# PATENT LITIGATION IN CHINA: PROTECTING RIGHTS OR THE LOCAL ECONOMY?

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*Abstract*: Though it lacked a patent system until 1985, China is now the world leader in patent filings and litigation. Despite the meteoric rise of the Chinese patent system, many in the West believe that it acts primarily to facilitate local protectionism rather than innovation. Recent high-profile patent suits filed by relatively unknown Chinese firms against high-profile foreign tech companies, like Apple, Samsung, and Dell, have only added fuel to the fire. Surprisingly, given how commonplace assertions of Chinese protectionism are, little empirical evidence exists to support them. This Article fills this gap in the literature by analyzing five years of data (2006–11) on patent suits litigated in courts with the fifty most active intellectual property (IP) dockets in China. Among other things, we find that Chinese patent suits are highly concentrated in a handful of major urban jurisdictions—not in smaller inland cities where protectionism is most often alleged to take place—and also have rates of success and appeal very similar to those of US patent suits. We also observe that foreign companies appear in Chinese patent suits most often as patent enforcers, not as accused infringers, and win their cases roughly as often as Chinese patentees. Finally, we find that patents litigated in China are generally more than five years old at the time of assertion and frequently have family members issued by foreign patent offices. Together, these findings contradict conventional wisdom that China's patent system has been structured to benefit domestic industry at the expense of foreign firms.

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## INTRODUCTION

In recent years, patent activity has exploded in China. Since the mid-1990s, the number of patent applications filed annually with China's State Intellectual Property Office (SIPO) has increased more than ninety-fold to a 2014 total of 928,177,[1] roughly forty percent more than the United States Patent and Trademark Office received that year.[2] China has also become the global leader in patent litigation with 9,680 suits filed in 2012,[3] almost

[1] State Intell. Prop. Off., Monthly Statistics Reports, http://english.sipo.gov.cn/statistics/ (last accessed Aug. 27, 2015) (reporting that in 2014 a total of 928,177 "invention" patent applications were filed in China). China, like most industrialized nations, recognizes three types of patents: invention patents, design patents, and utility models, *see* DOUGLAS CLARK, PATENT LITIGATION IN CHINA 31-32 (2011); however, in legal parlance, the term "patent" is typically used to refer exclusively to "invention" patents. We follow the same convention in this paper. All references *infra* to "patents" are, unless otherwise indicated, references to "invention patents."

[2] *Compare id. with* U.S. Pat. & Trademark Off., U.S. Patent Statistics Chart Calendar Years 1963-2014, http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm (last accessed Aug. 16, 2015) (reporting that in 2014 a total of 578,802 "utility" patent applications were filed in the U.S.).

[3] Erin Coe, *5 Tips In The Art Of Patent War In China*, LAW360, May 29, 2014, *available at* http://www.morganlewis.com/pubs/PR_5TipsPatentWar_China_30may14.pdf ("Chinese courts have seen patent cases more than double over a four-year period, from 4,422 filings in 2009 to 9,680 suits in 2012 . . . ."); *see also* YAN ZHAO, DLA PIPER, CHINA'S PATENT LITIGATION LANDSCAPE SHIFTS (2012), *available at* http://www.dlapiper.com/en/us/insights/publications/2012/09/chinas-patent-litigation-landscape-shifts/ (reporting that Chinese courts saw 7,819 new patent suits in 2011 and 5,785 in 2010). Though we were unable to obtain official statistics on the types of patents enforced in these cases, anecdotal evidence suggests that less than half (and perhaps as few as one-fifth) of these suits allege infringement of an invention patent. Hon. Zhou

eighty percent more than the total number filed in the United States.[4]

Little evidence, however, links China's patent boom to an actual increase in innovation.[5] Rather, the rapid growth coincides with a major government campaign designed to increase domestic patent activity through incentives and political pressure.[6] In contrast to American patent policymakers who have largely worked over the past decade to rein in some of the US patent system's excesses,[7] the Chinese government has been hard

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Yunchuan, Supreme People's Court of the People's Republic of China, Remarks at the Law in the Global Marketplace Conference at Santa Clara University School of Law (Nov. 4, 2015).

[4] *Compare* Coe, *supra*, *with* Lex Machina, https://lexmachina.com (last accessed June 28, 2014) (reporting that a total of 5,411 patent suits were filed in the U.S. in 2012, 3,530 in 2011, 2,714 in 2010, and 2,502 in 2009); *see also* Xuan-Thao Nguyen, *The China We Hardly Know: Revealing the New China's Intellectual Property Regime*, 55 ST. LOUIS U. L.J. 773, 777-78 (2011) (comparing the number of patent suits filed in China and the U.S. in 2006 and 2008).

[5] Many have questioned the quality of patents fueling China's patent explosion. *See Patents, Yes; Ideas, Maybe*, ECONOMIST, Oct. 16, 2010, at 79 (reporting that in response to government mandates, a "cottage industry has sprung up to produce patents of suspect value"); Markus Eberhardt, et al., *What Can Explain the Chinese Patent Explosion?*, CSAE Working Paper WPS/2011-15, at *4, *17 (2015), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1965963 (finding that the growth of domestic patenting in China is largely attributable to a small number of Chinese IT equipment manufacturers and thus "most likely not" a "wider technological take-off among Chinese companies"); *High Quantity, Low Quality: China's Patent Boom*, WANT CHINA TIMES, June 24, 2014, *available at* http://www.wantchinatimes.com/news-subclass-cnt.aspx?cid=1102&MainCatID=11&id=20140624000124 ("China's patent business is booming in terms of the number of applications, but the quality of patents is still poor, according to a Monday report to the top legislature.").

[6] These enticements include cash payments, tax breaks, better housing, and, for professors, increased credit toward tenure. *Patents, Yes; Ideas, Maybe*, *supra*, at 78. Several recent studies link the growth in Chinese patenting to government subsidies like these and resulting gamesmanship on the part of patentees. *See* Jianwei Dang & Kazuyuki Motohashi, *Patent Statistics: A Good Indicator for Innovation in China? Patent Subsidy Program Impacts on Patent Quality*, CHINA ECON. REV. (forthcoming 2015) (estimating that government subsidy programs inflate Chinese patent counts by 30 percent); Zhen Lei et al., *Patent Subsidy and Patent Filing in China*, Working Paper (2012) (finding that, after the institution of government subsidies, Chinese patentees received the same number of patent claims, but spread those claims out over a larger number of individual issued patents); *see also Patent Fiction*, ECONOMIST, Dec. 11, 2014, http://www.economist.com/news/finance-and-economics/21636100-are-ambitious-bureaucrats-fomenting-or-feigning-innovation-patent-fiction ("[T]he explosion of patent filings is not the result of local researchers suddenly coming up with twice as many ingenious inventions: it is a response to a government order.").

[7] Since the mid-2000s, congressional interest in the U.S. patent system has largely focused on reforms designed to eliminate low quality patents and reduce the level of patent litigation. After years of debate, Congress passed the Leahy-Smith America Invents Act in

at work encouraging patent filings and enforcement among its citizens. These efforts, formally embodied in the China State Council's National Intellectual Property Strategy (National IP Strategy), have the stated goal of raising China's rank "among the advanced countries of the world in terms of the annual number of patents for inventions granted to . . . domestic applicants" and thereby "improv[ing] China's capacity to create, utilize, protect and administer intellectual property" by 2020.[8]

Though the Chinese government insists that the goal of the National IP Strategy is to "mak[e] China an innovative country,"[9] many in the West contend that the practical impact—if not the true goal—of the policy shift is protectionism and thinly-veiled piracy rather than innovation. According to a report prepared by the US Chamber of Commerce and the Global Intellectual Property Center, China's patent reform efforts are part of "[a] refocus on state-industry monopolies" that is "increasingly perceived as anti-foreign" and "considered by many international technology companies to be a blueprint for technology theft on a scale the world has never seen before."[10] Suggestions are commonplace, even from US policymakers, that

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2011. Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in various sections of Title 35). Among other reforms, the AIA established a suite of powerful administrative procedures for challenging the validity of issued patents. *See* Brian J. Love & Shawn Ambawani, *Inter Partes Review: An Early Look at the Numbers*, 81 93 (2014) (comparing the new regime of "inter partes review" with the pre-AIA regime of "inter partes reexamination"). In the last two terms, Congress has considered close to a dozen additional bills aimed at further reducing the cost and prevalence of patent litigation. *See* Patent Progress, Patent Progress's Guide to Federal Patent Reform Legislation, http://www.patentprogress.org/patent-progress-legislation-guides/patent-progresss-guide-patent-reform-legislation/ (last accessed Aug. 26, 2015) (summarizing patent reform bills introduced during the 113th and 114th Congresses).

[8] Outline of the National Intellectual Property Strategy (2008), *available at* http://english.gov.cn/2008-06/21/content_1023471.htm [hereinafter, "National IP Strategy"].

[9] *Id*.

[10] JAMES MCGREGOR, CHINA'S DRIVE FOR INDIGENOUS INNOVATION: A WEB OF INDUSTRIAL POLICIES 4-5 (2010), *available at* https://www.uschamber.com/sites/default/files/legacy/reports/100728chinareport_0.pdf; PRICEWATERHOUSECOOPERS LLP, CHINA STRATEGY: REFINING YOURS COULD OPEN UP DOORS 6 (2011), *available at* http://www.pwc.com/us/en/private-company-services/publications/assets/gyb-63-china-strategies.pdf ("In 2010, surveys by both the American Chamber of Commerce (AmCham) in Shanghai and the US-China Business Council (USCBC) pointed to perceived protectionism, lack of protection for IP rights, and struggles with the evolving regulatory environment"). *See also* Mike Masnick, *China's Patent Strategy Isn't About Innovation; It's an Economic Weapon Against Foreign Companies*, TECH DIRT, Jan. 4, 2011, https://www.techdirt.com/articles/20110102/15230512491/chinas-patent-strategy-isnt-about-innovation-its-economic-weapon-against-foreign-companies.shtml; DANNY FRIEDMANN, CHINA'S NATIONAL IP STRATEGY 2008 (2008), http://duncanbucknell.com/

the patenting push is an attempt to whitewash and legitimize what, in essence, remains a system built on piracy of foreign inventions.[11]

Western complaints about China's patent surge generally take two forms. First, many allege that Chinese patents simply crib inventions previously made elsewhere.[12] Recent, headline-grabbing patent suits filed by relatively unknown Chinese firms against high-profile foreign technology companies have added fuel to this fire.[13] Apple has been sued for allegedly infringing Chinese patent rights that cover virtual assistant

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2008/09/11/chinas-national-ip-strategy-2008/ (noting the existence of "prevalent legal protectionism" in China); Andreas Bieberbach, *IP Strategies in Business Operations with China*, 9 J. BUS. CHEM. 161, 161 (2012), *available at* http://www.businesschemistry.org/downloads/issues/Issue10-2012.pdf ("[S]ince 1984, . . . Chinese Patent Law has been . . . constantly adjusted to the actual needs . . . of . . . Chinese companies."); Peter K. Yu, *Intellectual Property, Economic Development, and the China Puzzle*, OCCASIONAL PAPERS IN INTELL. PROP. L., at 34 (2007), *available at* http://www.law.drake.edu/clinicsCenters/ip/docs/ipResearch-op1.pdf (noting that "[i]n China, the oft-cited barriers to intellectual property reforms include . . . widespread corruption, abuse by government officials, different values placed on intellectual property infringement, . . . local protectionism, and the decentralization of government.").

[11] *See* Teresa Stanek Rea, Deputy Under Secretary of Commerce for Intellectual Property, Remarks at the Fordham Law School China Event (Jan. 28, 2013), *available at* http://www.uspto.gov/news/speeches/2013/rea_fordham_china.jsp ("This massive growth presents unique problems for U.S. rights holders, who have complained about patent quality . . . . [C]ompanies that have filed for patent protection of pharmaceutical compounds at SIPO have had their applications denied, while corresponding patent applications in other patent offices, such as the Japan Patent Office, the Korean IP Office, the European patent office, and others, have been granted. That is troublesome."); Lara Farrar, *Can China Become an Intellectual Property Powerhouse?*, CNN, Feb. 15, 2011, *available at* http://edition.cnn.com/2011/BUSINESS/02/14/china.intellectual.property/ ("'[The Chinese] say that if you don't come to China to file, you cannot accuse us of not respecting your own intellectual property because you don't even care to go to the Chinese patent office.'" (quoting Tony Chen, a partner in Jones Day's Shanghai office)). For an example of Chinese firms' desire to shed their reputation for piracy, see Bieberbach, *supra*, at 161-62 ("I don't mind how much [the accused infringer] pays us. What I care about is winning the case. It will help change the stereotype that it is Chinese companies that are always accused in IPR cases." (quoting Nan Cunhui, Chairman of Chint Group, a Chinese electronics company)).

[12] *See* Vivek Wadhwa, *China Could Game the U.S. in Intellectual Property*, BUSINESSWEEK, Jan. 10, 2011, http://www.bloomberg.com/bw/technology/content/jan2011/tc2011017_509416.htm ("A vast number of China's academic papers are plagiarized or irrelevant; its government-sponsored patents will be similarly tainted."); Vivek Wadhwa, *Let's Compete on Innovation Rather Than Patents*, TECHCRUNCH, Jan. 15, 2011, http://techcrunch.com/2011/01/15/lets-compete-on-innovation/ (recounting an anecdote about a Chinese supplier patenting its foreign customers' technology).

[13] *See* Chris Neumeyer, *China's Great Leap Forward in Patents*, IPWATCHDOG, Apr. 4, 2013, http://www.ipwatchdog.com/2013/04/04/chinas-great-leap-forward-in-patents/id=38625/ (summarizing these suits).

Siri, videotelephony service FaceTime, and aspects of famously sleek designs of the iPod, iPad, and iPhone.[14] Other household names, including Canon, Dell, Philips, Samsung, and Sony, have also been sued, losing multi-million dollar verdicts in some instances.[15]

Second, many contend that foreign companies cannot get a fair shake in the Chinese judicial system and, thus, it would be a Sisyphean endeavor for Western technology companies to engage the Chinese patent system as a means of deterring infringement.[16] Warnings about "local protectionism," "bias," "corruption," and "impartiality"—especially in China's inland provinces—are ubiquitous and go virtually unchallenged at the highest levels of government, the legal profession, and academia.[17]

However, given how strident and commonplace assertions like these are, surprisingly little empirical evidence exists to support or refute them. Despite the meteoric rise of patent activity in China—and an apparent commitment by the Chinese government to sustain that growth well into the

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[14] *Id.*

[15] *Id.*

[16] *See* Rea, *supra* note 11 ("[R]ight holders continue to complain about China's civil judicial enforcement system . . . . We have also heard about many cases of decisions being made based on local protectionism and bias towards local companies . . . ."); TINA E. HULSE, ET AL., FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP, BUILDING ASSETS TODAY FOR BUSINESS TOMORROW (2008), http://www.finnegan.com/resources/articles/articlesdetail.aspx?news=344b7049-cc9f-43c3-99cd-daedb90a9d01 ("[E]nforcement may sound appealing at first, but these procedures sometimes suffer from local protectionism and inadequate government resources. . . ."); Benjamin Bai, *Ignore At Your Own Peril: Intellectual Property (IP) Strategies for China*, MARSH INSIGHTS: INTELLECTUAL PROPERTY (2010), *available at* http://www.jonesday.com/files/Publication/8f265dea-89c0-408d-8b27-cc7a9b384340/Presentation/PublicationAttachment/5d0c3d30-1af4-4436-b6ee-d4fc5eea8768/Intellectual%20Property%20Update%20(Issue%202).pdf ("[M]any multinational companies are reluctant to enforce their IP in China due to the perceived lack of impartiality."); DEANNA WONG, ET AL., HOGAN LOVELLS, INTELLECTUAL PROPERTY ENFORCEMENT IN CHINA: CHALLENGES AND OPPORTUNITIES 6, 8 (2012), http://m.hoganlovells.com/files/Publication/3126b99b-33d1-48a8-889e-6b3eaa821235/Presentation/PublicationAttachment/d9ef5385-40bb-4fd0-99c5-6bf1ffd97cf4/Client_Note_Intellectual_Property_Enforcement_in_China_Challenges_and_Opportunitie.PDF (noting that "local protectionism is still prevalent in China, as is corruption" and that "[s]ometimes local protectionism also enables losing parties to delay payment for years"); Bieberbach, *supra* note 10, at 164 ("It is a 'common understanding' . . . that western companies cannot enforce their IP rights in China because of the weak legal system in China."); Richard P. Suttmeier & Xiangkui Yao, *China's IP Transition: Rethinking Intellectual Property Rights in a Rising China*, Nat'l Bureau of Asian Res. (2011), *available at* http://www.nbr.org/publications/element.aspx?id=520 (noting that "[m]any foreign companies have been reluctant to pursue their rights in the Chinese legal setting . . . .").

[17] *Id.*

future—Western scholars have paid little attention to the phenomenon. Though a small number of scholars (including two of us) have begun to analyze Chinese firm-level innovation,[18] empirical study of Chinese patent enforcement is virtually nonexistent.[19]

This Article aims to fill this gap in the literature by presenting the findings of the first large-scale empirical study of patent litigation in China. Among other things, we find evidence that Chinese patent litigation is highly concentrated in a few large jurisdictions and has rates of success and of appeal very similar to those seen in the United States.[20] Most importantly, we also find evidence that contradicts conventional wisdom about China's motivations for establishing, and efforts to implement, the National IP Strategy. Though many suggest China set out to create a system that would benefit domestic industry at the expense of foreign firms, our findings suggest that the system has accomplished the opposite. Contrary to conventional wisdom and high-profile anecdotes, foreign litigants in Chinese patent suits play the role of patentee more often than defendant and fare just as well in their suits as privately owned Chinese firms.[21] Moreover, state-owned monopolies—parties the Chinese government presumably has the greatest incentive to protect—rarely sue and, when sued, lose roughly three-quarters of the time.[22]

On the whole, our findings suggest that the Western technology community may have been too quick to write off the Chinese patent system as a rigged game. To the extent that Chinese authorities sought to establish a protectionist system, they appear to be failing. Rather, they seem to have opened the door for foreign innovators to seek redress against local copyists. Industries that have long accused Chinese firms of idea theft may be well advised to take a peek inside.[23]

Part I of this Article provides an overview of the Chinese patent litigation system. Part II describes our data collection methodology. Part III describes our findings, divided into jurisdiction-, litigant-, and patent-specific findings. And, Part IV assesses what our findings suggest about the

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[18] *See* Eberhardt, et al., *supra* note 5.

[19] *But cf.* Shenping Yang, *Patent Enforcement in China*, 4 LANDSLIDE 49 (2011) (reporting a few statistics for 3,000 concluded patent trials, presumably including those enforcing all three types of patents, reported on the Supreme People's Court's website), *available at* http://www.americanbar.org/content/dam/aba/publications/landslide/landslide_november_2011/yang_landslide_novedec_2011.authcheckdam.pdf.

[20] *See infra* Part III.A.

[21] *See infra* Part III.B.

[22] *Id*.

[23] Limitations to our study include a lack of data on settled cases and a lack of data on cases litigated after 2011. For more discussion of these limitations, see infra Part IV.

state of patent enforcement in China, with a particular focus on whether the National IP Strategy has lived up to its architects' expectations.

## I. PATENT ENFORCEMENT IN CHINA

With almost a million patent applications filed in China last year, it is hard to believe that the nation had no patent system until 1985. Originally passed by the National People's Congress in 1984, the "Patent Law of the People's Republic of China" has been amended three times—most recently in 2008—and is supplemented by, among other sources, regulations promulgated by the State Council and guidelines, measures, and "interpretations" issued by the Supreme People's Court of China.[24] Because China is a civil law jurisdiction, however, decisions of the Supreme People's Court (and all other courts for that matter) in individual cases have little direct effect on Chinese patent law.[25]

Claims of infringement can be pursued and defended both administratively and judicially. In the administrative system, challenges to the validity of issued patents are handled by SIPO's Patent Review and Adjudication Board (PRAB).[26] In fact, because Chinese patent suits are limited to the issue of infringement, the PRAB is the sole venue of first instance for validity challenges.[27] Allegations of infringement can also be brought to the attention of local branches of SIPO, which are authorized to "order the infringer to stop the infringing act" but are unable to award monetary damages.[28] If SIPO finds infringement or invalidity, its decision

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[24] CLARK, *supra* note 1, at 3, 7-8, 11-12 (2011); Yang, *supra* note 9, at 51-53. In addition, China ratified the Patent Cooperation Treaty in 1994, *The PCT Now Has 148 Contracting States*, World Intell. Prop. Org., http://www.wipo.int/pct/en/pct_contracting_states.html (last accessed Aug. 25, 2015), and the TRIPS Agreement in 2001, *China and the WTO*, World Trade Org., https://www.wto.org/english/thewto_e/countries_e/china_e.htm (last accessed Aug. 25, 2015).

[25] CLARK, *supra* note 1, at 10.

[26] *Id.* at 13.

[27] CLARK, *supra* note 1, at 13. Thus, in this sense, China has a bifurcated system like that in effect in Germany, which separates infringement and patent validity. *See* Katrin Cremers et al., *Invalid But Infringed? An Analysis of Germany's Bifurcated Patent Litigation System*, Working Paper (2014), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2504507 (discussing Germany's bifurcated patent enforcement system).

[28] CLARK, *supra* note 1, at 21-22; Yang, *supra* note 19, at 50. SIPO can, however, help the parties mediate a monetary settlement. *Id.* at 22, 25-26. A patentee can also enforce its rights outside of court via the General Administration of Customs (GAC), which has the power to seize infringing imports and exports. CLARK, *supra* note 1, at 27-28; Yang, *supra* note 19, at 51.

can be—and frequently is—appealed to the court system.[29] As a result, most serious cases eventually wind up in court.

With the exception of appeals from the PRAB, Chinese courts are restricted to deciding the issue of infringement.[30] Chinese patent suits involve relatively little discovery[31] and proceed quickly, generally reaching a decision on the merits six to eighteen months after filing.[32] In cases where infringement is shown, courts have broad power to award remedies, including damages and both pre-trial and permanent injunctions.[33]

When infringement litigation proceeds in parallel with an administrative validity challenge, courts may stay the case pending a ruling by the PRAB but are not legally required to do so.[34] Because validity proceedings usually take longer than infringement suits, it is possible that a court will find infringement of a patent that is later deemed invalid.[35]

Judgments from lower courts can be appealed up through the Chinese court system, which consists of four levels: Basic People's Courts, located in smaller cities and suburbs; Intermediate People's Courts, located in major cities; High People's Courts, located in each province, autonomous region, and directly controlled city; and the Supreme People's Court located in Beijing.[36] Patent suits—both infringement suits and appeals from PRAB—generally begin in an Intermediate People's Court, though infringement cases with sufficiently large amounts at stake may be filed in the first

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[29] CLARK, *supra* note 1, at 21.

[30] Appeals from PRAB are dealt with by the Beijing Fist Intermediate Court and can then go to the Beijing Higher People's Court. *Id.* at 29.

[31] *Id.* at 105 ("[O]btaining evidence to prove infringement . . . . can be very difficult as the Chinese court system only provides for very limited discovery [and] [t]here is no [automatic] obligation on the parties involved in the litigation to disclose any information . . . .).

[32] *See* Yang, *supra* note 19, at 51 ("The normal term of a first instance [patent] case is six months. In practice, once sued for infringing a patent, the defendant usually launches an invalidation process . . . [that] usually takes one year . . . . Therefore, a patent infringement litigation case in China generally takes 18 months.").

[33] CLARK, *supra* note 1, at 97-98, 151-52; *see also* ALAN J. COX & KRISTINA SEPETYS, NERA ECONOMIC CONSULTING, INTELLECTUAL PROPERTY RIGHTS PROTECTION IN CHINA: TRENDS IN LITIGATION AND ECONOMIC DAMAGES (2009) (studying damages awarded by Chinese courts in a sample of 179 IP cases between 2002-2008, including 20 patent suits). The Patent Law does not mention declarations of non-infringement as a potential remedy in patent suits, but a 2010 interpretation by the Supreme Court permits declaratory judgment actions when the patentee has sent a demand letter. CLARK, *supra*, at 100-01.

[34] CLARK, *supra*, at 102.

[35] A similar situation arises often in Germany. *See* Cremers et al., *supra* note 27, at 3 (estimating that 12 percent of German patent suits result in a finding of infringement of a patent that is later invalidated by the Federal Patent Court).

[36] CLARK, *supra*, at 16-17, 85.

instance in a Higher People's Court.[37] The Supreme Court, all Higher Courts, and many Intermediate Courts (at least 76 to date) have established divisions that specialize in IP cases, including patent suits.[38]

## II. STUDY DESIGN

To learn more about patent litigation in China, we set out to identify a large sample of patent suits litigated in recent years and collect data on the courts, litigants, and patents involved. This Part describes our data collection methodology.

### *A. Compiling a Database of Patent Suits*

Though the number of patent suits filed in China has exploded in recent years, little information about Chinese patent litigation is publicly available. Chinese courts do not regularly digitize filings and orders, let alone make them publicly accessible online, so those interested in collecting litigation data generally must hand-collect hard copy files directly from local courthouses and accumulate them for analysis.

The largest existing database of Chinese court records related to IP enforcement is the "China IP Litigation Analysis," or CIELA, database created by the law firm Rouse.[39] This source includes all Chinese IP suits litigated to at least one decision issued by one of fifty courts with the most active IP dockets in China, as well as all PRAB challenges proceeding in parallel with those suits.[40]

To assist in executing this study, Rouse graciously provided access to CIELA data on all IP suits with a decision issued between 2006 and 2011. Of these suits, we were able to identify 471 that included at least one claim for patent infringement.[41]

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[37] *Id.* at 94. Patent cases in China must be filed in the jurisdiction of a defendant's residence or where the infringing act occurred. *Id.* at 93. If more than one court has jurisdiction, the patentee can select among them. *Id.*

[38] *Id.* at 94.

[39] CIELA, http://www.ciela.cn/ (last accessed Aug. 26, 2015).

[40] The database covers the decisions of fifty "major IP courts" across thirty-one cities and twelve provinces. *Id.* To be clear, some suits were appealed to one of these courts, rather than filed there. To our knowledge, there is no publicly available data on Chinese suits that settled without generating at least one court decision. Thus, a limitation of our study is that we cannot observe the quantity or character of settled patent suits.

[41] Again, "patent" refers to "invention patent." *See supra* note 1.

### *B. Litigant- and Patent-Specific Data*

For each of these 471 patent suits, we gathered a variety of data relating to the suit's outcome and the parties and patents involved. First, for each suit, we identified all litigating parties.[42] For each litigating entity, we identified the location of its principal place of business, the industry in which it operates, and whether it is a privately- or state-owned entity. We accumulated this firm-level data from a number of sources, including the Chinese Annual Survey of Industrial Enterprises, and the Oriana and Qin databases, which contain financial information for over 400,000 companies registered in China.[43] Finally, for each suit, we identified the case's outcome, including whether the case was appealed and, if so, whether the ruling was affirmed or reversed.

Next, for each patent-in-suit, we identified the patent's priority date,[44] technology classifications,[45] and, for patents with international counterparts, the country where the application was initially filed.[46]

## III. FINDINGS

In this Part, we report our findings with respect to patent litigation filed in China. We do so by presenting the data broken down by jurisdiction and by the characteristics of the litigants and patents involved in each suit.

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[42] Party names were provided to us in Chinese characters, which we translated/transcribed using translation software.

[43] *Oriana*, Bureau van Dijk, http://www.bvdinfo.com/en-gb/our-products/company-information/international-products/oriana (last accessed Aug. 25, 2015). Qin is now exclusively available as part of the larger Orbis database. *Orbis*, Bureau van Dijk, https://orbis.bvdinfo.com/version-2015819/home.serv?product=orbisneo (last accessed Aug. 25, 2015).

[44] As in the United States, the priority date for a Chinese patent is the filing date of the patent's application or of the earliest relevant parent application to which it claims priority. *Compare* CLARK, *supra* note 1, at 33-34 *with* 35 U.S.C. § 154(a)(2) (2012).

[45] Specifically, we identified the patent's International Patent Classification number. *See International Patent Classification (IPC) Official Publication*, World Intell. Prop. Org., http://web2.wipo.int/ipcpub/ (last accessed Aug. 20, 2015).

[46] China has been a member of the Patent Cooperation Treaty (PCT) since 1994. *See supra* note 24. Using procedures established by the PCT, a patent applicant can file a fist application with a particular patent office and, within one year, file a second "international" application to pursue patent rights in other nations that are PCT members. *See* MANUAL OF PATENT EXAMINING PROCEDURES § 1842 (9th ed., 2014).

### *A. By Jurisdiction*

Viewing the data first across jurisdictions, we observe that Chinese patent litigation varies greatly by city in some respects and yet, in others, is quite consistent. For one, we find that cases are highly concentrated in a small number of jurisdictions (Figure 1).[47] Beijing alone is home to more than a quarter of all patent suits in our database,[48] and the majority of cases take place in one of China's three largest cities.[49] As a result, only twenty-two of the fifty most active IP courts issued at least one patent decision per year during the period of our study.

**Figure 1: Case Distribution by Jurisdiction**


Notes: Size of bubbles corresponds to number of cases in each location. The total number of cases displayed is 471. For case counts by location see Table 1.

[47] The statistics reported for each jurisdiction include all cases in the database that were decided by courts located in that jurisdiction.

[48] Not even the infamous US District Court for the Eastern District of Texas can tout this level of concentration during the same time period. Lex Machina, Patent Cases Filed by Year, https://law.lexmachina.com/court/table#Patent-tab (last accessed Aug. 25, 2015) (showing that, between 2005 and mid-2015, the Eastern District of Texas saw about one quarter of all U.S. patent suits filed in the top twenty most popular districts).

[49] Again, to be clear, the data does not include settlement data, so we cannot accurately assess how many patent cases were *filed* in these courts. *See supra* note 23.

**Table 1: Case Counts, Appeals, and Outcomes by Jurisdiction**

| Rank | Jurisdiction | No. Cases | % Appealed | Final Outcome | |
|---|---|---|---|---|---|
| | | | | % Not Infringed | % Infringed |
| 1 | Beijing | 123 | 63% | 54% | 46% |
| 2 | Guangzhou | 88 | 84% | 44% | 56% |
| 3 | Shanghai | 55 | 58% | 27% | 73% |
| 4 | Nanjing | 31 | 74% | 39% | 61% |
| 5 | Changsha | 28 | 14% | 18% | 82% |
| 6 | Hangzhou | 22 | 64% | 36% | 64% |
| 7 | Chongqing | 18 | 78% | 33% | 67% |
| 8 | Zhengzhou | 15 | 40% | 47% | 53% |
| 9 | Fuzhou | 10 | 50% | 40% | 60% |
| 10 | Ji'nan | 10 | 90% | 60% | 40% |
| 11 | Kunming | 10 | 40% | 20% | 80% |
| 12 | Chengdu | 9 | 67% | 56% | 44% |
| 13 | Hefei | 9 | 56% | 56% | 44% |
| 14 | Ningbo | 9 | 33% | 22% | 78% |
| 15 | Shenyang | 7 | 0% | 57% | 43% |
| | Other | 27 | 19% | 37% | 63% |

Moreover, we find that cases are clustered by technology (Table 2). Each of the three most active jurisdictions sees a disproportionately large share of patent suits involving technologies in one or more industries. The majority of all Chinese patent suits related to both information technology and pharmaceuticals are filed in Beijing. Shanghai is even more specialized, with almost 60 percent of all patent suits related to automotive technology. Similarly, Guangzhou plays host to half of all patent suits related to entertainment technology, a category that includes the toy industry. Patent suits in the United States, by contrast, are not nearly as clustered by industry, due in large measure to permissive venue rules that draw many filings to plaintiff-friendly jurisdictions located far from the geographic areas where industries themselves tend to be grouped.[50]

Despite this variation, however, three other data points appear relatively

[50] *See* Jeanne C. Frommer, *Patentography*, 85 NYU L. REV. 1444, 1449, 1502, 1512, 1514, 1516 (2010) (finding that, among US district courts, none saw more than roughly 15 percent of any one of five broad technology classes and arguing that venue rules should be changed to facilitate the industry-by-industry clustering of US patent suits in order to take advantage of local expertise and court specialization).

constant across courts: success rates, appeal rates, and remedies (Table 1). In eight of the ten courts that issued at least two decisions per year, success rates were between 30 and 60 percent, a smaller spread than that seen among US district courts.[51] Similarly, rates of appeal in six of the top seven jurisdictions fall between about 60 and 80 percent, rates that again are roughly similar to those seen in US patent suits.[52] Moreover, remedies are quite consistent across courts (Table 3). Seven of the top eight jurisdictions have an injunction grant rate of roughly 90 to 100 percent and a median damages award between 80,000 and 150,000 RMB.

[51] *See* Mark A. Lemley, *Where to File Your Patent Case*, 38 AIPLA Q.J. 401, 407-09 (2010) (reporting that patentee win rates in US district courts varied between roughly fifty-6 percent and 12 percent among district with at least twenty-five decisions between 2000 and 2010).

[52] *See* PRICEWATERHOUSECOOPER, 2014 PATENT LITIGATION STUDY (2014) (reporting that between 2007 and 2011 "appeals were lodged in over 70% of reviewed cases that reached an initial conclusion at the district court"), *available at* http://www.pwc.com/en_US/us/forensic-services/publications/assets/2014-patent-litigation-study.pdf.

## Table 2: Share of Cases by Industry and Jurisdiction

| Industry | Court | | | | | | | | | | No. Cases |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Beijing | Changsha | Chongqing | Guangzhou | Hangzhou | Nanjing | Shanghai | Zhengzhou | Other | Total | |
| No. Cases in Jurisdiction | 123 | 28 | 18 | 88 | 22 | 31 | 55 | 15 | 91 | 471 | |
| Apparel & Textiles | 14% | 0% | 0% | 0% | 5% | 10% | 29% | 0% | 43% | 100% | 21 |
| Automotive | 0% | 0% | 0% | 0% | 13% | 0% | 63% | 0% | 25% | 100% | 8 |
| Chemicals & Biotech | 18% | 3% | 3% | 15% | 0% | 12% | 12% | 18% | 21% | 100% | 34 |
| Entertainment | 0% | 10% | 0% | 50% | 10% | 20% | 0% | 0% | 10% | 100% | 10 |
| Food & Beverage | 27% | 0% | 0% | 7% | 13% | 7% | 0% | 7% | 40% | 100% | 15 |
| Healthcare | 40% | 0% | 0% | 20% | 0% | 0% | 20% | 0% | 20% | 100% | 10 |
| IT & Services | 57% | 0% | 7% | 14% | 0% | 0% | 7% | 0% | 14% | 100% | 14 |
| Manufacturing & Machinery | 24% | 8% | 5% | 23% | 5% | 6% | 11% | 3% | 17% | 100% | 320 |
| Others | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 100% | 2 |
| Pharmaceuticals | 59% | 4% | 4% | 4% | 0% | 7% | 4% | 0% | 19% | 100% | 27 |
| Publishing & Printing | 0% | 0% | 0% | 0% | 20% | 20% | 20% | 0% | 40% | 100% | 5 |
| Sports & Recreation | 80% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 20% | 100% | 5 |

**Table 3: Remedies Awarded by Jurisdiction**

| Jurisdiction | Permanent Injunctions | | | Damages Awarded | | | Costs Awarded | |
|---|---|---|---|---|---|---|---|---|
| | No. Cases | Requests | Granted | No. Cases | Mean | Median | Mean | Median |
| Beijing | 57 | 93% | 89% | 61 | 581.28 | 150 | 8.23 | 0.69 |
| Changsha | 23 | 70% | 65% | 23 | 283.15 | 48 | 1.76 | 0 |
| Chongqing | 12 | 100% | 100% | 13 | 338.54 | 100 | 0 | 0 |
| Guangzhou | 49 | 100% | 90% | 64 | 126.17 | 100 | 2.02 | 0 |
| Hangzhou | 14 | 100% | 93% | 15 | 146.82 | 150 | 5.25 | 1.02 |
| Nanjing | 19 | 100% | 89% | 21 | 241.9 | 90 | 5.99 | 0 |
| Shanghai | 39 | 100% | 100% | 41 | 144.9 | 100 | 15.76 | 0 |
| Zhengzhou | 8 | 100% | 100% | 9 | 82.5 | 82.22 | 0 | 0 |
| Other | 53 | 100% | 92% | 60 | 1118.86 | 100 | 2.29 | 0 |

Notes: Amounts in 1,000 RMB. "No. Cases" is the number of successful patent suits for which data on injunctions or damages is available. For example, while infringement was proven in 66 suits in Beijing, we have data on injunction for only 57 and data on damages and costs for only 61.

### *B. By Litigant Characteristics*

Turning to the litigants in our cases, we find that they are diverse—both geographically and classified by industry—and yet nonetheless fare consistently well in court decisions across these classifications.

First, we find that, while Chinese patent cases are highly concentrated in a small number of cities, litigants themselves are not (Figure 2). Almost half of all litigants accused of infringement hail from outside the largest five jurisdictions, as do the largest share of patentees.

Also, while individual industries tend to cluster in individual courts, litigants as a whole represent a diverse array of market sectors (Table 4). Though companies in the mechanical engineering industry constitute the vast majority of litigants, firms in the pharmaceutical, chemical, and textile industries also make up a sizeable minority.

**Figure 2: Litigants Categorized by Origin**

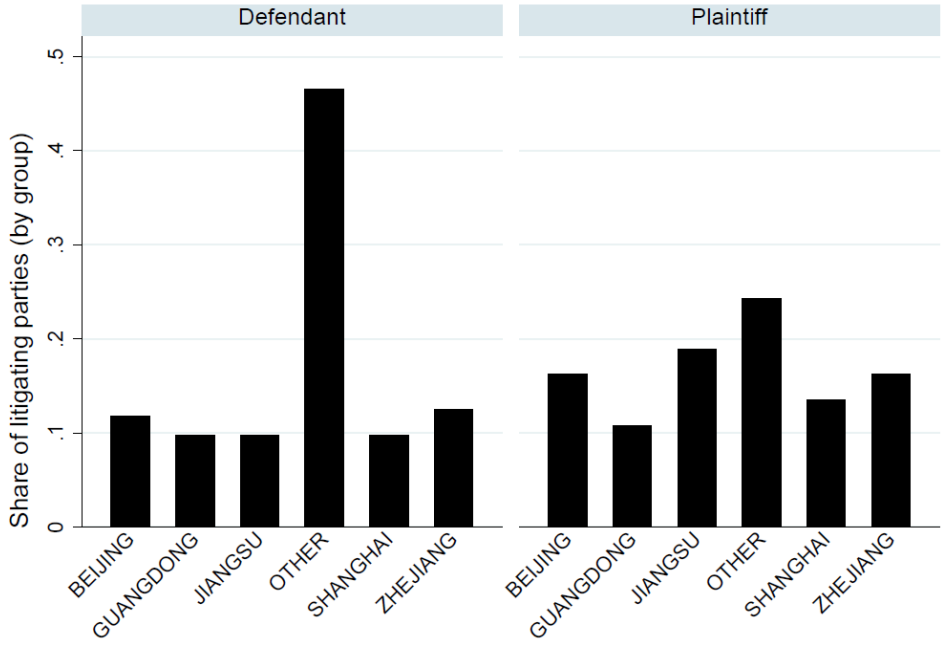



**Table 4: Case Distribution by Industry and Owner Type**

| **Industry** | **Ownership Type** | | | | |
|---|---|---|---|---|---|
| | HMT | Foreign | Domestic Private | Domestic State | Total |
| Apparel & Textiles | 0 | 4 | 20 | 0 | 24 |
| Automotive | 0 | 1 | 7 | 1 | 9 |
| Chemicals & Biotech | 0 | 5 | 26 | 0 | 31 |
| Entertainment | 2 | 3 | 10 | 0 | 15 |
| Food & Beverage | 0 | 2 | 14 | 0 | 16 |
| Healthcare | 0 | 2 | 10 | 1 | 13 |
| IT & Services | 0 | 1 | 14 | 0 | 15 |
| Mechanical Engineering | 6 | 41 | 307 | 12 | 366 |
| Others | 0 | 0 | 2 | 0 | 2 |
| Pharmaceuticals | 0 | 8 | 26 | 1 | 35 |
| Publishing & Printing | 0 | 0 | 5 | 0 | 5 |
| Sports & Recreation | 0 | 0 | 5 | 0 | 5 |
| Total | 8 | 67 | 446 | 15 | 536 |

Notes: HMT represents Hong Kong, Macao, and Taiwan

Moreover, as shown below in Table 5, we find a substantial number of foreign entities engaged in Chinese patent enforcement. Though domestic patentees filed the overwhelming majority of suits in our database, foreign patentees initiated more than 10 percent of cases. In fact, foreign entities appear in the data more often as patentees than accused infringers. Foreign parties filed suit forty-nine times, winning thirty-five of them, and were sued just twenty-nine times. By contrast, state-owned Chinese entities—often singled out as the intended beneficiary of the Chinese protectionism[56]—filed just one suit in our database. State-owned companies were accused of infringement much more often—fourteen times—and lost three of those suits.

Finally, remedies awarded in the suits in the database are surprisingly consistent across litigant types (Table 6). Successful foreign patentees received a median damages award of 100,000 RMB in suits against private Chinese firms, exactly the same amount that private Chinese patentees received when they sued private domestic parties. Interestingly, Chinese patentees received 20 percent *less* in suits against foreign companies and 60 percent *more* in suits against state monopolies. Similarly, foreign patentees received a permanent injunction in every case they won, while victorious domestic patentees were denied injunctions 5 to 10 percent of the time.

[56] *See* CLARK, *supra* note 1, at 5 ("Lawsuits brought against infringers where the alleged infringer is a state-owned enterprise can be especially problematic. State-owned enterprises usually have close relationships with local governments at the place where the enterprises are located."); MCGREGOR, *supra* note 10, at 4-5.

## Table 5: Case Outcomes by Litigant Type

| | | | Defendant | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | *Foreign* | | *Domestic Private* | | *Domestic State-Owned* | | *HMT* | |
| | | | Infringement Found | No Infringement | Infringement Found | No Infringement | Infringement Found | No Infringement | Infringement Found | No Infringement |
| **Plaintiff** | *Foreign* | Infringement Found | 80% (4) | | 70% (31) | | - | | - | |
| | | No Infringement | | 20% (1) | | 31% (13) | | - | | - |
| | *Domestic Private* | Infringement Found | 67% (16) | | 57% (224) | | 27% (3) | | - | |
| | | No Infringement | | 33% (8) | | 43% (168) | | 73% (11) | | 100% (3) |
| | *Domestic State-Owned* | Infringement Found | - | | 100% (1) | | - | | - | |
| | | No Infringement | | - | | - | | - | | - |
| | *HMT* | Infringement Found | - | | 100% (5) | | - | | - | |
| | | No Infringement | | - | | - | | - | | - |

Notes: HMT represents Hong Kong, Macao, and Taiwan

## Table 6: Remedies by Foreign and Domestic Litigants

| | | *Foreign* | | | | | *Domestic Private* | | | | | *Domestic State-Owned* | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Injunction | | Damages | | | Injunction | | Damages | | | Injunction | | Damages | |
| | | No. Cases Inf. Found | Requested (Req'd) | Awarded | Req'd | Awarded | No. Cases Inf. Found | Req'd | Awarded | Req'd | Awarded | No. Cases Inf. Found | Req'd | Awarded | Req'd | Awarded |
| **Plaintiff** | *Foreign* | 4 | 100% | 100% | Mean: 262.5 Median: 200 | Mean: 112.5 Median: 100 | 31 | 100% | 100% | Mean: 1014.51 Median: 250 | Mean: 440.94 Median: 100 | - | - | - | - | - |
| | *Domestic Private* | 16 | 100% | 94% | Mean: 1278.13 Median: 475 | Mean: 386.94 Median: 80.5 | 222 | 95% | 89% | Mean: 1284.65 Median: 300 | Mean: 539.56 Median: 100 | 3 | 67% | 67% | Mean: 1299.14 Median: 300 | Mean: 119.84 Median: 160 |
| | *Domestic State-Owned* | - | - | - | - | - | 1 | 100% | 100% | Mean: 100 Median: 100 | Mean: 100 Median: 100 | - | - | - | - | - |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *HMT* | - | - | - | - | - | 5 | 100% | 100% | Mean: 420 Median: 500 | Mean: 320 Median: 500 | - | - | - | - | - |

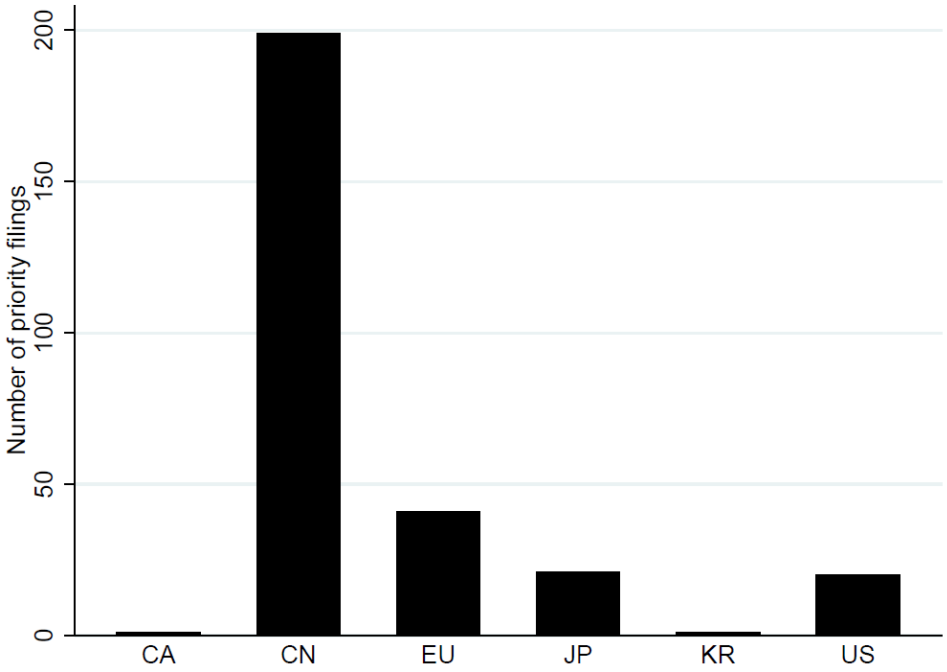
Notes: Amounts in RMB 1,000; Remedies data is unavailable for two suits between private domestic litigants; Infringement was not proven in any of the three suits filed against litigants from Hong Kong, Macao, or Taiwan

### *C. By Patent Characteristics*

Looking next at the individual patents asserted in our database, we find them to be relatively international in origin, relatively old when asserted, and disproportionately related to mechanical and chemical inventions. In addition, we see that surprisingly few faced a validity challenge.

First, almost 30 percent of patents litigated in Chinese courts were issued from applications initially filed in Europe, Japan, or the United States (Figure 3). Another 4 percent, though originally filed in China, were subsequently filed in other countries and have foreign counterparts issued from patent offices located elsewhere in the world.

**Figure 3: Priority Filings by Country**



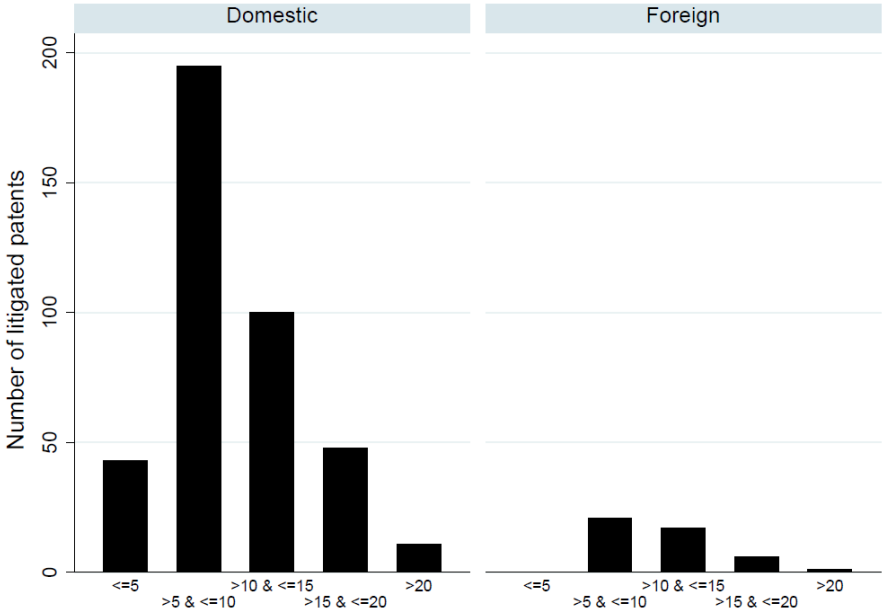

Note: CA: Canada; CN: China; EU: European Union; JP: Japan; KR: Korea; US: United States.

Also, we observe that litigated patents are, on the whole, roughly middle-aged, with a similar age distribution among patents asserted by both foreign and domestic patentees. Only about 10 percent of patents litigated in Chinese courts were asserted within five years of their priority date (Figure 4).[57] Approximately 42 percent, by contrast, were filed more than a

[57] Patent applications pend, on average, between two and three years at SIPO before

decade before they were enforced in court.

**Figure 4: Patent Age at Time of Litigation**




We additionally find that, consistent with the industry distribution reported above, patents enforced by both foreign and domestic parties mostly cover inventions related to the mechanical and chemical arts. By comparison, US patent suits predominantly involve electrical and computer-related technology.[58]

Lastly, we find that a surprisingly small number of asserted patents faced a parallel validity challenge. Overall, less than 14 percent of patents were challenged in a PRAB proceeding (Table 7). By contrast, virtually every patent asserted in the United States faces a validity challenge in court.[59] Even relative to other jurisdictions that bifurcate consideration of

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they are granted. *See* WORLD INTELL. PROP. ORG., PATENTS 39 (2014), *available at* http://www.wipo.int/export/sites/www/ipstats/en/wipi/2014/pdf/wipi_2014_patents.pdf (showing that patent pendency at SIPO decreased significantly from 2002 to 2010); Mark Liang, *Chinese Patent Quality: Running the Numbers and Possible Remedies*, 11 J. MARSHALL REV. INTELL. PROP. L. 478, 498 (2012) (same).

[58] *See, e.g.*, Brian J. Love, *An Empirical Study of Patent Litigation Timing: Could a Patent Term Reduction Decimate Trolls Without Harming Innovators?*, 161 U. PA. L. REV. 1309, 1342- 44(2014) (finding that over 40 percent of litigated patent issued in the early 1990s cover "high tech" inventions).

[59] *See* Mark A. Lemely, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV.

validity and infringement—a procedural choice correlated with fewer validity challenges—this is a relatively low rate of challenge.[60]

**Figure 5: Litigated Patents by Technology**

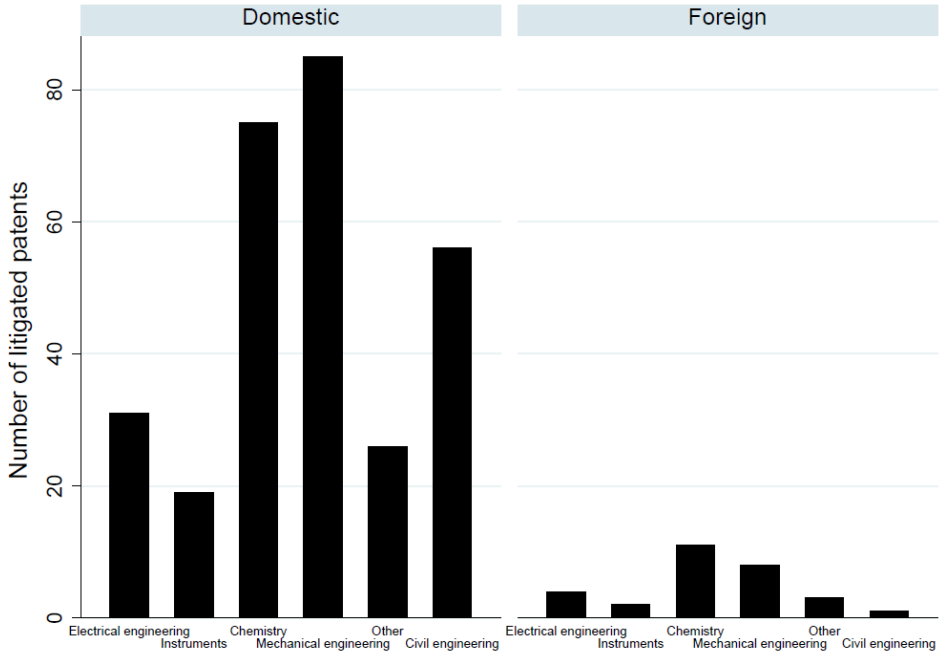


**Table 7: Validity Challenges by Nationality of Litigants**

| Plaintiff | Validity Challenged by Defendant? | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Defendant Foreign | | | | Defendant Domestic | | | |
| | No | | Yes | | No | | Yes | |
| | No. cases | % | No. cases | % | No. cases | % | No. cases | % |
| **Foreign** | 4 | 80% | 1 | 20% | 17 | 94% | 1 | 6% |
| **Domestic** | 15 | 83% | 3 | 17% | 162 | 86% | 27 | 14% |

Notes: We were able to obtain data on parallel validity challenged for only 230 cases.

1495, 1502 (2001) ("Virtually every patent infringement lawsuit includes a claim that the patent is either invalid or unenforceable due to inequitable conduct (or commonly both).").

[60] *See* Cremers et al., *supra* note 27, at 3 (finding that "bifurcation reduces the likelihood that an alleged infringer challenges a patent's validity . . . . in particular [for] smaller firms . . . .").

## III. ANALYSIS

Overall, our findings suggest that Chinese patent litigation is not rife with protectionism. To the contrary, they suggest that foreign companies perform as well, if not better, than Chinese firms in patent suits.

First, the case-level data suggests that patent suits are rarely litigated in smaller inland cities where, conventional wisdom holds, protectionism is most often encountered.[61] For one, our data indicates that patent litigation is overwhelmingly a big-city phenomenon in China and, even among major metropolitan areas, is largely concentrated in just a few of the nation's largest cities. Moreover, even when foreign companies are sued outside large cities, our data suggests that it is relatively easy to move cases to urban jurisdictions using the appeals process. As our findings show, the rate of appeal among Chinese patent suits is high, perhaps because Chinese patent suits are fast enough and cheap enough to make appeal a realistic option for most parties.[62] Last, large urban jurisdictions, particularly Beijing and Guangzhou, seem to be the overwhelming venues of choice for cases involving pharmaceuticals and information technology—the technologies most often cited as targets of Chinese protectionism.[63] Together, these findings suggest that, even if protectionism is common outside large cities, foreign patent litigants are not likely to face suit, let alone a final court decision, in those jurisdictions.[64]

Second, our observations about litigating parties also tend to suggest

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[61] *See, e.g.*, CLARK, *supra* note 1, at 4-5 ("In large cities, [protectionism] is usually not a serious concern. In smaller cities, however, the local government will have strong incentives to protect any opposing party that is a large employer of workers, and/or a large source of tax revenue."); HULSE, ET AL., *supra* note 16 ("[T]o the extent possible, IP owners should file civil actions in the highest court possible in areas most experienced in handling infringement cases, such as Beijing for patents or Shanghai for trademarks."); Bieberbach, *supra* note 10 ("To avoid local protectionism and have the case handled by an IP experienced court, the choice of the right court is important (Beijing or Shanghai are recommended).").

[62] Bifurcation of invalidity and infringement likely also creates an incentive for appeal. *See* Cremers et al., *supra* note 27, at 11 (explaining that the German bifurcated system incentivizes the appeal of infringement findings to delay their finality until the Federal Patent Court can decide the issue of validity).

[63] *See, e.g.*, Rea, *supra* note 11 (pointing to pharmaceuticals in particular); MCGREGOR, *supra* note 10.

[64] Indeed, even domestic patentees appear to favor urban jurisdictions when filing patent suits. As discussed above in Part III.A, a large percentage of patent cases litigated in large urban jurisdictions are filed by domestic parties from outside those cities jurisdiction. The fact that these parties very likely could have filed suit in their home jurisdiction, but chose not to, suggests that even Chinese litigants generally prefer large urban jurisdictions to smaller inland ones, despite the supposed benefits of local protectionism.

that protectionism is not rampant in jurisdictions where patent suits are commonly litigated. Foreign companies are not frequent targets of Chinese patent suits and, to the contrary, most often appear in our data as patent enforcers, not accused infringers. Moreover, when foreign companies sue, they win relatively frequently and are awarded remedies commensurate with those given to domestic patentees. Chinese companies—especially state-owned firms—fare worse on the merits of their cases, both as plaintiffs and defendants, and when they sue foreign companies, they actually receive less in damages than they do in suits against domestic infringers.

Finally, the characteristics of litigated patents in our database also tend to cast doubt on the broader Chinese patent system's supposed protectionist tendencies. In a system rife with patents that merely copy already-popular products, one would expect to see a large population of suits asserted newly-minted patents filed exclusively in China. But the litigated patents in our data set are, on the whole, relatively old, and many issued from applications that are part of international patent families. Just a tiny fraction of litigated patents were asserted within five year of their issue date, and close to half were more than a decade old at the time of suit. Moreover, about a third have at least one foreign counterpart, which indicates that these applications disclosed inventions deemed novel by at least one other patent office. In addition, the most common technology class among litigated patents is mechanical engineering, and the most common industry classification among litigants is manufacturing. Electrical engineering ranks fourth out of six patent categories, and information technology ranks sixth on the list of represented industries. Thus, though suits against Apple, Samsung, and Dell grab headlines in the West, it appears that cases involving software and computer technology constitute just a small minority of Chinese patent enforcement.

## CONCLUSION

Overall, these findings cast doubt on conventional wisdom among Western companies and commentators about Chinese patent enforcement. While we cannot rule out the existence of blatant protectionism in smaller inland courts from which we could not obtain data, patent suits in those jurisdictions appear to be rare. Moreover, while we cannot observe settlement behavior or correct for other possible selection effects,[65] our

[65] For example, it is possible that foreign tech companies, discouraged by conventional wisdom about Chinese courts' supposed protectionist tendencies, bring suit only when their claims are especially strong and, thus, litigate cases that are on average objectively more

findings on litigation outcomes bear little evidence of protectionism. Foreign patent owners brought over 10 percent of Chinese patent infringement actions in our database and won over 70 percent of those cases. By contrast, state-owned entities—presumably those the Chinese government has the greatest interest in protecting—filed only one suit in our database and lost 3 of the 14 suits filed against them. Lastly, while we cannot rule out a rush to file and enforce shoddy patents in more recent years, our findings cast doubt on claims that this was a regular occurrence prior to 2012. Rather than a land rush to obtain and enforce patent rights in the immediate aftermath of the National IP Strategy's announcement, the vast majority of litigated patents in our database were filed before the Strategy was ever announced, and many of those patents have family members blessed by other nations' patent offices.

Accordingly, our findings tend to suggest that, to the extent Chinese leaders hoped that stimulating the national patent system would result in widespread protectionism, their hopes were misplaced. To the contrary, they appear to have created a system that often benefits foreign interests at the expense of domestic ones and that also generates a good deal of litigation among domestic firms. Technology companies in the United States and elsewhere in the world—particularly those that have long accused China of piracy—may be well advised to give the Chinese patent system a second look.

Ultimately, however, this study is merely a starting point for analysis of Chinese patent litigation and should be viewed as such. We believe that the data presented in this Article is the best empirical information made available to date, but we also acknowledge that it is imperfect in several respects. If current trends in China continue, we expect to see the Chinese patent system become more and more important to Western companies, law firms, and policymakers. As demand for reliable information in this area increases, we expect data collection efforts to expand as well, and we encourage future scholars to take advantage and carry out future studies.

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meritorious than those filed by domestic patentees. It is also possible that foreign companies that are willing and able to file suit in China (as well as those that are worth suing in China) are generally more sophisticated or have deeper pockets than their Chinese counterparts and thus, for example, are able to secure more skilled (or well connected) legal representation. Because we lack the data to accurately measure and correct for these potential effects, we cannot rule out the possibility that the success rates we observe among foreign litigants are, despite their similarity to those of domestic parties, depressed by protectionism and, absent that disadvantage, would be significantly higher.