Stronger and more just? Recent reforms of China's intellectual property rights system and their implications

China's intellectual property rights system

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Abstract

Purpose – Since 2015, China has made efforts to reform its intellectual property rights (IPR) system to better protect and stimulate innovation. These reforms are a result of the demand for more stringent intellectual property (IP) protection from China's domestic, innovative industries and a measure to ease the pressure exerted by its foreign trading partners, particularly against the background of the US-China trade dispute that started at the beginning of 2018. This paper summarizes these reforms and their implications.

Design/methodology/approach — This paper combines a variety of sources, including academic articles, government websites, news reports, industry surveys and expert opinions, to offer insights in China's IPR system and its recent reforms.

Findings – This paper summarizes and discusses (1) the state's law amendments, including the 2015 amendment of the "Law on Promoting the Transformation of Scientific and Technological Achievements", the second amendment of the "Anti-Unfair Competition Law" with regard to trade secret protection, the fourth amendment of the "Patent Law", and the legislations and regulations addressing the criticisms of the US administration over China's so-called "forced" technology transfer policies; (2) the establishment of the specialized IP courts and tribunals since 2014; (3) the restructuring of the State IP Office; and (4) the issuing of an "Outline for Building an IPR Powerhouse (2021–2035)".

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Originality/value – This paper highlights China's efforts to make its IPR system stronger and more just. It also discusses international observers' reactions and pinpoints specific areas for further improvement.

Keywords Intellectual property rights, China, Reform, Innovation, Technology transfer

Paper type Research paper

1. Introduction

For some time, China has been under scrutiny for how it protects the rights of intellectual property (IP) holders. According to the World Intellectual Property Organization (WIPO), the leading international authority on IP, the purpose of a "balanced and effective international IP system" is to enable "innovation and creativity for the benefit of all" (WIPO, 2019). Yet, the international community, particularly the USA, has explicitly expressed its critical concerns about China's so-called "lax" intellectual property rights (IPR) regime. In early 2017, after a seven-month investigation in China's IP system, the then Trump administration alleged that China engaged in forced technology transfer (FTT), meaning US and other foreign companies are expected to transfer their technology to China by forming joint ventures with local companies in exchange for access to China's vast and attractive market. According to some observers, this practice is not unique to China and actually common in many emerging economies (Huang and Smith, 2019). The issue of proper IP protection and enforcement has since then complicated the trade relations between China and the USA, and both countries have started to raise tariffs on imported products, from Chinese washing machines and aircraft parts to American cars and soybeans, harming both economies.

Besides international concerns, China's own strategic industries are expecting better IPR legislation and protection from their government. According to a 2015 paper from the Federal Reserve Bank of Minneapolis, more than half the technology owned by Chinese companies is obtained from outside China (Holmes *et al.*, 2015). A strong IPR system that supports and, even more important, incentivizes domestic public research institutes and business sectors to (co-)create and distribute knowledge is the next necessary step for China to transform into a more innovation-oriented nation. In addition, it is necessary to execute China's ambitious innovation-driven development strategy announced in the 18th National Congress of the Communist Party of China in 2012, which aims to transform China from being "the world's factory" of low-value products, such as clothes and toys, to a high-tech country known for its innovative products, services and technologies (Fang and Walsh, 2018). For instance, Chinese universities and their research departments are still often untapped resources for local innovation, which could be further unleashed by stimulating technology transfer to proactively seek opportunities.

In light of these international and domestic developments, the Chinese government has pledged to more stringently protect IPRs. In 2017, President Xi Jinping already emphasized the need for better IP protection and stricter enforcement. In doing so, China aims to overcome a number of serious challenges at the forefront of IPR protection. The most recent noteworthy developments present in the article reflect some of the serious efforts that the Chinese government is undertaking to bolster its IPR regime. Firstly, China has been carefully reviewing and updating its IP laws (Hong *et al.*, 2022). The amendment of the "Law on Promoting the Transformation of Scientific and Technological Achievements" in 2015 has cleared several legal barriers, thereby aiding the transfer of technology from universities and public research institutes to industrial organizations. Furthermore, the second

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amendment of the "Anti-Unfair Competition Law" in 2019 and also the fourth amendment to the "Patent Law" in 2020 include important enhancements for preserving trade secrets and patent-owners' rights, respectively. In 2019, the Chinese government passed the "Foreign Investment Law" and revised the "Administrative Permission Law" to respond to the criticisms of the international community over China's FTT policies. Secondly, China established a series of mechanisms to enhance IP protection, including specialized IP courts in Beijing, Shanghai and Guangzhou in late 2014, 18 specialized IP tribunals across several provinces between 2017 and 2019 and a new national-level IP tribunal of appeal within the Supreme People's Court (SPC) in 2019. Thirdly, China's State Council has consolidated the nation's administrative structure in 2018 to align with its evolving IP regime and strengthen IP protection. Fourthly, the Chinese government issued an "Outline for Building an IPR Powerhouse (2021–2035)", which laid out a comprehensive blueprint to systematically strengthen China's IPR system in the next decade.

In the following sections, we explain the actions taken by the Chinese government in amending the laws, establishing courts and tribunals and restructuring the state's IP administration apparatus to improve IP protection and enforcement in China. We also summarize the international community's reactions to these actions and pinpoint specific areas for further improvement of China's IPR system.

2. Law amendments

2.1 Amendment of the "Law on Promoting the Transformation of Scientific and Technological Achievements"

Since the "Law on Promoting the Transformation of Scientific and Technological Achievements" went into effect in 1996, China has experienced more than 20 years of soaring technological as well as economic and social development. Yet, under the original version of the law, Chinese universities and public research institutes had to obtain government approval through individual agencies to transfer technologies that their researchers had developed. Moreover, they were prevented from negotiating patent prices with buyers. Instead, patents had to be auctioned in property markets, which was a cumbersome and time-consuming procedure, discouraging companies from acquiring patents from universities and public research institutes. Companies thus more often opted for exclusive licensing from universities and public research institutes. Chinese universities and public research institutes were also forbidden from retaining revenue generated by technology transfer and had to transfer this income to government agencies. In short, a law that was intended to promote technology transfer had become an obstacle to do so (Huang, 2017).

In 2015, the amended law became effective. Among other significant efforts, it progressed China's IPR regime in four respects. Firstly, public disclosure of scientific and technological achievements that include new technologies and patents has become mandatory. Secondly, universities and public research institutes are further incentivized to transfer technology. They can retain the revenue generated from technology transfer without obtaining government approval, and in addition to listing patents at auctions, they can negotiate over prices through patent sales. Moreover, the law specifies that at least 50% of the net profits from technology transfer must be shared with those who invented the technologies. Thirdly, the law encourages companies to be more proactive in acquiring the latest technologies from universities and public research institutes through establishing joint research institutes, technology transfer organizations or R&D alliance and so on. Finally, the law requires that government agencies provide enhanced services so as to make available information about the outcomes of scientific research to facilitate technology search and technology transfer.

Overall, this amendment, which bears similarities to the Bayh–Dole Act in the USA, has granted Chinese universities and public research institutes much greater autonomy when engaging in technology transfer, simplified the processes related to technology transfer and incentivized researchers, who contemplate the transfer of their technologies to companies, to pursue such efforts.

2.2 Second amendment of the "Anti-Unfair Competition Law"

In 2019, China for the second time amended the "Anti-Unfair Competition Law", which concerns primarily trade secret protection. The new law broadens the definition of a trade secret to include additional commercial information, supplementing the technology and business information that the law already covered. The law also adds a provision that further defines what counts as an infringement, specifying that any party, whether an individual or entity, engaged in teaching, inducing or assisting others in obtaining, disclosing, using or allowing others to use trade secrets, shall be regarded as such. Thus, any party that facilitates trade secret infringement is subject to legal action. Finally, the amendment has also raised the limit on statutory damages from RMB 3m to 5m.

For many years, trade secret holders have struggled to file lawsuits because evidence proving that such an asset is truly secret, or evidence that establishes another party's infringement, is difficult to obtain. The new law addresses this issue by reducing the burden of proof on the rights holder. If the holder of a trade secret marshals prima facie evidence that (s)he has made an effort to protect the secret and can demonstrate reasonable evidence of infringement, the burden of proof shifts to the suspected infringer, who must then prove they have not committed infringement. Such prima facie evidence can include:

- the availability to the suspected infringer of a channel (or opportunity) through
 which to obtain the trade secret or information that is substantially similar to the
 alleged trade secret;
- the disclosure or use of the trade secret, or even evidence of the risk of it being disclosed or used by the suspected infringer; and
- any other evidence that the suspected infringer has indeed infringed on the trade secret.

2.3 The fourth amendment of the "Patent Law"

Over the years, China has amended its 1984 "Patent Law" four times, bringing the Chinese patent system closer to international standards of legislation and enforcement. The law was first amended in 1992 under foreign pressure to expand the scope of patent rights in China and also extend their duration and strengthen their protection. This amendment made food, pharmaceutical and chemical inventions as well as microbiological products and processes patentable, and extended the duration of invention patent protection from 15 to 20 years. The law was amended again in 2000 to include the requirements specified in the Agreement on Trade-Related Aspects of Intellectual Property Rights and also to prepare China for accession to the World Trade Organization, which followed in 2001. A third amendment of the law took place in 2008. Its purpose primarily was to discourage the filing of so-called "garbage patents", but more importantly to enhance China's indigenous innovation capabilities. This raised the bar for the patentability of inventions, utility models and designs by endorsing absolute novelty as a critical criterion for patent grants.

In 2020, the "Patent Law" was amended a fourth time, and the amended law came into effect in June 2021. The amendment is designed to further strengthen the protection of

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patents. In particular, it aims to help resolve problems associated with the "difficulty of collecting infringement evidence in patent lawsuits, long legal and administrative procedures, low awarded damages, and the high cost and low effectiveness of enforcement" (Covington, 2019; Jackson, 2019).

The amendment contains several major changes. Firstly, remedies for patent rights holders were enhanced. It had always been difficult to accurately estimate an infringer's illegal profits in China, generally as a result of the absence of compulsory evidence exchange in patent proceedings, which would allow interested parties to assess an infringer's financial information. The amended law addresses this issue by allowing courts to impose statutory damages in cases where actual damages cannot be accurately or confidently determined (usually involving losses suffered by patentees or gains obtained from or reasonable royalties to be paid by infringers). Before the fourth amendment, such statutory damages were to be set at the court's discretion within a range of RMB 10,000 to RMB 1m. According to some observers, these amounts remain insufficient to remedy all forms of patent infringement. Therefore, the amended law increased the range between RMB 30,000 and RMB 5m. This rather dramatic change will make patent damages better reflect the legitimate expectations of patent rights-holders. The amended law also allows the court to award damages in multiples of up to five times of the actual damages to address cases involving wilful patent infringement. To further encourage the disclosure of relevant financial information, the new law codifies an existing judicial interpretation that permits burden-shifting. For instance, if a defendant withholds any required financial information, the court can order her/him to disclose it. If (s)he still fails to do so, the court is allowed to determine the extent of the damage based on the claims and evidence provided by the plaintiff.

A second major element of the amendment involves the drug patent term-extension regime. Launching new types of drugs requires a thorough and lengthy administrative assessment and approval time. The purpose of the amendment is to extend patent terms as a form of compensation. The State Council can extend patent terms at its own discretion as long as the patent remains within the limits of two restrictions: firstly, extensions granted cannot be longer than five years; and secondly, the total patent term after launching a new drug cannot exceed 14 years. By specifying additional details regarding the regime, this law becomes a closer alignment with the current US system.

A third element of the new amendment concerns the *bona fide* principle and antitrust matters. The *bona fide* principle requires honest and fair behaviour and good faith in the patent application process. The amended law not only reinforces that principle but also prohibits parties from engaging in abusive actions related to patent rights that would eliminate or limit competition. By explicitly including antitrust concerns as such, China shows that it aims to strike a better balance between the legitimate demands of patent rights-holders and society at large.

Finally, the fourth amendment of the "Patent Law" further encourages the declaration and implementation of patents by installing an open-licensing regime. Following other practices in jurisdictions such as the UK, France and Germany, a patentee in China will be allowed to submit, in writing, a declaration that (s)he is willing to license her patent to anyone and exploit the patent by specifying the payment method and license fee to the China National Intellectual Property Administration (CNIPA), which is the successor to the State Intellectual Property Office (SIPO) in the reorganization of the state government in 2018. The CNIPA must then announce and implement an open license on the patentee's behalf. This amended law also specifies the procedures that include (but are not limited to)

granting a mechanism for withdrawing an open-licensing statement, acquiring a license and mediating related disputes.

2.4 Law amendments to address the criticisms over forced technology transfer policies. In March 2018, the US Trade Representative published a report, "Findings of the Investigation into China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation Under Section 301 of the Trade Act of 1974" (USTR, 2018), which formally initiated its trade dispute with China. In the report, the USTR criticized the Chinese government for using "foreign ownership restrictions, such as formal and informal joint venture requirements, and other foreign investment restrictions to require or pressure technology transfer from US companies to Chinese entities". In addition, the report contended that "China's regime of technology regulations deprives US technology owners of the ability to bargain and set terms for technology transfer that are free from interference by China". The report singled out two Chinese regulations as the bedrocks of such regime, namely, the "Regulations for the Administration of the Import and Export of Technologies" (TIER) and the "Regulations for the Implementation of the Law on Chinese-Foreign Equity Joint Ventures" (JV Regulations).

To better protect and attract foreign investments and also to address the criticisms voiced by the US government regarding China's policies and practices related to technology transfer and IP, the 13th National People's Congress of China in March 2019 passed the "Foreign Investment Law", which came into effect in 2020. Article 22 of that law stipulates that Chinese government agencies are prohibited to use administrative methods to force technology transfer. Furthermore, Article 23 requires that Chinese government officials preserve the confidentiality of any trade secrets known to them during regulatory approval proceedings. In addition, Article 39 of the law orders government officials to be held accountable for their behaviours in misappropriating trade secrets (Prud'homme and von Zedtwitz, 2019).

Another law, the "Administrative Permission Law", which, among others, governs business licenses and certain regulatory approvals in China, was revised in 2019 to complement the newly passed "Foreign Investment Law". The law prohibits FTT and emphasizes the importance of maintaining confidentiality of trade secrets in regulatory approval processes. Article 5 of the law states that government officials and outside experts involved in permission application and review procedures cannot disclose trade secrets or any other confidential information without the applicants' explicit consent, except for specific instances when it is required by law or justified for national security or public interest reasons. Furthermore, Article 31 stipulates that government agencies and their personnel are prohibited to make technology transfer a prerequisite for administrative permission and should not indirectly or directly require applicants to transfer technology as a condition of granting permission (Prud'homme and von Zedtwitz, 2019).

Finally, in 2019, the State Council of China announced the "Decision to Revise Several Regulations". Provision 38 of the decision abolishes the controversial provisions in the TIER, namely, Articles 24.3, 27 and 29, which the USTR Special 301 Investigation Report, mentioned above, criticized. Moreover, Provision 33 of the decision abolishes the provisions in Article 43.3 and 43.4 in the JV Regulations, which stipulated that the duration of technology contracts is restricted to ten years and that the technology-importing entity in the JV possess the right to use such technology continuously after the term of the contract expires.

3. Establishment of special courts and tribunals

3.1 Establishment of specialized intellectual property courts

At the end of 2014, China established three specialized IP courts in Beijing, Shanghai and Guangzhou. These courts have further streamlined the IPR judicial system while making it more effective.

The new IP courts enjoy first-instance jurisdiction over civil cases which usually involve disputes between persons and organizations, and administrative cases which are between state authority and persons or organizations. They have also been granted jurisdiction over some first-instance civil copyright, trademark, technology contract, unfair competition and franchise cases, based on the value of a given claim and the extent of foreign involvement. The IP courts may also review copyright, trademark, technical contract and unfair competition decisions handed down by the basic county-level courts within their territorial jurisdictions. Finally, only the Beijing IP Court has the authority to revise administrative decisions on patent validity, particularly those issued by the Patent Re-examination Board (PRB) of the CNIPA and the Trademark Review and Adjudication Board (Xiao, 2018).

By establishing these three specialized IP courts, the Chinese government has taken significant steps to strengthen IPR protection enforcement. The complexity of IP laws and protected technology requires that experienced and knowledgeable judges adjudicate cases. The specialized IP courts have enhanced the quality, consistency and speed of decision-making (Huang, 2017). The Beijing IP Court, for example, used 50 judges, 125 assistants and 45 clerks, which tried 33,826 cases between 6 November 2014, when the court was founded, and 30 June 2018 (Tang, 2018). On average, a Beijing IP Court judge presided in two to three times the number of cases over what judges in other Beijing intermediate courts presided in that period. In 2022 only, the Beijing IP court completed trial of 23,757 cases. Each judge on average completed trial of 360 cases (ChinaNews, 2023). The damages awarded for IP infringement have also increased steadily (State Council Information Office, 2018). Moreover, it is expected that the specialized IP courts train judges more effectively, thus populating the courts with experienced judges more familiar with the technical issues associated with patent law.

3.2 Establishment of specialized intellectual property tribunals

Additional evidence of China's commitment to protecting IPR can been seen in its establishment of 18 specialized IP tribunals in intermediate courts in several provinces between 2017 and 2019. The tribunals all exercise cross-regional jurisdiction, with the exception of the IP tribunals in Tianjin and Shenzhen which have jurisdiction only over IP cases in those cities. Sichuan, Hubei, Anhui, Fujian, Shaanxi, Hunan, Henan, Jiangxi, Jilin and Gansu provinces have adopted the "single-centre" model, by which their tribunals operate in an intermediate court in each province's capital city to adjudicate technology-related IP cases throughout the province. Three provinces – Jiangsu, Zhejiang and Shandong – have adopted a "dual-centre" model, meaning they hold two specialized regional IP tribunals per province. Each tribunal comprises 12–15 judges, all of whom bring extensive experience in IP litigation to their courtrooms (Li et al., 2017).

There are several significant similarities between these specialized IP tribunals and the specialized IP courts discussed in the prior paragraphs. Both court systems operate at the intermediate level among Chinese courts while adjudicating similar cases involving patents and other technology-related issues. Moreover, both specialized IP courts and tribunals benefit from having the most highly qualified and experienced IP judges in China. While the three specialized IP courts in Beijing, Shanghai and Guangzhou adjudicate only civil and administrative cases, the tribunals have been granted jurisdiction to hear IP cases that

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involve civil, administrative, as well as criminal enforcement mechanisms under a single tribunal (AFD China Intellectual Property, 2019). Obviously, a specialized IP tribunal is more effective at minimizing inconsistencies that arise when more than one tribunal adjudicates the same subject cases (Li *et al.*, 2017; Xiao, 2018).

By establishing specialized IP courts and tribunals, China has followed a trend seen in other countries of introducing similar specialized IP mechanisms to facilitate forum centralization and uniform application of IP legislation. For example, the US Court of Appeals for the Federal Circuit was set up in 1982 as the only appellate-level court with jurisdiction over American patent case appeals. For its part, the EU established a Unified Patent Court which came into force in June 2023 as an international court involving all participating European member states to address the infringement and validity of both Unitary Patents and European patents. Specialized courts are already operating in Germany and to some extent also in the UK. In Asia, specialized courts have been operating in Japan and Korea for more than 10 years (Lee and Zhang, 2017).

3.3 Establishment of an intellectual property tribunal in the Chinese Supreme People's Court At the start of 2019, the Chinese SPC inaugurated an IP tribunal in Beijing. This court has the highest judicial authority over patent cases and other highly technical IP issues. The Chinese government has been applauded by companies and other stakeholders for setting up a national IP tribunal of appeals, which is considered a significant step towards further improving its IPR regime. Following the US Court of Appeals for the Federal Circuit, which, as a national patent appeals court, has spurred innovation overseas since its establishment in 1982, the creation of the IP Tribunal under the SPC is expected to similarly underscore the importance of IP protection and stimulate innovation that will further boost Chinese economic development (Robinson, 2019).

Under the former structure, basic and intermediate courts would hand down first-instance judgments and provincial-level high courts make second- and final-instance judgments. In the new structure, the SPC has replaced the high courts regarding second-instance judgments. The SPC IP Tribunal hears appeals against first-instance civil judgments and rulings by the high courts and intermediate courts in cases related to invention patents, utility model patents, new plant varieties, integrated circuit layout designs, know-how, computer programmes and antitrust issues. The tribunal also hears appeals against related first-instance administrative judgments and cases involving design patents. This consolidation of second-instance judgments under the IP Tribunal is the first of such attempts in any area of the Chinese law (Lexology, 2019). This way, China has effectively simplified the court hierarchy for patent litigations.

Establishing the IP tribunal under the SPC offers several advantages. Firstly, the tribunal promotes uniformity in the application of the laws pertaining to IPRs. There have often been inconsistent judgments where patent- and technology-related cases were first tried by intermediate courts, or even IP courts, and later appealed before high courts in another province. This inconsistency gave certain provincial high courts a reputation for favouring patentees, while others were seen by many as unfriendly to patentees. The previous system was also known for local protectionism practices. The high variety in courts' decisions also led to so-called "forum-shopping", whereby patentees and alleged infringers beat each other to the courthouse of their preference to file their case (mostly related to patent infringement or non-infringement declaratory actions) first, expecting more favourable results. Another conspicuous consequence of the lack of uniformity in IP-related judicial administration involves patent infringement and invalidity proceedings. Prior to the launch of the SPC IP Tribunal, the IP Court in Beijing exercised exclusive jurisdiction over

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administrative decision appeals of patent validity and re-examination judgments made by the PRB of the SIPO (the predecessor of the CNIPA) and such judgments could be further appealed to the High Court in Beijing. Appeals of patent infringement decisions were, however, heard by provincial high courts. After the SPC IP Tribunal is established, patent infringement appeals are no longer heard by individual provincial high courts. The SPC IP Tribunal is expected to create more consistency in the application of patent laws and make both local protectionism and forum-shopping problems of the past. Overall, the SPC IP Tribunal should enhance fairness in business at a time when more foreign companies are expected to litigate cases in China to enforce their patents.

A second noteworthy advantage of the new SPC IP Tribunal is the centralization of the patent appeal system, which is expected to enhance the quality of decision-making. The complexity of legal and technical issues in patent- and technology-related cases demands the utmost professionalism from judges. Nevertheless, the quality of legal analysis on the part of judges still varies across lower courts nowadays. The new SPC IP Tribunal intends to install only judges with a long and proven track record in handling trial proceedings and also the necessary proficiency for dealing with patent and technology-related cases. According to the SPC, the average age of the first group of judges to join the tribunal is 42 years. Half of these judges have earned doctoral degrees in law, and one-third has overseas study experience (State Council Information Office, 2018). It is hoped that the tribunal will thereby improve decision-making quality and guide other judges involved in technology-related cases for trial courts and the CNIPA's PRB proceedings.

A third benefit related to the consolidation of the adjudication process lies in the potential of the SPC IP Tribunal to reduce the ligation period and thus enhance the efficiency of the trial processes. By sidestepping the provincial high courts, retrial petitions will now reach the SPC in only one step, thus hastening the ultimate settlement of a dispute. The new system whereby the SPC deals with all appeal decisions is also expected to significantly lower the number of retrial petitions.

4. Restructuring the state intellectual property administrative apparatus

Patents, trademarks and geographic indications have historically been administered and enforced by separate Chinese government agencies, leading to jurisdictional conflict and confusion. Uneven administrative enforcement of patents and trademarks was a chief source of these problems. A patent- or trademark-rights holder had at least two options for enforcing her rights in infringement cases: the aggrieved patentee could either file a lawsuit or request that an administrative authority steps in to take care of the matter. Yet both the China Trademark Office (CTMO), typically through a local administrative department of the State Administration for Industry and Commerce (SAIC), and the Patent Office (SIPO), typically through a local department administering patent-related work, were empowered to investigate IP infringement, using their own enforcement teams operating under distinct sets of laws and regulations. Moreover, the two offices did not apply the same administrative remedies for infringement; the CTMO was entitled to confiscate and destroy infringing goods and instruments used in the manufacturing of the infringing goods, while the SIPO was confined to ordering the infringer to cease the offending actions immediately. An infringement case that involved both patents and trademarks often resulted in the rights holder seeking administrative relief only for the trademark side of the case while forgoing remediation of the patent side (Zhu and Wininger, 2018).

The 13th National People's Congress in March 2018 decided to reorganize central government agencies to make them more efficient and effective in performing their

respective functions. A new State Administration for Market Regulation (SAMR) was established from the SAIC, which merged and took over responsibilities previously held by the SIPO, the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ), the Certification and Accreditation Administration, the Standardization Administration of China and the China Food and Drug Administration (Figure 1 illustrates SIPO's restructuring). To strengthen China's IPR regime, a new CNIPA succeeded the SIPO, now assuming not only SIPO's responsibilities for registering and administrating patent adjudication, which includes patent application examination, re-examination and invalidation proceedings but also SAIC's responsibility for the registration and administration of trademarks. The CNIPA also took over from the CTMO and the AQSIQ responsibilities for handling registration and administration of geographic indications. The CNIPA did not, however, assume responsibility for administering copyrights, which remains with the National Copyright Administration.

The prospects for improving the administration and execution of patent laws following the reorganization of the SIPO into the CNIPA seem highly positive. By consolidating related functions used to be under administration of three different government agencies – the SAIC, CTMO and AQSIQ – into a single organization, the Chinese government has started to make efforts to resolve problems caused by a fragmented administration and conflicting jurisdiction in the enforcement of the protection of patents and trademarks. Now a single integrated team has been installed within the CNIPA to handle the entire process from registration, examination, protection, to enforcement of both patents and trademarks. It was hoped that rights holders would no longer be required to refer IP disputes to multiple government agencies, which presumably would save time and resources and provide more satisfying outcomes for IP rights holders. However, five years later, in March 2023, the 14th National People's Congress decided that the CNIPA is separated from SAMR and reports directly to the State Council, which further elevates its status in the central government hierarchy. This restructuring aims to "strengthen the IPR system, and comprehensively improve the level of intellectual property creation, use, protection, management, and service"

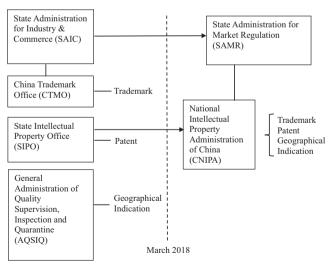


Figure 1. Restructuring of the State Intellectual Property Office of China in 2018

Source: Figure by authors

(Xinhua News Agency, 2023). The various agencies and administrative power that CNIPA acquired in the 2018 restructuring remained unchanged.

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5. Outline for Building an IPR Powerhouse (2021–2035)

In 2021, the Chinese government issued an "Outline for Building an IPR Powerhouse (2021–2035)", which laid out a blueprint to accelerate China's transformation from being mainly an importer of IP to becoming an innovator and IP exporter (China Daily, 2021). The outline provides detailed plans to "build an IP system serving socialist modernization", "build an IP protection system supporting a world-class business environment", "build an IP market operation mechanism encouraging innovation and development", "build a public service system for IP that is convenient for the people", "build a humanist social environment promoting high-quality development of IP" and "deeply participate in global IP governance".

The outline has set the goal that, by 2025, China's added value of patent-intensive and copyright industries will account for 13% and 7.5% of its GDP, its annual total IP royalties (including charges and payment) will reach RMB 350bn, and the number of high-value invention patents will reach 12 per 10,000 habitants. By 2035, China aims to have its IPR competitiveness ranked among the top in the world with a complete IPR system boosting innovation and entrepreneurship. Also, by that time China's cultural consciousness of IPR should be formed, and a multi-level participation in global IPR governance should have taken shape (Xinhua News Agency, 2021).

To implement the Outline, China has adopted various policies to emphasize the pursuit of IP quality over quantity (Li, 2021). For instance, since 2020, China has promoted high value innovation and R&D and abolished all incentives and subsidies for utility model and design patents. The CNIPA has issued a series of regulations, including the expanded definition of irregular patent applications (from six to nine types) and standardization of examination procedures for these applications. With the implementation of the Outline, China aims to further improve and refine its IPR laws and regulations to meet the growing demand, both domestic and international, for IPR protection.

6. Discussion

In the past several years, China has taken critical steps towards strengthening its IPR regime. Overall, IP protection in China today benefits from greater uniformity in adjudication criteria and the resulting improved decision-making. However, critics say that IP violations in China are very much present and that the new measures are inadequate because they do not include any criminal penalties such as jailtime (Clark, 2018). On the one hand, counterfeiters and infringers continue to find loopholes and exploit the system through evermore advanced and sophisticated techniques, such as infiltrating in legitimate business networks or setting-up their own parallel networks (USCBC, 2015). On the other hand, both foreign and domestic companies operating in China remain confronted with a number of IP challenges, from trade secret theft to counterfeiting, local protection and uneven enforcement, and undesired technology transfer requirements (Export.gov, 2019). Although companies consider filing patents an expensive and tiresome process (particularly for small and medium-sized companies without a corporate legal department), protecting their IP by developing an integrated IP strategy remains one of the key priorities. Such a strategy includes understanding China's legal landscape, adopting preventive and pre-emptive measures to protect IPs and confronting IP infringement when it occurs (USCBC, 2015).

Nevertheless, other observers praise China, which did not have any patent and IP law before 1984, for its steady reforms that increasingly protect IP rights domestically and reflect international standards. They say that it will probably take some time before China's

IP regime is on par with that in the USA and other developed nations (Huang and Smith, 2019). Neighbouring countries Japan and South Korea, for example, earlier went through a similar transition. However, China receives more attention today because of its size, possession of sophisticated technologies and innovation and different political system. There have been clear signs of improvement, though. Firstly, Chinese payments for the use of foreign IP, while still running deficit, have grown steadily over the past three decades, from US\$1bn in 1997 to US\$46.8bn in 2021, ranking China fourth in the world for the amount of spending to acquire foreign technology, which is even before Japan, Singapore and Korea (Lardy, 2018a). Secondly, damage payouts for IP infringement are steadily on the rise in China, and they even seem to benefit foreign companies seeking patent litigation better than local companies (Bian, 2018). Thirdly, FTT and IP theft are considered less of a concern by foreign companies. According to the US-China Business Council Member Survey, FTT was ranked "only" number 24 out of 27 top challenges that US companies face in 2019, and in the latest report of 2023, it was no longer mentioned (USCBC, 2019, 2023). Joint venture arrangements, which actually provide foreign companies with easier access to China's vast but difficult-to-reach market, also account only for one third of China's inbound investments compared to two-thirds 20 years ago (Lardy, 2018b). Fourthly, some observers find that China currently even has a better environment for certain IP-intensive sectors because business methods and certain biotechnology and software are easier to patent in China than, for instance, the USA or Europe, and also the attorney and court costs for IP litigation are lower in China (Prud'homme, 2019).

The end of the road towards a stronger and more just Chinese IPR system that is recognized by the international community is not yet in sight, and there are still specific areas for further improvement. For example, the 2015 amendment of the "Law on Promoting the Transformation of Scientific and Technological Achievements" clears the way for increased technology transfer activity in China, but a bottleneck has quickly developed at the technology transfer offices (TTOs) of Chinese universities and public research organizations, which so far have failed to plan strategically for creating and managing IP. Their TTOs seldom actively seek out research projects (or they are unable to identify those projects) that are most likely to produce IP assets with a strong potential for generating commercial value. In general, they lack the resources and know-how to support the transfer of technology from the public to the private sector. Many Chinese TTOs also lack both the relevant experience for and interest in commercialization (Rotenberg, 2016). Consequentially, IP strategy and management decisions in practice are left to researchers and their departments, while the universities and public research institutes themselves operate like "absentee landlords". Scientific researchers therefore find it difficult to determine reliably whether to patent a given innovation, let alone where and how to patent it. Policies that support and, even better, enhance the capabilities of TTOs in Chinese universities and public research organizations must be enacted and implemented.

7. Conclusion

Overall, China's efforts to strengthen its IPR regime not only signal the government's determination to become a responsible stakeholder that follows international norms and practices. More importantly, the actions taken by the Chinese government also stimulate domestic innovation and IP-related activities. After all, it is in China's own best interests to improve its IPR regime by amending its "Patent Law" and other related laws and regulations and by introducing new measures to implement and enforce these laws and regulations more effectively. Increasing international pressure has seemingly accelerated the process, starting to level the playing field and creating a fairer business environment for both foreign and domestic IPR holders in China.

References

AFD China Intellectual Property (2019), "Updates on China's specialized IP courts and tribunals – intellectual property – China", WWW Document, Mondaq.com, available at: www.mondaq.com/china/x/776734/
Trademark/Updates+On+Chinas+Specialized+IP+Courts+And+Tribunals (accessed 16 October 2023).

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- Bian, R. (2018), "Patent litigation in China: challenging conventional wisdom", Berkeley Technol. Law J, Vol. 33, p. 413, doi: 10.15779/Z382J6846W.
- China Daily (2021), "China issue outline to build IP powerhouse in next 15 years", available at: https://govt.chinadaily.com.cn/s/202110/19/WS616e3a54498e6a12c1206d57/china-issues-outline-to-build-ip-powerhouse-in-next-15-years.html (accessed 16 October 2023).
- ChinaNews (2023), "Beijing IP court completed trial of more than 20,000 cases, strengthened data protection", WWW Document, available at: www.chinanews.com.cn/gn/2023/01-11/9932947. shtml (accessed 14 November 2023).
- Clark, G. (2018), "What is intellectual property, and does China steal it?", available at: Bloomberg.com
- Covington (2019), "Chinas draft patent law includes important enhancements to patent-owners rights", WWW Document, available at: www.cov.com/-/media/files/corporate/publications/2019/01/chinas_draft_patent_law_includes_important_enhancements_to_patent_owners_rights.pdf (accessed 16 October 2023).
- Export.gov (2019), "China protecting intellectual property", export.gov [WWW Document], China Ctry, Commer. Guide, available at: www.export.gov/article?id=China-Protecting-Intellectual-Property (accessed 16 October 2023).
- Fang, J. and Walsh, M. (2018), "What is made in China 2025 and why is the world concerned about it?", WWW Document, ABC News, available at: www.abc.net.au/news/2018-04-29/why-is-made-in-china-2025-making-people-angry/9702374 (accessed 16 October 2023).
- Holmes, T.J., McGrattan, E.R. and Prescott, E.C. (2015), "The costs of quid pro quo", Economic Policy Paper No. 15–1, Federal Reserve Bank of Minneapolis.
- Hong, J., Jakob, E. and Silvia, M. (2022), "Evolution of the Chinese intellectual property rights system: IPR law revisions and enforcement", Management and Organization Review, Vol. 18 No. 4, pp. 755-787.
- Huang, C. (2017), "Recent development of the intellectual property rights system in China and challenges ahead", Management and Organization Review, Vol. 13 No. 1, pp. 39-48, doi: 10.1017/ mor.2017.2.
- Huang, Y. and Smith, J. (2019), "China's record on intellectual property rights is getting better and better", Foreign Policy, available at: https://foreignpolicy.com/2019/10/16/china-intellectualproperty-theft-progress/ (accessed 16 October 2023).
- Jackson, T. (2019), "Proposed amendments to China's patent law", WWW Document, www.rouse.com, available at: www.rouse.com/magazine/news/proposed-amendments-to-chinas-patent-law/ (accessed 16 October 2023).
- Lardy, N.R. (2018a), "China: forced technology transfer and theft?", WWW Document, PIIE, available at: www.piie.com/blogs/china-economic-watch/china-forced-technology-transfer-and-theft (accessed 16 October 2023).
- Lardy, N.R. (2018b), "Does China force foreign firms to surrender their sensitive technology?", WWW Document, PIIE, available at: www.piie.com/blogs/china-economic-watch/does-china-force-foreign-firms-surrender-their-sensitive-technology (accessed 16 October 2023).
- Lee, N. and Zhang, L. (2017), "Specialized IP courts in China judicial governance of intellectual property rights", IIC – International Review of Intellectual Property and Competition Law, Vol. 48 No. 8, pp. 900-924, doi: 10.1007/s40319-017-0642-6.
- Lexology (2019), "Sleeker and faster: IP tribunal in Chinese supreme court hears all appealed patent cases", Online, available at: www.lexology.com/library/detail.aspx?g=8f645587-3a23-40e0-b8ac-0a1766031ba6 (accessed 16 October 2023).

- LI, M. (2021), "Big to 'powerful'", available at: https://rouse.com/insights/news/2021/from-big-to-powerful-china-s-ambition-to-become-an-intellectual-property-nation-in-15-years(accessed 16 October 2023).
- Li, X., Xu, C. and Zhang, H. (2017), "China's specialized IP courts", WWW Document, Kluwer Pat. Blog, available at: patentblog.kluweriplaw.com/2017/04/10/chinas-specialized-ip-courts/
- Prud'homme, D. (2019), "3 myths about China's IP regime", Harvard Business Review.
- Prud'homme, D. and von Zedtwitz, M. (2019), "Managing 'forced' technology transfer in emerging markets: the case of China", *Journal of International Management*, Vol. 25 No. 3, p. 100670.
- Robinson, E. (2019), "Opinion: Establishment of IPR court sign of China's continued innovation", WWW Document, CGTN, https://news.cgtn.com/news/3d3d674d79517a4e31457a6333566d54/share_p.html (accessed 16 October 2023).
- Rotenberg, Z. (2016), "Where next for university IP commercialisation in China?", WWW Document, IAM, available at: www.iam-media.com/patents/where-next-university-ip-commercialisation-china (accessed 16 October 2023).
- State Council Information Office (2018), "State Council Information Office News Conference on Supreme People's Court IP Tribunal", Online, available at: www.gov.cn/xinwen/2018-12/29/content_5353373. htm#1 (accessed 16 October 2023).
- Tang, X. (2018), "Beijing IP Court: follow the rule of IP trial, build a professional team", WWW Document, China Intellect. Prop. IP. URL Beijing IP Court: Follow the Rule of IP Trial, Build a Professional Team.
- USCBC (2019), "Member Survey", US-China Business Council.
- USCBC (2023), "Member Survey", US-China Business Council.
- USCBC (2015), "Best practices: Intellectual property protection in China [WWW document]. US-China business council", available at: www.uschina.org/sites/default/files/USCBC%20Best%20Practices% 20for%20Intellectual%20Property%20Protection.pdf (accessed 16 October 2023).
- USTR (2018), "Section 301 report into China's acts, policies, and practices related to technology transfer, intellectual property, and innovation", WWW DocumentOff. U. S. Represent, available at: https://ustr.gov/sites/default/files/Section%20301%20FINAL.PDF (accessed 16 October 2023).
- WIPO (2019), "Inside WIPO", WWW Document, WIPO, available at: www.wipo.int/about-wipo/en/index.html (accessed 16 October 2023).
- Xiao, H. (2018), "An overview of China's specialised IP courts and tribunals BM insights", WWW Document, Blake Morgan, available at: www.blakemorgan.co.uk/an-overview-of-chinas-specialised-ip-courts-and-tribunals/ (accessed 30 October 2019).
- Xinhua News Agency (2021), "Outline for building an IPR powerhouse (2021-2035)", available at: www. gov.cn/zhengce/2021-09/22/content_5638714.htm (accessed 16 October 2023).
- Xinhua News Agency (2023), "Reform plan for the communist party of China and state council institution", available at: www.gov.cn/zhengce/2023-03/16/content_5747072.htm (accessed 16 October 2023).
- ZHu, L. and Wininger, A. (2018), "China announces plan to restructure the state intellectual property office (SIPO)", available at: www.chinaiplegalreport.com/2018/06/china-announces-plan-restructure-state-intellectual-property-office-sipo/ (accessed 16 October 2023).

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