

International Patent Systems: A Comparative Analysis

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ABSTRACT

The Patents Act, 1970 was amended in 1999, 2002 and finally in 2005 to provide for product patents in chemicals, pharmaceuticals, food, and agro-chemicals and bring in other necessary amendments in line with Trade Related Aspects of Intellectual Property Rights (TRIPS). Patents Rules have been commensurately amended, initially as Patent Rules, 2003, which were further amended in 2005, 2006, 2012, 2013, 2014, 2016, 2017 and 2019. India became signatory to Patent Cooperation Treaty (PCT) in 1998. Consequently, patent filing in India, including National Phase applications under PCT, has increased exponentially. Indian Patent Office is a major PCT filing country and functions as ISA/IPEA under PCT.

The international patent landscape is primarily governed by two significant treaties: the Paris Convention for the Protection of Industrial Property and the Patent Cooperation Treaty (PCT). The Paris Convention, established in 1883, introduced the concept of 'priority rights,' allowing an inventor to file a subsequent application in another member country within a specified timeframe, claiming the filing date of the original application. This laid the foundation for the harmonization of patent laws across nations.

The PCT, enacted in 1970, simplifies the patent filing process on a global scale. It provides a centralized filing system, allowing inventors to seek patent protection simultaneously in multiple countries by filing a single international application. The PCT process includes an international search and preliminary examination, providing valuable information to applicants before entering the national phase.

The International Patent System stands as a cornerstone of the global intellectual property framework, playing a pivotal role in fostering innovation, economic development, and the dissemination of knowledge across borders. This abstract provides a comprehensive overview of the key components, challenges, and significance of the international patent landscape.

KEYWORDS: PCT, TRIPS, WIPO, Indian Patent Act, 2003, Accession, Patents

INTRODUCTION

The International Patent System is a set of regulations and agreements designed to facilitate the protection of inventions across borders. Its roots can be traced back to the Paris Convention for the Protection of Industrial Property in 1883, a pioneering effort to establish a cohesive international framework for intellectual property rights. Today, the system is primarily governed by two key treaties: the Paris Convention and the Patent Cooperation Treaty (PCT), both administered by the World Intellectual Property Organization (WIPO).

The International Patent System is a complex and crucial framework that governs the protection of intellectual property on a global scale. In an era dominated by innovation and technological

advancement, the significance of safeguarding intellectual property rights has never been more apparent. These abstract aims to provide a comprehensive overview of the International Patent System, delving into its origins, functions, challenges, and the pivotal role it plays in fostering innovation and economic development.

In this research paper, following challenges are analyzed:

1. Divergence in Patent Standards – Broad definition

Different countries have varying patent standards, leading to inconsistencies in the criteria for patentability. This creates challenges for inventors seeking global protection, as they must navigate different legal requirements and interpretations.

2. Enforcement Disparities

Enforcement of patent rights varies significantly across jurisdictions. Some countries may have robust mechanisms for enforcing patents, while others may lack the infrastructure or legal framework to do so effectively. This inconsistency can undermine the value of patents in certain regions.

3. Patent Quality and Overlapping Claims

The issue of patent quality is a persistent challenge. In some cases, patents with overly broad or vague claims are granted, leading to potential infringement disputes, and hindering legitimate competition. Overlapping claims between different patents can create legal uncertainties and increase the risk of litigation.

4. Patent Trolls and Strategic Litigation

Patent trolls, entities that acquire patents with the primary goal of initiating litigation rather than contributing to innovation, pose a significant threat. Such entities can stifle legitimate competition and innovation by engaging in strategic and often frivolous lawsuits.

5. Barriers for Small Entities

The cost and complexity of the patent application process can be prohibitive for small and medium-sized enterprises (SMEs) and individual inventors. This creates a barrier to entry and may limit the ability of smaller entities to protect their innovations on a global scale.

6. Access to Medicines and Public Health Concerns

Balancing the need for innovation with public health concerns, particularly in the pharmaceutical industry, is a critical challenge. Ensuring access to essential medicines while protecting the rights of patent holders requires careful consideration and international cooperation.

Addressing these challenges requires ongoing collaboration among nations, policymakers, and stakeholders. Efforts to harmonize patent standards, enhance patent quality, reduce filing complexities, and adapt to the changing technological landscape are crucial for maintaining the integrity and effectiveness of the International Patent System.

LITERATURE REVIEW

Review of research paper by **Bronwyn H. Hall** “The Impact of International Patent System”.
Max Planck Institute for Innovation & Competition Research Paper No. 18-03

This article analyzes the impact of accession to the regional patent system established by the European Patent Convention (EPC) on 14 countries that acceded between 2000 and 2008. We look at changes in patenting behavior by domestic and foreign applicants at the national patent offices and the European Patent Office (EPO). Our findings suggest a strong change in patent filing behavior among

foreigners seeking patent protection in the accession states, substituting EPO patents for domestic patents immediately. However, there is little evidence that accession increased FDI by patenting foreign companies in accession countries. Moreover, there is no discernible reaction among domestic entities in terms of domestic filings, although we do find some evidence that applicants in accession states increased their propensity to file patents with the EPO post-accession. Inventor-level information suggests that the underlying inventions originate in the accession states.

The fragmented nature of patent protection also raises several other issues. First, there are doubtless a great deal of wasted resources when patent applications on the same invention need to be examined in several different offices, to say nothing of issues related to enforcement in different jurisdictions.

To some extent this problem is mitigated by the PCT system which allows a single search for prior art by one of the designated international search offices.⁷ However, for developing countries the creation of a patent office and the acquisition of the expertise required to grant patents may use resources that would be better spent elsewhere. For this reason, regional offices may be a desirable and cost-effective solution for smaller and less developed countries. A second problem created by the existence of many national patents.

There is extensive literature on the issue, see for example Nordhaus (1969), Diwan and Rodrik (1991), Helpman (1993), Gould and Gruben (1996), and Lerner (2002). -

There is a long-standing debate on the impact of intellectual property (IP) rights on innovation and economic development. One of the most controversial questions revolves around the strength of patent protection in lower- and middle-income economies. Underlying this debate is the fact that countries can individually determine important aspects of their IP rights systems. Although there are international agreements such as the Agreement on Trade- Related Aspects of Intellectual Property Rights (TRIPS) which harmonize and regulate important aspects of national IP systems, there is no global patent system, and only a few regional systems.

This often-overlooked fact means that patents are national rights and thus valid only in the jurisdiction that grants them. This in turn implies that regardless of the strength of statutory patent protection, the same invention may be patent protected in one jurisdiction but not in another. Hence, apart from the availability and strength of patent protection, the need to file patents on the same invention in each country for which patent protection is sought is likely to affect companies' decisions about where to obtain patent protection and therefore their business decisions including R&D, foreign direct investment (FDI), exporting, etc. It is also likely to affect business decisions of companies other than the patentees, especially those in lower- and middle-income economies.

There is the Patent Cooperation Treaty (PCT), which was signed in 1970 and is administered by the World Intellectual Property Organization (WIPO). The PCT offers only a simplified patent filing system for an applicant to obtain patent protection in several countries worldwide through a single application.

However, the decision of whether the patent will be granted remains with the national or regional patent authorities. Hence, despite a single patent filing, there is still the need to prosecute the patent filing separately in each jurisdiction to obtain a patent grant. Enforcement and validity of PCT patents are also subject to national law and procedures.

In this paper, we examine empirically the response of firms and inventors to the addition of a regional patent system to their own national system, to understand how it affects both their innovative activity and their patenting strategies. We use data for a set of 14 countries that joined the European Patent

Convention (EPC) during the 2000-2010 decade to explore the impact of the accession on patenting behavior by firms in those countries.

The EPC is a regional patent system that provides uniform patent protection in all member and extension states and that co-exists with national patent systems. It offers a single route to obtaining a patent grant in all member and extension states. Accession to the EPC, therefore, offers an interesting setting to study the effect of the introduction of a regional patent system.

The period that we study is particularly interesting because several relatively less developed transition and emerging market economies joined the EPC regional patent system which had been mainly composed of more advanced EU countries.⁹ Joining the EPC potentially has two main effects. First, it becomes cheaper for residents to simultaneously obtain patent protection both domestically and in the other countries signatory to the EPC.

Second, it also becomes cheaper for foreigners to obtain patent protection in the country as they can obtain an EPC patent in the country instead of filing a separate patent application with the national office of the country. This implies that on the one hand, it becomes cheaper for domestic firms to obtain patent protection at home and abroad simultaneously, and on the other, it becomes cheaper for foreign firms to obtain patent protection in the country provided they obtain patent protection in another country signatory to the EPC.¹⁰

Using both aggregate and patent level data, we investigate how EPO and national office patenting by residents and non-residents of accession countries change following accession to the EPC. We also carry out some analysis that looks at the effect of EPC accession on FDI in accession countries.

My analysis contributes to the literature by providing evidence on the effect of the national character of patents as well as the introduction of a regional patent system. Because most accession states were lower- and middle-middle income economies, our results also provide some insight into the impact of such international patent systems on developing countries in the rest of the world.

RESEARCH OBJECTIVES

Comparative analysis of 6 key challenges of International Patent System:

1. Divergence in Patent Standards – Broad definition

Different countries have varying patent standards, leading to inconsistencies in the criteria for patentability. This creates challenges for inventors seeking global protection, as they must navigate different legal requirements and interpretations.

2. Enforcement Disparities

Enforcement of patent rights varies significantly across jurisdictions. Some countries may have robust mechanisms for enforcing patents, while others may lack the infrastructure or legal framework to do so effectively. This inconsistency can undermine the value of patents in certain regions.

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RESEARCH METHODOLOGY

- 1. Studying relevant literature:** This step involves a thorough examination of existing literature, research papers, articles, and publications related to Impact of International Patent system and its various conventions outcome. It aims to understand the current state of knowledge, legal procedures, and emerging situations in the field.
- 2. Analyzing Data:** Analyzed the impact of accession to the EPC for the 14 contracting states that acceded to the EPC between 2002 and 2008.

ANALYSIS & DISCUSSIONS

There is a long-standing debate on the impact of intellectual property (IP) rights on innovation and economic development.³

One of the most controversial questions revolves around the strength of patent protection in lower- and middle-income economies. Underlying this debate is the fact that countries can individually determine important aspects of their IP rights systems. Although there are international agreements such as the Agreement on Trade- Related Aspects of Intellectual Property Rights (TRIPS) which harmonize and regulate important aspects of national IP systems,⁴ there is no global patent system,⁵ and only a few regional systems.

This often-overlooked fact means that patents are national rights and thus valid only in the jurisdiction that grants them. This in turn implies that regardless of the strength of statutory patent protection, the same invention may be patent protected in one jurisdiction but not in another.

Hence, apart from the availability and strength of patent protection, the need to file patents on the same invention in each country for which patent protection is sought is likely to affect companies' decisions about where to obtain patent protection and therefore their business decisions including R&D, foreign direct investment (FDI), exporting, etc. It is also likely to affect business decisions of companies other than the patentees, especially those in lower- and middle-income economies.

The fragmented nature of patent protection also raises several other issues. First, there are doubtless a great deal of wasted resources when patent applications on the same invention need to be examined in several different offices, to say nothing of issues related to enforcement in different jurisdictions. To some extent this problem is mitigated by the PCT system which allows a single search for prior art by one of the designated international search offices.

However, for developing countries the creation of a patent office and the acquisition of the expertise required to grant patents may use resources that would be better spent elsewhere. For this reason, regional offices may be a desirable and cost-effective solution for smaller and less developed countries. A

second problem created by the existence of many national patents.

RESEARCH FINDINGS

As of March 2016, there are 38 EPC contracting states. Before acceding to the EPC, countries can sign an extension agreement with the EPO which extends the possibility of patent protection for patents granted by the EPO to countries that are not members of the EPC. Extension states usually accede eventually to the EPC, although most member states have acceded to the EPC without prior extension agreements, as is shown in Table 2 later in Section 4.

The key feature of the EPC is the harmonization and standardization of the granting procedure of patents in all member and extension states. Patent applications are filed with a single office, the EPO, which examines and grants the patent. Nevertheless, patentees are required to extend (in the case of extension states) or validate (in the case of EPC member states) the granted patent in each national office of each country in which the patent should be enforceable. Extension/validation in a national office requires prior designation during the grant process. Once granted, it requires the payment of extension/validation fees as well as translation costs,

Although exceptions apply for contracting states to the London Agreement. The national character of granted patents implies that they must be kept in force in each individual country by paying renewal fees. Hence, turning an EPO patent into nationally enforceable rights requires:

- a. all the costs associated with the grant of an EPO patent (application fee, European search fee, examination fee, grant fee, and EPO renewal fees beginning the 3rd year from the date of filing until the patent is granted by the EPO);
- b. the specific costs incurred for obtaining national patent rights (designation fee, translation fees, and validation fees).

These account for the main difference between obtaining a patent right in each member/extension state of the EPC through the EPO or directly with the national office. An additional difference arises from potential cost differences between employing the services of a European patent attorney and a national/local patent attorney.

To obtain an EPO patent, fees payable to the EPO beginning the third year counting from the application date until grant of a European patent that designates two EPC countries amount to about EUR 4,360. To file with the EPO, domestic applicants in our set of accession states also need to translate their patent specification into one of the three official languages of the EPO, which is likely to be costly.

1. **Koninklijke Philips v. Rajesh Bansal and Koninklijke Philips v. Bhagirathi Electronics.**

Judgement denying in both cases, the defendants were importers and assemblers of DVD players in India. The plaintiff, Philips, filed patent infringement cases against both, claiming that they had imported DVD player components that were manufactured using its patented technology and had then assembled them in India without obtaining licenses. The patent in question covers the 'Channel (De)coding technology' responsible for video playback function in the DVD player. The implementers argued that they had not infringed Philips' patent as they acquired the components from authorized licensees of Philips.

The Delhi High Court ruled in favor of Philips. It held that the plaintiff's patent was essential for the DVD standard, accepting the company's US and European patents' essentiality certificates. As for the infringement, the court held that the defendants failed to prove that the components were imported from

Philips' authorized licenses. Furthermore, the court held that the defendants' failure to obtain a license from Philips to use its SEP *prima facie* led to the finding of infringement, as the defendants' products complied with the standard. Regarding the applicable license fee, the defendants were unable to prove that the fee charged by Philips was not on FRAND terms. Therefore, the court fixed the royalty charges as proposed by Philips.

This decision, though path-breaking, was a relatively straightforward one, focusing entirely on domestic issues. The situation is far more complex in the recent *InterDigital v. Xiaomi* case.

2. *InterDigital v Xiaomi (2020-21)*

In July 2020, the US tech company InterDigital filed suit against the Chinese consumer electronics maker Xiaomi, claiming infringement of its 3G and 4G patents, as the latter had used its technology without authorization. InterDigital sought a remedy in the form of either a permanent injunction or royalties. InterDigital had previously issued licenses of its SEPs to third parties and invited Xiaomi to do the same. However, the rate proposed by Xiaomi was rejected, as InterDigital believed that it did not comply with FRAND terms. For determining a FRAND royalty, Xiaomi claimed it needed information regarding the identity of the third-party licensees, the exact area and scope of the license granted to such licensees, and other information e.g. from comparable license agreements.

InterDigital did not grant Xiaomi access to comparable license agreements to preserve confidential commercial information, which it argued could not be disclosed to a competitor such as Xiaomi. Therefore, InterDigital proposed to form a confidential club where information could be shared at two tiers: an 'outer tier' where the information would be accessible to the advocates for both sides, experts appointed by them, as well as representatives of both parties; and an 'inner tier' which would receive documents accessible to all of the above, except the parties' representatives. This proposed solution implied that advocates and technical experts would end up negotiating the royalty rates without consulting with Xiaomi's representatives.

Keeping in mind the interests of both the parties, the court rejected the two-tier system proposed by InterDigital on two grounds – (i) fair play, where it is essential for each party to be aware of the case of the other party that it is supposed to counter; and (ii) the nature of lawyer-client relationship, which requires the lawyer to act in accordance to the client's instructions and not "substitute their judgement for that of the client".

On 3 June 2020, Xiaomi filed a complaint against InterDigital in the Wuhan Intermediate People's Court for determining royalty rates that comply with the FRAND terms payable for InterDigital's 3G and 4G SEPs. In retaliation, InterDigital filed a suit against Xiaomi in the Delhi High Court in part to garner leverage regarding the situation before the Wuhan Court. On 23 September 2020, the Wuhan Court issued an anti-suit injunction against InterDigital from pursuing matters in the Delhi High Court. In a 'tit-for-tat' response, on 29 September 2020, InterDigital filed an anti-anti-suit injunction application at the Delhi High Court.

On 3 May 2021, the Delhi High Court issued the first Indian anti-anti-suit injunction. This judgment confirms its 9 October 2020 order whereby it granted an *ad interim* anti-anti-suit injunction against Xiaomi, directing it not to pursue or enforce the injunction it had secured from the Wuhan Court. The Delhi High Court held that a court of one state (i.e., the Wuhan Court) cannot bar the parties from pursuing the dispute at a forum in another state (i.e., the Delhi court), when this foreign forum has the competent jurisdiction to hear the case. The court also clarified that exceptions could apply only when the

foreign forum is ‘vexatious or oppressive’ to the state’s court. Moreover, the court ordered Xiaomi to remunerate InterDigital for the penalties imposed by the Wuhan court.

CONCLUSION

This decision is a bitter pill to swallow for Xiaomi. Generally, an anti-suit injunction is an urgent remedy ordered by judges in one jurisdiction that prevents a party to a dispute from starting a parallel action in another jurisdiction. While controversial, such injunctions have the merit of reducing both the costs associated with defending cases in court, and the risk that conflicting judicial decisions will occur in parallel jurisdictions.

The remedy is particularly useful to SEP implementers when patent holders disrespect their commitment to license their patents on a FRAND basis. For example, a judge who is in the process of assessing whether the SEP owner complies with FRAND terms, may at the same time grant an anti-suit injunction to stop the patentee taking patent infringement actions in other jurisdictions until the FRAND litigation has been concluded (see Jorge Contreras – Michael Eixenberger, ‘The Anti-Suit Injunction – A Transitional Remedy for Multi- Jurisdictional SEP Litigation’, in Jorge Contreras (ed) ‘The Cambridge Handbook of Technical Standardization Law – Antitrust, Competition and Patent Law’, Cambridge University Press 2017).

At present, the High Court of Delhi seems to weigh the rights of SEP owners more highly than other concerns. As is well-known, in this area of patent law, a careful balance is often needed between two different (and often) clashing interests, i.e., those of SEP owners who make investments in developing new useful technologies and those of implementers who need access to such technologies.

An ITC market which is as competitive as possible is more capable of guaranteeing cheaper products for consumers. Now that the path has been broken for SEP cases to arise in India, it is likely that such concerns will be raised more and more. Time will tell whether future Indian SEP disputes will change this recent case law trajectory and reach a more balanced equilibrium between the interests of SEP owners and those of implementers.

RECOMMENDATIONS

Upon analyzing the available literature and relevant case laws, the recommendation is as under:

The Justice N Rajagopala Ayyangar Committee Report

In 1957, the Government of India appointed a committee led by a distinguished retired Justice of the Supreme Court of India, Justice N Rajagopala Ayyangar, to examine the revision of the Patents Act and advise the Government in this respect.

The Justice N Rajagopala Ayyangar Committee report stated, in no uncertain terms, that the patent system was a quid pro quo system: the monopoly that a patentee obtains is only in exchange for the disclosure of the invention to the public, free to be used after the monopoly period is over. The quid pro quo, according to the report, also included the obligation on the part of the patentee to work the invention in India.

The report also underscored, rather emphatically, that the patent system had failed in India because it had failed to spark the kind of innovation that it sought to encourage – underdeveloped countries could not yield the same result from the patent system as their more developed counterparts could. The patent system was recommended to be continued only because there was no better alternative to achieve better results – in their form at the time, patents were the lesser evil. The report was unequivocal in its apprehension that

foreign patentees could misuse the patent system to capture large markets in India at the cost of domestic innovation while simultaneously not investing in the manufacture of the patented product.

The committee's recommendations were a catalyst for wide changes in Indian patent law, eventually leading to the Patents Act of 1970, replacing the Indian Patents and Designs Act, 1911. The Patents Bill was introduced in 1965 and amended in 1967. The Patents Act of 1970, and Patents Rules, 1972 came into force on April 20, 1972.

The salient features of the Act (as enacted) were:

- the reduction of the term of patent from 16 to 14 years.
- a maximum of seven years for the term of a patent for the processes for drugs and foods.
- no product patents available for food, drugs, and medicines, including the products produced or obtained by chemical processes.
- provisions prescribing nonworking as a ground for the grant of compulsory licenses, licenses of right and the revocation of patents.
- the empowerment of government to use inventions for its own use.
- provisions for the use of inventions for government purposes, research, or instruction to pupils.
- the endorsement of a "license of right" to patents related to drugs, foods, and products of chemical reactions.
- the codification of certain inventions as non-patentable.
- the expansion of the grounds for opposition to the grant of a patent.
- exemption from anticipation in respect of certain categories of prior publication, prior communication, and prior use.
- provisions for the secrecy of inventions relevant for defense purposes.
- the mandatory furnishing of information regarding foreign applications.
- the prevention of abuse of patent rights by voiding restrictive conditions in license agreements and contracts.
- a provision for appeal to the High Court from decisions of the Controller General of Patents, Designs and Trademarks ("the Controller"); and
- the separation of industrial designs from the law of patents.

However, many provisions changed after the TRIPS Agreement, as discussed in Sections 6.1.4.4.3 to 6.1.4.4.5.

SCOPE OF FUTURE RESEARCH

Keeping in mind the serious negative effects and consequences associated with infringement proceedings, the stated policy of the law is that no person should unnecessarily be subjected to baseless threats of infringement. Under the Patents Act, 1970, groundless threats of infringement are considered civil wrongs.

A "groundless threat" under the Act is an unjustified or wrongful threat by which any person, whether having an interest in the patent or not,²²⁷ threatens another with legal proceedings without a reasonable basis. It is important to note that the mere notification of the existence of a patent does not constitute a threat of proceedings within the meaning of the relevant section. In *LG Electronics India Pvt. Ltd v. Bharat Bhogilal Patel*,²²⁸ the Delhi High Court clarified that,

“if any proprietor or the right holder issues a notice to the custom officials and the custom officials act upon the same by restricting the imports of consignments of any party without the determination (prima facie or otherwise) of the factum of infringement of patent by the appropriate designated authority, then such notice by the right holder to the customs and the actions thereof by the customs either in the form of notice to that party or otherwise calling upon the party to explain its stand are all unnecessary illegal threats to that party.”

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