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SECTION 337 OF THE TARIFF ACT OF 1930 AND ITS IMPACTS ON CHINA

By Yiqing Yin

I. INTRODUCTION OF SECTION 337

(A) Overview of Section 337

The International Trade Commission (“ITC”), an independent government agency that oversees the administration of U.S. trade laws, is the primary agency for implementing Section 337 of the Tariff Act of 1930.¹ Its primary responsibility is to investigate and issue decisions on unfair methods of competition in the importation and sale of imported articles.² U.S. or foreign companies, which own U.S. patents, can file complaints to the commission and request an investigation.³ The commission can also conduct Section 337 investigations by itself.⁴

(B) The Scope of Section 337

Generally, Section 337 is a “catch all” statute to declare unlawful the unfair methods of competition and unfair acts in the importation and sale of imported articles.⁵ However, most of the cases applying this statute involve intellectual property law, especially patent law issues. When facing allegations of infringement, the commission looks to principles and precedents from case law to determine whether unlawful activities have occurred.⁶ The commission will also consider whether the charged activity is protected by a 271(e)(1) defense,

¹ William P. Atkins & Justin A. Pan, *An Updated Primer on Procedures and Rules in 337 Investigations at the U.S. International Trade Commission*, 18 UNIV. OF BALT. INTELL. PROP. L. J., 105, 105 (2010).

² *Id.* at 106.

³ *Id.* at 105-07.

⁴ *Id.* at 106, 112.

⁵ *Id.* at 107.

⁶ *Id.*

which exempts “infringing users if they reasonably relate to the development and submission of information under a Federal Rule, which regulates the manufacture, use, or sale of drugs or veterinary biological products.”⁷

In addition to its broad scope, Section 337 is distinctive because of the remedies it provides. The ITC only provides injunctive relief, such as general exclusion orders, limited exclusion orders, and cease and desist orders. It is even more attractive after the *eBay Inc v. MercExchange* decision in 2006. In *eBay*, the Supreme Court initiated a four-factor test to decide whether a patent holder is entitled to injunctive relief: “(1) plaintiff has suffered an irreparable harm (2) legal remedies are inadequate (3) the balance of hardships lies in his favor and (4) the public interest weighs in favor of granting the injunction.”⁸ This decision weakened the patent owner’s ability to obtain permanent injunctive relief, thus provides a great incentive for them to enforce their rights in ITC.⁹

(C) Mechanics of Section 337 proceedings

As noted above, Section 337 investigations are conducted by the ITC. The proceedings share similar characteristics with private litigation, and its procedural rules resemble Federal Rules of Civil Procedure (FRCP).¹⁰ However, based on its international nature focused on trade law, it has several distinctive features.

After a complaint is filed, the Commission does not need to initiate an investigation automatically.¹¹ The Commission has to “determine whether the complaint is properly filed” by examining the complaint “for sufficiency and compliance with the applicable sections of this chapter” and “identify sources of relevant information,” to “assure itself of the availability thereof, and if deemed necessary, prepare subpoenas therefore, and give attention to other preliminary matters.”¹² In other words, the Commission will conduct a preliminary investigation to decide whether there is adequate basis for a formal investigation.¹³ The process usually takes thirty days and the Commission will vote for the result.¹⁴ Because the complaint has to provide a substantial amount of details and supporting materials, the filing process is typically more expensive and time

⁷ *Id.* at 109-10.

⁸ *Id.* at 110.

⁹ *Id.*

¹⁰ *Id.* at 129-30.

¹¹ *Id.* at 112.

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

consuming than a usual district court litigation.¹⁵

Once the Commission approves the investigation, an ITC Administrative Law Judge is assigned to the investigation.¹⁶ The ALJ will set a date estimating the completion of investigation within forty-five days after the beginning of the investigation.¹⁷ During the investigation, the ALJ has a similar role with a district court judge.¹⁸ The judge will issue “Initial Determinations” on matters such as “whether a violation of Section 337 has been established, whether temporary relief should be granted and, whether the investigation should be terminated based on settlement.”¹⁹

The participation of an Investigative Attorney (“IA”) from the Commission’s Office of Unfair Import Investigation (“OUII”) is unique for Section 337 investigation.²⁰ The IA participates in discovery, motions practice, briefings and hearing before the ALJ, and their major roles are to ensure that “a complete record is developed, to provide objective advocacy on issues that arise in the course of the investigation, and to safeguard the public interest in the investigation.”²¹ The IA cannot “engage in ex parte communications with the ALJ, Commissioners or the Office of General Counsel during the investigation process.”²²

The U.S. Court of Appeals for the Federal Circuit hears appeals from decisions by the Commission.²³ The Federal Circuit will interpret claims in ITC appeal de novo and may vacate the Commission’s rulings on infringement, remand the case, or re-determine the case.²⁴

(D) Short proceedings

ITC is required to complete an investigation “at the earliest practicable time after the date of publication of notice of such investigation.”²⁵ As mentioned above, the Commission has to set a target date within forty-five days from the beginning of the investigation.²⁶ If the target date for the cases is less than fifteen months, the initial determination has to be issued at least three months

¹⁵ *Id.* at 113.

¹⁶ *Id.*

¹⁷ *Id.* at 114-15.

¹⁸ *Id.* at 115.

¹⁹ *Id.* at 115-16.

²⁰ *Id.* at 116.

²¹ *Id.* at 116.

²² *Id.*

²³ *Id.*

²⁴ *Id.* at 116-17.

²⁵ 19 U.S.C. § 1337(b)(1) (2006).

²⁶ Atkins, *supra* note 2, at 114-15.

before target date.²⁷ Typical district court cases usually last two to three years, while a Section 337 case needs only 15 to 18 months to resolve.²⁸ There are also some procedural differences between the two types of proceedings.²⁹

Elements	Section 337 ITC Investigation	District Court patent litigation
Time to respond to discovery	Ten days	30 days
Time to respond to motions	Ten days	Varies by assigned hearing date but is typically two to four weeks.
Evidentiary trial or hearing	Held before an ALJ	Held before a judge and a jury (if requested by any party)

Discovery

All standard district court discovery tools, including “interrogatories, document requests, depositions, and request for admissions”, are available to the parties.³⁰ Third party discovery is limited for ITC because first, even though the ITC has nationwide subpoena power, it does not have its own enforcement authority; and second, the third party discovery usually takes a long time, which contradicts with Section 337 investigation’s goal to complete proceedings within a short time.³¹ Moreover, responses to discovery requests are due within ten days of service of a request, and a party only has two or three months to produce all documents, which means the party has to “collect and produce all documents to avoid duplicative depositions, especially in the circumstance that depositions will be taken outside of the U.S.” within a short period of time.³² As a result, parties are more unlikely to “withhold documents” or “play games”

²⁷ *Id.* at 129.

²⁸ H. Mark Lyon & Sarah E. Piepmeier, *ITC Section 337 Investigations: Patent Infringement Claims*, PRACTICAL LAW Co. 2 (2012), <http://www.gibsondunn.com/publications/Documents/Lyon-ITCSection337InvestigationsPatentInfringementClaims.pdf>.

²⁹ *Id.*

³⁰ *Id.* at 4.

³¹ *Id.*

³² *Id.*

because ALJs have little patience.³³

Evidentiary hearing and post-hearing briefing

The evidentiary hearing resembles district court trial except that first, there is no jury; second, Federal Rules of Evidence are applied more liberally.³⁴ As discussed above, timing is always an important issue. Some ALJ's hearings may "run ten hours or more per day and on the weekend" and hearings are "limited to only one or two weeks regardless of the number of patents, products, parties and exhibits".³⁵ For each issue, a large amount of details must be presented in a very short time and parties usually have much time pressure.³⁶

The chart below provides a more detailed timeline for a Section 337 investigation compared with typical district court patent litigation.³⁷

Action	Section 337	District Court litigation
Litigation Commences	Within 30 days after filing the complaint, if the ITC decides to institute an investigation	Upon filing and serving the complaint
Answer due	20 days after institution for a domestic respondent. Ten extra days for a foreign respondent. Very short extensions are common.	21 days after service. Extensions are common.
Initial scheduling conference	Four to six weeks after institution.	About 120 days after service.
Initial exchange of documents	One to two months after institution.	About 120 days after service.
Claim construction hearing	Generally occurs as part of the final evidentiary hearing.	About ten months after service.
Completion of written discovery and fact depositions	Three to four months after institution.	12 to 18 months after service.
Expert reports and	Four to six months	18 to 24 months after

³³ *Id.*

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.* at 8.

depositions	after institution.	service.
Summary judgment	Four to six months after institution.	No later than 30 days after close of all discovery.
Pretrial conference and filings	Seven to eight months after institution.	24 to 36 months after service
Trial	Eight to nine months after institution.	24 to 36 months after service.
Post trial briefing	Immediately after hearing	Immediately after trial
Judge or ALJ Decision	11 to 12 months after institution.	24 to 36 months after service.
Target Date for conclusion of investigation	16 months or less after institution. A longer period requires Commission review.	None.

(E) Remedies

ITC cannot provide monetary damages and the remedies afforded by the Commission are all injunctive in nature.³⁸ These remedies include: (1) general exclusion orders that forbid further importation of offending products irrespective of the source; (2) limited exclusion orders that affect only products manufactured by a specific foreign company or group of foreign companies specifically designated by complainant in complaint; (3) cease and desist orders that enjoin offending activities by U.S. entities; (4) temporary exclusion and desist orders that remain in effect during the pendency of an investigation; and (5) consent orders.³⁹

A general exclusion order is broad enough to block all relevant goods irrespective of their source.⁴⁰ The standard of issuing a general exclusion order is rigorous, so complainants often seek limited exclusion orders, which only affects the product of specific respondents allegedly violating Section 337.⁴¹

³⁸ *FAQs*, ITCTLA, <http://www.itctla.org/resources/faqs#relief-available> (last visited Feb. 24, 2017).

³⁹ Atkins, *supra* note 2, at 129-30.

⁴⁰ *Id.* at 130.

⁴¹ *Id.*

II. POSSIBILITY OF BIAS

As discussed above, the goal of Section 337 is to prohibit importation of certain products that violate U.S. intellectual property law.⁴² However, because of its negative impacts on foreign companies and foreign countries, ITC may have bias in its proceedings with the purpose of protecting certain local industry. Moreover, ITC, as an independent federal agency, is “exposed to political pressure from legislators and control the agency’s budget.”⁴³ Also, because “congresspersons care more about political costs and benefits than economic costs and benefits, ITC is likely to favor domestic firms, which can provide political benefits.”⁴⁴ Robert W. Hahn and Hal J. Singer conducted thorough research about this issue.⁴⁵ They compared district court decisions and ITC outcomes from several aspects to reach the conclusion that ITC has the potential of bias.⁴⁶ They used district court decisions as the benchmark because district courts are not exposed to the same level of political pressures, and the judges have life tenure, thus insulating them from political influence after their appointment.⁴⁷

(A) Whether ITC rules in favor of complainants too frequently

The win rate for patent holders in ITC patent cases is higher than the win rate in district court.⁴⁸ The win rate for patent holders in ITC is 65%, while for district court it was 40% to 45% between 1975 to 1988.⁴⁹ Between 1995 and 2000, the patent holders won 72% of cases.⁵⁰ Hahn and Singer’s also analyze cases from the ITC database.⁵¹ When favorable outcomes for patent holders also include settlements and findings of violations, the patent holders received a favorable outcome in 69% of patent cases brought before the ITC.⁵²

However, the results are not unexpected. As discussed above, because the filing process needs profound details and cost much more than ordinary proceedings, the complainants generally have more confidence that they will win

⁴² *Id.* at 106.

⁴³ Robert W. Hahn & Hai J. Singer, *Assessing Bias in Patent Infringement Cases: A Review of International Trade Commission Decisions*, 21 HARV. J. L. & TECH. 2, 457, 463 (2008).

⁴⁴ *Id.*

⁴⁵ *Id.* at 458.

⁴⁶ *Id.* at 490.

⁴⁷ *Id.* at 464.

⁴⁸ *Id.* at 473.

⁴⁹ *Id.* at 462.

⁵⁰ *Id.* at 473.

⁵¹ *Id.*

⁵² *Id.* at 474.

the case and they usually own stronger patents.⁵³

(B) Frequency with which the ITC is overturned on Appeal

The U.S. Court of Appeals for the Federal Circuit hears appeals of both ITC and district court decisions in patent cases.⁵⁴ In this regard, a higher rate of reversal for ITC decisions compared with district courts may show that court decisions are more accurate than ITC decisions.⁵⁵

Based on Foley & Lardner's Larry Shatzer report, the rate at which lower court decisions are affirmed on appeals is 75% to 80%, while the affirm rate for Section 337 decisions is 66%.⁵⁶ As for cases from ITC database, from 1972 to 2006, ITC determinations have been appealed in sixty-three investigations, in which ITC determination was affirmed 41 times, which confirm the accuracy of Foley's 66% result.⁵⁷ The number above shows that district courts may reach more accurate result than ITC.⁵⁸

(C) Outcomes in parallel district court and ITC proceedings.

Hahn and Singer found 32 cases in which the same or closely related patent issues were involved in both ITC and district courts.⁵⁹ 22 of them have final determination and the result is listed below.⁶⁰

ITC	Parallel cases	Same result	Different result	Survival rate
In favor of complainant	12	7	5	58%
In favor of respondent	11	7	4	64%
Total	23	14	9	61%

From the data above, it shows that ITC reached the same outcome with district court in favor of patent holder in 58% of the cases; while the results are in

⁵³ *Id.* at 477.

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Id.* at 478.

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.* at 480.

⁶⁰ *Id.*

favor of respondent, the rate is 64%.⁶¹ Although the sample is small, it supports the allegation that “ITC may use a different standard when it rules in favor of patent holder than that of district court.”⁶²

(D) ITC’s granting of injunctive relief

When finding a violation of Section 337, ITC can only impose injunctive relief.⁶³ However, the district courts have more options for remedies to choose such as monetary damages. Moreover, after the *eBay* decision, district courts are even less likely to award injunctive relief to patent holders.

There are 467 patent-related Section 337 investigations by ITC as of September 2006.⁶⁴ Violations are found in 109 of them, and ITC issued injunctive relief to 103 of them. However, as for district court, Kesan & Ball conducted a study, which examined the district court patent cases during 1995, 1997, and 2000.⁶⁵ The results of the study show that after a finding of infringement, the court granted injunctive relief to 29% of the cases.⁶⁶ The result is not hard to imagine because the ITC can only issue injunctive reliefs. To discuss whether there is bias by the ITC, the key issue is “whether ITC issue injunctive relief in cases that not qualified for the nonmonetary remedies.”⁶⁷

Hahn and Singer identified two situations where injunctive relief may be inappropriate. The first is “when the product to be enjoined contains multiple components, of which only one is the subject of the patent suit”; and the second is “when the patentee is a non-practicing entity that asserts its patent after the accused infringer has sunk substantial costs into design, development, and commercialization of the accused product.”⁶⁸ In at least one of the two situations, the patent holder might fail the four-part test of *eBay*.⁶⁹ Hahn and Singer conducted their research on patent cases between 1990 and 2000 that result in exclusion order or settlements.⁷⁰ There are 22 cases resulted in exclusion order, 16 of them meet the first condition and none of them meet the second one.⁷¹ There are 54 cases that resulted in a settlement but not an exclusion order, in which 37 of them meet either condition.⁷² As a result, nearly 70% of settled

⁶¹ *Id.* at 481.

⁶² *Id.*

⁶³ *Id.* at 483.

⁶⁴ *Id.*

⁶⁵ *Id.* at 487 n.107.

⁶⁶ *Id.* at 483.

⁶⁷ *Id.* at 462.

⁶⁸ *Id.* at 484.

⁶⁹ *Id.* at 484-85.

⁷⁰ *Id.* at 501.

⁷¹ *Id.* at 485.

⁷² *Id.*

cases “appeared to satisfy conditions under injunctive relief might not be appropriate.”⁷³ From the data above, it is not hard to reach the conclusion that a large percentage of cases that reach settlements or injunctive relief cannot satisfy the four factor eBay test, thus patent holders maybe more likely to file complaint in ITC rather than district court.⁷⁴

Based on the above analysis, the ITC has the possibility of bias in its investigations. Hahn and Singer provide two solutions to resolve this problem. One is eliminating the overlapping jurisdiction of the ITC and district court by restricting the ITC’s jurisdiction over patent cases “for which the accused infringer is not subject to the district court’s jurisdiction or cannot be identified.”⁷⁵ The other is that the ITC should apply the *eBay* test before granting injunctive relief.⁷⁶

III. INTERNATIONAL IMPACT OF SECTION 337 INVESTIGATIONS

Because of the injunctive nature of Section 337 remedies, a determination of violation is detrimental to the alleged infringer company because all relevant goods will be blocked from entering the U.S.⁷⁷ If the infringer is a large company that plays an important role in a foreign country, the exclusionary order will harm the whole industry. Lacking relevant knowledge in Section 337 investigations, Chinese companies are less likely to respond appropriately to Section 337 charges and always suffer unsatisfactory results. Moreover, the cost of Section 337 investigation is high, which makes some mid or small sized companies unlikely to resolve the cases appropriately. China is a significant trade partner of the U.S., thus the status of intellectual property in China, especially its enforcement, is particularly important for the economic relationship between the two countries. The remaining parts will discuss the impact of Section 337 in China.

(A) Introduction of Chinese patent system

Types of patents

The Chinese legal system protects three categories of patents: inventions,

⁷³ *Id.*

⁷⁴ *Id.* at 483.

⁷⁵ *Id.* at 488.

⁷⁶ *Id.* at 489.

⁷⁷ *Id.* at 482.

utility models, and designs.⁷⁸ An invention patent protects “an innovative technical solution for an article or process, or an improvement to an article or process.”⁷⁹ “A utility model patent protects any useful and new technical solution to the shape or structure of an article, or a combination thereof.”⁸⁰ “A design patent protects novel designs that are industrially applicable with respect to its shape, pattern, or color of an article, or a combination thereof.”⁸¹

Preliminary examination

“Once a patent application has been filed, it enters the preliminary examination stage.”⁸² The State Intellectual Property Office (“SIPO”) will conduct a formality check for patent applications.⁸³ Generally, the standard to pass preliminary examination is whether the applications conform to the Patent Law and its implementing regulations with no obvious and substantial flaws, and filing documents are conformed to certain law and regulations.⁸⁴

Utility model and design patents can be granted much faster than invention patents, because once they have passed the formality examination stage, SIPO will issue a grant decision on the application and publishes the grant patent accordingly.⁸⁵ However, invention patents need to pass the next substantive examination stage.⁸⁶

Substantive examination for inventions

Invention patent needs a substantive examination conducted by SIPO within three years of the application date.⁸⁷ The substantive examination will especially examine the novelty, inventive step and practical application.⁸⁸ After the SIPO has made the substantive examination, “if it finds that any of those requirements

⁷⁸ Crystal J. Chen, Eric C. K. Hsieh & Sylvester W. L. Hsieh, *China: Managing the IP Lifecycle*, THE IP MEDIA GROUP 11 (2013), <http://www.iam-media.com/Intelligence/IP-Lifecycle-China/2013/Articles/The-patent-application-process-explained> [hereinafter *China: Managing the IP Lifecycle*].

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.* at 12.

⁸⁷ *Id.*

⁸⁸ Ligu Zhang, *Introduction to Intellectual Property Protection in China*, FINNISH PATENT & REGISTRATION OFFICE 20, https://www.prh.fi/stc/attachments/patentintuulet/patentintuulkomaila/intellectual_property_protection_China_150504.pdf.

has not been fulfilled, it will notify the applicant” and request amendment to the application.⁸⁹ If the applicant fails to do so without legitimate reasons, the application is deemed to be withdrawn.⁹⁰

(4) Court proceedings for Patent litigation.

(a) Introduction to the Court system

The People’s Republic of China has a civil law system, which is different from a common law system in that earlier decisions do not bind other courts.⁹¹ “However, in practice lower courts will follow a decision of Supreme People’s Court (“SPC”) on a comparable issue.”⁹² The Chinese Court system is based on a four-tier model composed of the Primary People’s Courts, the Intermediate People’s Courts, the Higher People’s Courts, and the SPC in Beijing.⁹³ Specialized bodies deal with validity and infringement issues in separate proceedings, which are considered as a bifurcated system.⁹⁴

(b) Infringement proceedings

“Patent infringement claims are required to start “before the relevant designated Intermediate People’s Courts competent to hear patent disputes.”⁹⁵ Compared with approximately 368 Intermediate People’s Courts that are authorized to hear trademark and copyright disputes, only around 76 Intermediate People’s Courts are authorized to hear patent disputes.⁹⁶ “These courts are in the Tier 1 cities, such as Beijing, Shanghai, and Guangzhou, ”as well as in certain other developed Tier 2 cities.⁹⁷

There is an automatic right of appeal to the Higher People’s Courts against a decision of an Intermediate People’s Court and the SPC provides a final avenue of appeal.⁹⁸ “The Higher People’s Courts and SPC both have “specialist divisions or tribunals, of which the intellectual property courts are the third civil

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ Press Release, Troutman Sanders, Why There Is No Case Law In China, (July 13, 2015) (on file with author).

⁹² Richard Bird, *A Guide to Patent Litigation China*, FRESHFIELDS BRUCKHOUS DERINGER, LLP 4 (June 2013), <http://docplayer.net/14335072-A-guide-to-patent-litigation.html>.

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.*

decision.”⁹⁹ “Higher People’s Court’s first-level appeal “allows for the introduction of new facts and evidence and is not limited to only legal issues.”¹⁰⁰ On the other hand, “the Supreme Court appeal “only focuses on matters of law rather than facts.”¹⁰¹ In addition, “an applicant may start proceedings in an Intermediate People’s Court in the capital city of the province” typically where a defendant is located or where an infringing claim arises.”¹⁰²

(c) Validity proceedings

The Patent Re-Examination Board (“PRB”) in Beijing deals with challenges to patent validity.¹⁰³ PRB’s decision “in oppositions or revocation actions can be appealed to the Intermediate Peoples’ Courts in Beijing and then to Beijing Higher People’s Court.”¹⁰⁴ During the patent revocation proceedings, the patentee can apply to amend the claims in disputes.¹⁰⁵ Amendment will be allowed at the discretion of the presiding PRC panel, but it is not permitted during court infringement proceedings.¹⁰⁶

(d) Implications of the bifurcated system

“As a result of the bifurcated system, a patent’s invalidity cannot be used as a defense or counterclaim in infringement proceedings.”¹⁰⁷ “Where infringement and validity proceedings are concurrent, the defendant in the infringement proceedings can apply for a stay, but a stay is unlikely to be granted” since during patent prosecution, substantive examination process has already been conducted.¹⁰⁸ A court will more readily grant stay proceedings for infringement of utility models, because utility models did not pass the substantive examination.¹⁰⁹ Under this circumstance, utility model holder is entitled to obtain a “preliminary search report” from SIPO before starting the infringement proceedings.¹¹⁰ “Submission of a preliminary search report to the infringement court will increase the chances of avoiding a stay of proceedings if the validity

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.* at 5.

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* at 9.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

of the utility model is challenged.”¹¹¹

“Under the Patent Law, a decision to revoke a patent does not have retroactive effect on an infringement decision that has already been rendered.”¹¹² A defendant “is entitled to apply for damages against the former patent holder in this situation if the original proceedings had been brought in bad faith or in obvious violation of the principle of equity.”¹¹³

IV. PROBLEMS OF PATENTS IN CHINA

(A) Overview

In recent years, the Chinese government has begun to pay more attention to promoting innovation.¹¹⁴ The quantity of patents has long been considered as a key indicator for the level of innovation, thus the innovation policy spurred a patent boom in recent years.¹¹⁵ From a global perspective, patent applications in China are growing more quickly than other countries. Compared to 2013, the number of patent filings in 2014 at the SIPO increased by 12.5%,¹¹⁶ while the percentage for European Patent Office (“EPO”) and USPTO is 3.1% and 1.3%, respectively.¹¹⁷ On the other hand, the Japan Patent Office (“JPO”) experiences a decrease in number of patent filing.¹¹⁸

Domestic data also shows a significant increase in patent applications. Based on the SIPO’s “Report on patent application and valid patent status,” as for the first six months of 2015, SIPO received 1,124,000 patent applications with invention patent applications growing by 20.9%, utility model patent by 28.5%, and design patent by 6.4%, compared to the first six months of 2014.¹¹⁹

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ SOCIEDADE PORTUGUESA DE INOVAÇÃO - CONSULTADORIA E FOMENTO DA INOVAÇÃO S.A (SPI) ET AL., EVOLUTION OF CHINA’S INNOVATION PERFORMANCE, EUR. COMMISSION 154 (2015), https://ec.europa.eu/research/innovation-union/pdf/evolution_of_china_innovation_performance.pdf.

¹¹⁵ China: Intellectual Property Infringement, Indigenous Innovation Policies, and Frameworks for Measuring the Effect on the U.S. Economy, Inv. No. 332-514, USITC Pub. 4199 (Nov. 2010) (amended) [hereinafter USITC Pub. 4199].

¹¹⁶ USPTO, ET AL., KEY IP5 STATISTICAL DATA 1 (2014), <http://www.sipo.gov.cn/tjxx/wjndbg/201507/P020150707534432342721.pdf>.

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ 2015 First-Half Invention Patent Applications in China Up 20%, CHINA PATENT AGENT (H.K.) LTD., <http://www.cpahkLtd.com/EN/info.aspx?n=20150728160721350225> (last visited Mar. 16, 2017).

Companies in the U.S. and other foreign countries mainly file patent applications in China on invention patents, with few design patents but almost no utility model patents.¹²⁰ However, domestic inventors file more utility model and design patents.¹²¹ One reason for the applying utility model and design patents more frequently is because they are easier and quicker to obtain.¹²² Some utility model patents are alleged to be “opportunistic and predatory.”¹²³ There are some accusations that a few Chinese firms obtain quickly issued utility model patents based on the invention of others and then suing the true inventor for infringement, and recent law provides no protection against such “predatory patenting.”¹²⁴ Foreign applicants may also face difficulties in obtaining patents in certain industries, which are considered to be of strategic importance to Chinese government, such as renewable energy, biotechnology and pharmaceuticals.¹²⁵

Actually, there are relatively fewer patent-related administrative or civil actions in China involving U.S. patent holders, as compared to the large number of cases involving copyright and trademark.¹²⁶ One possible explanation is that the examination of patent infringement claims is “particularly technical and fact-intensive.”¹²⁷ One problem in patent litigation in China is the lack of effective discovery, which lowers the patent owner’s incentive to bring suit for patent infringement.¹²⁸ Moreover, the damages are low, which causes many patent holders to believe the litigation is not worthwhile.¹²⁹

As mentioned above, the patent enforcement in China is significantly problematic.¹³⁰ “Judicial inexperience, lack of discovery and evidentiary difficulties” raise more problems in complex patent cases compared to other intellectual property lawsuits.¹³¹ First, the lack of discovery makes patents covering production method impossible to enforce in China because defendants need not to disclose how their allegedly infringing products are made.¹³² Foreign firms are more negatively affected because all evidence obtained abroad shall be “notarized in the home country and then forwarded to the Chinese embassy in the home country for legalization,” which impose high cost and significant delay in

¹²⁰ USITC Pub. 4199, *supra* note 116.

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.*

presentation of certain evidence.¹³³ In addition, because patent often involve high-tech industries, “national favoritism” in certain fields may also hurt foreign patent owners.¹³⁴

Local protectionism provides additional obstacles for certain defendants.¹³⁵ Foreign industry representatives claim that their cases were subject to “anti-foreign newspaper and TV coverage, and publicity in China often work against foreign IPR litigants.”¹³⁶

(B) Patent quality vs. patent quantity

Patent quality is not easy to define. Generally, there are two aspects, one is technical and the other is legal.¹³⁷ Patent quality is defined as exceeding the minimum USPTO and legal standard of novelty, utility and non-obviousness; its claims are fully supported by the specification; while its claims are as broad as possible, they ultimately narrow to specific implementation of the technology; its claims read on high-revenue products; and its claims are strategically constructed for robustness and validity challenges.¹³⁸

Quality and value can be indicated by many factors such as number of “words in claims that are not supported in the specification,” “cited patents and non-patent reference which indicate disclosure completeness and robustness to prior art,” “office action which can be a proxy for their resulting patent claim breadth.”¹³⁹ Indicators of value are “patents that have been supported and licensed or litigated successfully,” “past, present and future revenue of potentially infringed patents,” “technology specific limiting language constructed used.” Each factor above may show that a patent is of high quality and more valuable.¹⁴⁰

It cannot be denied that the patent boom reflects the desire to protect domestic innovation and the increase in level of innovation in China. However, for a country like China, in which the patent laws and patent enforcement systems are relatively weak and imperfect, a large quantity of patents does not necessarily mean that China has become one of the most technologically advanced countries in the world.

First, the number of patent applications each year is large but the actual

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ Ian MacLean, *Balancing Patent Quality and Patent Quantity to Maximize ROI*, IP WATCHDOG (May 26, 2015), <http://www.ipwatchdog.com/2015/05/26/balancing-patent-quality-quantity/id=58028/>.

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.*

number of patents granted is small. Even though there are huge number of patent applications in China, only a small percentage of them are finally issued. In 2012, there were 535,000 patent applications, but 144,000, roughly 25% of the applications that year, matured into granted patents.¹⁴¹

Second, innovation patents which involve more technology and examined through most stringent procedure, constitute a relatively small number of all the patents. In 2012, the number of innovation patents constitutes 17.3% of the whole patents.¹⁴² The percentages were 34.7% in 2013 and 39.3% in 2014.¹⁴³

Third, the number of patents owned by domestic patentees is small. In recent years, foreigners own half of the existing patents. Until 2011, China has 697,000 valid innovation patents, but patents owned by domestic patentees only represent 50.4% of the whole.¹⁴⁴ Even among Chinese patentees, many of them are foreign invested enterprises.

Fourth, the distribution of patent applications is unbalanced in China. As for industries, the patents are concentrated in manufacture industry.¹⁴⁵ Chemical industry as well as electronic industry is experiencing “patent boom” in recent years.¹⁴⁶ Moreover, companies based in developed areas such as Beijing, Shanghai, Guangzhou, and Shenzhen initiate most applications. The patent boom phenomenon occurred less frequently in other areas of China.

Fifth, even though the overall number of patents is big, the number of patents owned per person is low. In 2012, the innovation patents owned per 10,000 persons are 3.23, while the number for Japan is 105.3, for South Korea is 96.1, and the U.S. is 35.6.¹⁴⁷

Sixth, the valid life of patent, which is one important factor in determining the value of patents, is short in China. Patents with longer valid time often enjoy higher market value. From the 2011 “Report on valid patent in China” for domestic patents, 54.3% of them have the valid life less than five years, while the number is only 15.2% for foreign countries. Moreover, only 4.8% of domestic patents have valid life more than 10 years, while the number is 24.7% for other countries.¹⁴⁸ In 2011, the average valid life for patent is 5.7 years for patents held by domestic patentees, while the number is 8.7 years for patents held by foreign

¹⁴¹ STATE INTELLECTUAL PROPERTY OFFICE OF THE P.R.C., REPORT ON CHINESE PATENT STATUS (2015), <http://www.sipo.gov.cn/tjxx/ztjtb/> [hereinafter STIPO REPORT ON CHINESE PATENT STATUS].

¹⁴² USPTO, IP5 STATISTICS REPORT 15 (2013), <http://www.fiveipoffices.org/statistics/statisticsreports/2013edition/chapter2.pdf>.

¹⁴³ STIPO REPORT ON CHINESE PATENT STATUS, *supra* note 142.

¹⁴⁴ *See Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

patentees.¹⁴⁹

Seventh, some companies did not file patents for purpose of increasing innovation, but desiring to qualify tax reduction or obtain subsidies as well as other government recognitions. Chinese government provides tax related benefits to patent holders that meet the threshold of owning a specific number of patents. Moreover, several provincial governments offer payments to Chinese companies that are intended to support the preparation and filing of patents in China and overseas.

From the analysis above, China still has a long way to go to become a real innovative country. The patent boom in China does not necessarily means that their patent quality is high.

V. REFORM PROPOSALS

As for Chinese enterprises, Section 337 investigation has a huge negative impact on them. When an infringement is found, all the relevant goods will be blocked from entering the U.S. market. The development of certain industries will be impeded and may even impact the overall economic of the country. Thus, China should make substantial improvements, not only aims at responding to Section 337 investigations effectively, but also improving the whole patent system in China.

(A) Legal reform

(1) Establishment of similar Section 337 provision

Section 337 is a legal statute, which currently acts as an important tool to protect U.S. intellectual property rights. However, there is no similar statute that protects Chinese intellectual property rights in the border in China. Due to the effectiveness of Section 337, Chinese legislators may consider enacting a similar legislature that protects Chinese intellectual property rights. With the development of globalization, more and more foreign products enter the Chinese market.¹⁵⁰ It is necessary to monitor their intellectual property related status and

¹⁴⁹ *Id.*

¹⁵⁰ See Jianyong Yue, *What does globalization mean for China's Economic Development?*, GLOBAL POLICY (May 24, 2012), <http://www.globalpolicyjournal.com/blog/24/05/2012/what-does-globalization-mean-china%E2%80%99s-economic-development> (describing China has become an “extension of the global supply chain” though its promotion of “indigenous innovation.”).

avoid unfair competition and unfair acts, which will be detrimental to China.

A Chinese version of Section 337 may also be an effective tool for negotiation when Chinese enterprises face U.S. investigations. In 1980s, Japan has been the main target of Section 337 investigation.¹⁵¹ Japan established a comprehensive set of strategies to respond to the U.S. One of the measures it takes is that in 2003, Japan modified and implemented its Act of Tariff and enacted its own “Section 337” articles.¹⁵² China can learn from experience of Japan and made modifications to its current law.

(2) Changes to Chinese patent law

Another implicit reason that led Chinese companies to become the main targets for Section 337 investigation is that China has a weak patent system. Improvement of the whole patent system in China is necessary, and changes to patent law are a key issue in the overall improvement of patent system. The current patent law, especially the part related to procedures, prevents foreign litigants from enforcing their rights. As a practical matter, if foreign companies cannot enforce their IP rights in China, the certain foreign governments will be more likely to block Chinese products as a measure of retaliation. Thus, it is important to improve the procedural law of patent to better protect patentee’s right to sue.

(B) Administrative reform

Because responding to Section 337 investigation needs not only comprehensive knowledge in relevant law, but also sufficient funds to face the high cost, governmental subsidies should perform an important function to support enterprises.

Recently, most local Chinese companies, especially mid and small size companies, are unaware of the importance of patents. They lack the understanding that patents are important for marketization of their products, which can generate more profits. Government should play the role of raising awareness of the importance of IP protection, providing trainings to IP staffs and organizing exchange programs, which provide opportunities for domestic IP staff to know more about the IP law in developed countries.

¹⁵¹ See Terry Lynn Clark, *The Future of Patent-Based Investigations Under Section 337 After the Omnibus Trade and Competitiveness Act of 1988*, 38 AM. U. L. REV. 1149, 1178-81 (1989).

¹⁵² See *The Customs Act (Excerpt), concerning Customs Enforcement of Intellectual Property Rights*, JAPAN TARIFF ASS’N 14-20, http://www.kanzei.or.jp/cipic/cipic_files/pdfs/Excerpt%20from%20'the%20Customs%20Act'of%20Japan.pdf.

In 2010, China established “Centers for the protection of enterprises’ IP right abroad”, which is administered by Ministry of Commerce of People’s Republic of China (“MOFCOM”).¹⁵³ However, the center is actually managed by a variety of government agencies. Communications and coordination between the departments are ineffective, thus the center plays a weak role in supporting Chinese enterprises.

After examining the U.S. and their experiences, China can establish agencies such as ITC, which is exclusively responsible for regulating unfair method of competition activities during trade. This agency can be directly led by central government. Staff members who expertise in IP related law and policies should be assigned to the center in order to provide better support. The proposed agency can first, regularly publish both domestic and foreign law and policies regarding IP protections on the website for the companies’ reference. Second, publish updated Section 337 investigations involving Chinese companies on a corresponding website and inform relevant agencies for further support. Third, provide communication methods between central government and local companies. Fourth, establish a warning system, which follow and conduct research on foreign companies’ IP status and forecast possible risks that would be faced by Chinese companies.

Industry associations may also be an important tool for IP protection. When facing Section 337 investigations, industry associations have its unique advantages because even though Section 337 investigations aim at blocking specific firms, the whole industry may also be affected. If the ITC issues general exclusionary orders, the products of the whole industry may be prevented from entering into the U.S. Although the government can play an important role in protecting enterprises, the government sometimes cannot solve every problem within the industry and it may lack the knowledge in specific industries to effectively deal with their problems. In these circumstances, a non-governmental industry association is likely to be a better choice for companies seeking support.

One important feature of Section 337 investigations is that costs are really high. Most small companies in China cannot afford the cost and even though they have confidence of winning, the high cost prevents them from defending themselves. To address this, industry associations could organize member companies and request them to share the cost. When no investigations occur, the industry association can set aside certain fund specially for supporting Section 337 investigations. As for patents, the innovation of technology is of vital im-

¹⁵³ *MOFCOM Holds Special Press Conference on “Combating IPR Infringement and Counterfeits”*, ENGLISH.MOFCOM.GOV (Dec. 16, 2013), <http://english.mofcom.gov.cn/article/newsrelease/press/201312/20131200428920.shtml>.

portance; therefore, industry associations can help member companies to actively involve in setting international technology standards.

(C) Technique related reform

(1) Establishment of patent database

As the subjects of Section 337 investigations, companies should be more cautious when applying their own patents or manufacturing certain products that contain patents. Patent databases are important for companies to search and estimate the possibility of infringement on foreign patents. For example, before the exportation, companies can use database to search and analyze whether their products have the possibility of patent infringement. If potential infringement exists, the company may change the technology or ask for permission from the patentees. On the other hand, if the companies are alleged to be violating a U.S. patent, it can use the figures in the database to support a finding of non-infringement or that the patent of the opposing party is invalid.

Industry associations can also contribute to the establishment of database. In addition to setting database containing the patent related data for the whole industry, the industry association can also establish Section 337 investigation cases database, which shows the background of the investigation and each party's allegations and responses.

VII. CONCLUSION

With the rapid development of globalization, more and more products enter the U.S. market and Section 337 investigations works as an important method for IP protection. However, potential bias occurs during the investigation proceedings for protectionism purpose. Companies in China have long been targets of the investigation. The recent patent boom in China shows its strong desire for innovation, but it still has a long way to go to become a real technology advanced country. Facing Section 337 investigations, China can react from legal, administrative, and technological perspectives to improve its patent system and better react to alleged violations. The improvements in Section 337 statute itself and other countries' patent systems will improve the economic development of the U.S. and its trade partners.