

**INCREASING THE DIFFICULTY LEVEL: CHINA'S 2016  
MOBILE GAME APP REGULATIONS, ANOTHER  
RESTRICTIVE MARKET ENTRY BARRIER TO FOREIGN  
CORPORATIONS**

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**ABSTRACT**

China is now the leading market for mobile game apps; however, foreign developers face an uphill battle to enter it, having long been stymied from access due to bureaucratic red tape which was made substantially stricter after the promulgation of China's 2016 mobile app regulations. The hinderance of foreign developers into the Chinese market is not by accident. After providing foundational knowledge of China's mobile app market and the 2016 mobile app regulations, this Comment uses these regulations as a stepping-stone to launch into a review of China's overarching, decade long, policy to maintain control of strategic sectors, including information technology. In so doing, this Comment highlights numerous China's policies that protect Chinese companies and adversely impact foreign firms, including required *quid pro quo* technology transfers, arbitrary censorship, and intellectual property concerns.

Under this framework, the Comment responds to the assertions made by the Chinese regulatory agencies that the new mobile app regulations create a healthier market and protect against nefarious activities. While these rationales appear justified, the regulations are predominately the latest protectionist measure in a policy apparatus intended to disincentive foreign tech companies from operating in China. In so doing, the Comment concludes that these and other anti-competitive measures allow established domestic corporations to fill the void—even to the detriment of domestic start-ups. When considered with the notion that China's policy is to develop dominate players in each strategic industry, this may, in fact, be the actual goal—a strong domestic mobile market, closely controlled and monitored by powerful, known, and cooperative domestic corporations.

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### I. INTRODUCTION

China recently overtook the United States as the leading market for mobile game apps. This new status is the culmination of a drastic, decade-long market shift. While foreign corporations have been eager to participate in this market, new regulations impose vague censorship and bureaucratic hurdles. The first law, under the direction of the State Administration of Press, Publication, Radio, Film, and Television (SAPPRFT), requires government approval of mobile games available on Android, iOS, and any mobile app stores, including all games that were previously published. The second law, under the direction of the Cyberspace Administration of China (CAC), requires app developers to (1) record and verify personal information of users and (2) monitor user activities to ensure they are not engaging in anti-government conduct.

These regulations are representative of a larger Chinese policy to maintain control of the growing information technology sector. It is no secret that China strictly controls the flow of information entering and being made available within the country through the “Great Firewall.” However, a new policy initiative that began in 2015 has raised concerns of what hurdles the future might hold for foreign companies. On the one hand, China has vaguely asserted that it aims to ensure that strategic industries remain “secure and controllable,”<sup>1</sup> but on the other

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hand, China has also indicated that it could usher in a “fresh start”<sup>2</sup> that relies predominately on domestic corporations. While Beijing has not been forthcoming on specific definitions, this Comment posits that China is already orchestrating a combination of this policy, with the recent mobile game app regulations as just another cog in this policy apparatus. Beyond simple censorship, this Comment will argue that these regulations are yet another protectionist measure in a long line of laws intended to discourage foreign corporations from operating in China, allowing established domestic counterparts to fill the void instead, even at the expense of domestic start-ups.

Part II of this Comment provides foundational background on the Chinese mobile market, relevant Chinese agencies, and the gauntlet of licensing and censorship hurdles a developer had to overcome to publish within China prior to the recent 2016 regulations. Part III discusses the new, additional bureaucratic and censorship requirements promulgated under the 2016 mobile game app laws. Part IV emphasizes the aforementioned censorship and bureaucratic apparatus by first providing brief background information on China’s Internet censorship laws and their impact on the global market. Part IV then discusses how China’s new information technology policy is aimed at (1) making sure foreign products are “secure and controllable,”<sup>3</sup> and (2) creating a “fresh start”<sup>4</sup> for domestic solutions. While interpretations of these new terms are lacking, this Comment proceeds to argue that these two goals are already being implemented by compelling foreign corporations to hand over technology; targeting foreign companies to their order to benefit domestic entities; utilizing acquired technology domestically to compete against foreign firms; and strategically restricting foreign corporations from participating in certain sectors of the Chinese economy. Lastly, Part IV discusses how the 2016 mobile app regulations fit within this policy framework, creating further trade barriers to foreign firms who wish to do business in the Chinese mobile app market, while also creating untenable hardships for domestic start-ups.

## II. BACKGROUND ON CHINA’S MOBILE APP MARKET

### A. Exponential Growth: China’s Mobile App Market Transformation

Over 700 million Chinese—more than half of China’s population—are online,<sup>5</sup> and 92% of Chinese internet users own a smartphone.<sup>6</sup> Given this

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1. Paul Mozur & Jane Perlez, *China Quietly Targets U.S. Tech Companies in Security Reviews*, N.Y. TIMES (May 16, 2016), <https://www.nytimes.com/2016/05/17/technology/china-quietly-targets-us-tech-companies-in-security-reviews.html?smid=tw-share>.

2. *Id.*

3. *Id.*

4. *Id.*

5. See *Internet Users by Country (2016)*, INTERNET LIVE STATS, <http://www.internetlivestats.com/internet-users-by-country/> (last reviewed on Nov. 3, 2017) (indicating that 721,434,547 of China’s 1,382,323,332 population are internet users).

6. Stewart Rogers, *Rapidly Growing Chinese Mobile Market Poses a Challenge to Western Businesses*, VENTUREBEAT (February 12, 2016), <http://venturebeat.com/2016/02/12/new-data-shows-the-staggering-growth-of-apps-and-smartphones-in-china/>.

expansive market, it is unsurprising that China recently surpassed the United States as the largest market for mobile games in terms of revenue.<sup>7</sup> From 2012 to 2015, the mobile gaming share of China's total domestic video gaming industry increased from 5.4% to 36.6%, including export value.<sup>8</sup> This growth is the result of a dramatic mobile market shift in China over the past few decades.<sup>9</sup> In the 1990s, cell phones were predominantly used for voice and text messaging, and the Chinese mobile game market was dominated by foreign parties,<sup>10</sup> but the new millennium "marked the advent of mobile gameplay in China."<sup>11</sup> By the early 2000s, mobile use in China had grown but technical limitations impeded mobile gaming.<sup>12</sup> From 2004 to 2007, the Chinese market adopted smartphones, and a homegrown mobile industry began to emerge.<sup>13</sup> The 2008 introduction of the Apple iPhone, though, was the watershed moment for China's mobile revolution.<sup>14</sup>

The combination of new possibilities in the handset (touchscreen, motion sensor, precise location system, enhanced display, heavy storage, high-quality audio, and embedded camera) and the ubiquitous connection to the network allowed many innovations, including application stores, playing on-line while on the move, multi-player games, playing across several media using social networks, games linked with device motion, and location-based gaming.<sup>15</sup>

China subsequently became the largest volume purchaser of iPhones globally,<sup>16</sup> putting mobile gaming capable devices in the hands of millions.<sup>17</sup> More significantly, the iPhone's introduction prompted the broader "Shanzhei" phenomenon—local production of cheap copycats and imitators that enabled smartphones to further penetrate the mobile market by providing an affordable,

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7. Steven Peterson, *Succeeding in China's Soaring Mobile Game Market Grows More Challenging*, [A]LIST (Sept. 12, 2016), <http://www.alistdaily.com/strategy/succeeding-chinas-soaring-mobile-game-market-grows-challenging/>.

8. Lisa Hanson, *China's Mobile Games Market is Growing Up*, FORBES (April 14, 2016), <http://www.forbes.com/sites/lisachanson/2016/04/14/chinas-mobile-games-market-is-growing-up/#4fbfc3363605>.

9. See generally Zixue Tai & Fengbin Hu, *Mobile Games in China: Ongoing Industry Transformations, Emerging Game Genres, and Evolving Player Dynamics*, in MOBILE GAMING IN ASIA: POLITICS, CULTURE AND EMERGING TECHNOLOGIES 173-174 (Dal Yong Jin ed., 2016) (indicating that China, as one of Asia's big three players, has emerged as one of the leaders in the mobile game industry in recent years).

10. *Id.* at 182, 184.

11. *Id.* at 182.

12. See *id.* at 185 (noting mobile gameplay in China grew from 2001–2004 but was limited by slow connectivity and minimal interactivity).

13. *Id.*

14. *Id.* at 185–86.

15. Dal Yong Jin, *The Emergence of Asian Mobile Games: Definitions, Industries, and Trajectories*, in MOBILE GAMING IN ASIA: POLITICS, CULTURE AND EMERGING TECHNOLOGIES 7 (Dal Yong Jin ed., 2016) (internal citations omitted).

16. Shara Tibken, *China Passes US to Become Apple's Biggest iPhone Market*, CNET (Apr. 27, 2015), <http://www.cnet.com/news/china-passes-us-to-become-apples-biggest-iphone-market/>.

17. See Jin, *supra* note 15, at 12. (indicating that the iPhone provided millions of people with a gaming platform).

desirable alternative.<sup>18</sup>

### 1. Mobile App Distribution Chain

The Chinese mobile app environment is in constant flux, making it difficult for firms to enter the market.<sup>19</sup> The current distribution chain for the maturing Chinese mobile game market includes content providers, content distributors, and venues to access content.<sup>20</sup> Consumers have access to four venues to obtain mobile games: app stores, device manufacturers, mobile game portals, and mobile gaming webzines.<sup>21</sup> Content providers are the game developers. While there are over 23,000 game developers in China,<sup>22</sup> “the top 7 companies, which includes NetEase, Tencent, Giant among others—released over 150 mobile games between them in 2015, with Tencent and NetEase accounting for the top 10 titles [in China] just between the two of them.”<sup>23</sup> These two companies represent 70% of the market share in China.<sup>24</sup> Content distributors are the publishers that provide proprietary game engines, apps, and retail networks, and serve as a “pivotal link between game developers and end players.”<sup>25</sup> Tencent is a prime example of a company that is both a developer and a distributor of content.<sup>26</sup>

Venues that Western consumers predominantly rely upon for mobile apps are the Apple Store for iOS and Google Play for Android.<sup>27</sup> Typically, a device manufacturer pre-installs a mobile app store on a smartphone, based on the device’s operating system. While Chinese users have access to Apple’s store, Google and Google Play exited China in 2011 in response to cyberattacks and Chinese censorship requirements.<sup>28</sup> Consequently, the 70% of Chinese mobile

18. Tai & Hu, *supra* note 9, at 186.

19. See Sam S. Adkins, *The 2014-2019 Mobile Learning Market*, AMBIENT INSIGHT (Jan. 2015), <http://www.ambientinsight.com/Resources/Documents/AmbientInsight-2014-2019-China-Mobile-Learning-Market-Abstract.pdf> (“The app ecosystem in China . . . is literally morphing in real time and entering the market can be daunting for new companies. It is especially difficult for a foreign firm to gain a foothold in the country.”).

20. See Tai & Hu, *supra* note 9, at 177–81 (providing information on key actors in the Chinese mobile game ecosystem).

21. See *generally id.* at 177–81 (discussing specifically four types of venues that directly deliver game content to consumers).

22. Xianhui Che & Berry Ip, *Mobile Games in China: Development and Current Status*, in *MOBILE GAMING IN ASIA: POLITICS, CULTURE AND EMERGING TECHNOLOGIES* 149-50 (Dal Young Editor ed., 2016); see also Tai & Hu, *supra* note 9, at 178 (“While developers engaged in the mobile game business are numbered in the thousands, most of them are small-scale startups and cottage entrepreneurs specializing in a very small niche area of production.”).

23. Hanson, *supra* note 8.

24. Peterson, *supra* note 7.

25. Tai & Hu, *supra* note 9, at 179.

26. See *id.* at 179 (“Fulfilling the dual role of developer/distributor are Tencent and Chukong Technologies.”).

27. See *Number of Apps Available in Leading App Stores as of March 2017*, STATISTA (2017), <https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/> (showing that out of approximately 5.7 million apps available across the top 5 app stores, 5 million were located on Google Play and the Apple App Store).

28. See Alexa Olesen, *Google China FALLOUT: Google’s Exit Angers China*,

gamers who use Android devices<sup>29</sup> must instead navigate the 200 to 400 other app stores that filled the void of Google's exit.<sup>30</sup> Many of these venues are owned by device manufactures, such as Samsung, Huawei, and Xiaomi.<sup>31</sup> In selecting a distribution venue, developers focus on the top three app stores: 360 Mobile Assistant, Myapp, and Baidu Mobile Assistant, which account for two-thirds of all app downloads.<sup>32</sup> Another distribution option is mobile game portals, which serve as "a Walmart-type of display and retail space for mobile game titles to players. Through their mobile sites and corresponding smartphone apps, they interconnect content distributors with end users by providing an easy-to-use transaction platform."<sup>33</sup> Lastly, mobile gaming webzines—produced by sources independent from distributors and developers—provide gaming news, reviews, developments, and download access, which enable consumers to filter through the countless published games every year to find the ones they want to own.<sup>34</sup> This platform is coveted by distributors who typically contract a 50-50 revenue sharing deal with the webzines to promote mobile games.<sup>35</sup>

## 2. Beijing's Invisible Hand

China's transformation from a non-existent mobile gaming market in the late 1990s to a global juggernaut today was not accidental.<sup>36</sup> "Over the past two decades, state authorities have meticulously carved out a road map in order to foster a globally competitive Chinese mobile game industry while at the same time implementing a regulatory framework to dictate the rules of the [sic] play and confine gamers within defined boundaries."<sup>37</sup> State-orchestrated policy initiatives nurtured this growth by incentivizing the development and prosperity of a homegrown mobile game industry, and by staving off unwanted content from entering Chinese game space.<sup>38</sup> This strategy was akin to that deployed for the

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HUFFINGTON POST (May 23, 2010), [http://www.huffingtonpost.com/2010/03/23/google-china-news-googles\\_n\\_509550.html](http://www.huffingtonpost.com/2010/03/23/google-china-news-googles_n_509550.html) (discussing reasons for Google's withdrawal from China).

29. Patrick Yip, *7 Little-Known Facts About the Enormous Chinese Mobile App Market*, APPLIFT (Jun 2 19, 2015), <http://www.applift.com/blog/chinese-mobile-app-market>.

30. Jeff Grubb, *How Google Play Could Fix the Frustrating Impenetrable Chinese Mobile Gaming Market*, VENTUREBEAT (Mar. 6, 2016), <http://venturebeat.com/2016/03/06/how-google-play-could-fix-the-frustrating-impenetrable-chinese-mobile-gaming-market/>.

31. See Tai & Hu, *supra* note , at 179 (noting that the Apple store, Samsung Store, Huawei Store, Xiaomi Store, and Android Store are popular app stores that cater to the users of a particular brand of smartphone).

32. See Vungle Marketing, *What to Know About China's Top 3 App Stores*, VUNGLE (Oct. 9, 2015), <https://vungle.com/blog/2015/10/09/what-to-know-about-chinas-top-3-app-stores/> (listing China's top three app stores and noting that those stores account for two-thirds of all mobile downloads).

33. Tai & Hu, *supra* note 9, at 179.

34. See *id.* at 180 ("[Webzines are a] much coveted avenue for mobile game marketing, and distributors have developed close partnership relations with Webzines in getting their titles out in the marketplace.").

35. *Id.*

36. See *id.* at 175 (providing context for how Chinese authorities fostered a competitive mobile game industry).

37. *Id.*

38. See *id.* (describing the Chinese state's goal-setting to elevate the online video game

software industry.<sup>39</sup> China “designated [both] as ‘national pillar industries’ in the early 2000s, thus allowing them to enjoy state subsidies, tax incentives, and special loans and other support.”<sup>40</sup>

One such policy was a 2003 initiative by the Ministry of Science and Technology that added online video games into Project 863, a state-sponsored program that provides financing and personal support to research and development for information technology enterprises.<sup>41</sup> The objective to create a homegrown national pillar industry was further promoted by joint directives from Chinese government agencies; a July 2006 ordinance from the State Council; and numerous other declarations. Those declarations focused “on four broad areas: development of a core set of game technologies; induction of localized exemplar game content; construction of incubators across multiple cities to encourage game entrepreneurship; and implementation of a wide range of supporting industries.”<sup>42</sup>

At the turn of the millennium, start-ups in China’s technology and software sectors received dramatically reduced tax treatment, value-added tax benefits, and other benefits.<sup>43</sup> Furthermore, in 2005, the city of Hangzhou structured its economic development to embrace video games through “a variety of local support mechanisms ranging from subsidies, bank loans, land lease to tax exemptions for upstarts and entrepreneurships.”<sup>44</sup> In 2012, China’s Cultural Reform and Development Plan for the 12th Five-Year Plan specifically included games as a cultural product. This policy recommended:

Strengthening the core competitiveness of the game industry, promoting the development of originally-created games with ethnic characteristics, that are healthy and upward, raising the cultural content of game products. Encouraging the research and development of network game technology, electronic game software and hardware equipment having indigenous intellectual property rights, optimizing game industry structures, stimulating the coordinated development of game types such as network games, electronic games, etc. Encouraging gaming enterprises to forge Chinese gaming brands, vigorously expanding into overseas markets.<sup>45</sup>

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industry).

39. Tai & Hu, *supra* note 9, at 175.

40. *Id.*

41. *See id.* (“[This] program . . . provid[ed] support in terms of finance and talent recruitment in incubating China’s own brand of high-tech research and development.”).

42. *Id.*

43. *See generally* RICHARD P. SUTTMEIER & YAO XIANGKUI, NAT’L BUREAU OF ASIAN RESARCH, CHINA’S POST-WTO TECHNOLOGY POLICY: STANDARDS, SOFTWARE, AND THE CHANGING NATURE OF TECHNO-NATIONALISM 33 (2004), <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan026775.pdf>.

44. Tai & Hu, *supra* note 9, at 176.

45. Ministry of Culture Plan for Redoubling Cultural Industries During The “12th Five-Year Plan” Period, CHINA COPYRIGHT AND MEDIA (Apr. 12, 2012), <https://chinacopyrightandmedia.wordpress.com/2012/02/24/ministry-of-culture-plan-for->

In doing so, the Ministry of Culture (MOC) recommended, in part, efforts aimed at “[p]erfecting laws and regulations corresponding to the gaming industry, building supervision and management interaction platforms, [and] vigorously guiding sector and enterprise self-discipline.”<sup>46</sup>

### ***B. Running the Gauntlet of Licensing and Censorship***

Publishing a mobile app in China can be a bureaucratic ordeal, especially for foreign participants. The laws are in flux, and translations from their Chinese text are generally not made available.<sup>47</sup> As one commenter suggested, a developer who is not fluent in Chinese but still decides to run the gauntlet of licensing and censorship must have “an extreme masochistic streak.”<sup>48</sup> Despite these difficulties, this section will attempt to highlight what developers had to consider when publishing a mobile app in China before the new 2016 regulations were adopted.<sup>49</sup> Note that, unless otherwise indicated, these considerations are still operative notwithstanding the 2016 regulations.

#### **1. Licensing**

Regardless of whether the firm is foreign or domestic, developers must obtain a slew of licensing documents, including an Internet Content Provider (ICP) license from the Ministry of Industry and Information Technology (MIIT), an Internet Culture Operation (ICO) license from the MOC, and an Internet Publishing Service (IPS) license from the General Administration of Press and Publication (GAPP).<sup>50</sup>

##### ***a. Internet Content Provider License***

Using the internet for any commercial purpose requires an ICP license when the website’s domain name resides on a server in China.<sup>51</sup> Without an ICP, Chinese

redoubling-cultural-industries-during-the-12th-five-year-plan-period/.

46. *Id.*

47. Kendra Schaefer, *Chinese ICP Licensing: What, Why and How to Get Hosted in China*, ENVATOTUTS+ (Feb. 3, 2015), <https://webdesign.tutsplus.com/articles/chinese-icp-licensing-what-why-and-how-to-get-hosted-in-china—cms-23193>.

48. *Id.*

49. Unless indicated otherwise, the regulations listed in this section of the Comment continue to be relevant to developers publishing in China, post-2016 regulations.

50. *Legal Primer: Regulation of China’s Video Game Industry* 2–3, THE LAW OFFICES OF GREG PILAROWSKI, (July 12, 2010), <http://www.americanmcgee.com/wp-content/uploads/2010/09/China-Video-Game-Industry-Legal-Primer-July-2010.pdf> [hereinafter LEGAL PRIMER].

51. See Thomas M. Shoesmith & Julian Zou, *China Imposes Broad New Restrictions on Publication of Internet Content*, PILLSBURY (Feb. 24, 2016), <https://www.pillsburylaw.com/images/content/1/0/v2/106243/AlertFeb2016ChinaChinaImposesBroadNewRestrictionsonPublicationof.pdf> (“Foreign companies using the internet for commercial purposes in China therefore were forced either to keep their servers outside of the PRC . . . or enter into contractual tie-ups with 100 percent Chinese-owned ICP license-holders.”); see also *Measures for the Administration of Internet Information Services (Chinese Text and CECC Partial Translation)*, CONG. EXEC. COMM’N ON CHINA (Sept. 25, 2000), <https://www.cecc.gov/resources/legal-provisions/measures-for-the-administration-of-internet->

hosts will not release server credentials.<sup>52</sup> By obtaining a license, the holder must implement “comprehensive self-censorship, maintain records and provide information on content . . . and refrain from publishing over the internet any content which would be detrimental to national security, social stability or the moral well-being of the Chinese public.”<sup>53</sup> A clever foreign developer may believe this license can be avoided by obtaining a domain name that resides on a server *outside* of China, however, “applicants . . . need to specify which *China-based ISP* they will be using – and it needs to be one that is on the MIIT database.”<sup>54</sup> Regardless, even if a foreign firm wanted to obtain an ICP license so they could have a Chinese domain name, ICP licenses are generally only given to 100% Chinese-owned enterprises.<sup>55</sup> Granted, 49% foreign-owned joint ventures are able to acquire ICP licenses, but in practice, MIIT has rarely granted licenses for those firms.<sup>56</sup>

### ***b. Internet Cultural Operation License***

As noted previously, video games are cultural products,<sup>57</sup> but they are also a cultural export. Indeed, in contrast to Chinese music, film, or other products, Chinese video games have permeated the international markets.<sup>58</sup> Not only are Chinese games easier to adapt for foreign audiences in comparison to television shows, but they are also easier to develop than other media because they can avoid extensive censorship by having nominal, if not non-existent, storylines.<sup>59</sup> The

information-services-cecc (defining commercial Internet information providers as “any service activity whereby one utilizes the Internet to provide information, Web page design, or other services to Internet users through the Internet for compensation”).

52. Schaefer, *supra* note 47.

53. Shoemith, *supra* note 51.

54. Digital Marketing, *A Guide to Internet Content Licenses in China*, DIGITAL CREW (July 11, 2016), <http://www.digitalcrew.com.au/guide-internet-content-licences-china/> (emphasis added).

55. See Shoemith, *supra* note 51 (“For many years, ICP licenses could only be issued to 100 percent Chinese-owned enterprises, which meant that even a PRC subsidiary of a foreign company could not hold an ICP license.”).

56. See *id.* (noting that the handful of licenses for 49 percent foreign-owned joint ventures have only been given to major internet players).

57. See MINISTRY OF CULTURE OF THE PEOPLE’S REPUBLIC OF CHINA, *Hulianwang Wenhua Guanli Zanxing Guiding*, (Mar. 21, 2011) [http://www.gov.cn/flfg/2011-03/21/content\\_1828568.htm](http://www.gov.cn/flfg/2011-03/21/content_1828568.htm), translated in INTERIM PROVISIONS ON THE ADMINISTRATION OF INTERNET CULTURE, <http://www.lawinfochina.com/Display.aspx?lib=law&Cgid=147100> (last visited Sept. 2, 2017) (“Internet cultural products” are cultural products “specifically produced for the internet, such as online music entertainment, online games, online shows and plays (programs), online performances, online works of art, online cartoons.”).

58. See Tai & Hu, *supra* note 9, at 182 (“Video games have surpassed all other cultural products (more than films, music, teledrama) in China’s creative industry in breaking into international markets.”).

59. See Adam Minter, *China’s New Weapon? Video Games*, BLOOMBERG (July 6, 2016), <http://www.bloombergquint.com/opinion/2016/07/06/china-s-new-weapon-video-games> (“Unlike film and television producers, moreover, Chinese game studios have largely avoided censorship fights (there’s not much to censor in a battle between orcs and humans).”).

number of mobile games from Chinese publishers that have made it to the top 1,000 global ranks have nearly doubled from 2015 to 2016.<sup>60</sup>

Since mobile games are considered cultural products, the MOC “assumes general oversight in the regulation of video games, including production, publication[,] and distribution of related products.”<sup>61</sup> In order to maintain an ICO entity within China, a license from MOC is required.<sup>62</sup> However, as with ICP licenses, foreign firms are restricted.<sup>63</sup> Specifically, foreign investors are barred from participating in this sector, and foreign entities and individuals cannot operate an ICO entity either directly or through *de facto* control,<sup>64</sup> which effectively bars foreign game developers from operating independently in China.<sup>65</sup>

### *c. Internet Publishing Services License*

“[A]ny internet information service provider that makes works publicly available on the internet, including . . . audio visual products, must obtain an internet publishing license from GAPP.”<sup>66</sup> The difference between the IPS and ICO licenses is in the name: publishing versus operating. A company that solely provides a service for another game, such as offering virtual currency exchange, has not published on the internet but is simply operating on the internet.<sup>67</sup> Therefore, an IPS license would not be needed. Since foreign entities are barred from engaging in internet activities, they are manifestly barred from obtaining this license.<sup>68</sup>

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60. See Dean Takahashi, *Chinese Mobile Games are Spreading around the Globe*, AKAMAI (Dec. 28, 2016), <http://venturebeat.com/2016/12/28/chinese-mobile-games-are-spreading-around-the-globe/>. (“A total of 84 games from Chinese publishers made it into the top 1,000 rankings globally, compared with 45 a year ago. That’s an 80 percent increase.”).

61. Tai & Hu, *supra* note 9, at 176.

62. See Wang Rui et al., *Issues Foreign Video Game Developers Face in Introducing Online Games to the Chinese Market*, CHINA LAW INSIGHT (Sept. 28, 2010), <http://www.chinalawinsight.com/2010/09/articles/intellectual-property/issues-foreign-video-game-developers-face-in-introducing-online-games-to-the-chinese-market/> (“To this end, Internet Cultural Operation Entities for profit need apply to the PRC Ministry of Culture or its local corresponding branch at provincial level for an Internet Cultural Operation License.”).

63. Shoemith, *supra* note 51; see also *Measures for the Administration of Internet Information Services* (Chinese Text and CECC Partial Translation).

64. See *LEGAL PRIMER*, *supra* note 50, at 4–5, (“[T]he Ministry of Culture is not accepting applications for an internet culture operation license from foreign invested internet service providers. In addition, the Foreign Investment Catalogue prohibits foreign investment in internet cultural operations. Currently these two restrictions effectively prohibit foreign companies from entering the online game operation market in China.”).

65. See *id.* (“Foreign investment in a telecommunication company must take the form of an equity joint venture and the equity participation of the foreign party is limited to 50%.”).

66. *Id.* at 5.

67. See Rui et al., *supra* note 62 (“Meanwhile, those Chinese companies issuing virtual currency and providing transactional services regarding virtual currency in online games for another company need only obtain the Internet Cultural Operation License as they are not actually publishing anything, but do have operations online.”).

68. See *LEGAL PRIMER*, *supra* note 50, at 5 (“[T]he Foreign Investment Catalogue prohibits foreign investment in internet cultural operations. As a result, foreign invested enterprises are not eligible to obtain an internet publishing license.”).

*d. The VIE Solution*

While foreign entities are barred from obtaining appropriate licenses to invest in or distribute video games in China, legal gymnastics accomplished through variable investment entities (VIE) have been used to bypass these restrictions.<sup>69</sup> VIEs enable foreign investments to maneuver around Chinese laws that are based on traditional stockholder ownership by instead instituting control through contracts.<sup>70</sup> The VIE itself is the Chinese company owned by a Chinese national. Such an arrangement legally allows the entity to be approved for the aforementioned licenses.<sup>71</sup> Investors then separate a portion of the entity into a wholly foreign owned enterprise (WFOE), which is a 100% foreign-owned onshore entity.<sup>72</sup> While this entity cannot obtain business licenses, it does act as a middleman between the VIE and a foreign offshore entity, typically based in the Cayman Islands, to channel investments.<sup>73</sup> “Generally, the foreign parent company exercises control over its wholly-owned subsidiary, the WFOE, which controls and manages the activities of the VIE through legal agreements—governed by PRC law—between the WFOE and VIE.”<sup>74</sup> Under this framework, foreign developers can utilize domestic distributors to publish games since the domestic distributors are able to obtain the appropriate licenses.

While not the main focus of this Comment, it should be noted that VIEs—even before the enactment of 2016’s laws—were, at best, quasi-legal under existing Chinese law.<sup>75</sup> Indeed, numerous hurdles existed for foreign companies who choose to utilize VIEs, including “uncertainty with respect to the regulatory status of VIEs, inconsistencies in national and local enforcement of VIE regulations, uncertainty regarding the enforceability of the underlying legal agreements, and conflicts of interest between the domestic VIE shareholders and the foreign holding company.”<sup>76</sup> For instance, GAPP released a notice in 2009 asserting that the law “expressly prohibits foreign investors from using contractual or other control arrangements to gain control over domestic Internet game

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69. See Paul L. Gillis, *Variable Interest Entities in China*, FORENSIC ASIA (Sept. 18, 2012), <http://www.chinaaccountingblog.com/vie-2012septaccountingmatte.pdf> (providing background information on the viability of VIEs).

70. See *id.* at 1–3 (providing information on how VIEs are used in the Chinese market).

71. Cf. *LEGAL PRIMER*, *supra* note 50, at 16 (“Due to the restrictions contained in the Foreign Investment Catalogue, GAPP will not accept applications from foreign-invested entities for an internet publishing license, which is also one of the three primary licenses required to operate online games.”).

72. Cf. *id.* (“Although the WFOE does not have a direct equity interest in the domestic operating company, the WFOE does control the operating company through a series of contractual relationships with both the operating company and the operating company’s nominee shareholders.”).

73. Gillis, *supra* note 69, at 1, 3–4.

74. David Schindelheim, *Variable Interest Entity Structures in the People’s Republic of China: Is Uncertainty for Foreign Investors Part of China’s Economic Development Plan?*, 21 *CARDOZO J. INT’L & COMP. L.* 195, 204 (2012).

75. See *id.* at 209 (noting that the VIE structure has never been explicitly prohibited or endorsed by Chinese regulatory authorities).

76. *Id.*

operators.<sup>77</sup> However, this notice was not echoed by other Chinese regulatory authorities, and its enforcement was minimal.<sup>78</sup> This policy landscape creates a precarious foreign investment environment, where Chinese corporations could obtain foreign funding, but the Chinese government could consequently take severe measures when foreign influence becomes too great.<sup>79</sup>

## 2. Censorship

Even with the aforementioned licenses, prior to 2016, game developers still needed to ensure their content complied with Chinese censorship under MOC and GAPP guidelines.<sup>80</sup> In general terms, the regulations prohibited content that:

- (1) Opposes the fundamental principles determined in the [Chinese] Constitution;
- (2) Endangers the unity, sovereignty or territorial integrity of the nation;
- (3) Divulges State secrets, endangers national security, or damages the dignity or interests of the nation;
- (4) Incites ethnic hatred or racial discrimination or undermines national solidarity, or infringes upon national customs and habits;
- (5) Propagates evil cults or superstition;
- (6) Disseminates rumors, disrupts social order or undermines social stability;
- (7) Propagates obscenity, pornography, gambling, violence or instigates crimes;
- (8) Insults or slanders others, or otherwise infringes upon the legitimate rights of others;
- (9) Endangers social morality or national splendid cultural traditions; or
- (10) Is otherwise prohibited by the laws, or administrative regulations of the State.<sup>81</sup>

### a. MOC Process

MOC's authority to review foreign online games is directed by the Notice on Strengthening the Content Censorship of Online Games.<sup>82</sup> Accordingly, a domestic operator who imports a foreign game "should submit [the following documents to obtain the required approval]: a) application form; b) specification of game

77. Paul D. McKenzie, et al., CHINA UPDATE: GAPP ISSUES NOTICE FURTHER RESTRICTING FOREIGN PARTICIPATION IN CHINA'S INTERNET GAMING INDUSTRY, MORRISON & FOERSTER LLP 1 (Oct. 16, 2009), <https://media2.mofo.com/documents/091016gappregulations.pdf>.

78. *Id.* at 3.

79. See Schindelheim, *supra* note 74, at 213.

80. See generally Rui et al., *supra* note 62.

81. LEGAL PRIMER, *supra* note 50, at 6.

82. *Id.* at 7. In the United States, the only process analogous to this is conducted by the Entertainment Software Rating Board (ESRB). However, the ESRB is a non-profit organization that developers voluntarily allow to rate the game, whereas in China, this is mandated by the government. See *Frequently Asked Questions*, ENT. SOFTWARE RATING BOARD, <http://www.esrb.org/ratings/faq.aspx#1> (last visited Oct. 4, 2017) (explaining the voluntary nature of the ratings process).

content; c) copyright trading or agency agreement, and the original certificate or the photocopy of the copyright certificate; d) the License for Cultural Business on Internet, and the photocopy of the applicant's the Incorporate Certificate; [and] e) other relevant documents.<sup>83</sup> Even after approval, any significant changes, such as expansion packs, will require further review.<sup>84</sup> Domestic games are not burdened by this pre-approval, though they are still required to follow the above restrictions that govern Internet content.<sup>85</sup>

### ***b. GAPP Process***

GAPP's authority over electronic publications, such as information on CDs, DVDs, and hard disks, stemmed from the Administrative Provisions on the Publishing of Electronic Publications.<sup>86</sup> However, under its authority, GAPP interpreted the definition of "electronic games" to include online games, regardless of whether or not they are published in a physical form.<sup>87</sup> "A domestic online game operator who imports a foreign game for publication must submit an application to GAPP that includes pictures of the main characters and main scenes from the game, the complete in-game text script and the game license agreement."<sup>88</sup> Similar to MOC, any updates to the game must be approved as well.<sup>89</sup>

## **III. THE MOBILE GAME APP LAWS OF 2016**

With the Chinese mobile app industry exploding in growth, stricter censorship and bureaucratic laws were implemented in 2016. The first new law, administered under the direction of the State Administration of Press, Publication, Radio, Film, and Television (SAPPRFT),<sup>90</sup> requires government approval of all mobile games appearing on Android or iOS app stores, including all games that were *previously* published. The second law, under the direction of the Cyberspace Administration of China (CAC), requires app developers to (1) record and verify personal information of users and (2) monitor their activities to ensure they are not engaging in anti-government conduct (i.e., any behavior that endangers national security or

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83. NEOGAMES LTD, CHINA'S REGULATORY ENVIRONMENT FOR GAMES 32 (2015), [http://www.neogames.fi/wp-content/uploads/2015/11/Chinas-Regulatory-Environment-for-Games-2015\\_18112015.pdf](http://www.neogames.fi/wp-content/uploads/2015/11/Chinas-Regulatory-Environment-for-Games-2015_18112015.pdf).

84. LEGAL PRIMER, *supra* note 50, at 7.

85. *Id.* at 8.

86. *Id.*

87. *Id.*

88. *Id.* at 9.

89. *See id.* (noting that an upgraded version of an approved foreign online game requires a new application to be approved by GAPP prior to its publication).

90. The SAPPRFT is sometimes called the General Administration of Press and Publication, Radio, Film, and Television. *Compare* HONGYI LAI, CHINA'S GOVERNANCE MODEL: FLEXIBILITY AND DURABILITY OF PRAGMATIC AUTHORITARIANISM 71 (2016) (describing the new agency's name as the General Administration of Press and Publication, Radio, Film, and Television), *with* CHINA, THE STATE COUNCIL, STATE ADMIN. OF PRESS, PUBLICATION, RADIO, FILM, AND TELEVISION OF CHINA (Sept. 4, 2014, 9:42 AM), [http://english.gov.cn/state\\_council/2014/09/09/content\\_281474986284063.htm](http://english.gov.cn/state_council/2014/09/09/content_281474986284063.htm) (indicating that the agency name is the State Administration of Press, Publication, Radio, Film, and Television).

disrupts the public order or any practice of producing, reproducing, publishing, or disseminating content banned by laws and regulations). This section will discuss these regulatory agencies and further highlight these new requirements that game developers will encounter.

#### ***A. Censorship: State Administration of Press, Publication, Radio, Film, and Television***

SAPPRFT was formed by the merger of the GAPP and the State Administration of Press, Publication, Radio, Film, and Television in 2013.<sup>91</sup> On February 4, 2016, SAPPRFT, with MIIT, issued the Regulations and the Administration of Online Publishing Services (Regulations). These Regulations, coupled with the contemporaneous Administrative Measures on Cultural Market Blacklisting (Blacklisting Measures) by the MOC, set the foundation to impose stricter regulations on online games, specifically foreign-copyrighted games.<sup>92</sup> Notably, the Regulations reclassified online games as “online publications,” which broadened the applicable scope of laws that could govern them.<sup>93</sup> The Regulations further defined “online publishing” to mean “providing online publications to the public through information networks. Therefore, any entity engaging in online publishing services must obtain the Online Publishing Service License from the SAPPRFT before commencing operations,”<sup>94</sup> and must also comply with other infrastructure requirements.<sup>95</sup> The Regulations also essentially banned the use of interest entity structures (e.g., VIE), required approval from SAPPRFT before any license holder cooperates with a foreign investor for online publishing services, and required entities to acquire approval before publishing any online games.<sup>96</sup>

In response to the Regulations, SAPPRFT issued the Notice on the Administration of Publishing Services of Mobile Games (Notice).<sup>97</sup> Effective since July 1, 2016, the Notice requires that all mobile games be submitted with all relevant licenses to SAPPRFT for pre-approval twenty days prior to publishing.<sup>98</sup> This includes all previously published games, of which there are tens of

91. Jun Wei et al., *Will the Merger of SARFT and GAPP End the Turf War Over Control Over the Internet?*, LEXOLOGY (June 3, 2013), <http://www.lexology.com/library/detail.aspx?g=eddb5883-ac7b-4702-9923-2c052be983f4>.

92. MMLC GROUP, CHINA UPDATE 9 (2016), <http://www.mmlcgroup.com/sitebuildercontent/sitebuilderfiles/cujune16.pdf>.

93. *Id.*

94. *Id.* at 10.

95. *See id.* (defining specific infrastructure requirements as appropriate domain names, onshore servers, technical equipment, and applications for mobile devices).

96. *Id.*; *see also* Edward J. Epstein, *How China's New Regulations Affect Online Publishing*, TROUTMAN SANDERS (Apr. 21, 2016), <https://www.troutmansanders.com/how-chinas-new-regulations-affect-online-publishing-04-21-2016/> (indicating the restriction of variable interest entities).

97. Notice on the Administration of Mobile Game Publishing Services (promulgated by SAPPRFT, May 24, 2016, effective July 1, 2016), <http://www.lawinfochina.com/display.aspx?id=22461&lib=law>.

98. C. Custer, *China's Government Must Pre-Approve Every Single Mobile Game Starting July 1*, TECH IN ASIA (June 2, 2016), <https://www.techinasia.com/chinas-government-preapprove-single-mobile-game-starting-july-1>.

thousands.<sup>99</sup> Games that are not approved by the deadline cannot be published; if games were already published but the application cannot be filed by the deadline, then they will be taken down.<sup>100</sup> When initially enacted, SAPPRFT believed it could process all approvals by October 1, 2016; however, because of the considerable amount of applications that had been filed, the deadline was postponed until January 1, 2017.<sup>101</sup>

Approval process times vary depending on whether the game requires a standard review process or if it qualifies for a simplified review process.<sup>102</sup> To take advantage of the latter, the following criteria must be met:

- (i) [G]ame copyright is owned by domestic individuals or entities;
- (ii) they do not contain any sensitive elements such as politics, military, nationality or religion;
- (iii) they have no storyline at all or only have a very simple storyline; and
- (iv) they are in the genres of casual games covering match-three, endless runner, top down shooter, board, puzzle, sports, music and etc.<sup>103</sup>

Those games that meet the above restrictive criteria can expect to be approved within eighteen business days;<sup>104</sup> however, once the game is launched, app developers still have to contact SAPPRFT to report further details of the launch.<sup>105</sup> Conversely, for foreign copyrighted mobile games or domestic mobile games that do not meet the above criteria, the wait time under the standard process could be indefinite.<sup>106</sup> The consequence of this processing time is evidenced by the fact that

99. *SAPPRFT Delayed Date for Licenses on Mobile Games Under New Regulations*, NIKO PARTNERS (Sept. 25, 2016) <http://nikopartners.com/sapprft-delayed-date-licenses-mobile-games-new-regulations/>.

100. Tracey Tang, *China SAPPRFT Issued Implementation Rules to Streamline the Approval Process of Mobile Games*, LEXOLOGY (June 7, 2016), <http://www.lexology.com/library/detail.aspx?g=4c3afd11-820f-4b4b-9854-519495ec9d73>.

101. *SAPPRFT Delayed Date for Licenses on Mobile Games Under New Regulations*, *supra* note 99.

102. *See* Tang, *supra* note 100 (providing the estimated time schedule for approval using the simplified review process and also noting that there is no specified timeline for the standard process).

103. *Id.*

104. *Id.*

105. *See id.* (noting that the publishing entity has to follow up with SAPPRFT within 7 days after the game launches to provide additional information).

106. *Id.* (noting that no timeline is set by SAPPRFT for foreign copyrighted mobile games); *see also* ZhugeEX, *The Challenge of Publishing a Mobile Game in China*, ZHUGEEX BLOG (July 4, 2016), <https://zhugeex.com/2016/07/the-challenge-of-publishing-a-mobile-game-in-china/> (commenting that the approval process for foreign games could take three months or longer). ZhugeEx Blog is managed by Daniel Ahmad, an analyst for Niko Partners which is a research firm that provides market intelligence on the Chinese digital market. *About Me*, ZHUGEEX BLOG, <https://zhugeex.com/about-me/> (last visited Oct. 31, 2017). Foreign content also includes when domestic parties license products from a foreign content provider. Tracey Tang, *China: SAPPRFT's New Administration Regime Over Mobile Games: What've Happened Since July?*, MONDAQ (Jan. 3, 2017), <http://www.mondaq.com/china/x/554134/Gaming/SAPPRFTs+New+Administration+Regime+O>

only ten of 1,000 approved games in the third quarter of 2016 were foreign games.<sup>107</sup>

As with console games, SAPPRT reviews mobile games to ensure they do not include the following content:

- Anything that violates China's constitution
- Anything that threatens China's national unity, sovereignty, or territorial integrity
- Anything that harms the nation's reputation, security, or interests
- Anything that instigates racial/ethnic hatred or harms ethnic traditions and cultures
- Anything that violates China's policy on religion by promoting cults or superstitions
- Anything that promotes or incites obscenity, drug use, violence, or gambling
- Anything that harms public ethics or China's culture and traditions
- Anything that insults, slanders, or violates the rights of others
- Other content that violates the law<sup>108</sup>

SAPPRT has already frustrated developers under this law by blocking games because of attributes that developers consider frivolous.<sup>109</sup> For example, game developers have encountered difficulties using any English words, even if they are not vulgar words or are words commonly used in the gaming industry (i.e., “mission start,” “warning,” and “HP” for Health Points).<sup>110</sup> Interestingly, this is not a new law, but SAPPRT began to enforce it on July 1, 2016.<sup>111</sup> To avoid these bureaucratic hurdles, both foreign and domestic game developers routinely choose to work with Chinese publishers—at a cost of \$3,000 to \$6,000 per game—but even then there is no guarantee that a game will be approved, creating further delay and costs for developers.<sup>112</sup> These costs are great when considered in comparison to the potential income generated from a mobile game; for example, one small game developer in China commented that a developer would be “lucky” to make a few hundred dollars per game.<sup>113</sup> Additionally, Chinese iOS developers only earn

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107. Tang, *supra* note 100.

108. ZhugeEX, *supra* note 106.

109. See ZhugeEX, *UPDATE: New Mobile Game Publishing Regulations in China*, ZHUGEEX BLOG (July 11, 2016), <https://zhugeex.com/2016/07/update-new-mobile-game-publishing-regulations-in-china/> [hereinafter ZhugeEX, *Update*] (indicating that the government's review standards have become more strict as a result of the new approval requirements).

110. *Id.*

111. *Id.*

112. ZhugeEX, *supra* note 106.

113. Owen Churchill, *Game Developer to Sue State Media Censors*, SIXTH TONE (July 6, 2016), <http://www.sixthtone.com/news/game-developer-sue-governing-censorship-body> (providing anecdotal evidence from a small Chinese gaming studio—that went out of business following the regulations—that making \$220 would be fortunate).

approximately three cents per download.<sup>114</sup> Foreign iOS developers were able to avoid these regulations at first through a loophole in iTunes, but this loophole may now be closed.<sup>115</sup>

### ***B. Data Collection: Cyberspace Administration of China***

Concurrent with the recent creation of SAPPRFT, additional organizational changes occurred within the Chinese government to provide more efficient regulatory control and oversight of internet activities; CAC oversees this objective.<sup>116</sup> Established in 2013, “CAC presents itself as the architect-in-chief of China’s cyber strategy.”<sup>117</sup> While market regulations could fall under this broad title, in practice, the CAC’s focus is on censorship and propaganda.<sup>118</sup> For instance, CAC recently threatened Sina, a Chinese media company, with closure unless it expanded censorship,<sup>119</sup> and cracked down on websites where users were allegedly spreading rumors regarding an August 2015 Tianjin explosion.<sup>120</sup>

On June 28, 2016, the CAC promulgated Administrative Provisions on Information Services of Mobile Internet Application Programs (Provisions), the first regulations directed towards mobile apps.<sup>121</sup> Effective August 1, 2016, all information services provided via apps and app store services now have to abide by additional censorship laws.<sup>122</sup> In addition, app providers are now required to collect all app users’ personal information, including real name, mobile number,

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114. Steven Millward, *Chinese iOS Developers Earn Only 3 Cents Per Download*, TECH IN ASIA (July 9, 2012, 1:01 AM), <https://www.techinasia.com/chinese-ios-app-developers-revenue-2012>.

115. ZhugeEX, *supra* note 106. *But see* Henry Fong, *Navigating the Regulatory Landscape in China’s US\$25 Billion Gaming Market*, GAMASUTRA (Feb.17, 2017, 10:25 AM), [http://www.gamasutra.com/blogs/HenryFong/20170217/291133/Navigating\\_the\\_Regulatory\\_Landscape\\_in\\_Chinas\\_US25\\_Billion\\_Gaming\\_Market.php](http://www.gamasutra.com/blogs/HenryFong/20170217/291133/Navigating_the_Regulatory_Landscape_in_Chinas_US25_Billion_Gaming_Market.php) (suggesting that this loophole is no longer viable as developers uploading mobile games to iTunes now require SAPPRFT approval).

116. ZhugeEX, *supra* note 106.

117. *How China’s Cybersecurity Administration Works*, CHINA DIGITAL TIMES (Sept. 16, 2016, 10:02 PM), <http://chinadigitaltimes.net/2016/09/chinas-cyberspace-administration-works-doesnt/>.

118. *Id.*

119. *China Orders Media Giant Sina to ‘Improve Censorship,’* PHYS.ORG (Apr. 12, 2015), <https://phys.org/news/2015-04-china-media-giant-sina-censorship.html>.

120. *China Cracks Down on Websites Accused of Spreading ‘Rumors’ About the Tianjin Blast*, VICE NEWS (Aug. 17, 2015), <https://news.vice.com/article/china-cracks-down-on-websites-accused-of-spreading-rumors-about-the-tianjin-blast>.

121. *China Publishes First Regulation Expressly Regulating Mobile Apps*, HUNTON & WILLIAMS: PRIVACY & INFO. SEC. L. BLOG (July 1, 2016), <https://www.huntonprivacyblog.com/2016/07/01/china-publishes-first-regulation-expressly-regulating-mobile-apps/>. The State Internet Information Office is the former name of the Cyberspace Administration of China (CAC). Rogier Creemers, *China’s Internet Gambit*, CHINA US FOCUS (Dec. 12, 2014), <https://www.chinausfocus.com/peace-security/chinas-internet-gambit>.

122. Laney Zhang, *China: Cyberspace Administration Releases New Rules on Mobile Apps*, LAW LIBR. OF CONG., (July 26, 2016), <http://www.loc.gov/law/foreign-news/article/china-cyberspace-administration-releases-new-rules-on-mobile-apps/>.

and other identifying information.<sup>123</sup> App providers must also monitor online content, archive user activity for sixty days, and take the initiative to notify government authorities of any violations, such as publishing banned content.<sup>124</sup> Similarly, app stores must also ensure app providers are only publishing lawful content.<sup>125</sup> CAC has commented on the necessity of the Provisions, noting that “[l]awbreakers exploit a handful of apps to disseminate violent, terrorist, obscene and pornographic information and rumours against the law.”<sup>126</sup>

#### IV. APP LAWS REPRESENT ANOTHER STEP TOWARDS CHINESE PROTECTIONISM OF ESTABLISHED DOMESTIC CORPORATIONS

Mobile game developers, both foreign and domestic, have criticized the 2016 regulations of SAPPRFT and CAC as unnecessary barriers. Indeed, as one commenter noted, the new rules are a “ridiculous, inefficient-sounding process that only a government body could come up with.”<sup>127</sup> In response, SAPPRFT has asserted that the regulations will create a healthier market for mobile games by increasing quality and reducing piracy,<sup>128</sup> while CAC has expressed that the law is necessary to ensure apps are not used for nefarious purposes.<sup>129</sup>

At face value, these rationales may seem justified. However, this section will argue that the regulations are not simply a form of political censorship, but are yet another protectionist measure in a long line of laws and policies intended to disincentivize foreign technology companies (and other industries generally) from operating in China. In so doing, these and other anti-competitive measures allow established domestic corporations to fill the void—even at the detriment of domestic start-ups. Section A will first provide background information of China’s transition from promoting domestic establishments in China (such as Chinese factories and offices owned by Chinese or foreign firms) to focusing on Chinese-owned firms. Section B will highlight how China’s efforts to promote Chinese firms has led to an increase in protectionist policies and regulations that compel foreign technology firms to exchange their technology for market access which is then used against them, deploy other tactics to hamper foreign firms, or effectively block their entry entirely. Lastly, Section C will utilize Section B’s findings to posit that the 2016 mobile app regulations will similarly act as an additional trade barrier to foreign firms who wish to do business in the Chinese mobile app market, while suppressing domestic start-ups who might challenge the established corporations.

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123. *Id.*

124. *Id.*

125. *Id.*

126. Nectar Gan & He Huifeng, *All Mainland App Providers Ordered to Keep User Logs for Months to Curb Spread of ‘Illegal Information,’* SOUTH CHINA MORNING POST (June 28, 2016, 11:37 PM), <http://www.scmp.com/news/china/policies-politics/article/1982756/all-mainland-app-providers-ordered-keep-user-logs>.

127. Custer, *supra* note 98.

128. ZhugeEX, *Update*, *supra* note 109.

129. *See* Gan & Huifeng, *supra* note 126 (quoting the CAC agency, claiming that mobile apps could be used “to disseminate violent, terrorist, obscene, and pornographic information and rumours against the law”).

***A. China's Transition from Incentivizing Domestic Establishments to Promoting Chinese Firms***

It is no secret that China has had an economic boom over the past thirty-five years.<sup>130</sup> “One key reason for China’s miraculous economic growth is its participation in international trade. In 1978, China accounted for less than one percent of world trade. That percentage jumped to over ten percent in 2013, twelve years after China’s accession to the World Trade Organization.”<sup>131</sup> China’s motivation to join the World Trade Organization (WTO) was in part based on recognizing the need to utilize market signals—rather than government control—to maintain its economic growth of the 1980s and 1990s.<sup>132</sup> Indeed, Chinese reforms in the 1990s that began moving the country from a centrally-planned economy to a market-oriented economy were the catalysts that grew the country from the thirtieth to the sixth largest economy in the world between 1970 and 2000.<sup>133</sup>

Before the turn of the twenty-first century, China sought to both incentivize foreign corporations to establish themselves in China and to encourage foreign direct investment.<sup>134</sup> While Chinese policy was at times unfair or mercantile, it was tolerated by foreign entities and governments because it created an environment for low-cost production, which benefited foreign corporations and foreign consumers.<sup>135</sup> Joining the WTO required China to make drastic economic changes to reduce trade barriers, which they began implementing after being accepted into the WTO.<sup>136</sup> However, “[t]he trouble is that China has never genuinely accepted the basic rules governing the world economy.”<sup>137</sup> As such, this transition to adopt WTO guidelines stalled in 2003 under new Chinese leadership that “pursued new

130. See Tomas Hirst, *A Brief History of China's Economic Growth*, WORLD ECON. FORUM (July 30, 2015), <https://www.weforum.org/agenda/2015/07/brief-history-of-china-economic-growth/> (indicating an average GPA growth of 9.4% between 1978–2012).

131. See generally Wentong Zheng, *Trade Law's Responses to the Rise of China*, 34 BERKELEY J. INT'L L. 110, 110 (2016).

132. See U.S. TRADE REPRESENTATIVE, 2015 REPORT TO CONGRESS ON CHINA'S WTO COMPLIANCE 3 (Dec. 2015), <https://ustr.gov/sites/default/files/2015-Report-to-Congress-China-WTO-Compliance.pdf> [hereinafter 2015 REPORT] (noting that relying on market signals was more important than relying on Chinese government economic planners and state-owned enterprises); Ramesh Adhikari & Yongzheng Yang, *What Will WTO Membership Mean for China and Its Trading Partners*, FIN. & DEV., Sept. 2002, at 22, <http://www.imf.org/external/pubs/ft/fandd/2002/09/adhikari.htm> (discussing China's transition from a centrally planned economy to a market-oriented one).

133. See Adhikari & Yang, *supra* note 132, at 22 (noting that market reform “triggered the rapid expansion of China’s foreign trade and investment inflows”).

134. Robert D. Atkinson, *Enough is Enough: Confronting Chinese Innovation Mercantilism*, THE INFO. TECH. & INNOVATION FOUND 8 (Feb. 2012), [http://www2.itif.org/2012-enough-enough-chinese-mercantilism.pdf?\\_ga=1.255389512.1587732089.1483415023](http://www2.itif.org/2012-enough-enough-chinese-mercantilism.pdf?_ga=1.255389512.1587732089.1483415023) (“Until the mid-2000s China actively encouraged foreign direct investment in the country”).

135. See *id.* (noting that, despite the costs, U.S. business also benefited from working in China).

136. See 2015 REPORT, *supra* note 132, at 3 (outlining U.S. attempts to bring China’s trade barriers into WTO compliance).

137. Robert Samuelson, *A Trade War with China?*, REALCLEARPOLITICS (Sept. 27, 2010), [http://www.realclearpolitics.com/articles/2010/09/27/a\\_trade\\_war\\_with\\_china\\_107310.html](http://www.realclearpolitics.com/articles/2010/09/27/a_trade_war_with_china_107310.html).

and more expansive industrial policies, often designed to limit market access for imported goods, foreign manufacturers and foreign service suppliers, while offering substantial government guidance, resources and regulatory support to Chinese industries, particularly ones dominated by state-owned enterprises.<sup>138</sup>

By 2006, Chinese strategy had shifted from attracting commodity-based production facilities owned by foreign corporations to promoting the growth of domestic Chinese companies.<sup>139</sup> While it is not uncommon for governments to provide policy incentives to encourage companies—regardless of nationality—to establish themselves within their respective countries, China's new goal was narrowly and specifically focused on promoting and protecting Chinese firms, instead of Chinese establishments, to the detriment of foreign firms.<sup>140</sup> This policy change was signaled in January 2006 when “China initiated a 15-year ‘Medium- to Long-Term Plan [(MLP)] for the Development of Science and Technology.’”<sup>141</sup> The MLP called upon China to develop capabilities for indigenous innovation in core strategic research areas, as well as in frontier technologies, engineering megaprojects, and science megaprojects.<sup>142</sup>

The objective was not solely for China to have access to these technologies, but also to have Chinese-owned firms master these core technologies and become national champions—large state-owned enterprises with highly recognizable Chinese brands—that would dominate domestically and compete globally.<sup>143</sup> In

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138. 2015 REPORT, *supra* note 132, at 3.

139. *See* Atkinson, *supra* note 134, at 8 (describing policy shift to a focus on Chinese firms at the expense of foreign investments).

140. *See* Atkinson, *supra* note 134, at 7 (“While virtually all governments have crafted economic development policies to boost competitive advantage, China has developed the most comprehensive set of policies, with most of them violating the spirit, if not the letter of the law of the WTO[. The mercantilist policies also] . . . focus on Chinese firms, rather than Chinese establishments (e.g., Chinese factories and offices owned by Chinese or foreign firms).”).

141. *See generally* Cong Cao et al., *China's 15-year Science and Technology Plan*, PHYSICS TODAY 38 (Dec. 2016), <http://china-us.uoregon.edu/pdf/final%20print%20version.pdf> (outlining changes under MLP, notably a stronger focus on utilizing internal resources).

142. *See id.* at 43 (listing key areas identified in MLP); *see also* NAT'L RES. COUNCIL OF THE NAT'L ACADEMIES, THE NEW GLOBAL ECOSYSTEM IN ADVANCED COMPUTING: IMPLICATIONS FOR U.S. COMPETITIVENESS AND NATIONAL SECURITY 99 (2012), <https://www.nap.edu/read/13472/chapter/16> (outlining technology areas of medium- and long-term plans). “Indigenous innovation” here refers to “enhancing original innovation, integrated innovation, and re-innovation based on assimilation and absorption of imported technology, in order to improve [China's] national innovation capability.” *Hearing on The Impact of International Technology Transfer on American Research and Development Before the Subcomm. on Investigations and Oversight of the H. Comm. on Science*, 112th Cong. 4 (2012) (statement of Dr. Robert D. Atkinson, President, Information Technology & Innovation Foundation), <http://www2.itif.org/2012-international-tech-transfer-testimony.pdf> [hereinafter *Atkinson Hearing*].

143. *See generally* Atkinson, *supra* note 134, at 8 (describing Chinese desire to focus on increasing Chinese global competitiveness); *see also* U.S. INT'L TRADE COMM'N, CHINA: INTEL. PROP. INFRINGEMENT, INDIGENOUS INNOVATION POLICIES, AND FRAMEWORKS FOR MEASURING THE EFFECTS ON THE U.S. ECONOMY 5–6 (2010), <https://www.usitc.gov/publications/332/pub4199.pdf> (noting that China's goal is to promote “national champions” that can compete in global markets); Bruce Einhorn, *A Cybersecurity Law in China Squeezes Foreign Tech Companies*, Bloomberg Newsweek (Jan. 21, 2016),

pursuing this objective, the MLP directed that “[a]ll policies and measures shall be made such that they are conducive to enhancing indigenous innovation capability,”<sup>144</sup> and left “no doubt that the MLP contain[ed] techno-nationalist notions of self-reliance.”<sup>145</sup> Indeed, “the plan is considered by many international technology companies to be a blueprint for technology theft on a scale the world has never seen before.”<sup>146</sup> In acquiring these technologies, China’s goal was defined by its pursuit of economic independence instead of trade, which conflicts with a global trading system theory that assumes countries will strive to achieve a competitive, not absolute, advantage in industries.<sup>147</sup>

### ***B. Clearing Foreign Corporate Participants for Domestic Growth***

In its effort to promote and protect Chinese firms, Chinese policies have stymied—or effectively exiled—technology and other industry competitors from China.<sup>148</sup> In their absence, domestic juggernauts have risen.<sup>149</sup> By following this policy, China is arguably mirroring the policy footsteps of Japan, South Korea, and India.<sup>150</sup> Yet, China’s policy is more impressive in scope and strength:

[T]he Chinese government is remarkable in how aggressively it applies these policies, how many of its agencies are involved, how quickly and radically it changes the rules, how many unique technology and product standards it tries to impose, and how subtly its regulations violate the spirit, if not the letter, of multilateral agreements.<sup>151</sup>

This section outlines the Chinese policies that have been implemented in an effort to accomplish the goals of promoting national champions. First, this section will highlight how the promise of the bountiful Chinese market lures foreign corporations to release their invaluable technology to Chinese firms for the mirage

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<https://www.bloomberg.com/news/articles/2016-01-21/a-cybersecurity-law-in-china-squeezes-foreign-tech-companies>.

144. Atkinson, *supra* note 134, at 22, (quoting *The National Medium-and Long-Term Program for Science and Technology Development (2006-2020): An Outline*, STATE COUNCIL OF PR CHINA, (non-official English translation), [http://www.etiea.cn/data/attachment/123\(6\).pdf](http://www.etiea.cn/data/attachment/123(6).pdf). [hereinafter *MLP*]).

145. Atkinson, *supra* note 134, at 22, (quoting *The National Medium-and Long-Term Program for Science and Technology Development of China (2006-2020): An Outline*, STATE COUNCIL OF CHINA, (non-official English translation), [http://www.etiea.cn/data/attachment/123\(6\).pdf](http://www.etiea.cn/data/attachment/123(6).pdf). [hereinafter *MLP*]).

146. *China’s Drive for ‘Indigenous Innovation’ – A Web of Industrial Policies*, U.S. CHAMBER OF COM. 4 (July 27, 2010), <https://www.uschamber.com/report/china%E2%80%99s-drive-indigenous-innovation-web-industrial-policies>.

147. Atkinson, *supra* note 134, at 5; *id.* at 16 (“As hard as it may be for adherents of Western neoclassical economics to grasp . . . China doesn’t want to make some things and buy others; they want to make virtually everything, especially advanced technology products and services.”).

148. *See id.* at 28 (discussing external consequences of China’s mercantilism).

149. *See id.* (discussing the internal consequences of China’s mercantilism).

150. Thomas Hout & Pankaj Ghemawat, *China vs the World: Whose Technology Is It?*, HARV. BUS. REV. (Dec. 2010), <https://hbr.org/2010/12/china-vs-the-world-whose-technology-is-it> (noting that other Asian countries have utilized similar protectionist measures).

151. *Id.*

of market access. Then, it will highlight how foreign companies are targeted to the benefit of domestic entities through Chinese policy and regulations. Finally, it will provide examples of how foreign firms ultimately are pushed out of the technology sector to the benefit of domestic Chinese firms.

### 1. Assets for Access

China has a longstanding history of requiring *quid pro quo* technology transfers to allow businesses to obtain access to Chinese markets.<sup>152</sup> Since China's accession into the WTO, this policy has been implicitly enforced through requirements such as joint ventures.<sup>153</sup> Such requirements allow China to avoid WTO regulations which forbid countries from requiring technology transfers for foreign direct investments.<sup>154</sup> Though the WTO prevents explicit demands,<sup>155</sup> a 2012 US-China Business Council survey found, "36 percent of respondents indicated they were asked in the past three years to make such a transfer as a requirement for gaining an investment, project, product or market entry approval."<sup>156</sup> Robert D. Atkinson, president of the Information Technology & Innovation Foundation, stated the dilemma foreign businesses face in sharing technology: "They do it with a gun to their head. [The Chinese] . . . say either you're going to make these investments[,] or you're not going to get access to the market."<sup>157</sup>

Indigenous innovation is accelerated by these required technology transfers because China can leapfrog by using another country's research and development.<sup>158</sup> Technology transfers allow China to outpace competition:

They let Western firms into the domestic market (SAIC, Volkswagen, Audi) and co-produce products using Western technology, slowly learning from them and then creating back door competitors on the home turf. These firms then push out the original Western firms after they

152. See generally THOMAS J. HOLMES ET AL., *QUID QUO: TECHNOLOGY CAPITAL TRANSFERS FOR MARKET ACCESS IN CHINA* (2015), <https://www.minneapolisfed.org/research/sr/sr486.pdf>.

153. See *id.* at 3 (outlining the use of Chinese joint ventures).

154. See *U.S.-China Bilateral Trade Agreement and the Accession of China to the WTO: Hearing Before the Comm. on Ways and Means H.R.*, 106<sup>th</sup> Cong. 68 (2001), <https://www.gpo.gov/fdsys/pkg/CHRG-106hhrg67129/html/CHRG-106hhrg67129.htm> (indicating that China would abandon requirements that require firms to set up factories in China in order to sell in China, abolish local purchase requirements, and abolish forced technology transfer).

155. See Atkinson, *supra* note 134, at 33 (noting that while China's guidelines are against the accession agreement to the WTO, they still encourage the transfer of technology); see also Hout, *supra* note 150 (indicating that the Chinese government argues that technology transfers do not violate WTO policies because these transfers are a business decision, rather than a requirement for market entry).

156. Holmes, *supra* note 152, at 8.

157. Julie Makinen, *Chinese Censorship Costing U.S. Tech Firms Billions in Revenue* L.A. TIMES (Sept. 22, 2015), <http://www.latimes.com/business/la-fi-china-tech-20150922-story.html>.

158. See Holmes, *supra* note 152, at 28 (outlining Chinese ownership of technology).

reach a level of sophistication.<sup>159</sup>

The goal is to create a “tipping point at which multinational corporations will have to locate their most-sophisticated R&D projects and facilities in China, enabling it to eventually catch up with or supplant the U.S. as the world’s most advanced economy.”<sup>160</sup> In 2010, approximately 50% of Chinese technology originated from foreign firms.<sup>161</sup>

While foreign businesses trading technology run a risk of turning “local upstarts into true rivals,”<sup>162</sup> they are enticed by the immense Chinese market with a population of more than one billion people.<sup>163</sup> In the 1980s and 1990s, foreign companies had little to fear from fledgling Chinese businesses which utilized shared technology.<sup>164</sup> However, “that gamble is increasingly looking like a sucker’s bet loaded in China’s favor,” with a maturing Chinese information technology sector that can now compete domestically and globally.<sup>165</sup> In a smaller market, companies could avoid these technology transfer tactics by simply not participating in the country’s market;<sup>166</sup> however, a multinational company cannot easily ignore the opportunity represented by the second largest economy in the world.<sup>167</sup> As such,

[f]oreign companies capitulate because they have little choice; they either give up their technology or lose out to other competitors that are willing to make the essentially Hobson’s choice. Industrial organization economists refer to this type of market as monopsonistic: having one buyer that can set largely whatever terms it wants against competitive sellers.<sup>168</sup>

## 2. Domestic Preference, Foreign Bias

China’s economic policy is “not merely competitive advantage, but *absolute advantage*” for domestic Chinese-owned firms—that is, it seeks to dominate all aspects of the market by destroying any advantage of a viable external competitor.<sup>169</sup> In achieving this, required technology transfer is only a single tool

159. Andy Bodrog, *From Copying To Creating: Chinese Tech Firms Eyeing Global Expansion*, SEEKING ALPHA, (Oct. 27, 2016), at 1, <http://seekingalpha.com/article/4015883-copying-creating-chinese-tech-firms-eyeing-global-expansion>; see also Hout, *supra* note 150 (outlining China’s strategy to obtain foreign technology).

160. Hout, *supra* note 150.

161. See Holmes, *supra* note 152, at 28 (outlining Chinese ownership of technology).

162. David Wolf, *Why Buy the Hardware When China Is Getting the IP for Free*, FOREIGN POL’Y, (Apr. 24, 2015), <http://foreignpolicy.com/2015/04/24/ibm-technology-transfer-china-virginia-rometty-strategy-lenovo-huawei-it/>.

163. Noah Smith, *Why US Companies Have Started Fleeing China*, N.Y. POST (May 17, 2016), <http://nypost.com/2016/05/17/why-us-companies-have-started-fleeing-china/> (“[T]he dazzling lure of the Chinese consumer pushed many multinationals to locate offices and factories in the country”).

164. Wolf, *supra* note 162.

165. *Id.* at 4.

166. Atkinson, *supra* note 134, at 3–4.

167. *Id.*

168. *Id.*

169. See Atkinson, *supra* note 134, at 5 (explaining China’s economic goals, and

utilized by the Chinese in its attempt to acquire market dominance.<sup>170</sup> China implements differential treatment between domestic and foreign corporate entities with regard to tax, transfer pricing, visa, and custom laws;<sup>171</sup> turns a blind eye towards intellectual property theft<sup>172</sup>—notably software piracy;<sup>173</sup> disregards international domestic technology standards;<sup>174</sup> requires onerous regulatory certification requirements, such as those outlined above for mobile game apps;<sup>175</sup> sustains Chinese state-owned enterprises, even when operating at a loss, that compete with foreign corporations;<sup>176</sup> grants export subsidies;<sup>177</sup> and grants export financing.<sup>178</sup> Moreover, the primary target for anti-monopoly law enforcement has been foreign corporations<sup>179</sup> to the benefit of “national champions.”<sup>180</sup>

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motivations behind those goals).

170. See *id.*, at 30–50 (describing the multiple methods China utilizes to assist Chinese-owned firms).

171. See Dan Harris, *China Whets Its Enforcement Appetite. And It's YOU It Wants*, CHINA L. BLOG (Jan. 16, 2010), [http://www.chinalawblog.com/2010/01/china\\_whets\\_its\\_enforcement\\_ap.html](http://www.chinalawblog.com/2010/01/china_whets_its_enforcement_ap.html) (discussing China's use of tax, transfer pricing, anti-trust, visa, and custom laws).

172. See e.g., Chris Strohm, *No Sign China Has Stopped Hacking U.S. Companies, Official Says*, BLOOMBERG TECH. (Nov. 18, 2015), <https://www.bloomberg.com/news/articles/2015-11-18/no-sign-china-has-stopped-hacking-u-s-companies-official-says> (indicating that espionage via computer hacking costs the U.S. economy \$400 billion a year, and that the Chinese government is believed to be behind 90 percent of those attacks); see also Anna Zhang, *IP Litigation in China: Foreign Companies Still Face Challenges*, THE AM. LAWYER INT'L (Aug. 8, 2016) <http://www.international.law.com/id=1202764567791/IP-Litigation-in-China-Foreign-Companies-Still-Face-Challenges?sreturn=20170016165150> (indicating that Chinese IP courts are tougher on foreign companies).

173. E.g., Britney Fitzgerald, *Software Piracy: Study Claims 57 Percent Of The World Pirates Software*, THE HUFFINGTON POST (June 1, 2012), [http://www.huffingtonpost.com/2012/06/01/software-piracy-study-bsa\\_n\\_1563006.html](http://www.huffingtonpost.com/2012/06/01/software-piracy-study-bsa_n_1563006.html) (noting that China has a software piracy rate of 77% which is the third highest in the world).

174. See Samantha Greene, *China's ICT Standards Policy Risks Global Technology Isolation*, INFO. TECH. & INNOVATION FOUND. (Dec. 15, 2014), <https://itif.org/publications/2014/12/15/china%E2%80%99s-ict-standards-policy-risks-global-technology-isolation> (noting that China's adoption of unique technology standards isolates it from the rest of the world).

175. See Peterson, *supra* note 7 (describing the regulations on mobile games in China).

176. See JOHN VAN REENEN & LINDA YUEH, UNIV. OF OXFORD: DEPT'T OF ECON., *WHY HAS CHINA GROWN SO FAST? THE ROLE OF INTERNATIONAL TECHNOLOGY TRANSFER* 7 (2012), <http://www.economics.ox.ac.uk/materials/papers/5634/paper592.pdf> (noting that China would bolster companies operating at a loss to be more competitive).

177. See *Chinese Export Subsidies Under the “Demonstration Bases-Common Service Platform” Program Terminated Thanks to U.S.-China Agreement*, OFF. OF THE U.S. TRADE REPRESENTATIVE (Apr. 14, 2016), <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2016/april/chinese-export-subsidies-under>. (describing China's use of export subsidies).

178. See Atkinson, *supra* note 134, at 49 (providing information on China's use of export financing).

179. Thomas J. Horton, *Antitrust or Industrial Protectionism? Emerging International Issues in China's Anti-Monopoly Law Enforcement Efforts*, 14 SANTA CLARA J. INT'L L. 109, 140–41 (2016).

180. See U.S. CHAMBER OF COM., *COMPETING INTERESTS IN CHINA'S COMPETITION LAW ENFORCEMENT: CHINA'S ANTI-MONOPOLY LAW APPLICATION AND THE ROLE OF INDUSTRIAL POLICY* 2 (2014) (finding that the beneficiaries of China's policies are often Chinese national

Consequently,

[t]he government does indeed seem to be giving the local companies a pass. While bureaucrats are raiding foreign-run factories, imposing sizable punishments on multinationals, and making demands on transactions that have little to do with China, enforcement of other domestic regulations come up almost comically short . . . . While the regulators are going after foreign companies, they appear to be taking it easy on local enterprises . . . . This double standard may indicate that the great enforcement crackdown is as much a matter of industrial policy as it is an effort to raise taxes and prevent economic concentration.<sup>181</sup>

This domestic industry preference and foreign bias in the information technology sector is exemplified by China's internet censorship and other technology regulations. It is no secret that China strictly controls the flow of information entering and manifesting within the country, viewing it as a matter of national security.<sup>182</sup> China's infamous "Great Firewall," otherwise known as the Golden Shield Project, bars numerous foreign websites from being viewed within mainland China.<sup>183</sup> However, "[m]uch of the blocking appears arbitrary; for example, a major home improvement site in the United States, which would appear wholly innocuous, is typical of sites likely swept up by the Great Firewall."<sup>184</sup> There are solutions to get around the firewall, such as using a virtual private network,<sup>185</sup> but if a company is trying to reach the masses it cannot rely on a consumer to use similar methods. Consequently, "[o]ver the past decade, China's filtering of cross-border internet traffic has posed a significant burden to foreign suppliers, hurting both internet sites themselves, and users who often depend on them for their business."<sup>186</sup>

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champions in industries that China considers strategic, such as commodities and high technology).

181. See Atkinson, *supra* note 134, at 41 (citing Richard Meyer, *China Whets Its Enforcement Appetite*, COMPLIANCE WEEK, Jan. 2009, <https://www.complianceweek.com/news/news-article/china-whets-its-enforcement-appetite#.WePpu2hSxPY>).

182. See Gillian Wong, *China to Get Tough on Cybersecurity*, WALL ST. J. (July 9, 2015), <https://www.wsj.com/articles/china-to-get-tough-on-cybersecurity-1436419416> (noting that China sees itself as the victim in light of Snowden's revelations).

183. See WIKIPEDIA, *Websites Blocked in Mainland China*, [https://en.wikipedia.org/wiki/Websites\\_blocked\\_in\\_mainland\\_China](https://en.wikipedia.org/wiki/Websites_blocked_in_mainland_China) (last visited Aug. 30, 2017) (providing a list of high-ranking websites that are blocked in China).

184. MICHAEL B.G. FROMAN, EXEC. OFF. OF THE PRESIDENT, OFF. OF U.S. TRADE REPRESENTATIVE, 2016 NATIONAL TRADE ESTIMATE REPORT ON FOREIGN TRADE BARRIERS 91 (2016), <https://ustr.gov/sites/default/files/2016-NTE-Report-FINAL.pdf>.

185. Virtual Private Networks (VPNs) allow users to contact an otherwise blocked website by establishing a dedicated, encrypted link between the user's computer and the website, thereby making it harder to block. See *China Blocks Virtual Private Network Use*, BBC NEWS (Jan. 26, 2015), <http://www.bbc.com/news/technology-30982198> (providing information on VPNs in China).

186. Paul Carsten and Michael Martina, *U.S. Says China Internet Censorship a Burden for Businesses*, REUTERS (Apr. 8, 2016), <http://www.reuters.com/article/us-usa-china-trade-internet-idUSKCN0X50RD>.

While China has developed domestic alternatives to Google and other blocked multinational internet companies, Chinese developers and professionals suffer from the alternative platforms' lack of resources. For instance, Chinese developers cannot take advantage of Google's public libraries of fonts and code, which requires greater costs and resources to recreate; Chinese researchers are unable to access data not kept on Chinese servers; and—as noted—foreign and domestic mobile app developers are forced to alter their apps to comply with Chinese regulations.<sup>187</sup> Moreover, the established flow of information in the global marketplace is disrupted by Chinese censorship regulations:

In international companies, for instance, many business applications such as statistics and database programs are not run on local computers, but rather on servers based at corporate headquarters. If connections are slow or VPNs unstable, these applications cannot always be accessed from China. Even simply transferring files to colleagues in other countries can be a trying experience.<sup>188</sup>

Indeed, in 2015 surveys, more than 80% of U.S. companies found Chinese internet censorship to be detrimental to business; more than 85% of European companies reported a negative impact on business, and 13% of European companies surveyed have postponed investments in Chinese-based research and development.<sup>189</sup>

It should be no surprise then that multinational companies and foreign government agencies have responded negatively to China's internet policy. In 2008, Pablo Chavez, Senior Policy Counsel of Google, released a memo that highlighted concerns of Chinese censorship and recommended strategies to ensure universal expression of speech on the internet, including making censorship a "central element of our bilateral and multilateral trade talks."<sup>190</sup> Google later pulled out of China in 2010 due to regulatory concerns.<sup>191</sup> In 2011, the United States expressed concern through the WTO about China's internet restrictions.<sup>192</sup> The

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187. See Keith Bradsher & Paul Mozur, *China Clamps Down on Web, Pinching Companies Like Google*, N.Y. TIMES (Sept. 21, 2014), [http://www.nytimes.com/2014/09/22/business/international/china-clamps-down-on-web-pinching-companies-like-google.html?\\_r=0](http://www.nytimes.com/2014/09/22/business/international/china-clamps-down-on-web-pinching-companies-like-google.html?_r=0) (describing restrictions on commerce and scientific research due to Chinese censorship).

188. Hauke Johannes Gierow, *Cyber Security in China: Internet Security, Protectionism and Competitiveness: New Challenges to Western Businesses*, MERCATOR INST. FOR CHINA STUD., Apr. 21, 2015, at 5–6, [http://www.merics.org/fileadmin/templates/download/china-monitor/150407\\_MERICS\\_China\\_Monitor\\_22\\_en.pdf](http://www.merics.org/fileadmin/templates/download/china-monitor/150407_MERICS_China_Monitor_22_en.pdf).

189. *China Internet Restrictions Hurting Businesses, Western Companies Say*, WALL STREET J. (Feb. 12, 2015), <http://blogs.wsj.com/chinarealtime/2015/02/12/china-internet-restrictions-hurting-business-western-companies-say/>.

190. Pablo Chavez, *Promoting Free Expression on the Internet*, GOOGLE: PUB. POL'Y BLOG (May 20, 2008), <https://publicpolicy.googleblog.com/2008/05/promoting-free-expression-on-internet.html>.

191. See Nicholas Carlson, *BREAKING: Google Pulls Search Engine Out of China*, BUS. INSIDER (Mar. 22, 2010, 2:44 PM), <http://www.businessinsider.com/google-pulls-out-of-china-2010-3> (explaining that Google removed its operations from China due to issues with censorship and oversight).

192. See *United States Seeks Detailed Information on China's Internet Restrictions*, OFF. OF THE U.S. TRADE REPRESENTATIVE (Oct. 19, 2011), <https://ustr.gov/about-us/policy-offices/press->

United States labeled the restrictions as a “commercial barrier” that was specifically detrimental to United States small businesses since website accessibility was a critical element to reach Chinese consumers.<sup>193</sup> More recently, Netflix pulled its service out of China in 2016, admitting that “[t]he regulatory environment for foreign digital content services in China has become challenging,” and content would be licensed to local companies instead.<sup>194</sup>

These challenges culminated in early 2016 with a United States Trade Representative report that added the Great Firewall to a list of impediments to trade with China.<sup>195</sup> It found that “Chinese companies dominate the China [internet] market, due primarily to restrictions imposed on foreign companies by the Chinese government.”<sup>196</sup> The report highlighted multiple barriers, including how foreign companies must partner with a Chinese company to participate in the development of cloud computing; that China imposes a value-added telecommunications licensing requirement on cloud computing, despite it not being in the telecommunication sector; and how multiple Chinese agencies have jurisdiction over electronic commerce and impose a range of burdensome restrictions on internet use.<sup>197</sup> The report continued by noting:

While the purpose of the Internet restrictions purportedly is to address public interest concerns enumerated in Chinese law, China’s regulatory authorities frequently take actions that appear to be arbitrary, rarely issue lists of banned search terms or banned sites and provide little or no justification or means of appeal when they block access to all or part of a website, putting providers of Internet-enabled services in a precarious position, as they attempt to comply with Chinese law that can seem arbitrary.<sup>198</sup>

In fact, causing confusion may be an operative feature of regulatory decisions that serves to deter people, not a bug or a symptom of agency incompetence:

China’s vaguely-defined web content rules and inconsistent censorship enforcement work the same way as the fog near a cliff: since people can’t see exactly where the edge is, they’re more likely to stay *far* away from it, just in case. There’s no toeing the line, because nobody knows exactly where the line is. So instead of pushing the envelope, many people choose to censor themselves.<sup>199</sup>

Consequently, Chinese agencies have created a regulatory environment of vagueness that, while frustrating to foreign corporations, allows Chinese agencies

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office/press-releases/2011/october/united-states-seeks-detailed-information-china%E2%80%99s-i (stating Internet barriers hurt small American businesses in China).

193. *Id.*

194. Charles Riley, *Netflix Admits Its Plan for China Has Failed*, CNN (Oct. 18, 2016, 8:08 AM), <http://money.cnn.com/2016/10/18/technology/netflix-china/>.

195. See 2015 REPORT, *supra* note 132, at 16–18, 69, 148–50 (detailing the aspects and prohibitive effects of China’s Internet regulatory regime).

196. *Id.* at 148.

197. *Id.* at 18, 148–49.

198. *Id.* at 149.

199. C. Cluster, *The Cleverest Thing About China’s Internet Censorship*, TECH IN ASIA (Apr. 24, 2016), <https://www.techinasia.com/cleverest-thing-about-china-internet-censorship>.

to enforce the laws selectively.

More recently, China specifically reiterated its target of the information technology sector through the Internet Plus plan and subsequently passed regulations. During the height of the dot-com bubble<sup>200</sup> in the United States, China only had approximately one million internet users.<sup>201</sup> When the internet became more accessible, China found itself in competition with established Western internet companies.<sup>202</sup> Subsequently, in 2010, Chinese officials recognized a need to “[protect] national sovereignty in cyberspace.”<sup>203</sup> In July 2015, China unveiled the Internet Plus plan, which aimed to “integrate mobile Internet, cloud computing, big data and the Internet of Things with modern manufacturing, to encourage the healthy development of e-commerce . . . and to help [Chinese] Internet companies increase their international presence.”<sup>204</sup>

To pursue the Internet Plus policy, Beijing promulgated a new paradigm for industry-specific regulations: “secure and controllable.”<sup>205</sup> Chinese President Xi Jinping stated that “[China] must accelerate the advancement of domestic production, indigenous and controllable substitution plans, and the building of secure and controllable information technology systems.”<sup>206</sup> As with many Chinese regulations, there is no clear definition yet for the phrase “secure and controllable.”<sup>207</sup> This vagueness means that “the government and Chinese industry have broad discretionary authority to launch intrusive security audits or reject foreign suppliers altogether as not secure.”<sup>208</sup>

For instance, a multitude of relevant technology laws congruent with this policy have been recently passed, including the National Security Law, Counterterrorism Law, and Cybersecurity Law.<sup>209</sup> The National Security Law is a

200. The “Dotcom Bubble” refers to the period in the late 1990s where market forces fueled the growth of internet-based companies. *E.g.*, *Dotcom Bubble*, INVESTOPEDIA, <http://www.investopedia.com/terms/d/dotcom-bubble.asp> (last visited Sept. 26, 2017).

201. See *Evolution of Internet in China*, CHINA EDUC. AND RES. NETWORK (Jan. 1, 2001), [http://www.edu.cn/introduction\\_1378/20060323/t20060323\\_4285.shtml](http://www.edu.cn/introduction_1378/20060323/t20060323_4285.shtml) (noting that China had approximately 1,175,000 internet users in July 1998).

202. See *Shattering the Great Firewall of China*, CHAIRMAN MIGO MEDIA (Aug. 13, 2013), <http://chairmanmigo.com/shattering-the-great-firewall-of-china/> (providing background information on the purpose behind China’s internet censorship).

203. Samm Sacks, *Apple in China, Part I: What Does Beijing Actually Ask of Technology Companies?*, LAWFARE (Feb. 22, 2016, 7:30 AM), <https://www.lawfareblog.com/apple-china-part-i-what-does-beijing-actually-ask-technology-companies>.

204. *China Unveils Internet Plus Action Plan to Fuel Growth*, CHINA ST. COUNCIL (Jul. 4, 2015, 11:07 A.M.), [http://english.gov.cn/policies/latest\\_releases/2015/07/04/content\\_281475140165588.htm](http://english.gov.cn/policies/latest_releases/2015/07/04/content_281475140165588.htm).

205. Sacks, *supra* note 203; see also *Understanding China’s Cybersecurity Law & What to Expect*, AMERICAN CHAMBER OF COM. IN SHANGHAI (Jan. 12, 2017), <http://insight.amcham-shanghai.org/understanding-chinas-cybersecurity-law-what-to-expect/> (noting that the most recent regulations call it “secure and trusted,” but these phrases are interchangeable).

206. *Xi Says China Must Speed Up Plans for Domestic Network Technology*, REUTERS (Oct. 9, 2016), <http://www.reuters.com/article/us-china-internet-security-idUSKCN1290LA>.

207. Sacks, *supra* note 203.

208. *Id.*

209. See *Untangling China’s Cybersecurity Laws*, WALL ST. J. (June 3, 2016, 4:39 PM), <http://blogs.wsj.com/chinarealtime/2016/06/03/untangling-chinas-cybersecurity-laws/> (providing

broad and vague umbrella law that serves to increase information security across government agencies by expanding the definition of security to include the economy, financial system, indigenous technology innovation, and social stability.<sup>210</sup> The law also lays down the foundation for reviewing foreign investment, similar to the Committee on Foreign Investment in the United States.<sup>211</sup> The Counterterrorism Law requires internet service providers to provide technical support in terrorism cases, such as decrypting data.<sup>212</sup>

Lastly, the Cybersecurity Law, which was implemented in June 2017, requires companies to undergo security inspections to ensure compliance with government regulations.<sup>213</sup> The law further requires information infrastructure operators to store user data within China, and would allow authorities to cut internet access in public-security emergencies.<sup>214</sup> Ultimately, it “allows the Chinese regime to codify, and, in turn, further, its current practices of surveillance, censorship, and market protectionism into written policy—explicitly tied to the nation’s national security.”<sup>215</sup> *The Economist* aptly describes this internet regime as a “techno-nationalist Trojan horse.”<sup>216</sup> Interestingly, while China has compromised with U.S. lobbying efforts regarding some of the aforementioned regulation—such as removing localization requirements under the Counterterrorism Law—these requirements curiously resurfaced in other laws, such as in the Cybersecurity Law.<sup>217</sup>

The “secure and controllable” requirement could also provide additional authority for Chinese agencies to force companies to hand over source code or encryption keys.<sup>218</sup> In fact, China has already attempted to acquire source code from tech companies.<sup>219</sup> At the very least, the government appears to be connecting security with localization in China, which gives domestic Chinese companies a

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information on these laws).

210. *Id.*

211. Sacks, *supra* note 203.

212. *See Untangling China’s Cybersecurity Laws*, *supra* note 209.

213. Ron Cheng, *China Passes Long-Awaited Cyber Security Law*, FORBES (Nov. 9, 2016, 7:07 PM), <http://www.forbes.com/sites/roncheng/2016/11/09/china-passes-long-awaited-cyber-security-law/#10e9cc286868>.

214. *See* Dou, *infra* note 221.

215. Levi Maxey, *China Officially Ties Internet Restrictions to its Own National Security*, THE CIPHER BRIEF (June 1, 2016), <https://www.thecipherbrief.com/article/tech/understanding-beijings-cyber-priorities-1092>.

216. The Economist (@TheEconomist), TWITTER (Nov. 16, 2016, 4:28 PM), <https://twitter.com/TheEconomist/status/797959445611421696>.

217. *See* Sacks, *supra* note 203 (showing data localization requirements remain a high priority in Beijing, despite the removal of such requirements from the Counterterrorism Law).

218. Paul Mozur & Jane Perlez, *China Quietly Targets U.S. Tech Companies in Security Reviews*, N.Y. TIMES (May 16, 2016), <http://www.nytimes.com/2016/05/17/technology/china-quietly-targets-us-tech-companies-in-security-reviews.html?smid=tw-share>.

219. *See* Aaron Pressman, *Apple Says it Rejected Chinese Demand for Source Code*, FORTUNE (Apr. 19, 2016), <http://fortune.com/2016/04/19/china-demanded-apple-iphone-code/> (noting that China has repeatedly requested source code from Apple for iOS software).

competitive edge.<sup>220</sup> In a discussion log submitted by Technical Committee 260, a national committee that defines the world's cybersecurity standards, Guo Qiquan, chief engineer of the China Ministry of Public Security's Network Security Bureau, candidly writes "[t]he big trend is called shifting to domestic production . . . But it can't be written that way, so one calls it independent and controllable."<sup>221</sup> Requiring data localization under the Cybersecurity Law places a financial burden on those companies without data centers located in China, and could also burden the growth of domestic Chinese tech startups.<sup>222</sup> Moreover, foreign companies may simply refuse to do business in China for security or integrity concerns raised by these requirements, as infamously evidenced through the business decisions of Google, Facebook, and Twitter regarding content removal.<sup>223</sup>

In contrast, President Xi indicated that China could "make a fresh start," and "thoroughly shake off our reliance on foreign technology and rely on indigenous innovation to pursue development."<sup>224</sup> This policy is congruent with the government's transition, noted above, of China providing preferential treatment to Chinese firms, at the detriment of foreign companies.<sup>225</sup> President Xi ultimately appears to have concluded that the "secure and controllable" and "fresh start" goals were not diametrically opposed, but rather that some middle ground could exist.<sup>226</sup> As discussed in the next section, "for companies like Apple, this could be the worst of both worlds: greater scrutiny from China's government, and greater competition from Chinese firms."<sup>227</sup>

### 3. China's Bias in Intellectual Property

This domestic preference and foreign bias in the information technology sector is further demonstrated through China's lackluster intellectual property (IP) enforcement. As noted, China has historically turned a blind eye towards IP theft,<sup>228</sup>

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220. See Sacks, *supra* note 203 (stating that localization gives Chinese companies a competitive advantage and pressures foreign companies to cooperate with local partners).

221. Eva Dou, *Microsoft, Intel, IBM Push Back on China Cybersecurity Rules*, WALL ST. J. (Dec. 1, 2016), <http://www.wsj.com/articles/microsoft-intel-ibm-push-back-on-china-cybersecurity-rules-1480587542>.

222. See Maxey, *supra* note 215 ("[B]y requiring companies to store all Internet logs for six months—an enormous financial burden on both foreign and domestic companies for expensive data storage space—this may even hinder the emergence of Chinese tech startups.").

223. *Id.*; see also Tara Kola, *Why US Tech Companies Struggle in China but Thrive in India*, TECH IN ASIA (Sept. 1, 2016, 7:46 AM), <https://www.techinasia.com/talk/why-us-tech-companies-struggle-in-china-but-thrive-in-india> (noting that the Great Firewall has provided protection to many large Chinese tech companies by forcing out foreign competitors).

224. Mozur, *supra* note 218. *But see* Shen Yi, *NYT Misrepresentation of Xi's Views May Damage Sino-US's Cyber Affairs Stability*, CHINA DAILY: USA (May 21, 2016), [http://usa.chinadaily.com.cn/china/2016-05/21/content\\_25402097.htm](http://usa.chinadaily.com.cn/china/2016-05/21/content_25402097.htm) (indicating that President Xi's remarks were misinterpreted).

225. Maxey, *supra* note 215.

226. Mozur, *supra* note 218.

227. James Vincent, *China Extends Security Reviews to Gadgets from Apple and Others*, THE VERGE (May 17, 2016), <http://www.theverge.com/2016/5/17/11689004/china-audit-apple-tech-products>.

228. See Stroh, *supra* note 172 (indicating that espionage via computer hacking costs the U.S. economy \$400 billion a year, and that the Chinese government is believed to be behind 90

such as inventions<sup>229</sup> and software piracy.<sup>230</sup> One reason is the difficulties of enforcement.<sup>231</sup> Although China is taking strides to improve its IP enforcement, case studies' findings on bias are still conflicted.<sup>232</sup> However, while rates of patent litigation wins might be similar between domestic and foreign firms,<sup>233</sup> cases involving foreigners only represent 1.3% of China's 2015 docket.<sup>234</sup> One explanation for this low number of cases is that "Chinese courts expect more from foreign parties," which puts foreign firms at a disadvantage, and therefore foreign firms are only filing lawsuits where they have a strong case.<sup>235</sup> Furthermore, "[t]here is still a clear delineation in cases where there is national interest," such as energy, infrastructure, and telecommunications industries, where China supports national champions.<sup>236</sup> For instance, in *Huawei v. InterDigital*, the Chinese judges

. . . advocated that Chinese companies more aggressively use Chinese domestic antitrust law to address technology roadblocks in China and overseas: "Huawei is good at using antitrust laws as a counter-weapon, which other Chinese companies should study . . . domestic enterprises [should] break through technical barriers in the development of space for

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percent of those attacks); *see also* Zhang, *supra* note 172 (indicating that Chinese IP courts are tougher on foreign companies).

229. *See, e.g.*, Josh Horwitz, *Your Brilliant Kickstarter Idea Could Be on Sale in China Before You've Even Finished Funding It*, QUARTZ (Oct. 17, 2016), <https://qz.com/771727/chinas-factories-in-shenzhen-can-copy-products-at-breakneck-speed-and-its-time-for-the-rest-of-the-world-to-get-over-it/> (providing information on China's product copying culture, describing how one inventor's product was copied within a week of being on the fundraising website, Kickstarter).

230. *See* Fitzgerald, *supra* note 173 (noting that China has a software piracy rate of 77%); *see also* Alap Naik Desai, *Surrendering to Piracy in China? MS Offering Free Upgrade to Windows 10 Even to Those Using Pirated Copies*, INQUISITR (Mar. 24, 2015), <http://www.inquisitr.com/1950835/microsoft-windows-10-china-piracy/> (noting that 90% of Windows OS is pirated).

231. *See* Edward J. Walneck, *The Patent Troll or Dragon?: How Quantity Issues and Chinese Nationalism Explain Recent Trends in Chinese Patent Law*, 31 ARIZ. J. INT'L & COMP. L. 435, 438 (2014) (noting that Chinese courts are enforcing more patents than in the past, especially for domestic companies against foreign companies); *see also* Zhang, *supra* note 172 (noting Chinese judges are overburdened with their caseload, and that Chinese national champions are favored).

232. *See* Walneck, *supra* note 231, at 463–64 (noting that damage awards are larger for domestic firms, a higher win ratio against foreign firms, and studies indicate favoritism to Chinese firms). *But see* Brian J. Love et al., *Patent Litigation in China: Protecting Rights or the Local Economy?*, 18 VAND. J. ENT. & TECH. L. 713, 718–19 (2016) (finding that foreign firms perform better in court than Chinese firms, and won over 70% of cases they brought forward).

233. *See* Zhang, *supra* note 172 (comparing and contrasting rationales for foreign firm patent litigation win ratios in China).

234. Mark Cohen, *Collaboration vs Litigation in IP Licensing in China: 2016 Update*, CHINA IPR (Jan. 2, 2017), <https://chinaipr.com/2017/01/02/collaboration-vs-litigation-in-ip-licensing-in-china-2016-update/>; *see also* Int'l Antitrust Enforcement: China & Beyond: Hearing Before H. Subcomm. on Reg. Reform, Com., & Antitrust Law Committee on the Judiciary, 114<sup>th</sup> Cong. (2016) (specifying that the docket is China's 2015 docket).

235. Zhang, *supra* note 172.

236. *Id.*

their own gain, through bold use of antitrust litigation.”<sup>237</sup>

China’s regulations, enforcement, and policy manifest an environment for foreign corporations that, if not explicitly hostile, is at least implicitly inhospitable, and therefore beneficial to domestic firms.

#### 4. Consequences of a Regulatory Environment Inhospitable to Foreign Firms

Foreign firms have come to the sobering realization that the Chinese markets are becoming an untenable investment, as they are outmaneuvered or replaced by domestic upstarts, and burdened by government regulations, policies, and courts. For years, Chinese authorities have targeted a number of Western technology giants, including Microsoft, Qualcomm, Google, Intel, Cisco, IBM, Oracle, and Apple.<sup>238</sup> These “guardian warrior” companies had “seamlessly penetrated” Chinese society, and China wanted to replace them with domestic counterparts.<sup>239</sup> Of these, Apple largely remained unscathed from Chinese oversight, having maneuvered into an agreement with China Mobile, a Chinese wireless carrier, to sell the iPhone.<sup>240</sup> However, Apple’s streak of fifty-one consecutive quarters of sales growth ended in early 2016<sup>241</sup> with 58% of its overall decline in growth attributable to slumping sales in China, Taiwan, and Hong Kong.<sup>242</sup> In its place, Oppo and Vivo—domestic Chinese phone producers that were relatively unknown until recently—produced one-third of smartphones sold in China in the third Quarter of 2016, with Apple only retaining 7% market share.<sup>243</sup> China also dropped Apple from approved state purchases,<sup>244</sup> and shut down Apple’s iBooks store and iTunes Movies store due to regulation concerns, which competed directly with

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237. MARK COHEN, U.S. PAT. & TRADEMARK OFF., WHEN IP SYS. COLLIDE – TRUE ADVENTURES IN FOREIGN-CHINESE JUDICIAL INTERACTION 6 (Oct. 2015), <https://www.law.berkeley.edu/wp-content/uploads/2015/07/Mark-Cohen-When-IP-Systems-Collide.pdf>.

238. Daniel H. Rosen & Beibei Bao, *Eight Guardian Warriors: PRISM and Its Implications for US Businesses in China*, RHODIUM GROUP (July 8, 2013), <http://rhg.com/notes/eight-guardian-warriors-prism-and-its-implications-for-us-businesses-in-china-2>; see also Zachary Karabell, *What Apple Has to Hear from China*, NEW YORKER (Apr. 30, 2016), <http://www.newyorker.com/business/currency/what-apple-has-to-fear-from-china> (describing the “guardian warriors” and recent actions against Apple).

239. Karabell, *supra* note 238.

240. Paul Mozur & Jane Perlez, *Apple Services Shut Down in China in Startling About-Face*, N.Y. TIMES (Apr. 21, 2016), <http://www.nytimes.com/2016/04/22/technology/apple-no-longer-immune-to-chinas-scrutiny-of-us-tech-firms.html> (noting how Apple was recently targeted by Chinese regulations after years of avoiding them).

241. Alex Webb, *Apple Forecasts Second Sales Drop as iPhone Woes Deepen*, BLOOMBERG: TECH. (Apr. 26, 2016, 4:32 PM), <https://www.bloomberg.com/news/articles/2016-04-26/apple-forecasts-another-sales-decline-as-iphone-demand-cools>.

242. Karabell, *supra* note 238.

243. Yuan Gao & Alex Webb, *How Apple Lost China to Two Unknown Local Smartphone Makers*, BLOOMBERG (Nov. 22, 2016), <https://www.bloomberg.com/news/articles/2016-11-22/how-apple-lost-china-to-two-unknown-local-smartphone-makers>.

244. Paul Carsten, *China Drops Leading Tech Brands for Certain State Purchases*, REUTERS (Feb. 27, 2015), <http://www.reuters.com/article/us-china-tech-exclusive-idUSKBN0LV08720150227>.

Chinese internet company products.<sup>245</sup> Chinese courts recently ruled against Apple in a patent case for supposedly copying the iPhone 6 design from a little known Chinese company, barring the phone from being sold in Beijing.<sup>246</sup> Additionally, Apple also lost a trademark case for the term “iPhone,” allowing a little-known accessory maker to use the term for wallets and purses.<sup>247</sup> Most recently, Apple was forced to remove the *New York Times* app from the Apple store due to violations of China’s “local regulations,” but when questioned, Apple declined to specify what those regulations actually were.<sup>248</sup>

The other guardian warrior companies have met similar pushback. For instance, Qualcomm, a world leader in next-generation mobile technologies, faced its own Chinese hurdle, after being hit with a \$975 million antitrust fine in 2015 that also required it to offer communication system licenses at a sharp discount to domestic competitors.<sup>249</sup> Additionally, Microsoft, Intel, and IBM have expressed significant concerns regarding the Cybersecurity Law that will require them to hand over their source code, arguing that sharing source code would not fulfill China’s alleged objective of ensuring the software is secure or controllable.<sup>250</sup> Microsoft was also specifically targeted by antimonopoly regulators in China.<sup>251</sup> Google, as noted above, has withdrawn itself from China due to security and censorship concerns, although China promises to welcome their return once they can “respect China’s laws.”<sup>252</sup>

Not wanting to forgo Chinese market participation, these companies are forced to find refuge from regulations in joint-owned ventures. Qualcomm has teamed up with Guizhou Province to distribute customized server chips to Chinese customers.<sup>253</sup> Microsoft has partnered with state-owned enterprise China Electronics Technology Group to create a Windows 10 tailored for government

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245. Mozur & Perlez, *supra* note 240.

246. David Ramli, *Apple iPhones Found to Have Violated Chinese Rival’s Patent*, BLOOMBERG: TECH. (June 17, 2016), <https://www.bloomberg.com/news/articles/2016-06-17/apple-s-iphones-found-to-have-violated-chinese-rival-s-patent>.

247. *Id.*

248. Katie Benner & Sui-Lee Wee, *Apple Removed New York Times Apps from Its Store in China*, N.Y. TIMES (Jan. 4, 2017), <https://www.nytimes.com/2017/01/04/business/media/new-york-times-apps-apple-china.html>.

249. Paul Mozur & Quentin Hardy, *China Hits Qualcomm with Fine*, N. Y. TIMES (Feb. 9, 2015), <http://www.nytimes.com/2015/02/10/business/international/qualcomm-fine-china-antitrust-investigation.html?ref=technology>.

250. Dou, *supra* note 221.

251. See Jonathan Vanian, *China Wants Microsoft to Explain Major Problems with Its Data*, FORTUNE (Jan. 5, 2016), <http://fortune.com/2016/01/05/china-probe-microsoft-antitrust/> (discussing antitrust investigations concerning Microsoft not giving full security disclosures to its customers).

252. Josh Horwitz & Echo Huang, *Beijing Said Facebook and Google are Welcome Back to China as Long as They “Respect China’s Laws”*, QUARTZ (Oct. 12, 2016), <https://qz.com/808130/beijing-said-facebook-and-google-are-welcome-back-to-china-as-long-as-they-respect-chinas-laws/>.

253. Eva Dou, *China’s Tech Rules Make It Hard for U.S. Firms to Take Control*, WALL ST. J. (June 2, 2016), <http://www.wsj.com/articles/chinas-new-tech-rules-make-it-hard-for-u-s-firms-to-take-control-1464870481>.

clients, and has stopped promoting its search engine, Bing.<sup>254</sup> Cisco is working with state-owned enterprise Inspur to create localized networking gear.<sup>255</sup> Apple recently invested \$1 billion in Didi, a Chinese ride-sharing app that beat out Uber, which could “indirectly help Apple’s relationship with Beijing officials.”<sup>256</sup> In fact, it appears that becoming a Chinese firm is the best business decision for companies.<sup>257</sup> This strong shift, and a greater preference for reduced risk, is reflected by the number of U.S. tech company acquisitions of Chinese firms plummeting from fifteen in 2011, to only one in 2015.<sup>258</sup>

However, joint venturing typically requires technology transfers,<sup>259</sup> and also increases the risk of unauthorized IP acquisition.<sup>260</sup> As noted earlier, the Chinese strategy to promote indigenous innovation is meant to allow domestic firms to advance technologically by conducting technology transfers with foreign firms.<sup>261</sup> Following such transfers, these domestic partners become rivals, who are able to eventually push out Western firms.<sup>262</sup> As a result, commentators have criticized IBM’s cooperation with domestic Chinese tech firms that explicitly seek to replace U.S. companies.<sup>263</sup> China seeks to replace Microsoft’s Windows OS with a

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254. See Josh Horwitz, *Microsoft’s New Joint Venture Shows that China’s Bullying Tactics Work on US Tech Firms*, QUARTZ (2015), <https://qz.com/576457/microsofts-new-joint-venture-shows-that-chinas-bullying-tactics-work-on-us-tech-firms/> (discussing Microsoft’s joint venture with a Chinese firm).

255. Dou, *supra* note 221.

256. Scot Cendrowski, *What Apple’s Investment in Chinese Car Hailing Giant Did Really Mean*, FORTUNE (May 13, 2016), <http://fortune.com/2016/05/13/uber-apple-china-didi/>; see also Heather Timmons, *Apple is Reportedly Giving the Chinese Government Access to Its Devices for “Security Checks”*, QUARTZ (Jan. 25, 2015), <https://qz.com/332059/apple-is-reportedly-giving-the-chinese-government-access-to-its-devices-for-a-security-assessment/> (outlining the consequences of Apple providing the Chinese government access to check the security of its devices). See also, *State-owned China Post Group invests in Didi Chuxing*, ALLCHINATECH (Aug. 18, 2016), <https://e27.co/state-owned-china-post-group-invests-in-didi-chuxing-20160818/> (While not a state-owned enterprise outright, “Didi has obtained investment from several state-owned companies.”).

257. See, e.g., *Chinese Cybersecurity Rules Alter Business Paths*, WALL ST. J. (June 14, 2016), <http://sponsoredcontent.wsj.com/pwc/broader-perspectives/chinese-cybersecurity-rules-alter-business-paths/> (stating that after a struggling foreign firm in China sold a 51% stake of itself to a Chinese firm its sales revenue increased by 40% and it avoided regulatory hurdles).

258. *Id.*

259. *The Impact of International Technology Transfer on American Research and Development: Hearing Before the Comm. on Sci., Space, and Tech. H. Subcomm. on Investigations and Oversight*, 112<sup>th</sup> Cong. 3 (Dec. 5, 2012) (statement of the Honorable Dennis C. Shea).

260. See, Stephan Bosshart et al., *Past Lessons for China’s New Joint Ventures*, MCKINSEY & CO. (2010), <http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/past-lessons-for-chinas-new-joint-ventures> (explaining that joint ventures are vulnerable to IP theft, and providing advice to protect foreign firms).

261. See Atkinson, *supra* note 134, at 9 (explaining why China engages in forced technology transfer).

262. Bodrog, *supra* note 159; see also Hout, *supra* note 150 (outlining China’s strategy to obtain foreign technology).

263. Paul Mozur, *IBM Venture with China Stirs Concerns*, N.Y. TIMES (Apr. 19, 2015), <http://www.nytimes.com/2015/04/20/business/ibm-project-in-china-raises-us-concerns.html>.

homegrown version.<sup>264</sup> Similarly, Qualcomm may find the chip industry becoming more crowded with Chinese competitors, as China promotes domestic semiconductor firms.<sup>265</sup>

While companies such as Microsoft, IBM, and Qualcomm have found ways to work with China and various state-owned corporations, for many foreign companies the environment has simply become too hostile. A 2016 survey from the American Chamber of Commerce in China found that 77% of respondent businesses felt unwelcome, with 25% planning to move production capacity outside of China.<sup>266</sup> Concerns include labor costs, regulatory challenges, and IP threats.<sup>267</sup> These statistics are unsurprising considering the history of how past industries have fared with these barriers. For instance, in 2009, China wanted to improve its high-speed rail system, and sought the investments of foreign companies to form joint-ventures with state-owned entities, China South Locomotive & Rolling Stock Corporation Limited (CSR) and China Northern Railroad (CNR).<sup>268</sup> However, it required the selected firm to not only transfer relevant technology<sup>269</sup> and to hold only a 49% stake in the new company,<sup>270</sup> but to also develop a local supply chain in China and teach Chinese engineers.<sup>271</sup> While the selected foreign company acquired short-term profits from the venture, they have ultimately retained scant market share in China.<sup>272</sup> Instead, CSR and CNR utilized the acquired technology, and now dominate the local Chinese market. They have even branched out into developing and developed markets, including the U.S.<sup>273</sup>

Goldwind, now one of China's largest wind-turbine manufactures, received technology transfers from Danish and German companies in the late 1980s and

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264. James Griffiths, *A Chinese OS at Last? More Than 40 Per Cent of Dell PCs in China Now Running Homegrown Windows Alternative*, SOUTH CHINA MORNING POST: CHINA TECH (Sept. 14, 2015), <http://www.scmp.com/tech/china-tech/article/1857948/chinese-os-last-more-40-cent-dell-pcs-china-now-running-homegrown>.

265. See Eva Dou, *China's Chip Makers Explained*, WALL ST. J. (Jan. 27, 2015), <http://blogs.wsj.com/digits/2015/01/27/chinas-chip-makers-explained/> (discussing governmental investment fueling rise of Chinese firms in the computer chip industry).

266. AM. CHAMBER OF COM. IN THE PEOPLE'S REPUBLIC OF CHINA, 2016 CHINA BUSINESS CLIMATE SURVEY REPORT 4–6, [http://www.bain.com/Images/2016\\_China\\_Business\\_Climate\\_Survey\\_Report.pdf](http://www.bain.com/Images/2016_China_Business_Climate_Survey_Report.pdf).

267. *Id.*

268. Atkinson, *supra* note 134, 34–35; see generally Yatang Lin et al., *Technology Transfer and Domestic Innovation: Evidence from the High-Speed Rail Sector in China* (Oct. 24, 2016), [http://yatanglin.weebly.com/uploads/8/7/8/7/87879450/main\\_20161022.pdf](http://yatanglin.weebly.com/uploads/8/7/8/7/87879450/main_20161022.pdf).

269. Atkinson, *supra* note 134, at 33.

270. *Id.* at 32.

271. *Id.* at 34.

272. *Id.* at 35.

273. *Id.* at 3; see *CRC Sets up US Subsidiary with Initial Assets of US\$10 Million*, RAILNEWS (July 17, 2015), <http://www.railnews.in/crc-sets-up-us-subsidiary-with-initial-assets-of-us10-million/> (discussing large Chinese firms foray into the U.S. market with a bid on California's high-speed rail project).

1990s.<sup>274</sup> After receiving the technology, China passed regulations requiring 70% of turbine parts to be produced locally to qualify for government contract projects.<sup>275</sup> Decried as a violation of the World Trade Organization, and pressured by the United States, the Chinese subsequently revoked this local production requirement in 2009, “[b]ut by then, the policy was no longer needed. Some Gamesa wind turbines exceeded 95 percent local content.”<sup>276</sup> Top foreign wind turbine manufactures have since complained of being denied large projects in China, even after investing heavily in China-based manufacturing operations.<sup>277</sup> Additionally, China’s policy to end the use of sub-1 megawatt turbines is alleged to be discriminatory since foreign firms do not generally produce turbines of larger capacity.<sup>278</sup> As of 2014, no foreign wind-turbine manufacturers have gained any substantial presence in China or won any concession tender.<sup>279</sup> In contrast, China’s Goldwind has grown into a multinational firm that now manufactures turbines in the United States.<sup>280</sup>

Within the ride-sharing industry, Uber stumbled after China passed regulations banning subsidized rides, stripping Uber of its business strategy for entering new markets,<sup>281</sup> and allowing its competitor, Didi, to administer a competitive *coup de grâce*.<sup>282</sup> Current guardian warrior companies in joint ventures

274. Frauke Urban et al., *Firm-Level Technology Transfer and Technology Cooperation for Wind Energy Between Europe, China and India: From North-South to South-North Cooperation?*, 28 ENERGY FOR SUSTAINABLE DEV. 30, 31 (2015), [https://www.researchgate.net/publication/280694478\\_Energy\\_for\\_Sustainable\\_Development](https://www.researchgate.net/publication/280694478_Energy_for_Sustainable_Development).

275. RICHARD J. CAMPBELL, CONG. RES. SERV., CHINA AND THE UNITED STATES—A COMPARISON OF GREEN ENERGY PROGRAMS AND POLICIES 15 (2014), <https://fas.org/spp/crs/row/R41748.pdf>; see also Keither Bradsher, *To Conquer Wind Power, China Writes the Rules*, N.Y. TIMES (Dec. 14, 2010), [www.nytimes.com/2010/12/15/business/global/15chinawind.html](http://www.nytimes.com/2010/12/15/business/global/15chinawind.html) (discussing how, in response to this regulation, Spanish turbine producer Gamesa sent Spanish engineers to China to not only oversee construction of the turbine factories but also to teach the Chinese how to make the necessary components).

276. Bradsher, *supra* note 275.

277. *China’s Wind Turbine Bidding Process Unfair, Say Foreign Firms*, INT’L CENTRE FOR TRADE & SUSTAINABLE DEV. (June 12, 2009), <https://www.ictsd.org/bridges-news/biores/news/china%E2%80%99s-wind-turbine-bidding-process-unfair-say-foreign-firms>.

278. *Id.* But see *id.* (“But officials insist that this [turbine] preference is based on local conditions, rather than an effort to buoy local manufacturers.”).

279. RENEWABLE ENERGY SOLUTIONS, ONSHORE AND OFFSHORE WIND ENERGY IN CHINA: CHINA’S OFFSHORE WIND AMBITION (PART 3 OF 4) 10 (2014), [http://www.resols.com/sites/default/files/China\\_report/Chinas\\_offshore\\_wind\\_ambition\\_resols\\_3.pdf](http://www.resols.com/sites/default/files/China_report/Chinas_offshore_wind_ambition_resols_3.pdf).

280. See Susan Kraemer, *Chinese Turbine Maker Goldwind to Supply Wyoming with 1.9 Gigawatts of Wind*, CLEAN TECHNICA (Nov. 4, 2016), <https://cleantechnica.com/2016/11/04/chinese-turbine-maker-goldwind-supply-wyoming-1-9-gw-wind/> (discussing Goldwind’s dominance in China and its slow introduction globally).

281. See Leslie Hook, *Uber’s Battle for China*, FT WEEKEND MAG. (June 2016), <https://ig.ft.com/sites/uber-in-china/> (explaining how Uber uses subsidies to fight for market share in China).

282. See Brad Stone & Lulu Yilun Chen, *Uber Slayer: How China’s Didi Beat the Ride-Hailing Superpower*, BLOOMBERG: TECH. (Oct. 6, 2016), <https://www.bloomberg.com/features/2016-didi-cheng-wei/> (providing history of Didi in its

with technology transfers<sup>283</sup>—handicapped by Chinese regulations and policy<sup>284</sup>—may be destined to repeat history in their respective technology sectors.<sup>285</sup>

It would be disingenuous though, to posit that Western firms have not dominated the Chinese market simply because of onerous Chinese regulations and policy. To the contrary, Western firms largely fail to properly localize their products to meet China’s unique social and economic ecosystem.<sup>286</sup> However, Uber’s capitulation may have finally shattered the notion that a foreign tech company can ever dominate the Chinese market.<sup>287</sup> “It destroyed it by doing nearly everything right.”<sup>288</sup> For example, Uber engaged in socialist rhetoric by calling itself the “People’s Uber”<sup>289</sup>—demonstrating a strategy that includes paying homage to the Chinese communist government.<sup>290</sup> It also spent billions to compete,<sup>291</sup> partnered with Chinese search engine Baidu for map services,<sup>292</sup> and jumped through numerous localization hurdles.<sup>293</sup> However, it was simply not

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competition against Uber).

283. See INTERNATIONAL BUSINESS PUBLICATIONS, CHINA BUSINESS LAW HANDBOOK 78 (2006) (indicating that most joint ventures require technology transfer and that, while not mandatory, foreign investors are likely to encounter pressure to agree to them); *The Impact of International Technology Transfer on American Research and Development*, *supra* note 259 at 3.

284. See, e.g., Atkinson, *supra* note 134, at 41 (discussing China’s discriminatory regulations against foreign guardian warrior companies, one example being Chinese regulations aimed against Google).

285. See generally Atkinson, *supra* note 134 at 34-55 (discussing China’s displacement of Kawasaki from its market, replacing the company, and using its technology).

286. See Li Qiaoyi, *US Internet Firms Need to Better Localize in China*, GLOBAL TIMES (Jan. 4, 2017), <http://www.globaltimes.cn/content/1027187.shtml> (highlighting how U.S. firms fail to effectively localize their product to Chinese culture and standards); see also Kola, *supra* note 223 (noting that U.S. firms perform better in India than China because it is easier to localize the products to India’s culture).

287. Erik Gordon, *Uber Has Destroyed the Western Myth that Companies Can Grow Huge in China Without Being Chinese*, QUARTZ (Aug. 11, 2016), <https://qz.com/756202/uber-has-destroyed-the-western-myth-that-companies-can-grow-huge-in-china-without-being-chinese/> (arguing that Uber’s loss in China has shattered the dream of foreign companies independently succeeding in China).

288. *Id.*

289. *Id.*

290. See Neal Ungerleider, *People’s Uber, Baidu, and Driver Bonuses: Uber’s Quest to Crack The Chinese Market*, FAST COMPANY TECH. (June 8, 2015), <https://www.fastcompany.com/3047188/fast-feed/peoples-uber-baidu-and-driver-bonuses-ubers-quest-to-crack-the-chinese-market> (describing how the “People’s Uber” service was colored red in the app as a “possible nod” to China’s government).

291. Jonathan Chew, *Uber is Burning Through \$1 Billion a Year in China*, FORTUNE (Feb. 17, 2016), <http://fortune.com/2016/02/17/uber-china-didi-kuaidi/>.

292. Catherine Shu, *Chinese Search Engine Baidu Confirms Strategic Investment in Uber, Will Add Ride Requests*, TECHCRUNCH (Dec. 16, 2014), <https://techcrunch.com/2014/12/16/baiduber-is-a-do/>.

293. See William C. Kirby, *The Real Reason Uber is Giving Up in China*, HARV. BUS. REV. (Aug. 2, 2016), <https://hbr.org/2016/08/the-real-reason-uber-is-giving-up-in-china> (noting how Uber had to install servers in China to prevent disruption from China’s firewall; had to change payment methods to utilize Alipay, a Chinese payment system; and partner with Baidu to utilize their map systems since Google maps was unreliable).

enough.<sup>294</sup> While it is unclear whether Uber would have succeeded in a more favorable regulatory environment,<sup>295</sup> it is evident that non-Chinese Uber was establishing itself in a grey, unregulated area of Chinese law before it was slammed with a national regulation that all but destroyed Uber's business model,<sup>296</sup> yet allowed the Chinese national champion company Didi<sup>297</sup> to remain standing.<sup>298</sup> There is a Chinese saying that "[t]he nail that sticks up is the nail that gets hammered down."<sup>299</sup> Here, Uber was a foreign threat in an unregulated marketplace, competing against a national champion; the Chinese regulatory hammer was inevitable.

### C. *The Inevitability of Stricter Mobile Game Regulations*

The adoption of the Regulations and the Administration of Online Publishing Services by SAPPRFT and the Administrative Provisions on Information Services of Mobile Internet Application Programs by CAC in 2016 is not surprising when considered in the context of China's larger strategy to promote domestic firms in the technology sector. First, this section highlights how these mobile game app regulations fit within the established policy framework to promote domestic firms to the detriment of foreign firms. Second, this section will then outline how mobile game app regulations similarly chill foreign game developers from entering the Chinese market, promote established domestic software development firms, and stymie Chinese development start-ups.

#### 1. Consistent with Chinese Policy

For over a decade, China has shifted its strategy from attracting commodity-based production facilities owned by foreign corporations to promoting the growth of domestic Chinese companies instead,<sup>300</sup> specifically in science and technology.<sup>301</sup>

294. See Kate Rooney, *Uber in China is 'Cute': Rival Didi's President*, CNBC (June 3, 2016, 3:33 PM), <http://www.cnbc.com/2016/06/03/uber-in-china-is-cute-rival-didis-president.html> (quoting Didi's president calling Uber's tactics "cute" because despite a 30% lower rate than Didi, its Didi holds 87% of the Chinese private car market).

295. See Kola, *supra* note 223 (speculating whether Uber would have eclipsed Didi in a more hospitable regulatory environment).

296. See Kirby, *supra* note 293 (articulating the implications of China's ride sharing regulations on Uber—which ultimately led to Uber selling its business in China to Didi).

297. See Gordon, *supra* note 287 (describing how China protects national champions and that it wanted a national champion in the ride-sharing industry); see also Stone & Chen, *supra* note 282 (describing Cheng Wei, founder and CEO of Didi, as the head of a connected national corporate champion).

298. See Zen Soo, *Didi Chuxing Unveils International Division as Part of Global Push*, S. CHINA MORNING POST (Feb. 17, 2017), <http://www.scmp.com/tech/china-tech/article/2071794/didi-chuxing-unveils-international-division-part-global-push> (describing Didi's possible future overseas expansion into markets where "there are no strong ride-sharing companies."); but see Tom Mackenzie, *Didi Drivers Forced to Live in Shanty Town After China Crackdown*, BLOOMBERG (Feb. 14, 2017) (describing the consequences of China's recent ride-sharing regulations that prevent non-city residents from being drivers in the cities).

299. Kirby, *supra* note 293.

300. See Atkinson, *supra* note 134, at 8 (describing China's shift towards promoting Chinese owned firms).

301. Cao, *supra* note 141 (discussing China's fifteen-year strategy to promote science and

In an effort to promote this goal, regulations have, directly or indirectly, stymied the success of foreign firms to the benefit of domestic corporations.<sup>302</sup> The Chinese mobile game market, as a component of the technology sector, is no exception.<sup>303</sup> Indeed, networked video games were seen as cultural products,<sup>304</sup> and designated as “national pillars” in the early 2000s, providing involved corporations access to state subsidies, tax incentives, special loans, and other support.<sup>305</sup> As the largest market for mobile games in terms of revenue,<sup>306</sup> it is unsurprising that China is now targeting this market with policies; which, as in other industries, impose regulatory hurdles for foreign firms and domestic start-ups.

## 2. Impact on Foreign Developers

It is easy for foreign developers to get lost within the layers and hurdles of the Chinese bureaucracy. Besides essentially mandatory cultural localization<sup>307</sup> and an unmanageable amount of app stores to navigate,<sup>308</sup> blatant barriers include forcing foreign developers into joint ventures with local partners,<sup>309</sup> and essentially banning the use of interest entity structures (e.g., VIE) that would circumvent this requirement.<sup>310</sup> Disregarding any increased IP risk of working with a Chinese firm,<sup>311</sup> forcing joint ventures is essentially a market-entry tax.

One of the biggest factors here is that developers often have to split their revenues with far more partners in China than compared to other regions. After the publishers and Android channels get their cut, the studios frequently end up having to give up more than 50 percent of their revenues.<sup>312</sup>

In fact, foreign developers forfeit up to 90% of their revenue shares to

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technology).

302. *Id.*

303. *See also* Tai & Hu, *supra* note 9, at 175.

304. MINISTRY OF CULTURE OF THE PEOPLE’S REPUBLIC OF CHINA, *supra* note 51.

305. Tai & Hu, *supra* note 9, at 175.

306. Peterson, *supra* note 7.

307. *See* Andrew Webster, *Why Your Favorite Mobile Games Look a Lot Different in China*, VERGE (Feb. 11, 2015), <http://www.theverge.com/2015/2/11/8014769/china-mobile-games-wandoujia-localized-chinese-version> (describing the necessity to localize mobile games to the Chinese audience; for example, adding characters that a Chinese audience would recognize from local mythology); Maria Aspan, *Why this Fast Growing Start-up Spent 3 Frustrating Years Trying to Crack China*, INC. (Nov. 2016), <http://www.inc.com/magazine/201611/maria-aspan/cracking-china-two-dots.html> (highlighting the struggles and necessity of localizing mobile games to the Chinese audience).

308. *See* Yip, *supra* note 29 (noting that China has over 200 different app stores).

309. *See* Shoesmith & Zou, *supra* note 51, at 1-2; Schaefer, *supra* note 47; *Legal Primer*, *supra* note 50, at 4.

310. *See* MMLC Group, *supra* note 86, at 10.

311. *See, e.g.*, Nordic Game Inst., *China Mobile Games Market 2016*, 30 (2016), [http://www.neogames.fi/wp-content/uploads/2016/08/NeogamesNGL\\_ChinaMobileGamesMarketResearch2016.pdf](http://www.neogames.fi/wp-content/uploads/2016/08/NeogamesNGL_ChinaMobileGamesMarketResearch2016.pdf) (advising that joint ventures are risky for IP reasons).

312. Grubb, *supra* note 30.

Chinese partners at times.<sup>313</sup> In stark contrast, in the West, these same developers would *retain* 70% of revenue share.<sup>314</sup>

While a developer can financially plan for these transparent barriers, of greater concern to foreign developers are the unknown, subjective hurdles. For instance, foreign developers must wait indefinite periods of time to be approved by SAPPRFT under the new rules<sup>315</sup>—only to be denied for arbitrary reasons<sup>316</sup>—which could waste time and resources. Furthermore, Chinese censorship laws are generally vaguely written, allowing China to subjectively enforce its regulations,<sup>317</sup> and causing companies to self-censor in order to protect themselves if they want to publish in China.<sup>318</sup> In order to comply with all of these requirements, game developers could end up submitting upwards of 130 pages of necessary documents for a simple game.<sup>319</sup> Even paying \$3,000 to \$6,000 per title to a Chinese publisher to help navigate these hurdles is no guarantee it will ever be allowed into the marketplace.<sup>320</sup> Moreover, if foreign firms avoid these regulations through an extant iTunes loophole,<sup>321</sup> it would mean missing out on the 70% of Chinese mobile gamers who use Android,<sup>322</sup> and assuming the risk of the loophole's uncertain continuation.<sup>323</sup>

While not dispositive, one indicator that manifests how well foreign developers are doing in the Chinese market is the landscape of game apps trending in the country. Of the 100 top grossing iOS mobile games in China, only seven are classified as from a foreign developer.<sup>324</sup> Of the top 100 free iOS mobile games in

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313. See Dean Takahashi, *Western Developers May Bag Just a 20% Revenue Share in China – and It May Be Worth It*, VENTUREBEAT (Aug. 12, 2015), <http://venturebeat.com/2015/08/12/western-developers-may-wind-up-with-less-than-20-revenue-share-after-publishing-in-china/> (noting that Western developers can earn only 10-20% in revenues).

314. *Id.*

315. Tang, *supra* note 100 (noting that “no timeline” is set by SAPPRFT for foreign copyrighted mobile games); see also ZhugeEX, *supra* note 106 (commenting that approval could take three months or longer).

316. See, e.g., ZhugeEX, *China's Mobile Game Regulations –Half a Year on*, ZHUGEEX BLOG (Mar. 16, 2017) (noting the ban on English words in mobile games).

317. See *2015 Report*, *supra* note 132, at 149.

318. Cluster, *supra* note 199.

319. See Henry Fong, *Navigating the Regulatory Landscape in China's US\$25 Billion Gaming Market*, GAMASUTRA (Feb. 17, 2017), [http://www.gamasutra.com/blogs/HenryFong/20170217/291133/Navigating\\_the\\_Regulatory\\_Landscape\\_in\\_Chinas\\_US25\\_Billion\\_Gaming\\_Market.php](http://www.gamasutra.com/blogs/HenryFong/20170217/291133/Navigating_the_Regulatory_Landscape_in_Chinas_US25_Billion_Gaming_Market.php) (providing list of necessary documents for SARRPFT submission).

320. See ZhugeEX, *supra* note 106.

321. See *id.* (“Right now foreign devs are unaffected and can still publish apps in China on the Chinese Apple App Store via iTunes connect.”). But see Fong, *supra* note 115 (suggesting that this loophole is no longer viable as developers uploading mobile games to iTunes now require SAPPRFT approval).

322. Yip, *supra* note 29.

323. Grubb, *supra* note 30.

324. APP ANNIE APP STORE STATS, [www.appannie.com/apps/ios/top-chart](http://www.appannie.com/apps/ios/top-chart) (last visited Nov. 27, 2017). App Annie is a site that provides analytics and app data. Games are characterized by which country the developer is headquartered in. The developers that did not disclose

China, seven are also from foreign developers.<sup>325</sup> In contrast, in the United States, fifty of the 100 top grossing iOS grossing mobile games, and sixty-seven of the top 100 free iOS mobile games, are from foreign developers.<sup>326</sup> In fact, only 10 out of 1000 games approved in China during the third quarter of 2016 were foreign-developed games.<sup>327</sup>

### 3. Impact on Domestic Start-Ups

While foreign firms have regulatory entrance barriers, domestic start-up developers have unique financial and competitive constraints. A new Chinese start-up is in competition with over 23,000 other Chinese mobile app developers,<sup>328</sup> two of which, Tencent and NetEase, control 70% of the market.<sup>329</sup> These, and other top companies, have invested billions into research and development, reducing the ability of smaller developers to enter into the market.<sup>330</sup> Indeed, in the fourth quarter of 2015, Chinese content producers dropped by 24.7%, which signified that the top contenders were acquiring smaller to medium size businesses and driving up the costs.<sup>331</sup>

Additionally, development time takes upwards of six to eighteen months for a marketable game,<sup>332</sup> meaning start-ups need capital to stay afloat during production. However, once published, the revenue generated by a domestic Chinese mobile app developer may only be a few hundred dollars per game developed,<sup>333</sup> with Chinese iOS developers only earning approximately three cents per domestic download.<sup>334</sup> In a market where 90% of Chinese mobile game app

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headquarter location were presumed to be Chinese for the purposes of this Comment. While only iOS app data is available from App Annie at the time of this Comment's publication, App Annie reportedly will provide Chinese Android app data shortly. *See App Annie Launches China Android Metrics, Reveals Top Chinese Apps*, APP ANNIE (Sept. 18, 2017), <https://www.appannie.com/en/insights/market-data/app-annie-launches-china-android-metrics-top-chinese-apps/>.

325. *Id.*

326. *Id.*

327. Tang, *supra* note 100.

328. Che & Ip, *supra* note 22, at 149–50.

329. Peterson, *supra* note 7.

330. *GMGDC 2014: How Not to be One of the 90% of Chinese Mobile Game Startups that Fail*, GLOBAL MOBILE GAME CONFEDERATION (Jan. 8, 2016, 1:40 PM), <http://en.gmgc.info/content-31-62-1.html> (summarizing commentary from Kevin Yang, CEO of Tap4fun on difficulties and business strategies regarding Chinese mobile game startups) [hereinafter *Yang Commentary*].

331. Jeff Grubb, *China's \$7.1B Mobile Gaming Market is Tougher Than Ever for Its Small Developers*, VENTUREBEAT (May 2, 2016, 7:30 PM), <http://venturebeat.com/2016/05/02/chinas-7-1b-mobile-gaming-market-is-tougher-than-ever-for-its-small-developers/>.

332. *Yang Commentary*, *supra* note 330.

333. *See* Owen Churchill, *Game Developer to Sue State Media Censors*, SIXTH TONE (July 6, 2016), <http://www.sixthtone.com/news/game-developer-sue-governing-censorship-body> (providing anecdotal evidence from a small Chinese gaming studio that making \$220 would be fortunate).

334. Steven Millward, *Chinese iOS Developers Earn Only 3 Cents Per Download*, TECH IN ASIA (July 9, 2012), <https://www.techinasia.com/chinese-ios-app-developers-revenue-2012>.

developers fail,<sup>335</sup> it is unsurprising that “[t]here are almost no successful [Chinese] domestic mobile game startups . . . .”<sup>336</sup> In response to fierce competition, as well as the difficulties Chinese mobile developers have with localizing their product to the rest of the world, some Chinese start-ups have forgone the Chinese market to focus entirely on foreign markets.<sup>337</sup>

Under these already tight competitive and financial constraints, the 2016 mobile app regulations will very likely drive out all independent and small enterprise game developers “with no glimmer of hope for survival.”<sup>338</sup> The reason is predominately financial reality. First, the new data localization measures, which require companies to host Chinese-related data within the country, as well as the regulations that require companies to store all Internet logs for six months, put an enormous financial burden on the emergence of Chinese tech start-ups who are already short on capital.<sup>339</sup> Second, domestic start-ups, which already have worked on a game for months, could be further delayed during SAPPRFT’s review, imposing further costs.<sup>340</sup> Third, and most importantly, the regulations impose licensing costs that are greater than the average expected revenue of a game.<sup>341</sup> Therefore, it is becoming financially untenable for Chinese mobile game start-ups to function. In fact, in December 2016, China also banned the online video streaming of unapproved games, a key marketing strategy utilized by Chinese indie game developers.<sup>342</sup> Consequently, “we could be facing a future where China’s entire mobile game catalogue consists only of the games produced by powerful corporations like Tencent and NetEase, with no room for startups and indies.”<sup>343</sup> When considered with the fact that China’s policy is to develop national champions, this may, in fact, be the actual goal—a strong domestic mobile market, closely controlled and monitored by powerful, known, and cooperative domestic corporations.

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335. *Yang Commentary*, *supra* note 330.

336. *Id.*

337. Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y. TIMES (Aug. 9, 2016), [https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html?\\_r=0](https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html?_r=0) (discussing the hurdles of publishing a mobile game in China); see Wang Xueqiao, *In Chinese Gaming, Micro is the New Macro*, additional report in Tom Hancock et al., *It’s Tencent’s World —You Are Merely an Avatar in It*, FIN. TIMES (Oct. 2, 2017), <https://www.ft.com/content/1394b280-9952-11e7-a652-cde3f882dd7b> (discussing that Tencent, as the leading publisher and distributor of mobile games in China, can charge fees that exceed the average revenue of a mobile game, which has resulted in Chinese game developers targeting foreign markets before attempting to enter the Chinese market).

338. Churchill, *supra* note 333.

339. Maxey, *supra* note 215.

340. Tang, *supra* note 100.

341. Churchill, *supra* note 333.

342. C. Custer, *China Bans All Video Streaming of Unapproved Games*, TECH IN ASIA (Dec. 13, 2016), <https://www.techinasia.com/china-bans-streaming-unapproved-games>.

343. C. Custer, *Mobile Game Devs Are Very Pissed about China’s New Censorship Rules*, TECH IN ASIA (July 6, 2016).

## V. CONCLUSION

China has a long policy of promoting national companies that can dominate domestically and compete globally against established Western businesses, especially in the technology sector. In its pursuit of this policy, China has promoted regulations that benefit domestic corporations and, either intentionally or consequently, has imposed barriers on foreign entities. Under this framework, China's recent targeting of the Chinese mobile game industry, the largest in revenue in the world, is long-overdue and unsurprising.

Data is still forthcoming on how detrimental these regulations will be for foreign and domestic mobile game developers. However, even if they are not a death knell, by imposing higher market-entry costs and burdening firms with additional censorship requirements, these regulations are certainly yet another protectionist measure in a history of regulations intended to discourage foreign entities from operating in China. This paves the way for established domestic counter-parts to fill the void, even at the expense of domestic start-ups. The question therefore is not a question of *if* but *how* detrimental these regulations are to foreign and domestic mobile game developers. Such a consequence of these regulations is consistent with China's overall objective to develop national champions, and to retain market and information control.