never admitted to involvement in any of these [cyber] attacks.”).

129. See, e.g., INFO. OFFICE OF THE STATE COUNCIL IN CHINA, *supra* note 93, at 30–31; Yeung & Leng, *supra* note 35.

amended some laws and regulations under pressure from the United States in the past year.<sup>130</sup>

### A. FOREIGN OWNERSHIP RESTRICTIONS

On June 30, 2019, the State Development and Reform Commission and the Ministry of Commerce jointly issued the *Special Administrative Measures (Negative List) for the Access of Foreign Investment (2019)* (外商投资准入特别管理措施[负面清单][2019年版]) (“*2019 Negative List*”), which came into effect on July 30, 2019.<sup>131</sup> In this new *2019 Negative List*, the Chinese government maintains the previous structure of foreign investment restrictions.<sup>132</sup> Foreign businesses are prohibited from investing in certain industries, such as “research, development, and raising or cultivation of any valuable or fine variety which is rare and peculiar to China or the production of relevant propagation materials,” as well as “Internet news information services, Internet publication services, Internet video and audio program services, Internet cultural business (except music), and Internet social networking services (save the part of such services already opening up in the commitments of China made upon WTO accession),” and so on.<sup>133</sup>

More relevant to China’s allegedly unfair IP practices are the sectors in which foreign enterprises are required to collaborate with Chinese partners or are subject to certain ownership restrictions. For example, foreign businesses can set up medical institutions only via EJVs or CJVs with Chinese partners.<sup>134</sup> The Chinese party is required to be the controlling shareholder in joint business ventures for (1) “selection and cultivation of new wheat or corn varieties or production of seeds,” (2) “printing of publications,” (3) “building or operation of a nuclear electric power plant,” (4) “building or operation of an urban water or drainage pipeline network for a city with a population of not less than 500,000,” (5) any “domestic water transportation company,” (6) any “public air transportation company,” (7) “general aviation companies for agriculture, forestry, or fishing,” (8) “building or operation of a civil airport,” (9) “basic telecommunications,” and (10) “broadcast media rating services.”<sup>135</sup> The Chinese government has announced a plan to loosen up its ownership restrictions in certain sectors, as outlined below, in the *2019 Negative List*:

- (1) Under the current scheme, “[f]or the manufacturing of automobiles other than special-purpose vehicles and new energy vehicles, the Chinese party shall have a

130. Angela Huyue Zhang, *The U.S.—China Trade Negotiation: A Contract Theory Perspective* 10–16 (Univ. Hong Kong Faculty of Law, Research Paper No. 2019/105, 2019), <https://perma.cc/V6CS-VEK3>.

131. 2019 Negative List, *supra* note 22.

132. *Id.* (“An overseas investor may not invest in any prohibited field for foreign investment on the Negative List; if a foreign investor is to invest in a field not prohibited on the Negative List, a foreign investment access permit must be applied for; and if a foreign investor is to invest in a field with ownership requirements, it may not establish a foreign-funded partnership.”).

133. *Id.*

134. *Id.*

135. *Id.*

stake of not less than 50%, and the same foreign investor may establish not more than two equity joint ventures manufacturing the same line of automobiles in China,” but “[f]or the manufacturing of commercial vehicles, the restriction on foreign stake will be canceled in 2020. In 2022, the restriction on foreign stake for the manufacturing of passenger vehicles and the restriction that the same foreign investor may establish not more than two equity joint ventures manufacturing the same line of automobiles in China will be canceled.”<sup>136</sup>

- (2) Under the current scheme, “[t]he foreign stake in a securities company shall not exceed 51%, and the foreign stake in a securities investment fund management company shall not exceed 51%,” but “[t]he restriction on foreign stake [in this sector] will be canceled in 2021.”<sup>137</sup>
- (3) Under the current scheme, “[t]he foreign stake in a securities company shall not exceed 51%” but “[t]he restriction on foreign stake will be canceled in 2021.”<sup>138</sup>  
The same restriction and deregulation plans are also applied to companies providing futures investment advice or broker services, as well as to life insurance companies.<sup>139</sup>

What is the Chinese government signaling with the *2019 Negative List*? First, relaxing the *Negative List* makes market access easier for foreign businesses—which might eventually alleviate the trade tension between the United States and China. Notably, not all industries that remain subject to ownership restrictions are high-tech ones. Instead, although there are some advanced technologies involved in certain sectors (such as the agricultural sector), most of the ownership restrictions apply to sectors that provide infrastructure such as water supply, airports, and basic telecommunications.<sup>140</sup> The policy rationale underlying these ownership restrictions is obviously that if critical infrastructure is completely owned or operated by foreign parties, then there might exist serious and justified national security concerns. Therefore, for the industries subject to ownership restrictions according to the *2019 Negative List*, these restrictions are not necessarily related to unfair IP practices.

Second, the government announced that certain ownership restrictions will be lifted in the commercial vehicle and financial services industries.<sup>141</sup> This is a clear sign for further opening up of the market. If, as the USTR claims, the previous ownership restrictions created a higher chance for IP theft by Chinese partners, the lifting of those restrictions indicates that China has either compromised on its IP practices for commercial vehicles and financial services industries or decided that these industries are no longer strategically important to its national technological development.

Third, the *2019 Negative List* and the *Special Administrative Measures (Negative List) for the Access of Foreign Investment in Pilot Free Trade Zones (2019)* (自由贸

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136. *Id.*

137. *Id.*

138. *Id.*

139. *Id.*

140. *See supra* text accompanying note 135.

141. *See supra* text accompanying note 136–139.

易试验区外商投资准入特别管理措施[负面清单][2019年版]) (“*Negative List for Free Trade Zones*”) completely scrap the limit on foreign ownership of new energy vehicle (“NEV”) ventures.<sup>142</sup> This relaxation has clearly been welcomed by Tesla’s founder and chief executive officer, Elon Musk, who once argued that foreign ownership rules created an uneven playing field for his company in China.<sup>143</sup> Based on the new *Negative List for Free Trade Zones*, Tesla has been able to establish a wholly-owned company and production line in Shanghai.<sup>144</sup> More importantly, Tesla can better protect its IP and technology in its own plant.<sup>145</sup>

The case of Tesla deserves more attention in the U.S.—China IP trade war. Energy technologies and NEV have been a hot field for the technological battles and trade disputes between these two countries. China has identified NEV as one of its “strategic emerging industries” since 2010<sup>146</sup> and has included it in the *Made in China 2025 Notice*.<sup>147</sup> Therefore, the USTR has raised special concerns regarding the protection of energy technologies in its 2018 Section 301 Report.<sup>148</sup> China’s willingness to compromise on foreign ownership of NEV ventures may, to some extent, help alleviate U.S. IP concerns over previous ownership restrictions in this sector.

## B. FOREIGN INVESTMENT LAW

China has denied there has been any forced technology transfer in the country. According to a statement issued by the State Council in China, all technology transfers in the country have been based on voluntariness and freedom of contract.<sup>149</sup> More importantly, in March 2019 China promulgated the Foreign Investment Law, which came into effect on January 1, 2020, to protect the rights and interests of foreign investors and to further open its market to foreign investors.<sup>150</sup> The law

142. See *supra* text accompanying note 136; 自由贸易试验区外商投资准入特别管理措施(负面清单) (2019年版), [Special Administrative Measures (Negative List) for the Access of Foreign Investment in Pilot Free Trade Zones (2019)] (promulgated by the Nat’l Dev. & Reform Comm’n and the Ministry of Commerce, June 30, 2019) (Chinalawinfo) [hereinafter 2019 Negative List for Free Trade Zones].

143. See, e.g., Adam Jourdan & Norihiko Shirouzu, *Tesla Registers Shanghai Electric Car Firm Ahead of Ownership Rule Change*, REUTERS (May 24, 2018), <https://perma.cc/2FQT-SMZP>.

144. *Id.*; Daniel Ren & Maggie Zhang, *Tesla Sets up Shanghai Beach Head with Wholly-Owned Plant in World’s Largest Electric Car Market*, S. CHINA MORNING POST (July 10, 2018), <https://perma.cc/G23B-42A7>; Xinhua, *Tesla Breaks Ground on Gigafactory in Shanghai*, CHINA DAILY (Jan. 8, 2019), <https://perma.cc/TSB9-BL7V>.

145. Jourdan & Shirouzu, *supra* note 143; see also USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 27 (“Foreign companies typically prefer to invest in China through a WFOE, rather than a JV, if the option is available. This preference often stems from concerns about the loss of control over their valuable technologies.”)

146. See *infra* text accompanying notes 219–221.

147. See *infra* text accompanying note 222.

148. USTR, 2018 SECTION 301 REPORT, *supra* note 13, 10–17.

149. INFO. OFFICE OF THE STATE COUNCIL IN CHINA, *supra* note 93, at 29–30.

150. Zhonghua Renmin Gongheguo Waishang Touzi Fa (中华人民共和国外商投资法) [Foreign Investment Law of the People’s Republic of China] (promulgated by Nat’l People’s Cong., Mar. 15, 2019,

replaces three main foreign investment laws—the *Law on Sino-Foreign Equity Joint Ventures*, the *Law on Sino-Foreign Contractual Joint Ventures*, and the *Law on Foreign-Capital Enterprises*—enacted between 1979 and 1990.<sup>151</sup> Many believe that the message of the new law is that Beijing aims to level the playing field for foreign investors and to address issues raised by Washington in the trade war.<sup>152</sup> This is also the first time that Chinese law has touched upon the problem of forced technology transfer. Article 22 stipulates that:

The State protects the intellectual property rights of foreign investors and foreign-invested enterprises, protects the legitimate rights and interests of intellectual property rights holders and related rights holders, and holds intellectual property rights infringers legally accountable in strict accordance with the law.

The State encourages technical cooperation based on the voluntariness principle and commercial rules in the process of foreign investment. The conditions for technical cooperation are determined by equal negotiation between the parties to the investment in accordance with the principle of fairness. Administrative agencies and their staff are prohibited to use administrative means to force any technology transfer.<sup>153</sup>

Article 23 protects the trade secrets of foreign investors from being disclosed by government officers:

The administrative organs and their staff shall keep confidential the trade secrets known to them, of foreign investors and foreign-invested enterprises during the performance of their duties, and shall not disclose or illegally provide them to others.<sup>154</sup>

The legal liability for violating Articles 22 and 23 can be found at Article 39:

If a staff of an administrative organ abuses his power, neglects his duties or engages in malpractices in the promotion, protection and management of foreign investment, or leaks or illegally provides others with trade secrets that he or she knows in the course of performing his duties, he shall be punished according to law; if he commits a crime, he shall be held criminally responsible.<sup>155</sup>

Most foreign investors in China seem to welcome these new provisions, which forbid

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effective Jan. 1, 2020), art.1 (Chinalawinfo) [hereinafter Foreign Investment Law].

151. See, e.g., Kinling Lo, Kimmy Chung & Tony Cheung, *China's Foreign Investment Law Will Apply to Hong Kong, Macau and Taiwan*, S. CHINA MORNING POST, (Mar. 3, 2019), <https://perma.cc/ZU5U-TBP6>; Zhou Xin, *China Approves New Foreign Investment Law Designed to Level Domestic Playing Field for Overseas Investors*, S. CHINA MORNING POST (Mar. 15, 2019), <https://perma.cc/F4FW-K96G>. See also Issaku Harada, *China Bans Forced Tech Transfer in Proposed Investment Bill*, NIKKEI ASIAN REV. (Mar. 9, 2019), <https://perma.cc/Q8GC-YGMC> (stating that the Foreign Investment Law would be “a replacement of three existing laws”).

152. See, e.g., Zhou, *supra* note 151. See also Lo, Chung & Cheung, *supra* note 151 (“The draft law . . . comes against the backdrop of the China-US trade war, with Beijing under pressure to address Washington’s allegations of unfair competition between foreign and domestic firms, intellectual property theft, and forced technology transfers.”).

153. Foreign Investment Law, *supra* note 150, art. 22.

154. *Id.* art. 23.

155. *Id.* art. 39.

forced technology transfer and strengthen trade secret protection.<sup>156</sup> Although the Foreign Investment Law reveals some positive progress that China has made to address some U.S. concerns regarding the disputed IP practices, the enforcement of these provisions is yet to be observed. The first paragraph of Article 22 is nothing more than an official declaration that foreign investors' IP will be protected seriously, whereas its second paragraph spells out the principles of voluntariness and fairness and explicitly prohibits forced technology transfer.<sup>157</sup> Article 23 forbids government officials from disclosing the trade secrets of foreign investors,<sup>158</sup> which has been a notorious type of trade secret leakage complained about by the United States and other trade partners of China.<sup>159</sup> While it is clear that both Article 22 and Article 23 deal with important concerns raised by the United States during the recent trade war, what is more important is the legal liability and enforcement mechanism of these two articles. According to Article 39, government officials violating Articles 22 and 23 will be subject to administrative liability (penalty) and possible criminal liability.<sup>160</sup>

Although some foreign investors have been positive about these provisions strengthening IP protection in China, especially the possibility of criminal liability,<sup>161</sup> Article 39 actually leaves some uncertainties in terms of enforcement. First, the administrative liability or penalty is not defined in the law; therefore, the government has broad discretion in imposing such liability, which might constitute an action as light as giving the breaching official a warning. Hence, more detailed

156. See, e.g., Ben Blanchard, Ryan Woo & Michael Martina, *Explainer: China Changes Laws in Trade War with U.S., Enforcement a Concern*, REUTERS (May 7, 2019), <https://perma.cc/NE8D-NQ49> (stating that “[f]oreign business groups have in principle welcomed [the Foreign Investment Law]”); Zhou, *supra* note 151 (quoting the comment of Jake Parker at the US-China Business Council that “we . . . are pleased with the . . . language [in the Foreign Investment Law] to further protect foreign company commercial information and trade secrets. . . . The addition of language imposing criminal penalties for sharing sensitive foreign company information adopts a much tougher deterrent against counterfeiting and [intellectual property] theft and will offer new avenues for the enforcement of [intellectual property] protection”).

157. See *supra* text accompanying note 153.

158. See *supra* text accompanying note 154.

159. Another relevant reform is the newly added trade secret provision of the Administrative License Law: “Without the consent of the applicant, an administrative agency, its functionaries, or an expert on a panel shall not disclose any trade secret, undisclosed information, or confidential business information submitted by the applicant, unless the law provides otherwise, or national security or the material social and public interest is involved; and if the administrative agency discloses such information of the applicant to the public according to the law, the applicant shall be allowed to file an objection within a reasonable period of time.” See Zhonghua Renmin Gongheguo Xingzheng Xuke Fa (中华人民共和国行政许可法) [Administrative License Law] (promulgated by the Standing Comm. Nat'l People's Cong., Apr. 23, 2019, effective Apr. 23, 2019), art. 5(2) (Chinalawinfo).

160. See *supra* text accompanying note 155.

161. See, e.g., Zhou, *supra* note 151 (quoting the comment of Jake Parker at the US-China Business Council that “the business community has collectively advocated for years for the Chinese government to impose criminal penalties for [intellectual property] infringement, we need to recognize this positive progress to that end”). But see Harada, *supra* note 151 (quoting the concern raised by the European Union Chamber of Commerce in China that the law “leaves open the possibility for any non-administrative body to use any other means to compel technology transfers”).

administrative regulations would be helpful for enforcing the administrative liability speculated in Article 39. Second, while Article 39 mentions criminal liability, it does not actually impose any criminal liability on the breaching officials—whether the involved government official has committed a crime depends on the application of criminal law and other relevant laws.<sup>162</sup> In other words, although Article 39 indicates the possibility of establishing criminal liability, it has not actually changed or established any criminal liability. Third, some foreign investors still doubt whether forced technology transfer will be eliminated even after the enactment of the Foreign Investment Law.<sup>163</sup> Some of them suspect that China will continue the practice of forced technology transfer via means other than administrative procedures.<sup>164</sup> If that does happen, it will be even more challenging for foreign enterprises to prove the new form of forced technology transfer. China may easily use the Foreign Investment Law as *prima facie* evidence to argue that forced technology transfer is banned in the country. One can foresee how the Chinese government will rebut the claims of forced technology transfer from the Chinese Foreign Ministry spokesman Lu Kang's response to the media in May 2019:

I am sure you have also noticed that the recently-adopted Foreign Investment Law stipulates explicitly that there shall be no forced technology transfer through administrative means. . . . I have to stress that if European or other foreign businesses in China do have reasonable concerns [of forced technology transfer] for which they can provide solid evidence, I believe they can surely be resolved since we have clear legal provisions.<sup>165</sup>

Therefore, the forced technology transfer provision in the Foreign Investment Law may create two-fold results for foreign investors. On the one hand, forced technology transfer may diminish in a positive way; on the other hand, the provision may become a shield to cover new forms of forced technology transfer.<sup>166</sup> The ultimate result will depend on China's level of determination to implement such reforms. China needs several benchmark cases establishing administrative liability and criminal liability for the violation of Articles 22 and 23 so that its foreign investors and the United States can be convinced that these Foreign Investment Law provisions are not only ceremonial window-dressing.

162. Foreign Investment Law, *supra* note 150, art. 39. See also Zhang, *supra* note 130, at 13.

163. See, e.g., Blanchard, Woo & Martina, *supra* note 156; Wernau, *supra* note 32.

164. See, e.g., Harada, *supra* note 151 (quoting the concern raised by the European Union Chamber of Commerce in China that the law “leaves open the possibility for any non-administrative body to use any other means to compel technology transfers”).

165. Foreign Ministry Spokesperson Lu Kang's Regular Press Conference on May 20, 2019, MINISTRY OF FOREIGN AFF. OF CHINA (May 20, 2019), <https://perma.cc/A9CZ-4X63>; see also Wernau, *supra* note 32 (quoting Lu Kang's statement that “[i]f those companies truly have such concerns, I hope they can provide concrete evidence. If their concerns are legitimate and fact-based, it can be totally addressed, because we clearly have this policy. But without any proof, you cannot just invent that from thin air”).

166. Cf. Blanchard, Woo & Martina, *supra* note 156 (reporting a Beijing-based foreign executive's perspective that the Foreign Investment Law “was probably best viewed as a ‘PR exercise’ to try and head off some U.S. accusations of unfair treatment for American companies”).



### C. *TIER 2019* AND *JV REGULATIONS 2019*

On March 2, 2019, Chinese Premier Li Keqiang signed a State Council decree to amend a total of forty-nine regulations, including the *TIER 2011* and *JV Regulations 2014*.<sup>167</sup> The State Council removed the three most controversial provisions in the *TIER 2011*,<sup>168</sup> as identified in the USTR's 2018 Section 301 Report.<sup>169</sup> First, the *TIER 2019* now allows a foreign technology transferor and the Chinese technology transferee to negotiate the allocation of risk by eliminating Article 24(3) of the *TIER 2011*.<sup>170</sup> Second, parties can also negotiate the ownership of improvements to the licensed technology with the deletion of Article 27 of the *TIER 2011*.<sup>171</sup> Third, the *TIER 2019* abolishes the prohibition against certain clauses in technology import contracts in Article 29 of the *TIER 2011*.<sup>172</sup> Therefore, in comparison to *TIER 2011*, the *TIER 2019* provides parties with a higher degree of autonomy to negotiate market-based terms for the transfer of technology into China. Some commentators are of the viewpoint that by removing Articles 24(3), 27, and 29, *TIER 2019* benefits both foreign companies and Chinese companies because the new regime will likely facilitate more foreign IP and capital investment.<sup>173</sup> The State Council also deleted two controversial provisions in the *JV Regulations 2014* on the same day.<sup>174</sup> Both the ten-year time limit for technology transfer agreements and the Chinese joint venturer's perpetual right to use the licensed technology were revoked in the *JV Regulations 2019*.<sup>175</sup>

The *TIER 2019* and *JV Regulations 2019* address the concerns in the USTR's 2018 Section 301 Report with regard to discriminatory licensing restrictions.<sup>176</sup> Both regulations went into effect immediately on the date of enactment. As commentator Mark Cohen indicated: "Interestingly, China did not take a 'phased' or 'limited' approach to revoking these terms, such as by limiting the application of mandatory provisions to protect smaller businesses or creating a default provision that could be waived in writing."<sup>177</sup> This may reflect China's determination to

167. 中华人民共和国国务院令 第 709 号 [People's Republic of China State Council Decree No. 709] (Mar. 2, 2019) (Gov.CN).

168. Regulations of the People's Republic of China on the Administration of Import and Export of Technologies (2019 Revision) (promulgated by the St. Council, Dec. 10, 2001, effective Jan. 1, 2002, amended Jan. 8, 2011, Mar. 2, 2019) (Chinalawinfo) [hereinafter *TIER 2019*].

169. See *supra* text accompanying notes 40–44; see also Fraser Tennant, *Tempered TIER Tantalises US-China Trade War Thaw*, FINANCIER WORLDWIDE MAG. (Aug. 2019), <https://perma.cc/FY6S-SV7U> ("The changes to TIER removed the most controversial mandatory requirements on foreign investors, which were designed to protect the rights of Chinese parties to a technology transfer agreement.")

170. *TIER 2019*, *supra* note 168.

171. *Id.*

172. *Id.*

173. Tennant, *supra* note 169.

174. Regulations for the Implementation of the Law of the People's Republic of China on Chinese Foreign Equity Joint Ventures (promulgated by the St. Council, Sept. 20, 1983, effective Sept. 20, 1983, amended Feb. 19, 2014, Mar. 2, 2019) (Chinalawinfo) [hereinafter *JV Regulations 2019*].

175. *Id.*

176. See *supra* text accompanying notes 40–47.

177. Mark Cohen, *The TIER Is Revised...*, CHINA IPR (Mar. 18, 2019), <https://perma.cc/H38K->

resolve the trade dispute or the external pressure it faced for legal reform. However, neither the *TIER 2019* nor the *JV Regulations 2019* address contracts that were negotiated and entered into under the prior regime. Moreover, not all of the controversial provisions in the *JV Regulations 2014* were amended in 2019. For example, Article 14, requiring that the transferred technology be “applicable and advanced” remains in the *JV Regulations 2019*.<sup>178</sup> China may have maintained these provisions because it is confident that they do not obviously violate its WTO treaty obligations or because it has reached a consensus with the United States to revoke the most controversial provisions while maintaining others.

#### D. TRADEMARK LAW AND ANTI-UNFAIR COMPETITION LAW

In response to U.S. claims regarding China’s controversial IP practices, the Chinese government has elaborated on its constant IP reform and determination to protect IP.<sup>179</sup> On April 23, 2019, the Standing Committee of the People’s Congress in China passed amendments to both the Trademark Law<sup>180</sup> and the Anti-Unfair Competition Law.<sup>181</sup> As these amendments were passed with extraordinary speed along with the Foreign Investment Law mentioned above,<sup>182</sup> some believe that they were part of China’s response to the United States’ accusations of insufficient IP protection in the trade war.<sup>183</sup>

The amendments to the Trademark Law aim at curbing bad-faith application and registration<sup>184</sup> and increase damages.<sup>185</sup> Although foreign investors have been concerned about trademark squatting in China,<sup>186</sup> this is not the core IP issue in the

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178. *JV Regulations 2019*, *supra* note 174.

179. See, e.g., INFO. OFFICE OF THE STATE COUNCIL IN CHINA, *supra* note 93, at 34–38.

180. Zhonghua Renmin Gongheguo Shangbiao Fa (中华人民共和国商标法) [Trademark Law] (promulgated by the Standing Comm. Nat’l People’s Cong., Apr. 23, 2019, effective Nov. 1, 2019) (Chinalawinfo) [hereinafter Trademark Law].

181. Zhonghua Renmin Gongheguo Fan Buzheng Jingzheng Fa (中华人民共和国反不正当竞争) [Anti-Unfair Competition Law] (promulgated by the Standing Comm. Nat’l People’s Cong., Apr. 23, 2019, effective Apr. 23, 2019) (Chinalawinfo) [hereinafter Anti-Unfair Competition Law].

182. See, e.g., *Lightning Fast IP Reform in China: Trademark Law and Anti-Unfair Competition Law Amended*, HOGAN LOVELLS (May 2019), <https://perma.cc/7PW8-8X6B> (“These amendments come hot on the heels of a flurry of other recent IP law reforms, the most significant of which include China’s adoption of the new Foreign Investment Law . . . It is remarkable that the changes were passed without the customary multiple consultation rounds, reinforcing the trend of rapid developments of China’s IP legislation.”); see also Amanda Yang & Carol Wang, *China Trademark Law and Anti-Unfair Competition Law Amendments Approved*, ROUSE: THE MAG. (Apr. 25, 2019), <https://perma.cc/WXU8-5VKE> (“The speedy approval of the amendments to two important laws demonstrate that China is reinforcing the protection of Intellectual Property alongside its economic development.”). For a discussion of the Foreign Investment Law, see *supra* Part II.B.

183. See, e.g., Tian Lu, *China Amends Trade Mark and Unfair Competition Law to Tackle Trade Mark Squatting and Enforcement Issues*, THE IPKAT (Apr. 27, 2019), <https://perma.cc/D8NC-C5U3>.

184. Trademark Law, *supra* note 180, arts. 4, 19, 33, 44(1), 64.

185. *Id.* art. 44(4), (6).

186. See, e.g., Blanchard, Woo & Martina, *supra* note 156; Jyh-An Lee & Hui Huang, *Post-Application Evidence of Bad Faith in China’s Trade Mark Law*, 13 J. INTELL. PROP. L. & PRACTICE 400,

U.S.—China trade war.<sup>187</sup> Therefore, it is possible that these amendments had been uncontroversial in the country's IP reform agenda and that China can easily use the newly amended Trademark Law as a signal to the international community that, contrary to the U.S. claim that IP is not respected, China has endeavored to continuously carry out its IP reforms.

The amendments to the Anti-Unfair Competition Law have mostly focused on trade secret protection, which is more relevant to the trade war because the leakage of trade secrets and confidential information was mentioned multiple times in the 2018 Section 301 Report.<sup>188</sup> The 2019 Anti-Unfair Competition Law expands the scope of the definition of "trade secret" from "technical and operational information" to "technical, operational or other commercial information."<sup>189</sup> The 2019 amendments provide punitive damages for malicious infringement and increase the cap on civil liability from three million yuan to five million yuan.<sup>190</sup> The new law also substantially reduces the burden of proof for trademark owners in the civil procedure.<sup>191</sup> Furthermore, Article 9 of the new law stipulates that trade secret infringement may occur because of one's "electronic intrusion."<sup>192</sup> China seems to use this "electronic intrusion" provision to address the U.S. concerns of cyber intrusion and consequent trade secret infringement.<sup>193</sup> Nonetheless, the trade secret infringers envisioned in the 2019 Anti-Unfair Competition Law are private parties; therefore, the law does not actually respond to U.S. criticism regarding the Chinese government's aggressive role in facilitating cyber intrusion into American commercial networks.<sup>194</sup> Thus, it would not be surprising if the United States is not satisfied should this be China's only legislative and institutional response to the issue of cyber intrusions. Although the Anti-Unfair Competition Law is not a proper mechanism for coping with government-supported cyber intrusions, the expanded scope of what a trade secret is might indirectly provide better protection to foreign investors in the implementation not only of the Anti-Unfair Competition Law itself but also of trade secret-related provisions in the above-mentioned Foreign Investment Law and Administrative License Law.<sup>195</sup>

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400 (2018); Jyh-An Lee & Thomas Mehaffy, *Prior Right in the Chinese Trademark Law*, 37 EUR. INTELL. PROP. REV. 674, 674 (2015).

187. See generally USTR, 2018 SECTION 301 REPORT, *supra* note 13; USTR, UPDATE CONCERNING CHINA'S ACTS, POLICIES AND PRACTICES, *supra* note 14.

188. See, e.g., USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 1, 28, 5–6, 8, 12–13, 16, 18, 42–43, 52–54, 153, 154, 158, 162–63, 166–67, 171, 172, 174, 179; see also *supra* text accompanying notes 27, 99–110.

189. Anti-Unfair Competition Law, *supra* note 181, art. 9.

190. *Id.* art. 17.

191. *Id.* art. 32.

192. *Id.* art. 9(1).

193. See *supra* text accompanying notes 99–112.

194. See *supra* text accompanying notes 99, 105–107.

195. See *supra* text accompanying notes 150, 159.

### E. PHASE ONE TRADE AGREEMENT

China and the United States agreed upon terms for the so-called Phase One trade deal in December 2019 and signed the agreement on January 15, 2020.<sup>196</sup> The agreement addresses issues of IP, technology transfer, agriculture, financial services, currency, expanding trade, and dispute resolution.<sup>197</sup> The chapter on IP “addresses numerous longstanding concerns in the areas of trade secrets, pharmaceutical-related intellectual property, geographical indications, trademarks, and enforcement against pirated and counterfeit goods.”<sup>198</sup> Although the IP chapter obliges China to define “electronic intrusions” as acts of trade secret misappropriation,<sup>199</sup> which China has done in its 2019 Anti-Unfair Competition Law,<sup>200</sup> the cyber intrusion problem identified by the USTR has not yet been resolved.<sup>201</sup>

What is more noteworthy is the chapter on technology transfer. The two countries have agreed that any transfer or licensing of technology should be based on market terms and voluntariness.<sup>202</sup> Under the agreement, neither government should require or pressure technology transfer in acquisitions, joint ventures, or other investment transactions.<sup>203</sup> Nor should either government require or pressure technology transfer as a condition of approving any administrative or licensing requirements.<sup>204</sup> While China has already addressed these issues in its Foreign Investment Law,<sup>205</sup> this is the first time the country has agreed to prohibit forced technology transfer as a condition of market access in an international agreement.<sup>206</sup> China’s justification of these compromises was that the agreement is of mutual benefit and in line with its current reform.<sup>207</sup>

196. Economic and Trade Agreement Between the Government of the United States of America and the Government of the People’s Republic of China, Jan. 15, 2020, <https://perma.cc/26BU-LKWB> [hereinafter U.S.–China Economic & Trade Agreement].

197. *Id.*

198. USTR, AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE PEOPLE’S REPUBLIC OF CHINA—FACT SHEET (2019), <https://perma.cc/5WW7-92CR>; *see also* U.S.–China Economic & Trade Agreement, *supra* note 196, at ch.1.

199. U.S.–China Economic & Trade Agreement, *supra* note 196, art. 1.4.

200. *See supra* text accompanying note 194.

201. *See* James Politi, *What’s in the US-China “Phase One” Trade Deal?*, FIN. TIMES, Jan. 16, 2020, <https://perma.cc/BW5J-FZPX>; *see also* Shawn Donnan, Josh Wingrove & Saleha Mohsin, *U.S. and China Sign Phase One of Trade Deal*, BLOOMBERG NEWS, Jan. 16, 2020, <https://perma.cc/688T-C7TG> (“It does nothing to address areas like what U.S. authorities have long claimed is China’s state-backed hacking of American companies and government institutions.”).

202. U.S.–China Economic & Trade Agreement, *supra* note 196, art. 2.1.

203. *Id.* art. 2.2.

204. *Id.* art. 2.3.

205. *See supra* text accompanying notes 153–155.

206. USTR, *supra* note 198; *see also* Bob Davis, Lingling Wei & William Mauldin, *U.S., China Sign Deal Easing Trade Tensions*, WALL ST. J. (Jan. 15, 2020), <https://perma.cc/UF2R-NAQF> (“The two pages on technology transfer go beyond other agreements China has signed that dealt with that issue.”).

207. Xinhua, *China, US Agree on Text of Phase One Trade Deal*, ENGLISH.GOV.CN (Dec. 13, 2019), <https://perma.cc/U5FK-2EWB> (“The agreement is generally in line with the main direction of China’s deepening reform and opening-up as well as the internal needs for advancing the high-quality economic development. Implementation of the agreement will help enhance intellectual property rights protection,

Another remarkable U.S. achievement with regard to China’s controversial IP practices is obtaining China’s commitment to refrain from directing or supporting “outbound foreign direct investment activities . . . aimed at acquiring foreign technology with respect to sectors and industries targeted by its industrial plans that create distortion.”<sup>208</sup> Prior to this agreement, China had never responded to U.S. claims regarding this issue in any of its policies, laws, regulations, or announcements. However, the language of this commitment is quite imprecise. It is not clear how a party can prove that the other party directs or supports outbound investment at acquiring technologies targeted by its industrial plans.<sup>209</sup> Therefore, without an enforcement mechanism, this commitment may easily become a symbolic one.

### III. ANALYSIS

The recent IP trade war has provided an ideal lens through which to view the economic, technological, and institutional competition between the United States and China. It also reflects how China’s new economic strategy might reshape the international order and legal systems in countries such as the United States. This Part first probes into the nature of the IP trade war and then presents legal and policy analysis of the institutional origins, justifications, and legal bases associated with these IP disputes.

#### A. TECHNOLOGICAL WAR AND CHINA’S TECHNOLOGY DEVELOPMENT STRATEGY

Commentators have indicated that the very nature of the trade war between the two powers is the competition for technological leadership.<sup>210</sup> That understanding can be verified by USTR’s 2018 Section 301 Report, which based its claims partly on China’s plan to develop high-end technologies, ranging from information technology to energy technology and biotechnology, with the goal of becoming a

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improve the business environment, expand market access, better safeguard the legitimate rights and interests of all companies including foreign firms in China, and protect the legitimate rights and interests of Chinese firms in their economic and trade activities with the United States.”); *see also* Donna Borak, *Trump Signs First Stage of Trade Deal with China*, CNN POLS. (Jan. 15, 2020), <https://perma.cc/MG7J-7U9E> (reporting that China’s President Xi Jinping wrote to U.S. President Donald Trump that the trade deal was “good for China, the US and the whole world”).

208. U.S.—China Economic & Trade Agreement, *supra* note 196, art. 2.1.

209. *See supra* text accompanying notes 87–95.

210. *See, e.g.*, Anthea Roberts, Henrique Choer Moraes & Victor Ferguson, *The U.S.—China Trade War Is a Competition for Technological Leadership*, LAWFARE (May 21, 2019), <https://perma.cc/NY2Z-BCNU> (indicating that the U.S.—China trade war “masks a more significant ‘tech war’ over innovation in the 21st century”); Ruchir Sharma, *The Coming Tech Battle With China*, N.Y. TIMES (June 28, 2018), <https://perma.cc/2D28-EAXX> (“To contain Beijing, the United States and its allies are fighting back with a campaign of technoprotectionism, opening a perilous new front in the global trade battles.”); Andrew Sheng, *Knowledge Is King: China and the US Are Not in a Trade War, but a Race to the Next Stage of Technology*, S. CHINA MORNING POST (Aug. 17, 2018), <https://perma.cc/G6P6-NJQL> (“[T]rade disputes are only one of many channels to disrupt your competitor before they become stronger and more competitive in technological capability.”).

global leader in these fields.<sup>211</sup> The USTR has specifically expressed its concerns over China's *National Medium-and-Long-Term Science and Technology Development Plan Outline (2006)* ("MPL"), the *State Council Decision on Accelerating and Cultivating the Development of Strategic Emerging Industries* ("SEI Decision"), and the *Notice on Issuing "Made in China 2025"* ("Made in China 2025 Notice").<sup>212</sup> The USTR has also explicitly indicated that the Chinese government has been targeting U.S. high-tech companies with its various IP practices, such as forced technology transfer.<sup>213</sup> In this section, I examine China's technology policy in these planning documents and its relation to IP. I also explore why technological competition has become the core of the U.S.—China trade friction.

### 1. China's IDAR Approach to Technology Development

Although the above initiatives have threatened the long-lasting leading role of the United States in technological innovation, and China is doubtlessly eager to catch up with developing economies technologically,<sup>214</sup> there is no direct evidence that China intends to achieve its industrial ambition through the theft of U.S. IP. The United States has expressed significant concerns over China's articulated "Introducing, Digesting, Absorbing, and Re-innovating" ("IDAR") approach to foreign IP and technologies under the *MPL* and relevant schemes.<sup>215</sup> The IDAR strategy was first elaborated in the five-year plan issued by China's State Council in 2006 and has since been referenced by other documents of central ministries, provincial and municipal governments, and the CCP.<sup>216</sup> With the IDAR approach, the Chinese government plans to collaborate with domestic companies, aiming to introduce foreign technologies to China through various policy schemes so that the Chinese can digest and absorb the essence of the technology.<sup>217</sup> Ultimately, China has a chance to develop its own indigenous and internationally-competitive IP for core technologies, which is known as the process of "re-innovating."<sup>218</sup>

China's technology development policy has focused on certain industries with strategic value. In 2010, China's State Council identified "strategic emerging industries" ("SEIs") in its *SEI Decision*.<sup>219</sup> These industries include (1) energy-efficient and environmental technologies, (2) next-generation information technology, (3) biotechnology, (4) high-end equipment manufacturing, (5) new energy, (6) new materials, and (7) new energy vehicles.<sup>220</sup> The State Council further

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211. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 10–17.

212. *See id.*

213. *Id.* at 22.

214. *See, e.g.*, Peter K. Yu, *Five Oft-Repeated Questions About China's Recent Rise as a Patent Power*, 2013 CARDOZO L. REV. 78, 97 (2013) [hereinafter Yu, *Five Questions*].

215. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 11–14.

216. *Id.* at 13–14.

217. *Id.* at 12.

218. *Id.* at 13.

219. *See id.*

220. *See id.*

recommended fiscal and taxation policy that supports the development of these SEIs.<sup>221</sup> In 2015, the State Council announced the *Made in China 2025 Notice*, aiming to promote ten strategic industries in advanced technologies, including (1) advanced information technology, (2) robotics and automated machine tools, (3) aircraft and aircraft components, (4) maritime vessels and marine engineering equipment, (5) advanced rail equipment, (6) new energy vehicles, (7) electrical generation and transmission equipment, (8) agricultural machinery and equipment, (9) new materials, and (10) pharmaceuticals and advanced medical devices.<sup>222</sup> This initiative calls for China to seek global market share and dominance in the domestic market by achieving breakthroughs in major technological fields.<sup>223</sup> The final goal of the *Made in China 2025 Notice* is to establish the country as a world leader in advanced manufacturing and technologies.<sup>224</sup> These documents and initiatives have revealed China's strong ambitions in certain strategic technology sectors.

## 2. China's Technology Development Plans and IP

China's agenda for technological development has been attracting IP-related concerns from the United States for several years. One can hardly find any direct evidence of IP theft, either actual or intended, from the above-mentioned technology policies issued by the Chinese government. Although absorbing and digesting the essence of foreign technologies typically leads to imitation-based technological development,<sup>225</sup> such practices do not equal IP infringement.<sup>226</sup> Instead, absorptive capacity has been recognized as a major way for latecomer economies to generate new knowledge and innovation outcomes<sup>227</sup> and to catch up with technological frontiers.<sup>228</sup> Absorptive capability normally depends on the R&D expenditure and human capital of the receiving firms or countries.<sup>229</sup> It is common for developing

221. See *id.* at 13–14.

222. See *id.* at 14.

223. See *id.* at 15–16.

224. See *id.* at 16.

225. See, e.g., Fulvio Castellacci & Jose Miguel Natera, *The Dynamics of National Innovation Systems: A Panel Cointegration Analysis of the Coevolution Between Innovative Capability and Absorptive Capacity*, 42 RES. POL'Y 579, 579–80, 592 (2013).

226. See also Yu, *Five Questions*, *supra* note 214, at 98–99 (“Having a national goal of catching up with developed economies is very different from having an intellectual property strategy that seeks to steal other intellectual property.”).

227. See, e.g., Moon Young Chung & Keun Lee, *How Absorptive Capacity is Formed in a Latecomer Economy: Different Roles of Foreign Patent and Know-How Licensing in Korea*, 66 WORLD DEV. 678, 678–79 (2015).

228. See, e.g., Castellacci & Natera, *supra* note 225, at 580–81; Hiroyuki Odagiri, Akira Goto, Atsushi Sunami & Richard R. Nelson, *Introduction to INTELLECTUAL PROPERTY RIGHTS, DEVELOPMENT, AND CATCH-UP: AN INTERNATIONAL COMPARATIVE STUDY 1*, 4–5 (Hiroyuki Odagiri et al., eds., 2010). See also Jae-Yong Choung, Hye-Ran Hwang & Wichin Song, *Transitions of Innovation Activities in Latecomer Countries: An Exploratory Case Study of South Korea*, 54 WORLD DEV. 156, 157 (2014) (using South Korea as an example to illustrate that “[t]he catch-up innovation system based on the adaptation and imitation of foreign technology has saturated”).

229. See, e.g., Fu & Pietrobelli, *supra* note 15, at 1210. See also Choung, Hwang & Song, *supra*

countries to aim at building their own independent and indigenous technologies; accessing and absorbing foreign technologies usually represent the foundations of such capabilities.<sup>230</sup> The United States has had particular concerns that the Chinese government has played an active “top-down” role in facilitating the country’s IDAR strategy and other technology initiatives.<sup>231</sup> Nevertheless, such top-down industrial policy is quite common in developing countries. For example, the South Korean government used foreign exchange control and other policy tools to introduce foreign technologies and to foster its domestic R&D of critical technologies from the 1960s to 1980s.<sup>232</sup> Brazil also uses FDI regulations to create links between foreign and local firms and facilitate technology transfer from the former to the latter.<sup>233</sup>

Instead of ignoring IP protection and enforcement, China has in these policy initiatives demonstrated the importance of developing its own IP. The goal of “re-innovating” is to create indigenous IP, based on which Chinese enterprises can compete with other international players.<sup>234</sup> Commentators also suggest that China’s promotion of indigenous innovation will lead to more awareness of IP protection and to IP reform on a larger scale in the country.<sup>235</sup> Moreover, Chinese policymakers have recognized the economic and strategic significance of IP since the *MPL* declared in 2006 the goal of developing China as an innovation-based economy.<sup>236</sup> In contrast to its notorious reputation as a hotbed of piracy,<sup>237</sup> China has learned the importance of IP and international IP game rules and is aiming to use them for its own competitive advantage.<sup>238</sup> An increasing number of Chinese companies have evidenced that they can build their international competitiveness by developing their own IP.<sup>239</sup> Huawei is one of example of a Chinese company that relies heavily on

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note 228, at 157 (“Latecomers use their own technological capabilities to embrace, absorb, and improve on the advanced countries’ technologies.”).

230. See, e.g., Chung & Lee, *supra* note 227, at 679–80; Gervais, *supra* note 15, at 48; see also Endeshaw, *supra* note 7, at 296 (noting that technology transfer from the industrialized countries is essential for the advancement of developing economies, including China’s).

231. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 11.

232. Chung & Lee, *supra* note 227, at 680.

233. See, e.g., Fu & Pietrobelli, *supra* note 15, at 1207–08.

234. See *supra* text accompanying note 218.

235. See, e.g., Yu, *Five Questions*, *supra* note 214, at 92.

236. Peter K. Yu, *A Half-Century of Scholarship on the Chinese Intellectual Property System*, 67 AM. U. L. REV. 1045, 1080 (2018) [hereinafter Yu, *Scholarship on Chinese IP*].

237. See, e.g., Jyh-An Lee, *Tripartite Perspective on the Copyright-Sharing Economy in China*, 35 COMPUTER L. & SECURITY REV. 434, 435 (2019) [hereinafter Lee, *Copyright-Sharing Economy*] (noting China’s longstanding IP piracy problem); Bryan Mercurio, *The Protection and Enforcement of Intellectual Property in China Since Accession to the WTO: Progress and Retreat*, 1 CHINA PERSP. 1, 23 (2012) (stating that China is “the world’s leading IP infringer”); Xuan-Thao Nguyen, *The China We Hardly Know: Revealing the New China’s Intellectual Property Regime*, 55 ST. LOUIS U. L.J. 773, 786–88 (2011) (describing large scale of pirated and counterfeiting products in China).

238. Cf. Jyh-An Lee, *The New Silk Road to Global IP Landscape*, in LEGAL DIMENSIONS OF CHINA’S BELT AND ROAD INITIATIVE 417, 421 (Lutz-Christian Wolff & Chao Xi eds., 2016) (“China has been notorious for its domestic piracy and counterfeit problems. Nevertheless, . . . China will reach a critical point where the protection and enforcement of IP will be in its own interests.”).

239. Cf. Daniel J. Gervais, *Policy Calibration and Innovation Displacement*, in THE DEVELOPMENT AGENDA: GLOBAL INTELLECTUAL PROPERTY AND DEVELOPING COUNTRIES 51, 69 (Neil Weinstock



creation, commercialization, and utilization of IP in its business models.<sup>240</sup>

Nevertheless, even though China's numerous technology development plans did not indicate any intention of IP infringement or theft, the ambition therein has worried the leading technological power in the world—the United States. The unwritten hypothesis of the 2018 Section 301 Report, which scrutinizes China's series of technology development plans,<sup>241</sup> is that the only way for China to achieve its objectives of market share and a leading technological position is to steal IP from the United States,<sup>242</sup> otherwise, the report seems to assume, China could never compete with the United States in a number of strategic technology sectors. U.S. Vice President Pence has elaborated on the link between China's unfair IP practices and its *Made in China 2025* program:

Now, through the “Made in China 2025” plan, the Communist Party has set its sights on controlling 90 percent of the world's most advanced industries, including robotics, biotechnology, and artificial intelligence. To win the commanding heights of the 21st century economy, Beijing has directed its bureaucrats and businesses to obtain American intellectual property.<sup>243</sup>

Nonetheless, it is quite challenging to prove this hypothesis. This might explain why the USTR has endeavored to link certain IP theft incidents to the government's technology development plan.<sup>244</sup> A notable example, presented in the 2018 Section 301 Report, asserted that China stole Westinghouse's AP1000 nuclear power design technology via a JV requirement, forced technology transfer, and cyber intrusion based on the “indigenization with outside support” approach identified in its *12th Five-Year Plan for Energy Technology (2011–2015)*.<sup>245</sup>

A noteworthy development on the Chinese side is that the government has avoided mentioning the *Made in China 2025* program since June 2018 because it has aroused suspicion in the United States and Europe in the midst of the trade war.<sup>246</sup>

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Netanel ed., 2009) (“Chinese . . . companies compete head-to-head with innovation-based Western enterprises . . . in certain industries.”).

240. Xue Lan & Liang Zheng, *Relationships Between IPR and Technology Catch-Up: Some Evidence from China*, in *INTELLECTUAL PROPERTY RIGHTS, DEVELOPMENT, AND CATCH-UP: AN INTERNATIONAL AND COMPARATIVE STUDY* 317, 350–55 (Hiroyuki Odagiri et al. eds., 2010).

241. See *supra* text accompanying note 212.

242. Cf. Gordon & Milhaupt, *supra* note 69, at 223 (“Among the policy tools actually or allegedly being used by the Chinese central and local governments to implement MIC 2025 are forced technology transfers in exchange for market access, government-backed investment funds, and acquisition of foreign technology through outbound investment.”).

243. Pence, *supra* note 1; see also WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *supra* note 8, at 2 (asserting that China's IDAR policy has been carried out through IP theft).

244. See, e.g., USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 166 (citing SolarWorld's viewpoint that “Chinese hacking and technology theft is pervasive . . . driven by China's Five Year Plans, which target specific high-tech and developing industries” and linking the theft of Westinghouse's AP 1000 design to China's *12th Five-Year Science and Technology Development Plan*).

245. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 166–67.

246. See, e.g., USTR, UPDATE CONCERNING CHINA'S ACTS, POLICIES AND PRACTICES, *supra* note 14, at 7–8; Issaku Harada, *Beijing Drops “Made in China 2025” From Government Report*, NIKKEI ASIAN REV. (Mar. 6, 2019), <https://perma.cc/6BFB-389W>; Orange Wang, *Beijing No Longer Requires Local*

Nonetheless, given China's continuous push for technological development, the United States does not seem to appreciate its endeavors to deemphasize the *Made in China 2025* plan.<sup>247</sup>

### 3. Innovation Imperative

China is not the only country that has ambitious industrial plans,<sup>248</sup> but why is it the only one drawing reproach from the United States? Other than China's aggressive approach to accessing foreign technologies, recent international relations theory on the so-called "innovation imperative" provides a valuable lens through which the IP and technological war between these two major powers can be understood. According to this theory, rising powers—and China in particular—face an "innovation imperative" that compels them to acquire and create new technologies from developed economies.<sup>249</sup> Rising powers have no choice but to engage in advanced technological innovation in order to further their economic development and national interest.<sup>250</sup> In order to avoid the "middle-income trap," rising states normally invest heavily in the acquisition and creation of new technologies.<sup>251</sup> On the other hand, dominant states or developed economies have maintained their political, economic, and military lead based on technology and innovation.<sup>252</sup> They have a strong motive to respond to the threatening innovation activities of rising states.<sup>253</sup> Therefore, tensions between rising states and dominant states occur when the former's catching-up activities threaten the latter's strategic interests in technological innovation.<sup>254</sup> Consequently, a dominant state may constrain a rising state's innovation-related activities, such as acquisition of technologies.<sup>255</sup>

The "innovation imperative" theory may well explain, at least in part, the IP trade war discussed in this Article. China is now in the process of crossing over from a pirating nation to an innovation-driven economy,<sup>256</sup> and it has gradually become a

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*Governments to Work on "Made in China 2025," But Hi-Tech Ambitions Remain*, S. CHINA MORNING POST (Dec. 13, 2018), <https://perma.cc/B5RN-76GC>.

247. USTR, UPDATE CONCERNING CHINA'S ACTS, POLICIES AND PRACTICES, *supra* note 14, at 8–9.

248. See, e.g., KOREAN MINISTRY OF SCI. & TECH., VISION 2025: KOREA'S LONG-TERM PLAN FOR SCIENCE AND TECHNOLOGY DEVELOPMENT 15 (2000) ("[B]y 2025, Korea should secure scientific and technological competitiveness in selected areas that are comparable to the level of G-7 countries."); TECH. INFO., FORECASTING & ASSESSMENT COUNCIL, TECHNOLOGY VISION 2035, at 105–06 (2015), <https://perma.cc/3DU9-JCXP> ("India will have to become a major player in the technology production game and suitably leverage its market attractiveness.").

249. Kennedy & Lim, *supra* note 16, at 556.

250. *Id.*

251. *Id.* at 555–56.

252. *Id.* at 555.

253. *Id.* at 559.

254. *Id.* at 558.

255. *Id.* at 557.

256. See, e.g., Peter K. Yu, *The Global Intellectual Property Order and Its Undetermined Future*, 1 WIPO J. 1, 10–15 (2009); Peter K. Yu, *The Rise and Decline of the Intellectual Property Powers*, 34 CAMPBELL L. REV. 525, 529–32 (2012); see also Lee, *Copyright-Sharing Economy*, *supra* note 237, at 435 (noting that China is at the crossroad of imitation and innovation).

fast-growing economy with high technological and innovation capabilities.<sup>257</sup> Given the tremendous royalties the country has paid to foreign IP owners,<sup>258</sup> China has evidently realized that innovation is the only way to maintain its economic growth and advance from being a low-level producer;<sup>259</sup> likewise, Chinese companies have begun to realize that innovation, instead of imitation and low-end production, is the only way to generate value and international competitiveness.<sup>260</sup> One can also easily find the “innovation imperative” faced by the country in its *Made in China 2025* initiative, a document that has been scrutinized and criticized by the United States in the trade war.<sup>261</sup> In the *Made in China 2025* program, China wishes to shift its industrial landscape from low-value and low-end production to advanced manufacturing, which is currently dominated by the developed world.<sup>262</sup>

However, the strategic technology sectors in the Chinese government’s various plans happen to overlap with the fields in which the United States is a global leader. Information technology, robotics and automated manufacturing, biotechnology, and new energy are all sectors that China is ambitious to develop,<sup>263</sup> and in which the United States wants to maintain its lead. China’s various innovation and acquisition activities have thus threatened the strategic interests of the United States, leading to conflict between Beijing and Washington.<sup>264</sup> What is worse is that China may misappropriate American enterprises’ confidential information via cyber intrusion and other aggressive approaches, which aggravates the tension.<sup>265</sup> Given the strategic value of innovation and technology in this international political economy, the trade war between these two countries seems inevitable.

257. See, e.g., DAN BREZNITZ & MICHAEL MURPHREE, *RUN OF THE RED QUEEN: GOVERNMENT, INNOVATION, GLOBALIZATION, AND ECONOMIC GROWTH IN CHINA* 4 (2011); Gervais, *supra* note 239, at 67; Yu, *Five Questions*, *supra* note 214, at 96; Yu, *Scholarship on Chinese IP*, *supra* note 236, at 1103–05; see also Wernau, *supra* note 32 (quoting the annual survey of the European Union Chamber of Commerce in China that sixty-two percent of respondents indicated that “Chinese firms were just as innovative as European firms, or even more so”).

258. Yu, *Scholarship on Chinese IP*, *supra* note 236, at 1085.

259. See, e.g., Mercurio, *supra* note 237; see also Kennedy & Lim, *supra* note 16, at 561 (“While China has sought to boost domestic innovation for decades, its efforts have increased dramatically in the twenty-first century, reflecting a strong conviction that the country must move up the economic value chain.”).

260. See, e.g., Yu, *Scholarship on Chinese IP*, *supra* note 236, at 1106.

261. See, e.g., *supra* text accompanying note 212; Kristen Hopewell, *What is “Made in China 2025”—and Why Is It a Threat to Trump’s Trade Goals?*, WASH. POST (May 3, 2018), <https://perma.cc/4AW3-YR68>.

262. Hopewell, *supra* note 261.

263. See *supra* text accompanying notes 219–224.

264. Kennedy & Lim, *supra* note 16, at 562.

265. See, e.g., Lee, *China and International Cybersecurity*, *supra* note 104, at 952–53 (“[S]ome American intelligence officials suspect that the hacking and the stealing of American intellectual property has become constitutive of an important strategy by which China hopes to maintain its high economic growth rate.”).

## B. THE CHANGING NATURE OF THE U.S.—CHINA IP DISPUTES

IP has been one of the main issues in U.S.—China trade relations since trade with China emerged as an important part of the U.S. policy portfolio in the late 1980s.<sup>266</sup> Over the past three decades, the United States has complained that China is the world's main source of production for pirated and counterfeit products. China was first charged by the United States under Section 301 of the Trade Act of 1974 for insufficient IP protection in 1991.<sup>267</sup> At that time, the United States threatened to increase the tariff on Chinese imports by 100 percent.<sup>268</sup> The USTR further declared a plan for retaliatory tariffs to be imposed on a list of Chinese products worth 1.4 billion dollars.<sup>269</sup> This led to the Sino-American Memorandum of Understanding on the Protection of Intellectual Property, signed by the two countries in January 1992.<sup>270</sup> Nevertheless, the two countries almost initiated a trade war over the IP disputes that occurred between 1994 and 1996.<sup>271</sup> Both countries threatened to impose trade sanctions on one another as a result of their disagreements over China's progress in protecting foreign IP.<sup>272</sup> In 1995, the United States demanded that China shut down twenty-nine factories that were purportedly producing pirated compact and laser discs and, in return, China threatened to impose sanctions on U.S. products.<sup>273</sup> China also raised the possibility of retaliation against U.S. automobile manufacturers and the suspension of new cooperation with U.S. chemical, audiovisual, and automobile companies if the United States imposed the threatened sanctions.<sup>274</sup> In 1996, the Clinton administration threatened to impose 100 percent tariffs on two billion dollars' worth of imports from China if China did not enforce its IP laws.<sup>275</sup> The trade war did not occur because the two countries eventually

266. See, e.g., MERTHA, *supra* note 127, at 54.

267. See, e.g., *id.* at 43; Susan K. Sell, *Intellectual Property Protection and Antitrust in the Developing World: Crisis, Coercion, and Choice*, 49 INT'L ORG. 315, 329 (1995).

268. See, e.g., MERTHA, *supra* note 127, at 43.

269. *Id.* at 44.

270. See, e.g., CHEUNG, *supra* note 6, at 32–33; Mercurio, *supra* note 237, at 24 (2012); Naigen Zhang, *Intellectual Property Law Enforcement in China: Trade Issues, Policies and Practices*, 8 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 63, 72–73 (1997).

271. See, e.g., Zhang, *supra* note 270, at 74; see also Peter K. Yu, *Intellectual Property, Economic Development, and the China Puzzle*, in INTELLECTUAL PROPERTY, TRADE AND DEVELOPMENT: STRATEGIES TO OPTIMIZE ECONOMIC DEVELOPMENT IN A TRIPS-PLUS ERA 173, 186 (Daniel J. Gervais ed., 1st ed. 2007) [hereinafter Yu, *China Puzzle*] (“In the late 1980s and early 1990s, the US government repeatedly threatened China with a series of economic sanctions, trade wars, non-renewal of most-favoured-nation status, and opposition to China's entry into the WTO.”).

272. See, e.g., MERTHA, *supra* note 127, at 49, 52; Zhang, *supra* note 270, at 74.

273. See, e.g., MERTHA, *supra* note 127, at 50; Richard J. Ansson, Jr., *International Intellectual Property Rights, the United States, and the People's Republic of China*, 13 TEMP. INT'L & COMP. L.J. 1, 11 (1999); Endeshaw, *supra* note 7, at 315; see also Andrew Mertha & Robert Pahre, *Patently Misleading: Partial Implementation and Bargaining Leverage in Sino-American Negotiations on Intellectual Property Rights*, 59 INT'L ORG. 695, 703 (2005) (noting that U.S. demands that China shut down pirated CD plants eventually became the most important component in the two countries' 1996 agreement).

274. See, e.g., Ansson, *supra* note 273, at 11; Endeshaw, *supra* note 7, at 315.

275. See, e.g., Robert Boxwell, *How China's Rampant Intellectual Property Theft, Long Overlooked by US, Sparked Trade War*, S. CHINA MORNING POST (Oct. 28, 2018), <https://perma.cc/L9TM-SRNF>.

entered into two agreements in 1995 and 1996 respectively: (1) the Agreement Regarding Intellectual Property, and (2) the People’s Republic of China Implementation of the 1995 Intellectual Property Rights Agreement, aiming to strengthen IP enforcement measures in China and to facilitate American businesses’ access to the Chinese market.<sup>276</sup> Even so, since China joined the WTO in 2001, the United States has claimed several times that China had violated the TRIPS agreement under the WTO framework.<sup>277</sup> The USTR has also put China on the priority watch list multiple times in its Special 301 Report, with a view that China’s pervasive IP infringement is unacceptable.<sup>278</sup>

Before President Trump’s August 2017 memorandum to the USTR initiated the current IP trade war, U.S. IP claims against China had focused on the pervasive counterfeiting and piracy activities in the country, which had caused enormous losses to the U.S. economy.<sup>279</sup> The conventional claims made by the United States before the current trade war were aimed at China’s inactive enforcement of IP laws or ignorance of widespread IP infringement in the country.<sup>280</sup>

Although large-scale counterfeiting and piracy activities still concern foreign businesses,<sup>281</sup> U.S. claims against China’s IP regime have shifted in a different direction. The United States now claims that—for the purpose of economic and technological development—the Chinese government has actively allocated various state resources to help Chinese enterprises obtain key technologies and confidential information from U.S. companies.<sup>282</sup> The state-planned and directed strategies have

276. See, e.g., MERTHA, *supra* note 127, at 52; Boxwell, *supra* note 275; Ke Shao, *What May Validate Intellectual Property in the Traditional Chinese Mind? Examining the US–China IP Disputes Through a Historical Inquiry*, 1 J. INFO. L. & TECH. 1, 1 n.1, 4–5 (2006), <https://perma.cc/3TV2-XNP5>; Zhang, *supra* note 270, at 74–75; Mercurio, *supra* note 237, at 25; Yu, *China Puzzle*, *supra* note 271, at 186–87; see also Yiqiang Li, *Evaluation of the Sino-American Intellectual Property Agreements: A Judicial Approach to Solving the Local Protectionism Problem*, 10 COLUM. J. ASIAN L. 391, 393 (1996) (introducing the negotiation and signing of the 1995 and 1996 agreements); Jiarui Liu, *The Tough Reality of Copyright Piracy: A Case Study of the Music Industry in China*, 27 CARDOZO ARTS & ENT. L.J. 621, 625 (2010) (“[E]ach time [in 1991, 1995, and 1996], the two countries managed to avoid a trade war at the last minute by reaching an agreement in which China undertook to take further legislative and enforcement initiatives to improve intellectual property protection and the United States agreed to withhold the sanctions for the time being.”).

277. See, e.g., CHEUNG, *supra* note 6, at 33, 35–36; Ruth L. Okediji, *TRIPS and Its Methods: The Resilience of Developing Country Implementation of Intellectual Property Norms*, in *INTELLECTUAL PROPERTY, TRADE AND DEVELOPMENT: STRATEGIES TO OPTIMIZE ECONOMIC DEVELOPMENT IN A TRIPS-PLUS ERA*, *supra* note 127, at 241, 247; Yu, *China Puzzle*, *supra* note 271, at 188; Yu, *Scholarship on Chinese IP*, *supra* note 236, at 1075–79; Zhou, *supra* note 6.

278. See, e.g., CHEUNG, *supra* note 6, at 35–36; MERTHA, *supra* note 127, at 41–47.

279. See *supra* text accompanying notes 11–13.

280. See, e.g., Kennedy & Lim, *supra* note 16, at 566 (noting that “enforcement remained weak and IP theft remained widespread [in China]”).

281. See, e.g., WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *supra* note 8, at 5; Boxwell, *supra* note 275.

282. See, e.g., USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 165 (“China uses the intelligence resources at its disposal to further the commercial interests of Chinese state-owned enterprises to the detriment of their foreign partners and competitors.”); Pence, *supra* note 1 (“[T]he Chinese Communist Party has also used an arsenal of policies inconsistent with free and fair trade, including tariffs, quotas,

led to various controversial IP practices against U.S. companies that base their competitive advantages on IP and technologies. Such concerns appeared throughout the 2018 Section 301 Report.<sup>283</sup> To put it differently, the focus of the IP disputes between these two countries has shifted: from China's inactive enforcement of U.S. companies' IP rights to its active involvement in acquiring IP and confidential information from U.S. companies. While the Chinese IP market was once viewed as an anarchy in which only laws of the jungle apply,<sup>284</sup> the current claim made by the United States is that the Chinese government has inappropriately twisted the IP market using various mechanisms, such as SOEs, to help domestic industries acquire technologies from the United States.

The USTR's 2018 Section 301 Report also reveals that China's approach to learning new technologies from the western world has shifted, from low-end imitation to obtaining advanced technologies through corporate control. As corporations are the main actors in the economy and owners of IP, controlling a firm's equity means controlling its IP and technology. With regard to inbound investment, foreign investors inevitably share their IP with Chinese partners under the JV corporate structure.<sup>285</sup> Additionally, outbound investment has been a vehicle for the Chinese to acquire foreign technologies.<sup>286</sup> Through inbound investment regulations and outbound investment strategies, China has obtained or accessed foreign technologies and IP via the corporate equity structure. This shifted strategy illustrates that China has improved its capability to compete with western economies in technological development.

### C. INSTITUTIONAL COMPETITION

China's controversial IP practices are largely rooted in the country's political economy. As Professor Peter Yu has rightfully pointed out, China has provided a

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currency manipulation, forced technology transfer, intellectual property theft, and industrial subsidies that are handed out like candy to foreign investment. These policies have built Beijing's manufacturing base, at the expense of its competitors—especially the United States of America.”).

283. See, e.g., USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 164 (“China relies primarily on a state-led approach to technology development and economic growth. Through an extensive planning system, China identifies certain sectors and technologies for development and fosters national champions to achieve dominance in both domestic and global markets. China's industrial plans and innovation goals, such as Made in China 2025, aim to provide support and assistance through the use of state resources to Chinese companies and commercial sectors. At the same time, China maintains an extensive state sector and uses state-invested enterprises and other mechanisms as instruments to achieve the government's economic objectives.”).

284. See, e.g., Liu, *supra* note 276, at 625–26 (noting the copyright anarchy and the high piracy rate in the Chinese copyright market); Nguyen, *supra* note 237, at 789 (“China's piracy issue lies in China's failure to recognize private intellectual property rights and the absence of a strong enforcement mechanism.”); see also MARTIN K. DIMITROV, PIRACY AND THE STATE: THE POLITICS OF INTELLECTUAL PROPERTY RIGHTS IN CHINA 97 (2009) (describing the past lawless status of IP enforcement in China).

285. See *supra* text accompanying notes 18–26.

286. See *supra* text accompanying notes 61–76; WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *supra* note 8, at 19.

case of an IP regime and practices in a non-market economy.<sup>287</sup> With the changing nature of the U.S.—China IP disputes, as discussed above, what the United States has been criticizing is not only China’s IP practices *per se*. Rather, it criticizes the institutional framework that China has built, in which the state and the CCP use a wide range of policy tools to achieve the country’s economic objectives by intervening in market activities.<sup>288</sup> SOEs, in particular, have been the primary vehicles for the party-state to implement its economic policies.<sup>289</sup> Through equity ownership and the appointment of senior SOE management, the government and CCP effectively control SOEs and use them to implement various public policies.<sup>290</sup> The SASAC, the government agency that controls the Chinese SOEs, is discernibly “the world’s largest controlling shareholder of one of the most powerful economic actors in the world.”<sup>291</sup> China also uses numerous formal and informal pathways—so-called “institutional bridging”—to link various public and private entities with one another.<sup>292</sup> With such institutional arrangements pooling gigantic resources to fulfill the country’s political and economic objectives, China has threatened the United States’ IP-based technological advantage.

U.S. Vice President Pence’s speech on October 4, 2014, at the Hudson Institute, illustrated well the United States’ concerns about China’s development associated with the country’s unique institutional structure and signaled new U.S. policy toward China in the midst of the trade war.<sup>293</sup> Pence warned that U.S. grievances extended far beyond the trade imbalance.<sup>294</sup> He stated that:

287. Yu, *Scholarship on Chinese IP*, at 1121, *supra* note 236, at 1121.

288. See, e.g., USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 84 (“Through the CCP, the Chinese government exercises additional control over SOE behavior. Top executives of SOEs are generally CCP members, cycle between corporate and government positions, and are subject to evaluation by the CCP organization Department. SOEs also host CCP committees that actively participate in corporate governance.”); *id.* at 164 (“China’s government-directed cyber capabilities exist alongside an institutional framework that provides state-invested enterprises and national champions with privileged access to various forms of Chinese government support and information.”); Kennedy & Lim, *supra* note 16, at 571 (“China’s particular approach to promoting innovation has been criticized, particularly in respect of the degree of government intervention involved.”).

289. This is the so-called “policy channeling,” referring to “government ownership of an SOE as a means of implementing social or industrial policy.” See Curtis J. Milhaupt & Mariana Pargendler, *Governance Challenges of Listed State-Owned Enterprises Around the World: National Experiences and a Framework for Reform*, 50 CORNELL INT’L L.J. 473, 535 (2017); see also Gordon & Milhaupt, *supra* note 69, at 212 (“[T]he SOEs facilitate ‘policy channeling’—the use of state-controlled companies (and non-controlling private shareholders’ investments) as a means of implementing public policy.”); Wernau, *supra* note 32 (reporting a survey conducted by the European Union of Commerce in China, which found that forced technology transfer took place more often in the case of joint ventures with SOEs).

290. See, e.g., Gordon & Milhaupt, *supra* note 69, at 214–17; Milhaupt & Pargendler, *supra* note 289, 525–26; Wu, *China, Inc.*, *supra* note 76, at 280–82.

291. Wu, *China, Inc.*, *supra* note 76, at 271.

292. Li-Wen Lin & Curtis J. Milhaupt, *We Are the (National) Champions: Understanding the Mechanisms of State Capitalism in China*, 65 STAN. L. REV. 697, 707–11, 716–21 (2013).

293. Pence, *supra* note 1.

294. *Id.* See also Keith Johnson & Elias Groll, *It’s No Longer Just a Trade War Between the U.S. and China*, FOREIGN POL’Y (Oct. 4, 2018), <https://perma.cc/MJ7C-RJ5W> (noting that Pence’s remarks revealed that “what began as a tariff war is hardening into a long-term standoff on many levels”).

Beijing is employing a whole-of-government approach to advance its influence and benefit its interests. It's employing this power in more proactive and coercive ways to interfere in the domestic policies of this country and to interfere in the politics of the United States.<sup>295</sup>

Pence raised an alarm about China's influence over a broad range of sectors, from military to business and academia.<sup>296</sup> Although Pence's remarks covered issues much broader than IP, the signal from the remarks is clear: The present U.S. administration is prepared to take a much tougher stance on China than the previous ones, including through tariffs and increased military spending.<sup>297</sup> The China described in Pence's remarks is a monster—even more powerful than Leviathan—pooling all kinds of resources to attack the United States in all respects. This accusation reveals that the very nature of this trade war is not only that of a technological war but also of an institutional competition between the two states.

In his seminal work *The End of History and the Last Man*, Professor Francis Fukuyama argues that, following the Cold War and the collapse of the Soviet Union, “[a]ll countries undergoing economic modernization must increasingly resemble one another.”<sup>298</sup> Eventually, as Fukuyama wrote several years after the publication of that work, these changes are apt to “blur the boundaries between civilizations and promote a homogeneous set of political and economic institutions among the world's most advanced countries.”<sup>299</sup> He therefore contends that “[a]t the end of history, there are no serious ideological competitors left to liberal democracy,” which, according to Fukuyama, is superior to “monarchy, aristocracy, theocracy, fascism, communist totalitarianism, or whatever ideology [people] happened to believe in.”<sup>300</sup> According to Fukuyama, there is no set of economic and political arrangements superior to liberal democracy.

Nevertheless, through the study of recent U.S. policy toward and criticism of China, it is evident that the end of history described by Fukuyama has not yet come. China has created a new institution that threatens U.S. national interests based on liberal democracy and market economy.<sup>301</sup> Ironically, although the mainstream thought in the western world is that a planned economy is highly inefficient and inferior to a market economy,<sup>302</sup> what concerns the United States most about the

295. Pence, *supra* note 1.

296. *Id.*

297. *Id.* (“We’ve been making the strongest military in the history of the world stronger still. Earlier this year, President Trump signed into law the largest increase in our national defense since the days of Ronald Reagan—\$716 billion to extend the strength of the American military to every domain. . . . At President Trump’s direction, we’re also implementing tariffs on \$250 billion in Chinese goods, with the highest tariffs specifically targeting the advanced industries that Beijing is trying to capture and control. And as the President has also made clear, we will levy even more tariffs, with the possibility of substantially more than doubling that number, unless a fair and reciprocal deal is made.”)

298. FRANCIS FUKUYAMA, *THE END OF HISTORY AND THE LAST MAN* xiv–xv (1992).

299. Francis Fukuyama, *Second Thoughts: The Last Man in a Bottle*, NAT’L INT. 16, 19–20 (1999).

300. FUKUYAMA, *supra* note 298, at 211.

301. See, e.g., *supra* text accompanying notes 288–297.

302. See, e.g., PAUL MILGROM & JOHN ROBERTS, *ECONOMICS, ORGANIZATION AND MANAGEMENT*



current IP trade war, or about the trade war generally, is that a new form of planned economy<sup>303</sup> has shaken the foundations of the global economic order built by the world's leading democracies.<sup>304</sup> China's supposedly unfair IP practices are just one aspect of the country's planned economy, which is much larger and more influential than it was during the Cold War.

#### D. LEGAL BASES FOR CLAIMING UNFAIR IP PRACTICES

As mentioned above, the United States' claims against China's IP system have shifted from complaints about inadequate IP enforcement to accusations that the party-state actively facilitates the acquisition of various kinds of information and technology from the United States.<sup>305</sup> However, this new type of accusation may not completely fit into the current international IP regime. While the United States can claim that China's laws, policies, or practices of unfair technology transfer and discriminatory licensing restrictions violate the TRIPS agreement,<sup>306</sup> it is very challenging for a complainant to find a legal basis to claim that either state-backed outbound acquisition of equity and technologies or cyber intrusions violate any TRIPS obligation. In other words, even though the United States claims that these are all unfair IP practices, the current international IP treaties in general, and TRIPS in particular, are quite limited in their ability to address those latter practices.<sup>307</sup>

From a procedural perspective, a complainant in the WTO dispute settlement process needs to identify another contracting member's challengeable "measure."<sup>308</sup> A "measure" is defined to include "acts setting forth rules or norms that are intended to have general and prospective application."<sup>309</sup> Moreover, the "instruments of a

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12–15 (1992); Alan S. Greenspan, *Thoughts About the Transitioning Market Economies of Eastern Europe and the Former Soviet Union*, 6 DEPAUL BUS. L.J. 1, 4–8 (1993); F.A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519, 521–24 (1945); Thomas W. Merrill, *The Property Strategy*, 160 U. PA. L. REV. 2061, 2081–82 (2012); see also Charlie Xiao-Chuan Weng, *Assessing the Applicability of the Business Judgment Rule and the "Defensive" Business Judgment Rule in the Chinese Judiciary: A Perspective on Takeover Dispute Adjudication*, 34 FORDHAM INT'L L.J. 124, 124 (2010) (positing that "corporate China has been struggling to dismantle the inefficient management systems formed in the era of the planned economy" since the country entered the WTO in 2001).

303. See, e.g., Wu, *China, Inc.*, *supra* note 76, at 276–78 (describing how China marshals various resources to implement its economic plans and affect market supply and capacity).

304. See, e.g., *supra* Parts III.A, III.B, and text accompanying notes 288–297.

305. See *supra* text accompanying notes 282–284.

306. See *supra* text accompanying notes 52–60.

307. Cf. Brewster, *supra* note 4, at 1423–24 (indicating that forced technology transfer "is a distinct issue from existing WTO trade law").

308. Under Article 6.2 of the WTO's Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU), a WTO Member can only challenge "specific measures" that are maintained by another WTO Member. DSU, Dispute Settlement Rules: Understanding on Rules and Procedures Governing the Settlement of Disputes, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, THE LEGAL TEXTS: THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 354 (1999), 1869 U.N.T.S. 401, 33 I.L.M. 1226 (1994).

309. Appellate Body Report, *United States—Sunset Review of Anti-Dumping Duties on Corrosion-Resistant Carbon Steel Flat Products from Japan*, ¶ 82, WTO Doc. WT/DS244/AB/R (adopted Jan. 9, 2004) (citation omitted). See generally SIMON LESTER, BRYAN MERCURIO & ARWEL DAVIES, WORLD

Member containing rules or norms could constitute a ‘measure,’ irrespective of how or whether those rules or norms are applied in a particular instance.”<sup>310</sup> Legislation and judicial decisions constitute a typical type of challengeable measure for WTO dispute resolutions. However, it is much more challenging for a contracting party to claim that another party’s state-backed outbound acquisition of equity and technologies or cyber intrusions are also “measures” according to the above definition. As Professor Mark Wu has pointed out, it is time for the WTO to consider “a predictable and fair set of legal rules to address the new trade-distortive behavior” arising out of China’s distinctive political economy.<sup>311</sup>

From an IP perspective, the above-mentioned limitation indicates either that TRIPS and other international trade rules are outdated or that assertions regarding outbound acquisition or cyber intrusions should not be governed by domestic and international IP laws at all. The difficulty in finding an appropriate legal basis for such accusations also partially explains why the United States has felt compelled to engage in a trade war, instead of resolving all these issues in existing institutions such as the WTO.<sup>312</sup> In this section, I investigate other possible legal alternatives for the United States to resolve its IP-related claims and whether IP is the ideal arena in which to wage this war.

### 1. National Security Review

Although the United States is generally open to foreign investments,<sup>313</sup> those investments that concern national security must be reviewed by the Committee on Foreign Investment in the United States (“CFIUS”).<sup>314</sup> CFIUS is required to review all “covered” foreign investment transactions,<sup>315</sup> including a “merger, acquisition, or

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TRADE LAW: TEXT, MATERIALS, AND COMMENTARY 177 (3d ed. 2018); Alan O. Sykes, *An Economic Perspective on As Such/Facial versus As Applied Challenges in the WTO and U.S. Constitutional Systems*, 6 J. LEGAL ANALYSIS 1, 8 (2014).

310. See, e.g., Raj Bhala & David A. Gantz, *WTO Case Review 2006*, 24 ARIZ. J. INT’L & COMP. L. 299, 370 (2007).

311. Wu, *China, Inc.*, *supra* note 76, at 266; see also *id.* at 287 (“[T]he challenge stems from the fact that China, Inc. does not conform to any of the alternative economic forms envisioned under WTO rules.”).

312. But see Jessica Brum, Note, *Technology Transfer and China’s WTO Commitments*, 50 GEO. J. INT’L L. 709, 727-28 (2019) (citing Jennifer Hillman’s viewpoint that instead of imposing unilateral penalties, the United States should confront China under the WTO structure).

313. See, e.g., Rachel H. Boyd, *FIRMA: “Buy American” Products, or Bye American Progress?*, 19 WAKE FOREST J. BUS. & INTELL. PROP. L. 103, 104 (2019) (acknowledging that “[t]he United States relies heavily on foreign cash inflows to compensate for a shortage of savings in America, and the U.S. routinely ranks among the most favorable destinations for foreign direct investors”); Amy Deen Westbrook, *Securing the Nation or Entrenching the Board? The Evolution of CFIUS Review of Corporate Acquisitions*, 102 MARQ. L. REV. 643, 646 (2019) (noting that “the United States historically has maintained an open posture toward foreign investment”).

314. Executive Order No. 11,858, 40 Fed. Reg. 20,263 (May 7, 1975), 3 C.F.R. § 990 (1971–1975), reprinted as a note under 15 U.S.C. § 78b (2000) (as amended by Executive Order No. 12,188; 45 Fed. Reg. 989 (Jan. 2, 1980); 3 C.F.R. § 131 (1981)).

315. Foreign Investment and National Security Act of 2007, Pub. L. No. 110-49, § 2(b)(1)(A), 121 Stat. 247 (1970).

takeover . . . by or with any foreign person which could result in foreign control of any person engaged in interstate commerce in the United States.”<sup>316</sup> CFIUS must also review any transaction that could result in control by a “foreign government-controlled” entity.<sup>317</sup> If there is credible evidence that a transaction would threaten U.S. national security, then the committee can recommend the prohibition or divestment of that investment to the president.<sup>318</sup> Presidents George W. Bush, Barack Obama, and Donald Trump have all had experience accepting CFIUS’s advice and asking parties to abandon deals concerning investments from China.<sup>319</sup>

On August 13, 2018, President Trump signed the Foreign Investment Risk Review Modernization Act of 2018 (“FIRRMA”), turning it into a law to further strengthen CFIUS’s power.<sup>320</sup> FIRRMA mandates that transaction parties must report to CFIUS any “covered transaction” in which a foreign government has a “substantial interest.”<sup>321</sup> This “substantial interest” can be found if “a foreign government could influence the actions of the foreign person, including through board membership, ownership interest or shareholder rights.”<sup>322</sup> Most notably, the jurisdiction of CFIUS has been expanded under the FIRRMA to cover “other investments” by a foreign person in any unaffiliated U.S. business that operates in critical infrastructure or critical technologies spaces, or that maintains or collects sensitive personal data of U.S. citizens that may be exploited in a manner that threatens national security.<sup>323</sup> FIRRMA also expanded the definition of “critical technologies” to include new categories of “emerging and foundational technologies” that are essential to U.S. national security.<sup>324</sup> Emerging and foundational technologies are defined pursuant to the Export Control Reform Act of 2018, a companion law to FIRRMA that was passed at the same time.<sup>325</sup>

Although FIRRMA is not applied only to investments by Chinese companies, it has been made clear that this legislation originated from national security concerns associated with increasing investments from China.<sup>326</sup> This is directly relevant to

316. *Id.* § 2(a)(3).

317. *Id.* § 2(b)(1)(B).

318. 50 U.S.C. § 4565(d)(2) (2012).

319. *See, e.g.*, Boyd, *supra* note 313, at 107; Daniel C.K. Chow, *United States Unilateralism and the World Trade Organization*, 37 B.U. INT’L L.J. 1, 23–24 (2019); Kennedy & Lim, *supra* note 16, at 564–65; Westbrook, *supra* note 313, at 665, 674–76; Andrew Thompson, *The Committee on Foreign Investment in the United States: An Analysis of the Foreign Investment Risk Review Modernization Act of 2018*, 19 J. HIGH TECH. L. 361, 379–89 (2019).

320. Foreign Investment Risk Review Modernization Act (FIRRMA) of 2018, Pub. L. No. 115-232, §§ 1701–28, 132 Stat. 2174–2207 (codified as amended at 50 U.S.C. § 4565 (2018)); *see also* Boyd, *supra* note 313, at 107–11 (describing how FIRRMA expands CFIUS’s jurisdiction and power in an unprecedented way); Thompson, *supra* note 319, at 362–63 (noting that FIRRMA “expanded CFIUS’ authorization to scrutinize inbound foreign investment”).

321. FIRRMA §§ 1701–28; S. 2098, 115th Cong. § 6(v)(iv) (2018).

322. S. 2098 § 5.

323. FIRRMA § 1703.

324. *Id.*

325. Export Control Reform Act of 2018, Pub. L. No. 115-232 § 1758, 132 Stat. 2208, 2218 (codified as amended at 50 U.S.C. § 4817 (2018)).

326. *See, e.g.*, USTR, UPDATE CONCERNING CHINA’S ACTS, POLICIES AND PRACTICES, *supra* note

the current IP trade war because FIRRMA requires that the Secretary of Commerce produce a biannual report on all FDI from Chinese companies until 2026.<sup>327</sup> The law requires this report to mark whether the investment is governmental and whether it is aligned with the *Made in China 2025* program.<sup>328</sup> In this sense, the risks identified by FIRRMA and USTR's 2018 Section 301 Report obviously overlap with one another.<sup>329</sup> This overlapping leads to the question of whether FIRRMA is an effective tool for the United States to curb the increasing acquisition of U.S. stocks and IP by Chinese enterprises and to prevent the consequent harm identified in the 2018 Section 301 Report.

The answer to this question is: probably not. FIRRMA focuses on “[w]hether a covered transaction involves a country of special concern that has a demonstrated or declared strategic goal of acquiring a type of critical technology or critical infrastructure that would affect United States leadership in areas related to national security.”<sup>330</sup> However, among the acquisitions or investments in the strategic technology sectors in the United States, not all have direct national security implications,<sup>331</sup> which means they are not subject to CFIUS's review. In other words, under FIRRMA, neither CFIUS nor the U.S. president can stop Chinese investments that strategically target key technology sectors—even if they harm U.S. commerce—as long as they do not raise military or national security concerns. This explains why the United States needs to seek solutions other than FIRRMA for this type of inbound investment that threatens U.S. leadership in certain areas.

With respect to China's aggressive acquisition of U.S. IP, there are some existing mechanisms in the United States that prevent the export of sensitive technologies with military applications, including the Arms Export Control Act (“AECA”) and the International Emergency Economic Powers Act (“IEEPA”).<sup>332</sup> Nevertheless, AECA and IEPA are inapplicable if the targeted technology does not have military applications. The U.S. government has faced problems enforcing these laws, especially with technologies that have both military and civilian uses. Therefore, AECA and IEEPA do not seem to completely solve the issues concerning China's aggressive acquisition of IP from U.S. enterprises. Although the U.S. government

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14, at 33; Boyd, *supra* note 313, at 107–09; Gordon & Milhaupt, *supra* note 69, at 200, 231.

327. S. 2098 § 18(b).

328. *Id.*

329. *Cf.* Boyd, *supra* note 313, at 117–18 (indicating that “the new rules [in FIRRMA] could be used as political leverage in the ongoing trade war with China”); Zack Hadzismajlovic, *FIRRMA Becomes Law, Reforming CFIUS, Export Controls, and Forever Changing Diligence in Foreign Direct Investment and Structuring of Public and Private Equity Deals*, 10 INTELL. PROP. & TECH. L.J. 7, 7 (2018) (linking FIRRMA to “China's investment in and acquisition of U.S. companies . . . state-sponsored IP theft through physical theft, cyber-enabled espionage and theft”).

330. *See* John S. McCain National Defense Authorization Act for Fiscal Year 2019, H.R. 5515, 115th Cong. § 1702(c)(1) (2018).

331. *Cf.* Kennedy & Lim, *supra* note 16, at 554, 558–61 (stating that rising states create two types of negative externality associated with innovation for the dominant states: (1) *security externality*, which means a significant impairment of security; and (2) *order externality*, which refers to a threat to the preferred international order).

332. WHITE HOUSE OFFICE OF TRADE & MFG. POLICY, *supra* note 8, at 4.

has planned to further limit the export of sophisticated technologies, such as quantum computing and artificial intelligence, to China and other economic adversaries, such initiatives have fueled concerns from the business sector that overbroad limitation would prevent some U.S. companies from selling products to their key customers abroad.<sup>333</sup>

## 2. Subsidy

One of the United States' criticisms of China's IP practices is that the Chinese government has financially supported domestic companies through "systematic investment in, and acquisition of, U.S. companies and assets . . . to obtain cutting-edge technologies and . . . IP and generate large-scale technology."<sup>334</sup> Such support has been made via "SOEs, state-backed funds, government policy banks, and private companies."<sup>335</sup> Other types of subsidy can also be found in other policies, such as the implementation of the *Made in China 2025* initiative:

[T]he priorities and targets that the [*Made in China 2025* policy] outlines will have sent a strong message to provincial and local governments, SOEs and private Chinese companies regarding the central government's priorities. This will have given them a clear idea of where subsidies, other forms of support, and therefore near-term opportunities for profit, can be expected to flow.<sup>336</sup>

The United States may consider claiming that the financial support given to Chinese enterprises for acquiring foreign IP and shares constitutes a type of subsidy forbidden by the WTO Agreement on Subsidies and Countervailing Measures ("SCM Agreement").<sup>337</sup> To avoid distortions of international trade,<sup>338</sup> the SCM

333. See, e.g., Alexandra Alper, *U.S. Finalizing Rules to Limit Sensitive Tech Exports to China, Others*, REUTERS (Dec. 17, 2019), <https://perma.cc/M8FQ-89PR>.

334. USTR, 2018 SECTION 301 REPORT, *supra* note 13, at 65.

335. *Id.*; see also *id.* at 69 ("To facilitate this "Going Out" strategy, the International Cooperation Opinion calls for government support, including preferential financing through: (1) equity investment and other new forms of financing; (2) international use of the Renminbi (hereinafter Chinese Yuan or CNY) to facilitate transactions, with support from the state-owned policy banks Export-Import Bank of China (China Exim) and China Development Bank (CDB); (3) diversified funding sources, including low-cost access to funding through domestic fund-raising and preferential access to foreign exchange funds; (4) increases in equity investment resources through more use of state-backed funds, such as the Silk Road Fund; and, (5) export credit insurance.").

336. EUROPEAN UNION CHAMBER OF COMMERCE IN CHINA, *CHINA MANUFACTURING 2025: PUTTING INDUSTRIAL POLICY AHEAD OF MARKET FORCES* 13 (2017), <https://perma.cc/V7B3-3W8M>.

337. SCM Agreement, *supra* note 97. It should be noted that some other government measures unrelated to IP might trigger subsidy issues in the SCM Agreement as well. For example, the Chinese government has set up a special fund for enterprises related to the *Made in China* policy. See, e.g., Wang, *supra* note 246. But see INFO. OFFICE OF THE STATE COUNCIL IN CHINA, *supra* note 93, at 39–41 (including China's explanation regarding its compliance with the SCM Agreement).

338. See, e.g., Chris Wold, Grant Wilson & Sara Foroshani, *Leveraging Climate Change Benefits Through the World Trade Organization: Are Fossil Fuel Subsidies Actionable?*, 43 GEO. J. INT'L L. 635, 650 (2012); see also Matthew C. Porterfield, *U.S. Farm Subsidies and the Expiration of the WTO's Peace Clause*, 27 U. PA. J. INT'L ECON. L. 999, 1011 (2006) ("In order to be considered illegal, actionable subsidies must be shown to be trade-distorting.").

Agreement prohibits member governments from providing a financial contribution that confers a benefit on a specific recipient.<sup>339</sup> Nonetheless, some hurdles exist for the United States to substantiate any claims based on the SCM Agreement. First, the United States needs to prove that SOEs, state-backed funds, or government policy banks that provide financial support for such acquisitions are functioning as a “government or public body.”<sup>340</sup> The U.S. Department of Commerce once viewed some Chinese state-owned banks and SOEs as if they were “public bodies.”<sup>341</sup> However, this viewpoint was not accepted by the Appellate Body of the WTO.<sup>342</sup> According to the WTO Appellate Body, majority ownership by a government does not necessarily mean that the subject entity is a “public body,” which “must be an entity that possesses, exercises or is vested with government authority.”<sup>343</sup> Therefore, any party that aims to challenge China’s state-backed outbound acquisition of equity and IP under the SCM Agreement must prove that SOEs, state-backed funds, or government policy banks that provide financial support for acquisitions are “exercising government functions.”<sup>344</sup>

The second hurdle for the United States to overcome under the SCM Agreement is to prove that Chinese companies obtain a “benefit” from the financial support provided for the acquisition of U.S. equity or IP.<sup>345</sup> “Benefit” normally concerns a

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339. The SCM Agreement provides in Article 1.1:

For the purpose of this Agreement, a subsidy shall be deemed to exist if:

(a)(1) there is a financial contribution by a government or any public body within the territory of a Member (referred to in this Agreement as “government”), i.e. where:

(i) a government practice involves a direct transfer of funds (e.g. grants, loans, and equity infusion), potential direct transfers of funds or liabilities (e.g. loan guarantees);

(ii) government revenue that is otherwise due is foregone or not collected (e.g. fiscal incentives such as tax credits);

(iii) a government provides goods or services other than general infrastructure, or purchases goods;

(iv) a government makes payments to a funding mechanism, or entrusts or directs a private body to carry out one or more of the type of functions illustrated in (i) to (iii) above which would normally be vested in the government and the practice, in no real sense, differs from practices normally followed by governments; or

(a)(2) there is any form of income or price support in the sense of Article XVI of GATT 1994; and

(b) a benefit is thereby conferred.

SCM Agreement, *supra* note 97, art. 1.1 (footnotes omitted).

340. See, e.g., LESTER, MERCURIO & DAVIES, *supra* note 309, at 451–53.

341. United States—Definitive Anti-Dumping and Countervailing Duties on Certain Products from China, Request for Consultations by China, DS379 1–3, WTO (Sept. 19, 2008).

342. Appellate Body Report, *United States—Definitive Anti-Dumping and Countervailing Duties on Certain Products from China*, WTO Doc. WT/DS379/AB/R (adopted Mar. 25, 2011) [hereinafter Appellate Body Report].

343. *Id.* But see Ting-Wei Chiang, Note, *Chinese State-Owned Enterprises and WTO’s Anti-Subsidy Regime*, 49 GEO. J. INT’L L. 845, 873–76 (2018) (arguing that Chinese SOEs should be viewed as government or public bodies under the SCM Agreement).

344. Appellate Body Report, *supra* note 342.

345. See, e.g., LESTER, MERCURIO & DAVIES, *supra* note 309, at 459–67.

comparison in the marketplace.<sup>346</sup> For instance, a “benefit” is conferred if a state-owned bank provides a loan to an enterprise with terms more favorable than those provided to its normal customers. Although the concept of a “benefit” is straightforward, its determination is not easy.<sup>347</sup> Sometimes it is hard to decide whether a loan conferred a “benefit” to a borrower because the loan agreement includes terms other than the interest rate and the determination of “benefit” involves the comparison of all the terms in a loan agreement.<sup>348</sup> What is more important, in the Chinese context, is that such a determination is exceedingly challenging in China’s unique economic system, where state-owned banks are linked not only to the state, but also to the CCP, SOEs, and the private sector.<sup>349</sup> Even if the loan agreement looks normal in comparison to similar agreements, the state might provide preferential treatment to the borrower via other entities or arrangements. In this sense, it would be extremely difficult for a complainant to challenge such a practice under the SCM Agreement.

### 3. Cyber Intrusion

A cyberattack can be directed for various purposes, such as cyber terrorism, warfare, or crime.<sup>350</sup> In addition to IP, hackers may target personal data, authentication credentials, and insider information.<sup>351</sup> Furthermore, cyber intrusion may cause serious national security concerns if a country’s critical infrastructure is the subject of a cyberattack<sup>352</sup> or if sensitive governmental information is acquired by hackers.<sup>353</sup> Therefore, although cyber intrusions occasionally cause large-scale

346. *Id.* at 459; Elizabeth Whitsitt, *A Modest Victory at the WTO for Ontario’s Fit Program*, 20 U.C. DAVIS J. INT’L L. & POL’Y 75, 82 (2013). *See also* Wold, Wilson & Foroshani, *supra* note 338, at 650–51 (2012) (explaining the WTO’s Appellate Body’s viewpoint that “a determination of ‘benefit’ will be based on ‘whether the recipient has received the “financial contribution” on terms more favorable than those available to the recipient in the market’”).

347. LESTER, MERCURIO & DAVIES, *supra* note 309, at 459.

348. *Id.*

349. *See supra* text accompanying note 292.

350. *See, e.g.*, Scott J. Shackelford, *Protecting Intellectual Property and Privacy in the Digital Age: The Use of National Cybersecurity Strategies to Mitigate Cyber Risk*, 19 CHAP. L. REV. 445, 448 (2016).

351. *See, e.g.*, Florian Skopik, Giuseppe Settanni & Roman Fiedler, *A Problem Shared Is a Problem Halved: A Survey on the Dimensions of Collective Cyber Defense Through Security Information Sharing*, 60 COMPUTERS & SECURITY 154, 159 (2016); *see also* Mohamed Abomhara & Geir M. Køien, *Cyber Security and the Internet of Things: Vulnerabilities, Threats, Intruders and Attacks*, 4 J. CYBER SECURITY & MOBILITY 65, 77 (2015) (noting that cyber intrusion may cause identity theft and financial fraud as well).

352. *See, e.g.*, Lee, *China and International Cybersecurity*, *supra* note 104, at 954; Lee, *Cybersecurity Law*, *supra* note 126, at 74. Critical infrastructure refers to “facilities, systems, and networks that are socially and economically crucial to the functioning of a country in terms of how goods or services provided therein are essential to national security, economic vitality, and citizen health and safety.” *Id.* at 73.

353. *See, e.g.*, GREG ALLEN & TANIEL CHAN, ARTIFICIAL INTELLIGENCE AND NATIONAL SECURITY 92 (2017), <https://perma.cc/P8L9-ZEM3>; *see also* Lee, *China and International Cybersecurity*, *supra* note 104, at 953 (indicating that “Chinese hackers have posed a serious threat to both the public and private sectors in the United States”).

IP infringement and enormous economic losses,<sup>354</sup> IP law might not be the most effective approach to solving this problem.<sup>355</sup>

If cyber intrusions or attacks are directed by one nation-state against another nation-state, public international law may provide a better approach to address such intrusions, which involve issues of state responsibility and sovereignty.<sup>356</sup> Both China and the United States have proposed cybersecurity initiatives under the United Nations (“UN”) structure. China, together with Russia, Tajikistan, and Uzbekistan, introduced a draft resolution entitled the “International Code of Conduct for Information Security” to the UN General Assembly in September 2011.<sup>357</sup> The proposal was not supported by the United States because it failed to practically address U.S. security concerns and because it seemed to recognize the central control of online information flow by national governments.<sup>358</sup> However, the United States did successfully forge a cybersecurity consensus in a report released by the UN Group of Governmental Experts.<sup>359</sup> Given these developments and the wide range of cybersecurity issues that go beyond IP, a robust international norm or treaty might be a more comprehensive approach to addressing cyber intrusions and other international cybersecurity issues.

#### IV. CONCLUSION

China’s approach to acquiring western technologies has transformed from low-end imitation to gaining a controlling stake in foreign companies via joint ventures or outbound investments. Although counterfeiting, piracy, and IP enforcement remain unresolved issues in China, U.S. criticism of China’s IP practices has shifted to focus on China’s “economic aggression” in targeting strategic technology sectors in the United States and the western world at large. China’s perceived economic aggression has created a number of unresolved issues for the international IP regime, which include but are not limited to the justification of China’s approach to IP appropriation for the purpose of industrial catch-up, as well as issues surrounding the potential legal basis for holding China liable for its economic aggression in relation to IP.

I argue that the recent IP trade war represents a struggle for global technological leadership as well as a new type of institutional competition in the post-Cold War era. Both the United States and China are inevitably compelled to maximize their political and economic interests based on technological innovation, which is mostly subject to IP protection. The current trade frictions between the United States and

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354. See, e.g., Lee, *China and International Cybersecurity*, *supra* note 103, at 952–53.

355. But see Brum, *supra* note 312, at 730–31 (arguing that the Dispute Settlement Body in the WTO is likely to find that China’s cyber intrusion violates the TRIPS agreement).

356. See, e.g., Finlay & Payne, *supra* note 114, at 203; Payne & Finlay, *supra* note 115, at 556; Tran, *supra* note 114, at 390.

357. International Code of Conduct for Information Security, in letter dated Sept. 12, 2011 from the Permanent Representatives of China, the Russian Federation, Tajikistan and Uzbekistan to the United Nations addressed to the Secretary-General, U.N. Doc. A/66/359 (Sept. 14, 2011).

358. See, e.g., Lee, *China and International Cybersecurity*, *supra* note 104, at 962.

359. See, e.g., Kennedy & Lim, *supra* note 16, at 569.



China reflect that existing international economic rules are a poor fit for China's distinctive economic structure of intertwined linkages between the state, CCP, SOEs, and the private sector. China has utilized its unique economic structure to its advantage, including to access and acquire foreign IP and other confidential information. What seems to concern the United States most is that the government-led economic system in China has expanded at the cost of other technologically advanced countries, particularly the United States. Consequently, an increasing demand to rethink, redesign, or reinterpret the law in light of unforeseen Chinese strength has emerged in numerous legal fields related to international economic relations—and IP is, evidently, no exception.