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Bridging the Gap and Uncertainty in Patent Valuation: Regulatory Challenges in Indonesia's Creative Economy

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Abstract

Patent valuation plays a critical role in the creative economy; particularly as intellectual property assets are increasingly utilized as collateral in financial transactions. However, significant challenges remain in the valuation process, particularly for patents, which are intangible assets with high economic potential but complex valuation methods. This study aims to address the legal and valuation challenges surrounding patents in IP-based financing and provide recommendations to enhance legal certainty. The research adopts a normative juridical approach, analyzing relevant regulations and cases. The results highlight the need for a comprehensive legal framework in Indonesia to mitigate uncertainties in patent valuation. Addressing the uncertainty in patent valuation requires a proactive legal framework that ensures predictability, transparency, and consistency. By strengthening regulations and learning from international best practices, Indonesia can unlock the potential of its creative economy and position itself as a competitive player in the global IP market. By addressing these challenges, Indonesia can enhance the credibility and effectiveness of IP-based financing, fostering innovation and economic growth in the creative economy sector.

Keywords: Patent, Creative Economy, Intellectual Property, Patent Valuation.

1. INTRODUCTION

Over the past 25 years, the value of global intangible assets has increased tenfold, reaching USD 74 trillion in 2021 [1]. Intellectual property (IP), as an asset recorded on company balance sheets, has become a common practice in many countries [2]. During the WIPO and Intangible Asset Finance discussion forum, it was highlighted that intellectual property or other intangible assets can enhance the tangible capital value of products produced and traded within value chains [3]. However, the forum also noted that despite its potential, without strong assets, traditional funding avenues may seem unattainable for many small and medium-sized enterprises (SMEs). This financing gap poses significant barriers for many companies.

Many innovations emerge from newcomers to the market, who often face funding challenges. Without resources, these companies encounter substantial hurdles, particularly as they strive to gain traction in global markets. As a result, many fail to compete, fall behind, and eventually collapse. Consequently, the promise of business to contribute to sustainable economic development remains unfulfilled in both developed and developing countries. To address this, many nations are positioning intellectual property as a game changer for economic growth [4]. The practice of

[1] Brand Finance. *Global Intangible Finance Tracker 2021*. Accessed January 8, 2025. https://brandirectory.com/reports/gift-2021.

[2]Irawan, Candra. "Protection of traditional knowledge: A perspective on Intellectual Property Law in Indonesia." *The Journal of World Intellectual Property* 20, no. 1-2 (2017): 57-67.

[3] WIPO. *World Intellectual Property Report 2017: Intangible Capital in Global Value Chains.* Accessed January 8, 2025. *https://www.wipo.int/publications/en/details.jsp?id=4225.*

[4]Marditia, Putri Purbasari Raharningtyas, and Tivana Arbiani Candini. "Regulation Model for Intellectual Property Financing Scheme (IPFS) Optimizing MSME Capital for the Tourism Sector Comparative Study: Singapore and Malaysia." In *3rd International Conference on Business Law and Local Wisdom in Tourism*, pp. 710-728. Atlantis Press, 2023.

using intellectual property rights as collateral for financial institution loans has already been implemented in countries like South Korea, Japan, the UK, Turkey, and even Singapore.

Awareness of intellectual property as a commercially valuable asset is also growing in Indonesia. This is evident in the government's emphasis on implementing a creative economy in its work plans, as outlined in Presidential Regulation No. 18 of 2020. The narrative reflects the government's focus on facilitating intellectual property in the creative economy sector. One of the performance indicators set for this program is the number of businesses facilitated in terms of IP, with a target of 330 businesses across 34 provinces by 2022. Additionally, Annex II of Presidential Regulation No. 18 of 2020 identifies the establishment of Science Technoparks at four universities—ITB, UI, IPB, and UGM—as a strategic priority project to promote the commercialization of research and innovation products.

To strengthen regulations supporting the downstream utilization of intellectual property, the Indonesian government has enacted Government Regulation No. 24 of 2022, a derivative regulation of Law No. 24 of 2019 on the Creative Economy. This regulation defines the creative economy as the embodiment of the added value of intellectual property derived from human creativity based on cultural heritage, science, and/or technology. Consequently, the creative economy sector is expected to contribute significantly by creating added value in employment, investment in the real sector, and industrialization, thereby enhancing national productivity. Thus, both creative economy actors, who have undergone relevant training, and financial institutions are involved in the IP valuation process.

However, these provisions may lead to differences in how intellectual property is assessed, which could pose challenges for the banking sector. Countries that have adopted IP as collateral often face difficulties in conducting intellectual property valuation. A significant disparity between accounting values and market values is commonly observed, resulting in high levels of uncertainty. This, in turn, increases the risk factors faced by lenders or credit providers. Additionally, different types of intellectual property used as collateral require varying valuation methodologies.

This article will explore how the uncertainty in the regulation of intangible asset valuation for various types of intellectual property impacts the perceived value of these intangible assets. The research will specifically focus on examining the legal framework necessary to address the uncertainties surrounding patent valuation in IP-based financing schemes within the creative economy sector.

2. METHOD

This research uses doctrinal or normative legal research, by examining library materials or secondary data. This research also uses primary data in the form of interviews with stakeholders [5]. Furthermore, the data were analyzed with content analysis to analyze the formulation of the problem and then made a conclusion and suggestion. Those legal material collected are analysed prescriptively.

3. RESULT AND DISCUSSION

3.1 Proactive Strategies for Patent Valuation in Financial Collateral

Historically, Patents are intangible assets with significant potential to be used as collateral in financial institutions, both banks and non-banks. This is supported by a regulatory framework that permits patents to serve as fiduciary guarantees. However, research conducted by Aili Papang Hartono [6], on patents as fiduciary guarantees highlights a critical issue: in cases of debtor default, the execution of patent rights cannot be carried out in accordance with Indonesia's Fiduciary Security Law No. 42 of 1999. The execution process for intangible asset collateral, such as patents, typically involves auctions in markets or exchanges [7]. The study suggests that patent execution could be addressed through the transfer of patent rights via licensing agreements, enabling the economic benefits of the patent to continue under the licensee.

While this recommendation focuses on handling default scenarios, the author believes a more pressing issue lies in reducing uncertainty in patent valuation. This proactive measure could be implemented before extending credit using patents as collateral in financial institutions. By applying the principle of legal certainty, aligned with the 5C principles in banking (Character, Capacity, Capital, Collateral, and Condition), this approach could also extend to alternative financing models like venture capital [8].

It is essential to draw lessons from countries with more advanced IP-based financing frameworks, particularly in the use of patents. Singapore serves as an example, being a Southeast Asian country that recently implemented IP-based financing schemes. Singapore officially began this initiative with the launch of its IP

[5] Irwansyah. *Penelitian Hukum, Pilihan Metode & Praktik Penulisan Artikel*, (Yogyakarta: Mirra Buana Media, 2020), p. 41.

[6] Hartono, Aili Papang. *Pemberian Kredit dengan Jaminan Fidusia Hak Paten*. Bandung: Alumni, 2021.

[7] Purwaningsih, Endang. "Patent Law and Its Enforcement in Indonesia, Japan and the USA." *Jurnal Media Hukum* 27, no. 1 (2020): 1-22.

[8] Mulyati, Etty. "The Implementation of Prudential Banking Principles to Prevent Debtor with Bad Faith." *Padjadjaran Jurnal of Law* 5, no. 1 (2018).

Hub Master Plan in 2013, which positioned the country as a center for IP transactions and management. This plan was updated in 2017, incorporating IP valuation as part of a broader national economic strategy.

Singapore's strong performance in the Global Innovation Index (GII) for "facilitating IP financing for businesses" can be attributed to its robust IP ecosystem developed over the years. The country's approach focuses on three key areas:

a. Establishing a strong legal and regulatory infrastructure to help companies protect, manage, and commercialize IP.
b. Fostering a pool of innovative enterprises.
c. Building a comprehensive network of IP service providers and strong public-private partnerships.

The challenges surrounding patent valuation in intellectual property-based financing highlight the need for a comprehensive legal framework to address uncertainties and mitigate risks for both lenders and borrowers. Legal certainty plays a crucial role in ensuring that intangible assets like patents are effectively utilized as collateral while maintaining fairness and trust among stakeholders [9].

The use of fiduciary guarantees for patents under Indonesia's Fiduciary Security Law needs to be reviewed to better accommodate the distinctive nature of intangible assets. This review should focus on defining clear procedures for the valuation, execution, and transfer of rights in the event of default. In the absence of precise and enforceable regulations, the likelihood of legal conflicts rises, hindering the effectiveness of patents as collateral in financing transactions.

Lessons from Singapore's IP Hub Master Plan demonstrate the importance of building a robust IP ecosystem supported by legal infrastructure, innovative enterprise development, and strong public-private partnerships. Indonesia can adopt similar approaches by developing standardized valuation methodologies, enhancing legal protections for IP transactions, and fostering collaboration between financial institutions, government bodies, and IP holders.

Addressing the uncertainty in patent valuation requires a proactive legal framework that ensures predictability, transparency, and consistency. By strengthening regulations and learning from international best practices, Indonesia can unlock the potential of its creative economy and position itself as a competitive player in the global IP market.

3.2 Valuation Framework for Determining Patent Economic Value in Indonesia: Comparative Practices

The valuation of patents in Indonesia is intricately tied to the development of a robust intellectual property (IP) ecosystem, which is currently fragmented across various ministries without a unified national framework [10]. Although patents are legally recognized as valuable intangible assets, the absence of standardized valuation mechanisms, competent assessors, and a centralized regulatory body hampers their full economic potential.

The upcoming National Medium-Term Development Plan (RPJMN) 2025–2029 highlights patent commercialization as part of a broader strategy to foster innovation-driven economic transformation. Yet, Indonesia's research budget remains disproportionately low (0.25% of GDP) compared to regional peers like South Korea and Malaysia, limiting the scalability of innovation outcomes.

Current practices reveal that BRIN and several universities independently conduct patent valuations using disparate methodologies—income-based for BRIN and market-based for universities—causing inconsistencies and reliability concerns in valuation results. In contrast, countries like China, South Korea, and Singapore have institutionalized IP ecosystems supported by comprehensive legislative frameworks that integrate patent valuation, legal protection, and commercialization pathways.

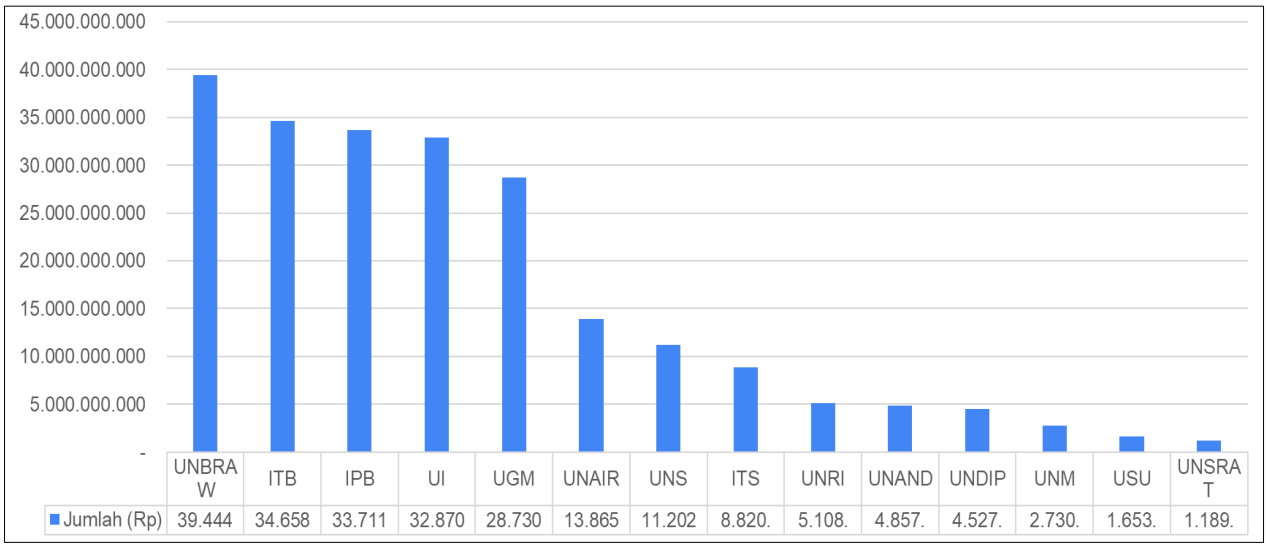
Indonesia lacks a Master Plan for IP Ecosystem Development akin to these models, relying instead on fragmented regulations such as the Creative Economy Master Plan (2018–2025) and National Research Master Plan (2017–2045), which inadequately address the intersection of IP, academia, and economic policy. The intrinsic value of a patent is not only determined by its market application but also by qualitative dimensions such as strength of protection, technological breadth, and scope of applicability—criteria largely overlooked in current Indonesian practices [11]. Recognizing patents' strategic role in national development, harmonized legal reforms and competency development in IP valuation are essential to unlock their economic value and facilitate technology-based economic transformation in Indonesia

[9] Ramli, Tasya S., Ahmad M. Ramli, Ranti F. Mayana, Ega Ramadayanti, and Rizki Fauzi. "Artificial intelligence as object of intellectual property in Indonesian law." *The Journal of World Intellectual Property* 26, no. 2 (2023): 142-154.

[10] Rosser, Andrew. "The political economy of institutional reform in Indonesia: the case of intellectual property law." In *Law, Capitalism and Power in Asia*, pp. 80-99. Routledge, 2006.

[11] Nasution, Saddam Syahbani, Erika Lismayani, and Candra Kusuma Negara. "Effectiveness of Simple Patent Protection Based on Traditional Knowledge of Creative Economic Products." *LEGAL BRIEF* 11, no. 3 (2022): 1772-1787.

The determination of a patent's economic valuation is inseparable from the surrounding patent ecosystem within a country. The economic value of a patent is highly dependent on the strength of collaboration among patent stakeholders. In Indonesia, patent applications are submitted under two fee categories: the General category and the category for MSMEs, Government Research Institutions, and Universities. Currently, domestic patent applications at the Directorate General of Intellectual Property are predominantly submitted by universities. According to data from the National Research and Innovation Agency (BRIN), 94 patents have been commercialized with licensing values exceeding IDR 3.6 billion [12]. To assess whether downstreaming or commercialization mechanisms are being implemented, an initial indicator can be derived from the non-tax state revenue (PNBP) related to the maintenance of domestic patents at the top 10 universities actively filing patents.



Patent maintenance fees serve as preliminary indicators of commercialization. A patent that continues to be protected implies ongoing economic value, as the patent holder is willing to pay annual fees to retain protection—indicating sustained commercial potential. Therefore, valuing patents, particularly those developed by government research institutions, becomes essential. However, Indonesia currently lacks a coherent IP ecosystem policy to support patent valuation, resulting in individual ministries creating their own valuation regulations.

For example, asset valuation regulations for recording and asset management purposes exist across various ministries and equivalent institutions, including the Ministry of Finance Regulation No. 251/PMK.06/2015, Ministry of Research and Higher Education Regulation No. 35 of 2019, LIPI Regulation No. 1 of 2018, and BRIN Regulation No. 11 of 2023. These fragmented rules reveal the absence of higher-level coordination on roles related to patent valuation within the IP ecosystem.

Unlike countries such as China, South Korea, and Singapore—which have implemented national master plans for IP ecosystem development—Indonesia only has the 2018–2025 National Creative Economy Development Master Plan (Presidential Regulation No. 142 of 2018) and the 2017–2045 National Research Master Plan (Presidential Regulation No. 38 of 2018). A dedicated national master plan for IP ecosystem development would enable ministries to align their regulations, ensuring that patents—often produced by universities—can be better integrated into the economy as intangible assets.

Although Law No. 24 of 2019 and Presidential Regulation No. 24 of 2022 define the creative economy as human creativity manifested as intellectual property rooted in knowledge, cultural heritage, and/or technology, these regulations lack a clear role for ministries overseeing universities and public research institutions. Instead, the focus remains on 17 creative economy sub-sectors such as game development, architecture, interior design, music, visual arts, fashion, culinary arts, film, animation, photography, broadcasting, crafts, advertising, performing arts, publishing, and apps. Consequently, the Creative Economy Agency does not prioritize inventions produced by universities and research bodies.

[12] Information obtained from an interview with Mr. Juldin Bahriansyah as Coordinator for the Intellectual Property Valuation Function, BRIN.

In contrast, countries like China, South Korea, and Singapore have amended their legislation to strengthen their IP ecosystems. South Korea, for instance, has enacted the Invention Promotion Act, the Intellectual Property Financial Support Act, and the Framework Act on Intellectual Property to support its Patent Act. If patents are to be used as collateral, the Indonesian government should amend regulations related to collateral and valuation under the Ministry of Finance's jurisdiction. Such legislative reforms are crucial for the future of Indonesia's IP ecosystem.

Currently, BRIN and the Ministry of Higher Education, Research, and Science have taken independent steps to commercialize their patents through licensing. BRIN primarily uses income-based valuation methods, while several universities prefer market-based methods. The lack of standardized valuation protocols leads to discrepancies across institutions and evaluators. For example, research conducted by BRIN—under LIPI Regulation No. 1 of 2018—can only be commercialized via licensing, whereby BRIN retains patent ownership, and the licensee pays an agreed amount under a licensing agreement [13].

Effective licensing depends on accurate patent valuation. Success in this area is a key factor in developing a strong IP ecosystem [14]. As stated in Chapter II, Indonesia already has several regulations related to patent valuation as intangible assets. Patents, as economically valuable intellectual property rights, must be assessed not only to benefit inventors and owners but also to contribute to the nation's economic development. Beyond accounting-based (accrual) approaches, valuation must also consider the quality of the patent to uncover its true intrinsic value.

As comparison, South Korea and Singapore represent exemplary models in utilizing intellectual property (IP), especially patents, as engines of national economic growth, underpinned by strong ecosystems and coherent legal frameworks. South Korea, ranked sixth in the Global Innovation Index (GII) 2024, has institutionalized IP as a strategic economic driver through integrated legislation such as the Framework Act on Intellectual Property, which mandates a measurable evaluation system for fair valuation of IP assets, aligned with the International Valuation Standards (IVSC). This valuation framework supports commercialization and investment, facilitating stakeholders' ability to assess the economic potential of IP.

Furthermore, the country mandates a quinquennial Master Plan and annual Action Plans for national IP development, coordinated by the Presidential Council on Intellectual Property, ensuring policy consistency across sectors. Complementary laws like the Patent Act, Invention Promotion Act, and Intellectual Property Financial Support Act interlink to enable patents as both legal and financial instruments, supporting South Korea's leadership in biotechnology and medical industries.

In contrast, Indonesia's current IP valuation framework remains fragmented, with overlapping authorities among ministries such as Finance, BRIN, and the Financial Services Authority (OJK), lacking a national master plan akin to Korea's orchestrated system .

Singapore, another leader in IP comer-cialization, operates under the IPOS Act, which empowers the Intellectual Property Office of Singapore to design and implement comprehensive IP policies, including promotion and commercialization strategies. Its 2013 IP Strategic Planning designated Singapore as a global IP hub, coordinating ministries and establishing standards for IP-backed finance, valuation competence, and dispute resolution through WIPO Arbitration. Key initiatives include the development of internationally aligned valuation standards, professional accreditation systems (e.g., CVA), improved IA/IP reporting frameworks via ACRA, and the creation of advanced platforms for IP monetization.

The National IP Protocol further streamlines public-private collaboration in commercia-lizing government-funded research. These coordinated efforts position Singapore as a global leader in IP valuation and innovation-driven investment. Learning from these models, Indonesia must establish a unified national IP planning system to harmonize valuation standards, reduce regulatory overlaps, and fully leverage patents for economic advancement.

4. CONCLUSION

Patent valuation regulation in Indonesia remains fragmented across various ministries and institutions, lacking a unified national standard that integrates valuation methodologies, institutional roles, and assessor competencies. Although Government Regulation No. 24 of 2022 and the Indonesian Valuation Standard (SPI) 321 lay a foundational framework for IP valuation in financial schemes, they fall short in encompassing the legal, economic, and strategic dimensions necessary for effective patent utilization. Implementation across institutions such as BRIN, universities, and ministries reveals inconsistencies, with

[13] Nugroho, Agung, and Faisal Santiago. "The Effect of Patent Rights on Innovation of The Technology Industry in Indonesia." *Journal Research of Social Science Economics and Management* 2, no. 11 (2023): 2610-2620.

[14] Khairunnisa, Salsabila. "Patent Legal Protection On Invention (Comparation Study Between Indonesia and Japan)." *Jurnal Hukum Novelty* 9, no. 2 (2018): 183-191.

divergent methodologies—often limited to accrual-based approaches—resulting in variable and unreliable valuation outcomes. These methods frequently omit critical factors like legal protection strength and patent quality, which are essential in determining true market value.

Addressing this gap necessitates a regulatory overhaul that introduces an integrated national framework encompassing: (a) unified valuation standards that combine cost, market, and income approaches; (b) a nationally accredited valuation body aligned with SPI 321, capable of delivering credible assessments for business, academic, and financial transactions; (c) a digitalized patent information system to enhance transparency and valuation accuracy through accessible legal and economic status data; and (d) a formal dispute resolution mechanism to ensure legal certainty for patent holders and stakeholders involved in valuation-related disagreements. Such a centralized approach would harmonize sectoral practices and establish a coherent infrastructure that enables reliable, fair, and economically relevant patent valuation processes—essential for transforming patents into viable financial assets and strategic tools in national innovation and commercialization efforts.

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