

Legal Analysis of Patent Registration through the Patent Cooperation

Treaty in Indonesia: Benefit or Loss?

Caitlin Audrey Edelyne¹, Aurora Jillena Meliala²

*Faculty of Law, Universitas Pembangunan Nasional Veteran Jakarta
Jl. RS Fatmawati No. 1, Cilandak, Jakarta, Indonesia
2110611324@mahasiswa.upnvj.ac.id*

*Faculty of Law, Universitas Pembangunan Nasional Veteran Jakarta
Jl. RS Fatmawati No. 1, Cilandak, Jakarta, Indonesia
Aurora@upnvj.ac.id*

Submitted : 15/02/2025 Reviewed: 28/03/2025 Accepted: 31/05/2025

Abstract: *This study aims to examine and analyze the legal protection of patents in Indonesia within the framework of the Patent Cooperation Treaty (PCT) system as an instrument to facilitate technology transfer, as well as to identify the key obstacles faced by inventors in utilizing it. The research employs a normative juridical method with statutory and conceptual approaches. The findings reveal that the regulatory framework governing the PCT system in relation to technology transfer has been accommodated in Article 20 of Law No. 13 of 2016 on Patents, which has since been amended by Government Regulation in Lieu of Law (Perppu) No. 2 of 2022. Nonetheless, the implementation of the PCT system faces several significant challenges, including regulatory disharmony due to the amendment of Article 20 that has led to liberal interpretations, the procedural complexity of PCT applications that demands substantial legal and technical knowledge, and the generally low level of literacy and understanding among Indonesian inventors regarding patent strategies linked to commercialization and technology transfer. Therefore, strategic measures are required to strike a balance between the protection of exclusive patent rights and the public interest in accessing and adapting technologies. Through an integrative approach oriented toward national capacity building, Indonesia has the potential to transition from a passive technology user to an active player in the global innovation ecosystem by optimizing the PCT system.*

Keywords: *Patent; PCT; Technology Transfer.*

DOI: *10.32801/lamlaj.v10i1.225*

INTRODUCTION

In the era of globalization and the industrial revolution 4.0, science and technology have impacted various fields of human life, including changes in law and

economics. The condition of legal and economic life of a country is very important not only to predict and direct its economic growth but also to maintain the welfare of its

people.¹ Similarly, the state of legal awareness in society can be reviewed from three aspects: legal violations, law enforcement, and the law itself.² Therefore, legal changes and legal reform agendas are needed to face this wave of globalization, which includes institutional reform, instrumental reform (legislative reform), and cultural reform.³

As times develop, various new inventions will inevitably emerge to meet human needs, especially as Indonesia is one of the countries experiencing the impact of technological development, whether in trade, information, or the economy.⁴ This situation encourages technology companies to compete in creating the latest and most sophisticated technologies that benefit human life, develop the national economy, develop the national economy, create innovative industries that are useful for improving the culture and society of the nation,⁵ and encourage national discoveries in the field of technology to realize technological strengthening.

Recognizing the importance of technological inventions achieved through significant effort, thought, time, and financial investment it is essential to provide legal protection through patent. This protection prevents imitation by other parties which would harm inventors, and ensures inventors

receive recognition in the form of exclusive rights over their inventions.

In Indonesia, Patents are regulated under Law Number 13 of 2016 concerning Patents.⁶ A patent is defined as an exclusive right granted by the state to an inventor for their invention in the field of technology, for a certain period, to independently implement the invention or give consent to others to do so. The term "technology" here covers all types of technology, from the very simple to the most advanced, as long as they meet patentability requirements: novelty, inventive step, and industrial applicability. The exclusive right in this context means that the inventor has the right to implement or prohibit others, without their consent, from making, exporting, selling, or distributing the invention.

Historically, patents have been a crucial type of intellectual property in the field of technology, playing a strategic role in Indonesia's development, particularly in stimulating economic growth. This is because:⁷

- 1) Patent information facilitates technology transfer and investment;
- 2) Patents encourage research and development at universities and research centers;
- 3) Patents serve as catalysts for new technology and business; Businesses

¹ Jonathan Andre Woods, Aurora Jillena Meliala. *Proceedings of the International Conference on Law Studies (INCOLS 2022)*. *Proceedings of the International Conference on Law Studies (INCOLS 2022)*.

² Wicipto Setiadi, Satino, dan Surahmad. "Sosialisasi Hukum Perlindungan Anak Dilingkungan Karang Taruna RT. 07 RW. 14 Kelurahan Bahagia Kecamatan Babelan Kabupaten Bekasi, Prosiding Seminar Hasil Pengabdian Kepada Masyarakat" Vol. 1, no. No. 1 (2018).

³ Manan, Abdul. "Aspek-Aspek Pengubah Hukum." hlm. 59. 1 ed. Jakarta, Kencana Prenada Media Group, 2009.

⁴ Nasir, R. "Paten dalam Proses Produksi: Tinjauan Hak yang Melekat pada Inventor." *Jurnal Hukum Positum* 1, no. (1) (n.d.): 141–149.

⁵ Tarigan, Nathanael Eljuhar. *Urgensi Pengakuan Konsep Trade Dress Dalam Hukum Positif Indonesia: Studi Komparatif Antara Indonesia dengan Amerika*. Skripsi Universitas Indonesia, 2023.

⁶ Dr. Muhammad Citra Ramadhan, S.H., M.H. *Paten Jilid II*. Medan: Merdeka Kreasi Group, 2022.

⁷ Fanny, Rindia. "Reformasi Peraturan Paten di Indonesia." *SNH Seminar Nasional Hukum Universitas Negeri Semarang* 2, No. (1) (2016): hlm. 3.

collect and use patents for licensing, joint ventures, and other transactions that generate profit.

These aspects are vital, but access, adoption, and technology transfer remain challenges for Indonesia. Therefore, Indonesia has issued various regulations and ratified international agreements to promote technology transfer, such as revising the Patent Law, the Paris Convention for the Protection of Industrial Property, and ratifying the Patent Cooperation Treaty (PCT) through Presidential Decree No. 16 of 1997. This treaty provides a mechanism for inventors to obtain patent protection in multiple countries with a single international application. The ratification of these international agreements marks Indonesia's commitment to integrating its intellectual property system globally.

Previous research has examined whether the PCT system benefits developing countries by enabling further technological development through the simplification of the application process, or whether PCT membership disproportionately increases the number of patent applications in those countries. These studies concluded that there is a significant gap between industrialized countries, which are the main actors in the PCT system, and other member countries, which merely receive more patent applications than before joining the PCT. Some authors also view the PCT as a useful system for reducing costs and improving patenting strategies in third countries.⁸

After the PCT system becomes effective in a country, various studies have attempted to

estimate its impact on developing countries. Although these studies reach different conclusions, they show that the impact depends on various factors in each country, such as R&D expense, GDP, GDP per capita, and the participation of foreign companies in the national economy. It was also found that the impact would not be immediately visible, not only due to the transition period after joining but also because of uncertainty regarding how extensively the system would be used by the country's citizens. According to a news article from the Directorate General of Intellectual Property (DGIP), since Indonesia joined the PCT, the number of international patent applications filed domestically is still only 163, with 109 of them already published internationally.⁹ This number is still relatively low compared to other Asian countries.

Based on the above phenomenon, the author will further examine the legal aspects of patents, particularly through the Patent Cooperation Treaty (PCT) system in facilitating technology transfer, as well as analyze its obstacles and opportunities and how to optimize the patent application system through the PCT. Considering that the Paris Convention, ratified through Presidential Decree Number 24 of 1979, states in Articles 2 and 4 (1) that patent protection is essentially territorial and there is no international patent protection,¹⁰ obtaining patent protection in other countries requires registration in each

⁸ Erlsting, J., Boutillon, I. "The Patent Cooperation Treaty: At the Center of the International Patent System", *William Mitchell Law Review*, Vol. 32, No. 9, (2006).

⁹ <https://www.dgip.go.id/index.php/artikel/detail-artikel-berita/djki-dorong-peningkatan-jumlah-paten-dalam-negeri-di-tingkat-global-melalui->

[pct?kategori=liputan-humas](https://www.dgip.go.id/index.php/artikel/detail-artikel-berita/djki-dorong-peningkatan-jumlah-paten-dalam-negeri-di-tingkat-global-melalui-pct?kategori=liputan-humas). Accessed 30 October 2024.

¹⁰ Doi, Teruo. "The Territoriality Principle of Patent Protection and Conflict of Laws: A Review of Japanese Court Decisions" 26, no. 2 (2002): hlm. 378. <https://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?article=1874&context=ilj>.

target country or through the PCT system.¹¹ The results of this research are expected to provide valuable insights for inventors, IP attorneys, and policymakers to understand the legal challenges of patents in technology transfer in Indonesia and to reduce potential patent infringements. Additionally, it is hoped that this study will provide knowledge about the available patent application systems in Indonesia, helping inventors make the best decisions regarding their patent protection strategies so they can contribute to national innovation.

METHOD

The method used in this research is normative juridical, conducted by studying library materials or secondary data. Normative legal research is the process of finding norms, principles, and doctrines in law to answer legal issues.¹² This research uses two approaches: the statute approach, which primarily focuses on examining legislation or other provisions related to the research object, both written and unwritten;¹³ and the conceptual approach, which involves scrutinizing concepts related to the content of values and norms in legislation.

The data used in this study are secondary data derived from legal materials, including primary legal materials, secondary legal materials, and tertiary legal materials. These consist of the Patent Law, Peraturan Pemerintah Pengganti Undang-Undang (Perpu), Keputusan Presiden Republik Indonesia, and Peraturan Menteri Hukum dan Hak Asasi Manusia.

ANYLISIS AND DISCUSSION

Legal Protection of Patents in Indonesia Regarding the PCT System in Facilitating Technology Transfer

The regulation of patent protection through the PCT is carried out via the ratification or enactment of Presidential Decree No. 16 of 1997 concerning the Ratification of the Patent Cooperation Treaty. The PCT is a multilateral cooperation agreement, established on June 19, 1970, in Washington during a Diplomatic Conference attended by 78 countries and 22 international organizations.¹⁴ The PCT itself has undergone two amendments, in 1979 and 1984. The PCT is an agreement under the Paris Convention, aiming to facilitate and provide patent protection in several member countries of the Paris Convention.

Patents protect inventions in the field of technology; however, not all inventions can be patented. The requirements for intellectual works to be patentable refer to Article 107 point 1 of the Omnibus Law (Perppu Ciptaker), which amends Article 3 paragraph 1 in conjunction with Article 2 letter a of the Patent Law, namely: 1) The invention must be new, meaning it has technical features that differ from previous inventions; 2) The invention must involve an inventive step, meaning it is non-obvious and could not have been predicted before; 3) The invention must be industrially applicable, meaning it can be repeatedly produced (on a mass scale) with

¹¹ <https://www.hukumonline.com/klinik/a/paten-bersifat-teritorial--begini-penjasannya-1t5fa8b35c98679/>, Accessed 28 Oktober 2024.

¹² Marzuki, Peter Mahmud. *Penelitian Hukum*. Kencana Prenada Media Group, 2010.

¹³ Marzuki, Peter Mahmud. *Penelitian Hukum: Edisi Revisi*. Jakarta: Penerbit Kencana., 2017.

¹⁴ Direktorat Jenderal Kekayaan Intelektual. "Pelindungan Paten di Banyak Negara Melalui Patent Cooperation Treaty". Accessed 28 Januari 2025. <https://www.dgip.go.id/artikel/detail-artikel-berita/pelindungan-paten-di-banyak-negara-melalui-patent-cooperation-treaty?kategori=liputan-humas>.

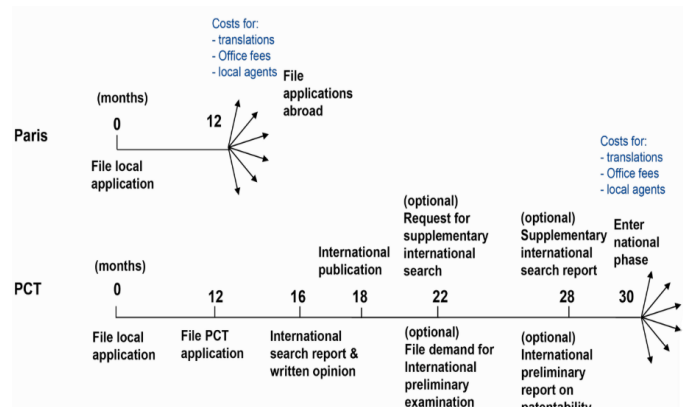
consistent quality and must be usable in practice.¹⁵

Patent registration can be done through the Patent Cooperation Treaty (PCT) mechanism or directly to the target country via the Paris Route (Paris Convention 1883). Registration via the Paris Convention route means submitting separate patent applications simultaneously in all countries where the inventor wishes to protect their invention, or, after filing in a Paris Convention member country, submitting separate patent applications in other member countries within 12 months from the date of the first patent application. Meanwhile, patent applications through the PCT system cover more than 150 countries, reflecting Indonesia's legal commitment to the PCT system, which plays a strategic role in encouraging cross-border technology transfer. The main objectives of this system are to simplify administrative processes especially by unifying prior art searches in patent applications reduce application procedure costs, and build the economies and technologies of developing countries through access to information and modern technology.¹⁶

The PCT enables both foreign and domestic inventors to submit a single international patent application, which automatically registers the patent in more than 150 PCT member countries. This can then proceed to the national phase in Indonesia, where the Directorate General of Intellectual Property (DGIP) receives, processes, and administers international patent applications submitted to Indonesia via the PCT route. Only patents registered in Indonesia can have their rights transferred through voluntary or

compulsory licensing and assignment of rights. This forms the basis for the implementation of technology transfer in Indonesia. In other words, the existence of the PCT system not only grants exclusive rights to inventors but also opens opportunities for licensees in Indonesia to access, adopt, and further develop patented technologies.

Chart 1: Patent Registration system through PCT and Direct (Paris Convention)



Source: <https://www.wipo.int/pct/en/faqs/faqs.html>

There is a difference in the process between the country of origin and the destination country for applications filled through the Paris Convention and those filled through the PCT. Through the PCT, a patent application receives certain treatment before entering the destination country.

Table 1

Aspect	PCT (Patent Cooperation Treaty)	Direct (Paris Convention)
Time period	Provides a period of 31 months from the priority date (if	12 months from the priority date (if claiming priority rights).

¹⁵ Pasal 8 Undang-Undang Nomor 13 Tahun 2016 tentang Paten dan penjelasannya.

¹⁶ WIPO. "Patent Cooperation Treaty (PCT)". Accessed January 05 2025. <https://www.wipo.int/pct/en/texts/articles/a0.html>.

	claiming the priority rights), and 31 months from the international filing date (if not claiming priority rights). Applicants have a longer period to prepare the administrative requirements of the application without losing their priority rights within 30 months.	Applicants are required to prepare and file applications in various countries within 12 months from the priority date.	patentability indications at an early stage.	designated countries.
			<i>Source: https://www.wipo.int/pct/en/faqs/faqs.html</i> Based on Table 1 above, which compares patent applications through the PCT system and direct/Paris Convention, in terms of international application filing, the PCT allows applicants to seek patent protection in any member country of the Agreement. Unlike the Paris Convention, which requires filing applications in each country separately, the PCT substantially simplifies the procedure. Another important aspect of the PCT is that applicants have 30 months from the priority date (initial filing) to enter the national phase; therefore, patents obtained under this Agreement can be valid for 18 months longer than patents filed under the Paris Convention Route, which only grants a 12-month priority right. This can be seen as an advantage, as this deadline provides room for business actors especially small and medium industries, technology-based startups, and research and development institutions to conduct market studies, commercial feasibility analyses, and license partner searches before deciding on the target countries for registration. Thus, the PCT functions as an efficient risk management instrument for entities with limited financial and operational resources. On the other hand, it can also be a disadvantage because it delays the entry of the application into the national phase for examination and granting of rights, thereby preventing the applicant from exercising exclusive rights against third parties for a	
Cost	PCT application fee + search fee + fees in the designated countries (translation and administrative fees apply only to the selected countries)	Fees in the designated countries (translation and administrative fees must be paid in the 12 th month)		
Patent ability Informa tion	There are reports/opions from the International Search Authority (ISA) and the International Preliminary Examination Authority (IPEA), which help in identifying	None. Patenability information depends on the administrative requirements, search, publications, and substantive examination conducted by each patent office of the		

longer period.¹⁷

Within the framework of international law, Article 7 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (*TRIPS*) emphasizes that the patent protection system is not merely about granting exclusive rights but also aims to promote technological advancement and accelerate the dissemination and transfer of knowledge. This provision obliges developed countries to create incentive schemes whether fiscal, regulatory, or partnership programs to ensure that the technologies they control can be effectively transferred to developing countries, including Indonesia.¹⁸ In this context, the Patent Cooperation Treaty (PCT) mechanism functions as a strategic instrument. The PCT system provides a globally standardized procedural framework, so that every license or technology transaction is based on a patent status recognized nationally. Thus, the technology transfer process becomes more systematic, transparent, and legally protected, while aligning with the *TRIPS* mandate to balance innovation incentives with the development interests of technology-receiving countries.

In Indonesia, the implementation of technology transfer is regulated under Article 20 of Law No. 13 of 2016, which states that patent holders are required to manufacture products or use the patented process in Indonesia, known as the “local working requirement.” However, following the issuance of Government Regulation in Lieu of Law No. 2 of 2022 concerning Job Creation, the provision in Article 20 was amended. Patent holders now have the option to either implement their patents in Indonesia or simply import or license the patented products. The

obligation to manufacture products or use the patented process in Indonesia is no longer absolute. Instead, the government provides incentives for patent holders who are willing to implement their technology domestically. This approach aims to add value for those who implement technology in Indonesia, creating a win-win solution between intellectual property protection and the goals of technology transfer.

Furthermore, the PCT system can facilitate technology transfer through a more structured licensing mechanism. With the International Search Report (ISR) and written opinions produced during the PCT international phase, prospective licensors gain a clearer understanding of the strengths and weaknesses of the relevant patent. This information is highly valuable in technology license negotiations, enabling Indonesian parties to conduct better due diligence and make more informed decisions during the technology transfer process. Additionally, the 30-month period provided under the PCT system allows patent holders sufficient time to explore technology collaboration opportunities with local partners before entering the national phase.

The benefits of the PCT system are also institutionally felt by the Directorate General of Intellectual Property (DGIP). Acting as both the Receiving Office and the Designated Office, DGIP gains knowledge transfer related to substantive examination techniques, digital infrastructure, and WIPO-standard best practices. Moreover, the PCT system improves the quality of substantive examination at the national level while accelerating decision-making processes for domestic patent applications.

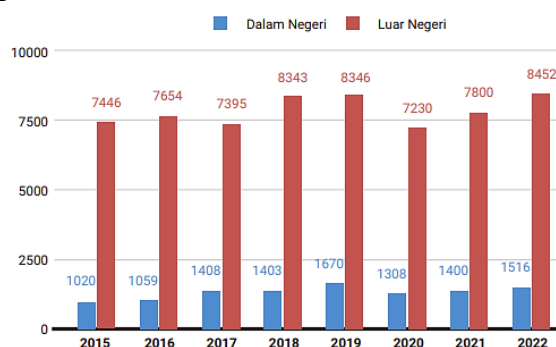
¹⁷ Rouse. Accessed January 25, 2025. <https://rouse.com/insights/news/2025/indonesia-patent-litigation-guide>.

¹⁸ Kurniawan, "Perlindungan Terhadap Paten Asing Berdasarkan Sistem Hukum Paten Di Indonesia Pasca *TRIPS*-WTO", 2 (2012).

Obstacles Faced by Inventors in Registering Patents through the PCT System in Indonesia and Efforts to Optimize It

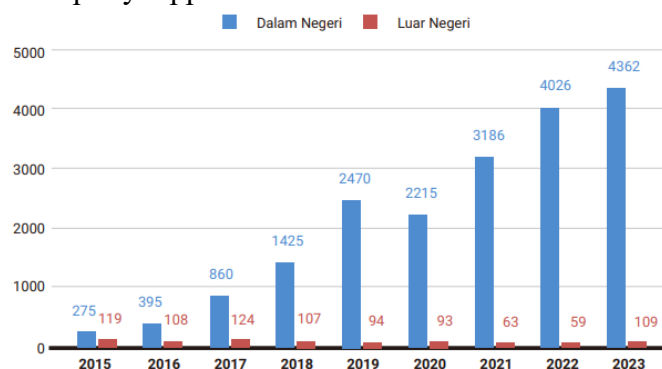
Indonesia's participation in patent protection by issuing various regulations, policies, and ratifying international agreements especially through the PCT has not yet been fully optimal. This is caused by various factors, such as the registration of patents through the Patent Cooperation Treaty (PCT) system, which is linked to the national patent legal framework that has not been fully integrated with the global technology transfer mechanism. Although Law No. 13 of 2016 on Patents has accommodated the PCT system, its implementation still presents several obstacles that hinder technology transfer. One of these is the disharmony between the provisions of the Patent Law in Indonesia and international law, such as the amendment to Article 20 of the Patent Law through the Job Creation Law, which provides flexibility for foreign patent holders not to be obligated to implement their patents in Indonesia. This change has had a positive impact on increasing the number of patent applicants; however, on the other hand, it has not been accompanied by adequate incentive mechanisms to encourage technology transfer.

Chart 1: Patent Intellectual Property Application 2023



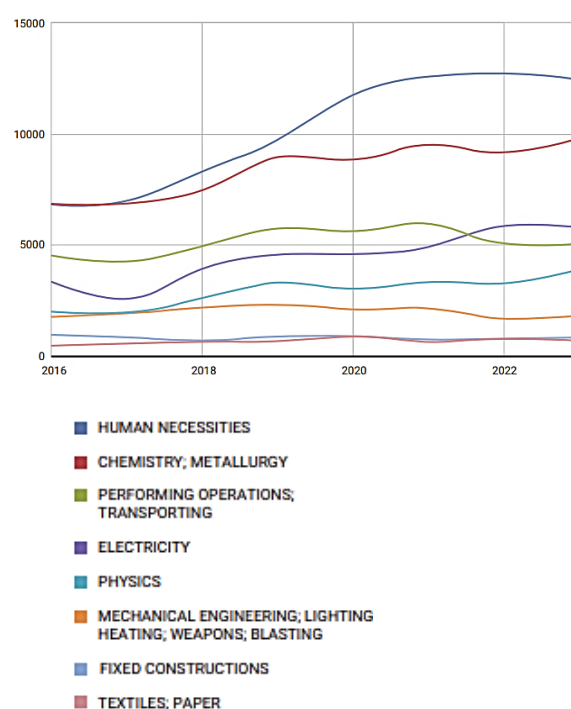
Source: <https://www.dgip.go.id/unduh/laporan-tahunan>

Chart 2: Simple Patent Intellectual Property Application 2023



Source: <https://www.dgip.go.id/unduh/laporan-tahunan>

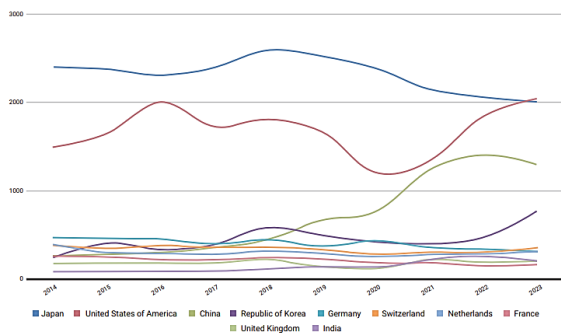
Chart 3: Trends in Patent Application Classes in Indonesia



Source:

<https://www.dgip.go.id/unduh/laporan-tahunan>

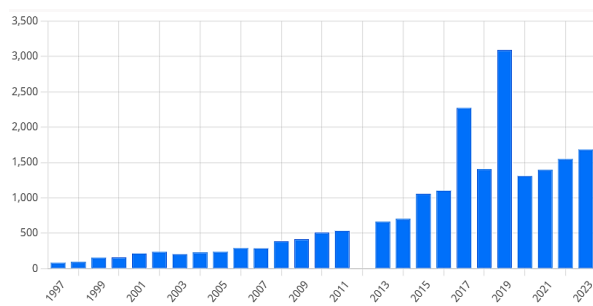
Chart 4: 10 Countries with the Most Patent Applicants from Abroad



Source: <https://www.dgip.go.id/unduh/laporan-tahunan>

Looking at the charts above, patent applications from domestic applicants for Indonesia remain relatively low (an average of 14.7% since 2015) compared to the total patent applications. Patent applications from foreign countries in Indonesia are currently dominated by Japan, the United States, and China. Additionally, based on data from the Directorate General of Intellectual Property (DGIP), South Korea shows a consistent pattern that is expected to increase significantly in 2024. The patent classes most frequently filed in Indonesia currently are primarily in human necessities and chemistry, metallurgy.

Chart 5: Total number of Indonesian patent applications (direct and national PCT stage)



Source: <https://www.wipo.int/ipstats/en/>

According to the graph released by WIPO,

from 1997 to 2012, the growth of patent registrations both directly and through the PCT was relatively stable and slow, with the number of registrations ranging between 50-500 applications per year. This reflects the early stage of patent system development in Indonesia following the ratification of the national patent agreement. Then, from 2013 to 2019, there was significant acceleration, with a drastic surge reaching a peak of around 3,100 patent registrations. This period indicates an increasing awareness of patent law in Indonesia. Subsequently, during the period 2020 to 2023, there was a stabilization decline to around 1,300 to 1,700 registrations, possibly influenced by the COVID-19 pandemic and market adjustments. This situation needs to be evaluated to determine whether the increase in patent quantity is balanced by quality for legal protection in the development of technology in Indonesia.

Patent applications through the Patent Cooperation Treaty (PCT) are indeed not that straightforward in practice because the results of the cooperation agreement must be harmonized with the applicable regulations in Indonesia. In reality, there are often obstacles encountered in its implementation.¹⁹ One of the challenges in applying this system is the complexity involved in patent registration through the PCT, which requires a deep technical and legal understanding. From the stage of drafting technical specifications to handling the International Search Report (ISR), the involvement of competent intellectual property consultants or IP attorneys is necessary. However, based on the Intellectual Property Consultant Database, the number of active IP consultants in Indonesia is approximately 1,000²⁰ with almost all of

¹⁹ Riswandi, Budi Agus, dan M. Syamsudin. *Hak Kekayaan Intelektual Dan Budaya Hukum*. Jakarta: PT. Raja Grafindo Persada, 2004.

²⁰ PDKKI. Accessed 23 December 2024. https://pdkki.dgip.go.id/index.php/pages/index_?per_page=1100,

them domiciled in the Jakarta area (Jabodetabek), while their presence outside Java Island is rare. In addition, financial barriers exist, as the costs incurred in this system are quite high, such as filing fees in various countries especially for individual inventors or SMEs translation fees, and consultant fees. Furthermore, technical obstacles have been found, such as failures during the international search and examination stages, which reduce the opportunities for Indonesian inventors to obtain patent protection in strategic target countries. These failures not only imply a loss of potential legal protection but also hinder the reciprocal technology transfer process because Indonesian inventions are not recorded in the global patent database, which is often used as a reference by international innovators. This situation creates recurring problems where the low visibility of Indonesian innovations at the global level further diminishes the chances of involvement in international technology transfer networks.

Besides structural and technical factors, another obstacle lies in the low understanding of inventors regarding patent strategies in the context of commercialization and technology transfer. This lack of information directly impacts the very limited number of PCT patent applications from Indonesia compared to other countries in the ASEAN region.²¹ Many PCT applications are filed not because of well-planned global market strategies but merely to fulfill institutional or academic obligations. Inventors from research institutions and universities often have not been able to utilize international patent documents as sources of

information for developing adaptive technologies. As a result, the PCT system has not been fully utilized as a means of learning technology and innovation tailored to local needs, causing technology transfer to be one-directional and not supportive of national capability development.

To optimize the PCT system as a strategic tool for technology transfer, efforts that can be undertaken include strengthening regulations and incentives by encouraging technology transfer policies through patent licensing mechanisms, both voluntary and compulsory, as well as fostering collaboration with foreign and local companies. Furthermore, digitizing and simplifying the process through the Intellectual Property Administration System (SAKI)²² application will facilitate the submission and monitoring of applications via the PCT. In addition, increasing education and outreach by the Directorate General of Intellectual Property (DGIP) can be done by organizing socialization on the procedures for patent applications through the PCT, conducting workshops, and providing technical assistance²³ so that individual inventors, SMEs, and academics can optimally utilize the PCT to obtain patent protection in multiple countries simultaneously without losing novelty requirements. Moreover, enhancing human resource capacity and research infrastructure is necessary so that inventions produced by inventors can be registered globally and have the potential to be adopted by both international and national industries, thereby improving Indonesia's position in the Global Innovation Index.

²¹ Direktorat Jenderal Kekayaan Intelektual. Accessed 15 January 2025. <https://www.dgip.go.id/index.php/artikel/detail-artikel-berita/djki-dorong-peningkatan-jumlah-paten-dalam-negeri-di-tingkat-global-melalui-pct?kategori=liputan-humas>.

²² Direktorat Jenderal Kekayaan Intelektual. Accessed 15 January 2025. <https://www.dgip.go.id/artikel/detail-artikel-berita/tingkatkan-pemahaman-pendaftaran-paten-internasional-djki-gelar-workshop-pct?kategori=liputan-humas>.

²³ Ibid.

At the university, research institute, and industry levels, strengthening the role of Intellectual Property Centers (Sentra KI) is also essential as a liaison between local inventors and the PCT system. Improving the capacity of Sentra KI personnel in drafting, portfolio management, and patent commercialization strategies will significantly impact the quality of PCT applications, ensuring that the new generation of inventors has a comprehensive understanding from the outset and increasing the potential for patent filings through the PCT with opportunities for technology transfer to the global market.

If utilized strategically, the PCT system will not only serve as a legal protection instrument but also as a key driver in the transformation toward a knowledge-based economy. To realize this, Indonesia needs to balance the exclusive rights protection of patent holders with the public interest in accessing and adapting technology. With a holistic approach, Indonesia can transform from a passive technology user into an active player in the global innovation ecosystem, while strengthening its national position in the increasingly technology- and knowledge-driven global economic architecture.

CONCLUSION

Based on the discussion presented, it can be concluded that the implementation of the Patent Cooperation Treaty (PCT) in Indonesia reveals a complex duality between advantages and operational challenges. Referring to Gustav Radbruch's theory of legal certainty,²⁴ he proposed that three fundamental values must be used to achieve the purpose of law: justice, legal certainty, and utility. According to Radbruch, these three

values are equal or relative. From the perspective of legal certainty, the PCT has provided a globally standardized procedural framework ratified through national regulation, namely Presidential Decree No. 16 of 1997, which guarantees clear legal protection for inventors with a 30-month period to enter the national phase. However, the amendment to Article 20 of the Patent Law through the Job Creation Law creates uncertainty regarding the obligation to implement technology in Indonesia. In terms of justice, the PCT system offers equal access to both domestic and foreign inventors; however, the complexity of procedures and high costs create disparities in access, especially for individual inventors and SMEs. The dominance of foreign patent applications indicates an imbalance that disadvantages local inventors. Regarding utility, the results are paradoxical. The PCT has facilitated technology transfer and improved the quality of national patent examinations but has not been optimal in encouraging local innovation and technology commercialization. The low number of PCT applications from Indonesia (averaging 1,300–1,700 applications) indicates underutilization of this system.

Therefore, policy reform is needed to balance the exclusive rights of patent holders with measurable technology transfer obligations, such as strengthening regulations and policy incentives, digitizing processes through the Intellectual Property Administration System (SAKI), enhancing comprehensive education and outreach, and strengthening human resource capacity, research infrastructure, and Intellectual Property Centers at universities and research institutions as links between local inventors and the global PCT system. With appropriate

²⁴ Nasihuddin, Abdul Aziz. *Teori Hukum Pancasila*. Purwokerto: CV. Elvaretta Buana, 2024.

efforts, the PCT system is expected to become an effective instrument to drive innovation growth, strengthen Indonesia's position in the global technology transfer network, and provide better legal protection for domestic inventors.

BIBLIOGRAPHY

Books

Diantha, I Made Pasek. *Metodologi Penelitian Hukum Normatif dalam Justifikasi Teori Hukum*. Jakarta: Kencana, 2016.

Dr. M. Citra Ramadhan, S.H., M.H., Fitri Yanni Dewi Siregar, S.H., M.H., dan Bagus Firman Wibowo, S.H., M.H. *BUKU AJAR HAK KEKAYAAN INTELEKTUAL*. Sumatera Utara: Universitas Medan Area Press, 2023.

Dr. Muhammad Citra Ramadhan, S.H., M.H. *Paten Jilid II*. Medan: Merdeka Kreasi Group, 2022.

Manan, Abdul. "Aspek-Aspek Pengubah Hukum," hlm. 59. Jakarta, Kencana Prenada Media Group, 2009.

Marzuki, Peter Mahmud. *Penelitian Hukum*. Kencana Prenada Media Group, 2010.

Muhaimin. "Metode Penelitian Hukum," hlm. 47. Mataram: NTB: Mataram University Press, 2020.

Prof. Dr. Abdul Aziz Nasihuddin, S.H., M.M., M.H., Dkk. *Teori Hukum Pancasila*. Purwokerto: CV. Elvaretta Buana, 2024.

Riswandi, Budi Agus, dan M. Syamsudin. *Hak Kekayaan Intelektual Dan Budaya Hukum*. Jakarta: PT. Raja Grafindo Persada, 2004.

Journal

Atmaja, Yustisiana Susila, Budi Santoso, dan Irawati. "PELINDUNGAN HUKUM

TERHADAP PATEN PRODUK FARMASI ATAS PELAKSANAAN PATEN OLEH PEMERINTAH (GOVERNMENT USE)" 50, no. 2 (2021): 196–208.

Doi, Teruo. "The Territoriality Principle of Patent Protection and Conflict of Laws: A Review of Japanese Court Decisions" 26, no. 2 (2002): hlm. 378. <https://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?article=1874&context=ilj>

Jonathan Andre Woods, Aurora Jillena Meliala. *Proceedings of the International Conference on Law Studies (INCOLS 2022)*. *Proceedings of the International Conference on Law Studies (INCOLS 2022)*. Atlantis Press SARL, 2023. http://dx.doi.org/10.2991/978-2-494069-23-7_21.

Juan correa, carlos correa. "Impact of the Patent Cooperation Treaty in Latin America." *GRUR International* 69, no. Correa J Correa C (2020): 803–822.

Kurniawan. "PERLINDUNGAN TERHADAP PATEN ASING BERDASARKAN SISTEM HUKUM PATEN DI INDONESIA PASCA TRIPS-WTO" 2 (2012).

Nasir, R. "Paten dalam Proses Produksi: Tinjauan Hak yang Melekat pada Inventor." *Jurnal Hukum Positum* 1, no. (1) (n.d.): 141–149

Nugroho, Agung, dan Faisal Santiago. "The Effect Of Patent Rights On Innovation Of The Technology Industry In Indonesia." *Journal Research Of Social Science, Economics, and Management* 02, no. 11 (2023): 2610–20. <https://doi.org/10.59141/jrssem.v2i11.468>.

- Novianti. “Pelindungan Paten Melalui Patent Cooperation Treaty Dan Regulations Under The Patent Cooperation Treaty.” *Negara Hukum: Membangun Hukum untuk Keadilan dan Kesejahteraan* 8, no. 2 (2017): 289–307. <https://doi.org/10.22212/jnh.v8i2.1071>.
- Palupi Kurnianingrum, Trias. ““Dampak Hukum Penghapusan Pasal 20 UU No. 13 Tahun 2016 Tentang Paten (Legal Impact of Abolishing Article 20 of Law No. 13 of 2016 on Patent).”” *Jurnal Dpr*, 1. <https://doi.org/https://doi.org/10.22212/jnh.v13i1.2967>.
- Sardjono, Adzhani Tharifah dan Agus. “Eksistensi Perlindungan Paten Atas Vaksin COVID-19” 51, no. 4 (2021). <https://doi.org/10.21143/jhp.vol51.no4.3302>.
- Internet**
- DJKI, Kemenkumham RI. “Rencana Strategis Direktorat Jenderal Kekayaan Intelektual 2020-2024,”. Accessed October 29 2024. www.dgip.go.id/renstra.
- BRIN, <https://www.brin.go.id/news/112216/belum-banyak-diketahui-inventor-kemkumham-jelaskan-penelusuran-dan-pelindungan-paten>. Accessed October 29 2024.
- Hukumonline, <https://www.hukumonline.com/klinik/a/paten-bersifat-teritorial--begini-penjasannya-lt5fa8b35c98679/>. Accessed October 29 2024.
- UGM, <https://penelitian.ugm.ac.id/faq/Paten/>. Accessed October 29 2024.
- Hukumonline, <https://www.hukumonline.com/berita/a/memahami-mekanisme-pemeriksaan-substantif-pada-paten-cooperation-treaty-lt6332fcaac3ba8/?page=all>. Accessed October 29 2024.
- DGIP, <https://www.dgip.go.id/index.php/artikel/detail-artikel-berita/djki-dorong-peningkatan-jumlah-paten-dalam-negeri-di-tingkat-global-melalui-pct?kategori=pengumuman>. Accessed October 28 2024.
- PDKKI, https://pdkki.dgip.go.id/index.php/pages/index_per_page=1100. Accessed 20 December 2024.
- DGIP, <https://www.dgip.go.id/unduh/laporan-tahunan>, Accessed 02 February 2025.
- Nasional, BPN. “Naskah Akademik Rancangan Undang-Undang Tentang Perubahan Atas Undang-Undang Republik Indonesia Nomor 13 Tahun 2016 Tentang Paten.” bphn.go.id, February 18, 2020. https://bphn.go.id/data/documents/na_paten.pdf. Accessed 03 November 2024.
- Organization, World Intellectual Property. “Intellectual property statistical country profile 2023 Indonesia. Accessed 30 October 2024.
- Organization, World Intellectual Property. “Intellectual property statistical country profile 2023 Japan. Accessed 30 October 2024.
- Organization, World Intellectual Property. “Intellectual property statistical country profile 2023 Singapore. Accessed 30 October 2024.
- WIPO, <https://www.wipo.int/pct/en/texts/articles/a0.html>. Accessed January 05 2025.

WIPO,

“<https://www.wipo.int/treaties/en/registration/pct/>. Accessed January 28 2025.”

Laws and Regulations

Undang-Undang Nomor 13 Tahun 2016 tentang Paten.

Undang-Undang Nomor 14 Tahun 2001 tentang Paten.

Undang-Undang Nomor 65 Tahun 2024 Tentang Perubahan Ketiga Atas Undang-Undang Nomor 13 Tahun 2016 tentang Paten.

Penetapan Peraturan Pemerintah Pengganti Undang-Undang (Perpu) Nomor 2 Tahun 2022 tentang Cipta Kerja.

Keputusan Presiden Republik Indonesia Nomor 16 Tahun 1997 Tentang Pengesahan *Patent Cooperation Treaty (PCT) And Regulations Under The PCT*.

Peraturan Menteri Hukum dan HAM Nomor 13 Tahun 2021 tentang Perubahan atas Peraturan Menteri Hukum dan Hak Asasi Manusia Nomor 38 Tahun 2018 Tentang Permohonan Paten.