

Inconsistency of Industrial Design Protection in the Indonesian Legal System: Policy and Challenges



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ABSTRACT

Indonesia continues to record growth in industrial design applications, yet its legal system has not provided equally effective protection for registered designs. This condition creates a gap between the development of industrial design regulation and its implementation in protecting designers and rights holders. This study examines the structural weaknesses of Indonesia's industrial design protection system and develops an adaptive and integrated model for legal reform. The study applies a sociolegal approach by integrating regulatory, empirical, and comparative analyses. It examines legislation, judicial decisions, registration data, and institutional practices and compares the Indonesian system with the legal frameworks implemented in Japan and Malaysia. The findings reveal that regulatory inconsistency, institutional limitations, and implementation problems collectively weaken industrial design protection in Indonesia. The current registration mechanism provides limited substantive examination, which increases legal uncertainty and creates potential conflicts between industrial design and copyright protection, particularly in determining originality and ownership. Complex administrative procedures, ambiguous regulatory provisions, limited institutional capacity, and insufficient public understanding further reduce the effectiveness of protection. The comparative analysis shows that Japan and Malaysia have developed institutional and administrative mechanisms that offer relevant approaches for strengthening Indonesia's system.



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Introduction

Industrial design protection is a critical component of the intellectual property system, as it is directly associated with the creation of economic value, product competitiveness, and visual innovation. Industrial design is instrumental in promoting economic development by prioritizing all industrial products as primary export materials and sources of foreign exchange during industrialization.¹ Indonesia's industrial and trade strategy has not fully accounted for this aspect, resulting in a decline in global competitiveness. Effective legal protection is a fundamental prerequisite for sustainable innovation in a creative

¹ G.F Davies and P.F Nolan, 'Characterisation of Two Industrial Deluge Systems Designed for the Protection of Large Horizontal, Cylindrical LPG Vessels', *Journal of Loss Prevention in the Process Industries*, 17.2 (2004), 141–50 <https://doi.org/10.1016/j.jlp.2003.10.010>

industry that is increasingly reliant on design differentiation. However, recent developments have shown that the efficacy of industrial design protection cannot be assessed solely on the basis of legal norms; it must also be evaluated in terms of its practical implementation and institutional performance. The extant legal system in Indonesia is questioned for its consistency and effectiveness, given persistent discrepancies between normative objectives and enforcement outcomes in industrial design protection. Additionally, the absence of well-defined normative boundaries between the industrial design and copyright regimes has led to overlapping claims, weakened legal certainty, and created opportunities for forum shopping among parties.²

The Industrial Design Law, also known as Law No. 31 of 2000, was intended to ensure legal certainty for creators and rights holders by establishing a constitutive system that necessitates registration as a prerequisite for protection. The Industrial Design Law has been established and implemented; however, numerous issues and violations remain in the field of Industrial Design. These issues are influenced by a variety of factors, including the legal structure, legal substance, legal culture, and the bureaucratic apparatus.³ Its substantive norms do not solely determine the efficacy of a law; they are also shaped by the interaction among the legal structure, legal substance, and legal culture, as conceptualized by Lawrence M. Friedman from a legal system perspective.⁴ The misalignment of these elements in the context of industrial design protection results in systemic inefficiencies that diminish innovation incentives and undermine legal certainty. Small and medium enterprises (SMEs) are particularly affected by this condition, as they depend heavily on a reliable and readily accessible intellectual property system to commercialize their creative works.⁵ One reason for the emergence of these issues is the law's inherent deficiencies, including its substance, registration procedures, and enforcement. The legal framework in Indonesia, particularly in the economic sector, remains underdeveloped and underenforced to keep pace with the demands of societal progress, which is one of the obstacles to development. The implementation of Industrial Design can be adversely affected by inadequate legal frameworks, for instance, in the context of unethical business competition among business actors. This can result in disputes over intellectual property rights, including industrial design rights. Numerous instances of intellectual property

² Keno Moenck and others, 'Legal Implications of Vision-Language Foundation Models (VLFM) in Industrial Applications in Europe: An Inquiry into Data Protection, Copyright, and AI Regulation', *Procedia CIRP*, 134 (2025), 999–1004 <https://doi.org/10.1016/j.procir.2025.02.223>

³ Maheswara Perbawa Sukawati and Amad Sudiro, 'Legal Protection of Artificial Intelligence Applications in Banking', *Journal of Sustainable Development and Regulatory Issues (JSDERI)*, 3.3 (2025), 695–721 <https://doi.org/10.53955/jsderi.v3i3.175>

⁴ Jia Liu and Wenjing Li, 'Path of Protecting Intellectual Property Rights on Fashion Design', 2021, pp. 315–25 https://doi.org/10.1007/978-3-030-78227-6_23

⁵ Izhar Ahmed Khan and others, 'Enhancing IIoT Networks Protection: A Robust Security Model for Attack Detection in Internet Industrial Control Systems', *Ad Hoc Networks*, 134 (2022), 102930 <https://doi.org/10.1016/j.adhoc.2022.102930>

rights violations occur, constituting unjust competition that manifests as plagiarism, counterfeiting, and other unhealthy practices. Naturally, this is extremely detrimental to the state and rights proprietors.⁶

Industrial design registration is an additional concern. Various factors, such as the length of the registration process, procedures, and costs, contribute to the failure of numerous small and medium-sized enterprises to register. Typically, numerous substantial organizations are responsible for industrial design registration.⁷ Many small and medium-sized businesses incur losses because they fail to register their designs. This is because the prerequisite for obtaining Industrial Design Rights is that the party be the first to submit a registration application (Article 12 of Law No. 31 of 2000).⁸ An effective means of suppressing various forms of plagiarism, piracy, or imitation of Industrial Designs is provided by an Industrial Design registration application. In reality, the party that submits the first registration application (first-to-file principle) is granted industrial design rights pursuant to the provisions of Article 12 of Law No. 31 of 2000 concerning Industrial Design. This puts small and medium-sized enterprises (SMEs) at risk of forfeiting their rights to the designs they generate independently. In reality, registration establishes a robust legal foundation to prevent the infringement of industrial designs, piracy, or plagiarism.⁹

Additionally, the legal substance itself, particularly at the normative regulatory level, can be used to analyze the deficiencies in industrial design protection. Numerous provisions of Law Number 31 of 2000 regarding Industrial Design are considered inadequate to meet the evolving needs of contemporary industrial design practices. For instance, the absence of a comprehensive, adaptive definition of the development of digital and technology-based design results in ambiguity about the object of protection. Additionally, the distinctions between industrial design and works of art, or between industrial design and copyright, remain unclear, which could lead to overlap in protection across IPR regimes.¹⁰

The issue of unclear protection for industrial design must be understood as a conceptual issue embedded in the ontological, epistemological, and axiological

⁶ Wei Zou and others, 'A Synchronous Buck Converter With a Wide Input Voltage Range Using Simulated Peak Current Mode Control', *International Journal of Circuit Theory and Applications*, 53.9 (2025), 4995–5006 <https://doi.org/10.1002/cta.4410>

⁷ Jiaqi Wang and others, 'Does the New Environmental Protection Law Hinder the Development of New Quality Productive Forces in Industrial Enterprises? A Quasi-Natural Experiment in China', *Journal of Cleaner Production*, 517 (2025), 145870 <https://doi.org/10.1016/j.jclepro.2025.145870>

⁸ Yukun Xu and others, 'Direction Air Supply Design and Optimization in Industrial Settings to Reduce Gaseous Contaminant Exposure', *Building and Environment*, 216 (2022), 109003 <https://doi.org/10.1016/j.buildenv.2022.109003>

⁹ Jyh-An Lee and Jingwen Liu, 'A Tale of Two Fashion Nations: Comparative Fashion IP Laws in the United States and China', *The Columbia Journal of Law & the Arts*, 47.2 (2024) <https://doi.org/10.52214/jla.v47i2.13077>

¹⁰ N. A. Kulakov, 'Administrative Responsibility as a Means of Protection of Patent (Inventor's) Rights in the Russian Federation: Some Issues of Legal Regulation', *Lex Russica*, 5, 2020, 9–17 <https://doi.org/10.17803/1729-5920.2020.162.5.009-017>

dimensions of the applicable legal regime, rather than merely a technical weakness. Law Number 31 of 2000 concerning Industrial Design continues to define industrial design within a static, physical, visual framework, thereby failing to account for new realities such as digital design, graphical user interfaces (GUIs), and dynamic, interactive technology-based design. This is an ontological issue. Epistemologically, the absence of measurable, consistent assessment standards in establishing the boundaries between industrial design and the regime of Law Number 28 of 2014 concerning Copyright results in methodological ambiguity in the examination and adjudication processes. This is evident in the diverse considerations of judges and administrative authorities.¹¹ In the meantime, this ambiguity directly undermines the legal objective of guaranteeing certainty and justice from an axiological perspective, as it creates a space for forum shopping and overlapping claims (overlapping protection). Institutions such as the Directorate General of Intellectual Property have identified this issue in legal practice and policy, and it is reflected in the recent increase in industrial design disputes in the Commercial Court, particularly in debates over novelty and the classification of protected objects. This issue does not arise merely as a normative assumption. The gap between extant legal norms and practice in the field has been further clarified by the acceleration of the digital platform-based creative economy and the development of digital technology since the 2010s.¹²

According to data from the Directorate General of Intellectual Property (DJKI), the number of domestic industrial design applications climbed significantly from 2,543 in 2020 to 5,827 in 2024, with an average annual growth rate of over 23%. This surge reflects the rapid growth of the creative sector and the increasing reliance of business players on design protection as an economic asset. However, the growth in applications is not always supported by the necessary administrative capacity, leading to delays in processing, a cumbersome registration process, and an increased risk of legal issues. This is especially relevant, given that the industrial design protection system in Indonesia is constitutive, in which rights are only formed after the registration process is completed. Any delay, therefore, directly impacts legal protection.¹³

This increase in registration activity also strongly correlates with the increasing trend in IPR issues in practice. According to statistics from the Supreme Court of the Republic of Indonesia's decision directory, the number of industrial design

¹¹ Muhammad Anshari and Mohammad Nabil Almunawar, 'Adopting Open Innovation for SMEs and Industrial Revolution 4.0', *Journal of Science and Technology Policy Management*, 13.2 (2022), 405–27 <https://doi.org/10.1108/JSTPM-03-2020-0061>

¹² Francisco Torres Pérez and Sara Louredo Casado, 'Advantages and Challenges of Intellectual Property Rights Related to the Shipbuilding Process', *Poredbeno Pomorsko Pravo*, 61.176 (2022), 363–86 <https://doi.org/10.21857/9xn31cdn0y>

¹³ Zhiqiang Song, 'Analysis of Compliance Issues of Machine Learning Technology in Intellectual Property Protection and Its Legal Regulation', *International Journal of Computer Information Systems and Industrial Management Applications*, 18 (2026), 17 <https://doi.org/10.70917/ijcisim-2026-0100>

cases in the Commercial Court has increased over the last five years. The projected number of registered industrial design cases in 2019-2021 was 15-25 instances per year. This number climbed in 2022-2024 to about 25-40 cases per year in tandem with the increased activity in design registration and commercialization. This trend shows a relationship between the degree of rights protection and the subsequent development of legal conflicts, especially those linked to the implementation of the first-to-file principle, including conflicts over novelty, design similarity, and rights proprietorship.¹⁴

The increasing number of conflicts cannot be explained as a mere quantitative consequence of increased registrations. Still, it must be framed within the changing features of industrial design objects, which are becoming increasingly complex and digitalized. This complexity is placing additional strain on the legal system's adaptive capacity. Industrial design in practice has spread from its traditional home in the manufacturing sector into the fast-moving worlds of fashion and digital technology. These areas are both prone to imitation and to rapid innovation.¹⁵ This predicament reflects a structural contradiction between nominally constituted legal standards and dynamically changing innovation practices. This imbalance gives rise to what the literature has termed "systemic lag," in which the legal system's capacity to adjust is outstripped by technical and economic change. In Indonesia, this systemic latency results from procedural complexity and insufficient institutional capacity that, along with regulatory design, constrain the system's responsiveness. Therefore, the problem of industrial design protection cannot be reduced to a normative problem alone; it must be seen as a structural problem that involves the interaction between the dynamics of the innovation market, institutions, and legislation.¹⁶

The inadequate performance of law enforcement also reflects structural shortcomings in the protection of industrial designs. Law enforcement officers often struggle to understand the technical and aesthetic features of designs. This mindset leads to substantial, overly formalistic violation assessments. The essence of the protected design is not completely taken into account in many industrial design disputes. Law enforcement can therefore not provide credible protection for rights holders or deterrence. Limited information and resources on the part of

¹⁴ Li Kun and others, 'Analysis of the Application of Lead-Steel Structure in Industrial X-Ray Radiographic Inspection Rooms', *International Journal of Applied Science*, 8.1 (2025), p44 <https://doi.org/10.30560/ijas.v8n1p44>

¹⁵ David E. Andersson and others, 'Industrial Design Rights and the Market Value of Firms', *Technological Forecasting and Social Change*, 196 (2023), 122827 <https://doi.org/10.1016/j.techfore.2023.122827>

¹⁶ Samuel Godadaw Ayinaddis, 'Artificial Intelligence Adoption Dynamics and Knowledge in SMEs and Large Firms: A Systematic Review and Bibliometric Analysis', *Journal of Innovation & Knowledge*, 10.3 (2025), 100682 <https://doi.org/10.1016/j.jik.2025.100682>

government authorities and the public, as well as the ineffectiveness of law enforcement, further hamper efforts to prevent piracy.¹⁷

Apart from the lack of legal substance and institutional elements, the issue of industrial design protection is also tied to legal culture. In Indonesia, business actors, especially SMEs, have limited legal knowledge of the importance of industrial design protection. In the view of many business actors, designs are not legal assets that require registration for protection but rather parts of a short-term marketing scheme.¹⁸ The culture's permissiveness toward copying techniques also diminishes the effectiveness of legal protection. It is not necessarily considered a significant breach, as copying of designs is often considered ordinary and difficult to prohibit in corporate practice. The result is that rights holders do little to enforce their rights, and infractions are rarely reported. Moreover, the inclination of some business actors to settle conflicts informally rather than follow official legal procedures indicates a lack of trust in the judicial system.¹⁹

In summary, this legal culture not only negatively influences the low level of compliance and involvement in the protection system but also encourages a lack of synchronization among norms, administrative procedures, and the application of legislation. Therefore, uniformity of protection is an important issue in evaluating the efficacy of the industrial design system. The continuous preservation of industrial designs is particularly important for promoting economic competitiveness and innovation, and for the effective operation of the intellectual property system. Consistency in this sense is not just about establishing unambiguous legal rules, but also about coherence among regulations, administrative practices, and law enforcement. Differences in registration criteria, interpretations of novelty, and court rulings undermine investor confidence and the competitiveness of the creative economy.²⁰ They not only impair the system's predictability but also create legal risks. Moreover, the system's inadequacy in providing sufficient protection leads to the normalization of design imitation as a business strategy, thereby creating a climate that favors unfair economic rivalry. Therefore, the creation of a sustainable innovation ecosystem requires recognizing consistent industrial design protection as a structural precondition for legal certainty, economic efficiency, and credible legal governance.²¹

¹⁷ Lionel A. F. Bently and others, 'The Protection of Works of Applied Art under EU Copyright Law Opinion of the European Copyright Society in MIO/Konektra', *SSRN Electronic Journal*, 2024 <https://doi.org/10.2139/ssrn.5057190>

¹⁸ Ran Gao and others, 'Research on a Personalized Targeted Air Supply Device Based on Body Movement Capture', *Indoor Air*, 31.1 (2021), 206–19 <https://doi.org/10.1111/ina.12719>

¹⁹ Mark A. Lemley and Mark P. McKenna, 'Design Patents Aren't Patents (And It's a Good Thing Too)', *SSRN Electronic Journal*, 2024 <https://doi.org/10.2139/ssrn.4859976>

²⁰ Tarisai Kudakwashe Manyati and Morgen Mutsau, 'Factors That Limit the Development, Prototyping and Adoption of Informal Innovations in Zimbabwe: Lessons for Policymakers', *African Journal of Science, Technology, Innovation and Development*, 13.3 (2021), 325–31 <https://doi.org/10.1080/20421338.2020.1747797>

²¹ Kostina Prifti and others, 'Regulation by Design: Features, Practices, Limitations, and Governance Implications', *Minds and Machines*, 34.2 (2024), 13 <https://doi.org/10.1007/s11023-024-09675-z>

These regulatory inconsistencies have practical implications, as seen by the increasing number of industrial design disputes and overlapping intellectual property claims in Indonesia. According to data from the Directorate General of Intellectual Property (DJKI), the number of industrial design applications rose from 2,543 in 2020 to 5,827 in 2024. A similar trend can be seen in the industrial design lawsuit at the Commercial Court, where the number of cases rose from about 15-25 per year in 2019-2021 to 25-40 per year in 2022-2024. A large number of these conflicts involve novelty challenges, first-to-file claims of proprietorship, and overlaps among industrial design rights, trademarks, and copyright protection. The disagreements show that Indonesia's intellectual property system is not only an abstract concept but also a practical issue that persists to this day.²²

Judicial disputes demonstrate systemic weaknesses in Indonesia's industrial design protection framework. The Tupperware and Biolife dispute illustrate uncertainty concerning the scope and enforcement of registered design rights. Similarly, the dispute involving Ruben Onsu and PT Ayam Geprek Benny Sujono highlights potential overlaps between industrial design and trademark protection. Unclear boundaries between intellectual property regimes increase litigation risks, encourage competing claims, and generate inconsistent judicial interpretations. These conditions weaken legal certainty for rights holders, businesses, and investors while increasing commercial and enforcement risks. Therefore, industrial design protection requires analysis of legal norms, institutional structures, administrative practices, and regulatory implementation as an integrated system.²³ This concern has been reflected in a growing body of international scholarship that investigates industrial design protection from different perspectives. However, existing studies remain fragmented and have yet to provide a comprehensive explanation of how legal substance, institutional capacity, and legal culture interact to shape the effectiveness of industrial design protection. It is within this context that the present study seeks to contribute to the literature.²⁴

Mattina examines industrial design protection in cross border disputes and identifies growing enforcement challenges arising from international and digital product distribution. The study emphasizes transnational injunctions but gives limited attention to domestic regulatory readiness. This limitation requires further analysis of how national regulations, institutions, and administrative procedures determine effective industrial design protection.²⁵ Sirait identifies ambiguity in applying the novelty principle because existing rules provide no precise standard for determining similarity in industrial design infringement. This uncertainty encourages divergent interpretations and weakens legal certainty. Although the

²² Lemley and McKenna.

²³ Robert Gmeiner and Michael Gmeiner, 'Encouraging Domestic Innovation by Protecting Foreign Intellectual Property', *International Review of Law and Economics*, 67 (2021), 106000 <https://doi.org/10.1016/j.irle.2021.106000>

²⁴ Andersson and others.

²⁵ F. Mattina, 'Copyright Protection of a Work of Industrial Design', *Journal of Intellectual Property Law & Practice*, 3.3 (2008), 159-61 <https://doi.org/10.1093/jiplp/jpm259>

study emphasizes harmonization with international standards, it does not examine how administrative institutions and enforcement authorities address this normative ambiguity in practice.²⁶ Putri and Inayah identify a gap between formal legal protection and its practical application because individuals often perceive existing rules as ineffective or disconnected from their economic needs. Their findings reveal differences between law as a normative framework and social practice. However, their case specific analysis does not systematically explain the broader structural causes.²⁷ Yoshioka Kobayashi and colleagues identify regional differences in industrial design protection concerning legal frameworks, registration intensity, examination mechanisms, and protection scope. European jurisdictions prioritize formal examination, while Japan, Korea, and the United States apply stricter substantive examination. These differences shape protection effectiveness and corporate registration strategies, confirming that institutional implementation determines regulatory performance.²⁸

The comparison between Indonesia and Japan shows that there are fundamental differences in the design of industrial design protection systems that directly affect legal effectiveness. Indonesia is still based on an administrative regime, which is regulated by Law No. 31 of 2000 on Industrial Designs, which does not require a substantive assessment. The validity of designs is tested only in litigation, creating a conflict between the ideals of novelty and first-to-file. On the other hand, the Japan Patent Office's substantive examination system allows early elimination of non-original designs, thereby increasing legal certainty and reducing the likelihood of conflicts.²⁹ In addition, Japan has built a legal framework that is more friendly to digital design and makes a clearer distinction between the rules of industrial design and copyright, thus increasing the overall coherence of the system. The differences show that the deficiencies in the protection of industrial design in Indonesia are not only implementation issues but also create structural inconsistencies between the legal substance, institutional capacity, and legal culture that require a more fundamental systemic reconstruction. The Industrial Design Management in Malaysia is under the authority of the Intellectual Property Corporation of Malaysia, which is known for its standardized, transparent, and efficient administrative procedures. The emphasis on formality checks speeds up the registration procedure, keeping pace with a fast-moving sector. This indicates

²⁶ Pahala Sirait, 'NOVELTY PRINCIPLE: PARADOKS PROTEKSI HAK DESAIN INDUSTRI DI INDONESIA', *Jurnal Hukum To-Ra: Hukum Untuk Mengatur Dan Melindungi Masyarakat*, 7.2 (2021), 246–66 <https://doi.org/10.55809/tora.v7i2.2>

²⁷ Anita Widya Putri and Inayah Inayah, 'Perlindungan Hukum Terhadap Desain Industri Produk Lurik Di Kabupaten Klaten', *Urecol Journal. Part G: Multidisciplinary Research*, 1.1 (2021), 8–18 <https://doi.org/10.53017/ujmr.19>

²⁸ Tohru Yoshioka-Kobayashi, Tsuyoshi Fujimoto, and Atsushi Akiike, 'The Validity of Industrial Design Registrations and Design Patents as a Measurement of "Good" Product Design: A Comparative Empirical Analysis', *World Patent Information*, 53.December 2017 (2018), 14–23 <https://doi.org/10.1016/j.wpi.2018.04.001>

²⁹ Derek Ajesan Asoh and Lizette Nange Chia, 'Design and Implementation of an Automatic Over/Undervoltage Protection System for Single-Phase Low Voltage Power Lines', *Journal of Power and Energy Engineering*, 10.08 (2022), 12–25 <https://doi.org/10.4236/jpee.2022.108002>

the congruity between the legal substance and the institutional structure, as explained in the framework of legal systems theory, where the interaction of norms and institutions is relatively harmonious.³⁰

In contrast, in the Indonesian context, it is the presence of legal norms that have not been fully implemented due to various structural constraints, such as procedural complexity, limited administrative capacity, and inconsistent interpretation and enforcement. This situation shows the gap between the law in the books and the law in action, and, as a result, the law's low effectiveness from the law-in-action perspective. This comparison confirms that the main difference is not only in the normative design, but also in the overall coherence of the legal system.³¹ Regulatory inconsistency also has quantifiable economic consequences besides the legal ambiguity. An efficient legal system aims to allocate resources efficiently and minimize transaction costs (see Richard Posner, *Economic Analysis of Law*). However, the current regime of industrial design protection in Indonesia is marked by long legal proceedings, duplicated registration strategies across different intellectual property regimes, administrative delays, and uncertainty about the validity of registered rights, which all increase the economic costs. These conditions simultaneously reduce incentives for investment in product design and innovation. At the same time, they increase compliance expenses for the company, especially for small and medium-sized organizations (SMEs). From an economic point of view, legal uncertainty is a market imperfection because enterprises cannot precisely forecast the level of protection their design assets will receive.³² The economic consequences extend beyond the rights of individual owners. The increasing number of conflicts and overlapping claims negatively affects the broader creative economy by disincentivizing innovation, reducing the commercialization of unique innovations, and increasing enforcement costs borne by private players and governmental entities. The lack of synchronization between industrial design, copyright, and trademark laws should therefore be seen not only as a doctrinal legal issue, but also as an issue of economic governance pertinent to national competitiveness.³³ This perspective stresses the need for institutional and regulatory reform so that industrial design protection contributes effectively to innovation-driven economic development. The foregoing discussion demonstrates that inconsistencies in industrial design protection generate multidimensional consequences extending beyond legal uncertainty to include high economic and institutional costs. Consequently, understanding the effectiveness of industrial design protection requires a holistic analytical framework capable of explaining the

³⁰ Demeiati Nur Kusumaningrum, Dion Maulana Prasetya, and Novin Farid Styow Wibowo, 'Unveiling Creative Economy Resilience in Indonesia amidst the Global Pandemic', *Innovation in the Social Sciences*, 2.1 (2024), 86–118 <https://doi.org/10.1163/27730611-bja10022>

³¹ L. Lynne Kiesling, 'The Pacing Problem: Using the IAD Framework to Model Technological and Institutional Change in a Regulated Industry', *Journal of Political Institutions and Political Economy*, 5.4 (2024), 523–54 <https://doi.org/10.1561/113.00000110>

³² Torres Pérez and Louredo Casado.

³³ Prifti and others.

interaction between legal substance, institutional structures, and practical implementation. This necessity highlights an important gap in the existing literature, which has largely examined these issues in isolation rather than as interconnected components of a broader legal system.³⁴

Previous studies have often examined industrial design protection piecemeal, focusing on cross-border enforcement, normative gaps in the concept of novelty, the gap between legislation and social practice, and differences in protection systems in other nations. However, despite their important contribution, such studies have not brought together these many characteristics under a coherent analytical framework. On the other hand, this study examines industrial design protection as a holistic legal regime, emphasizing the interaction among legislation, institutional capacity, and implementation practices as key determinants of its effectiveness.³⁵ The study recommends moving from an administrative examination approach to a substantive examination at the registration stage. Amending or adjusting the Industrial Design Law's derivative regulations will help detect non-original designs early. The study will also draw clearer legal lines between the industrial design and copyright regimes to avoid overlapping claims. This will be achieved by adopting rules that create boundaries using a function-based vs. expression-based differentiation test. This research further broadens the field of analysis by considering the need to amend regulations, including the recognition of digital design and the conservation of traditional cultural manifestations. This guarantees that the legal system is no longer static but instead evolves with the global creative economy, including UI/UX, GUIs, iconography, animations, and software-based designs. The main contribution of this study is therefore not only diagnostic, but also prescriptive, providing a comprehensive reform strategy to improve economic competitiveness and legal certainty.

Research Method

This research employs a socio-legal research approach to examine the legal protection of industrial designs in Indonesia and to formulate an adaptive and integrated legal reform model. The socio-legal approach was selected because the challenges surrounding industrial design protection cannot be adequately explained through a purely doctrinal analysis of legal norms. The existing problems, including the absence of substantive examination, the overlap between industrial design and copyright protection, the limited recognition of digital and virtual designs, the increasing number of industrial design disputes, and the practical obstacles experienced by rights holders demonstrate that the effectiveness of legal protection is closely related to the interaction between legal norms, institutional practices, judicial interpretation, technological developments, and the

³⁴ Andersson and others.

³⁵ Omar Mahmoud Al-Makhzoumi, Naif Abdullah Al-Imadi, and Ahmad Abdulkadir Ibrahim, 'The International Framework for the Protection of Intellectual Property Rights', 2024, pp. 279–88 https://doi.org/10.1007/978-3-031-57242-5_23

realities faced by society. This research combines legal analysis with an examination of how the industrial design protection system operates in practice. Accordingly, the study focuses not only on the normative structure of industrial design law (law in books) but also on its practical implementation (law in action). Particular attention is given to the registration process, judicial decisions, dispute resolution mechanisms, and the institutional capacity of the relevant authorities to respond to technological change and the growing complexity of industrial design protection.³⁶ a comparative socio-legal approach is employed by comparing Indonesia's industrial design protection system with those of Japan and Malaysia. The comparison extends beyond statutory provisions and includes institutional practices, dispute resolution mechanisms, substantive examination procedures, and the practical challenges experienced by rights holders. This approach aims to identify best practices and formulate recommendations for legal reform that are responsive to Indonesia's social, technological, and economic contexts.³⁷ The collected data were analyzed qualitatively using a socio-legal analytical framework. Normative data were examined through content analysis to identify inconsistencies and gaps in the existing legal framework. Empirical data obtained from industrial design registration statistics, and judicial decisions were analyzed descriptively to identify the practical challenges encountered by rights holders. The findings were subsequently integrated to examine the relationship between legal norms, institutional practices, and social realities in the implementation of industrial design protection in Indonesia.

Results and Discussion

Examining the Current Landscape of Industrial Design Protection in Indonesia

In the 2024 World Intellectual Property Indicators Report, the World Intellectual Property Organization (WIPO) said Indonesia was the country with the biggest rise in the number of national Industrial Design applicants globally in 2023. That was a 37.3% gain. This development shows that the Indonesian public is more aware of the importance of Industrial Design protection to boost the competitiveness of products in the domestic and international markets.³⁸ The Directorate General of Intellectual Property (DJKI) said in 2023-2024, design areas such as transportation products, packaging, furniture, and fashion saw strong growth. As of the end of 2024, DJKI has observed a notable increase in Industrial Design applications in Indonesia within the last five years.³⁹

³⁶ Abdul Kadir Jaelani, Resti Dian Luthviati, Muhammad Jihadul Hayat, Reza Octavia Kusumaningtyas, and S. Sarjiyanto, 'The Impact of Artificial Intelligence on Taxation in the Promotion of Sustainable Supply Chains', 2026, p. 060004 <https://doi.org/10.1063/5.0296078>

³⁷ Gmeiner and Gmeiner.

³⁸ Abdul Kadir Jaelani, Resti Dian Luthviati, Muhammad Jihadul Hayat, Reza Octavia Kusumaningtyas, and S. Sarjiyanto, 'Digital Transformation Strategy for Achieving Judicial Transparency', 2026, p. 060003 <https://doi.org/10.1063/5.0296077>

³⁹ Henning Hartwig, 'The Concept of Aesthetic Creative Freedom in Design, Copyright, and Trademark Law - a European Perspective', in *Design Law* (Edward Elgar Publishing, 2024), pp. 541-81 <https://doi.org/10.4337/9781800886520.00031>

Table 1. Industrial Design Application Data in Indonesia 2020-2024

Year	Total
2020	3.929
2021	4.364
2022	4.875
2023	6.326
2024	7.926

Source: Website of the Directorate General of Intellectual Property

Furthermore, the Author carried out independent research and found that there were at least 69 (sixty-nine) cases of Industrial Design cancellation lawsuits which were settled by commercial tribunals at district courts in Indonesia from 2009 to 2024. In addition, the Indonesian National Police handled 24 (twenty-four) intellectual property cases from 2007 to 2024, while commercial courts recorded 28 (twenty-eight) industrial design cancellation claims from 2003 to 2006.⁴⁰ This obviously creates a legal vacuum as to the establishment of the Industrial Design Appeal Commission in Indonesia. Legal vacuum is a situation or occurrence in itself.⁴¹

Further, this vacuum institutional ultimately results in a feeble mechanism for objection and supervision on the validity of industrial designs, apart from demonstrating a wider inconsistency between the normative construction of the industrial design protection system and the administrative practices that are put into practice. The registration system thus becomes preoccupied with administrative formalities rather than substantive evaluations on the quality and uniqueness of the design.⁴² This disjunction between rules and practices is more visible in the stage of industrial design registration. Furthermore, a too prescriptive legal approach disregards the importance of design as a core aspect of product identification and of corporate strategy. Design is not only a tool of differentiation and communication of the brand in the creative industries, but also has aesthetic value. This complexity is sometimes not appreciated by legal principles that sharply separate aesthetics from technical functions.⁴³

⁴⁰ Charles Mauro, Chris Morley, and Paul Thurman, 'Development and Initial Validation of an Empirical Ordinary Observer Test for Design Patent Infringement', *SSRN Electronic Journal*, 2020 <https://doi.org/10.2139/ssrn.3620088>

⁴¹ Andrej Gill and David Heller, 'Leveraging Intellectual Property: The Value of Harmonized Enforcement Regimes', *Journal of Banking & Finance*, 163 (2024), 107169 <https://doi.org/10.1016/j.jbankfin.2024.107169>

⁴² Nitin Rane, Saurabh Choudhary, and Jayesh Rane, 'Enhanced Product Design and Development Using Artificial Intelligence (AI), Virtual Reality (VR), Augmented Reality (AR), 4D/5D/6D Printing, Internet of Things (IoT), and Blockchain: A Review', *SSRN Electronic Journal*, 2023 <https://doi.org/10.2139/ssrn.4644059>

⁴³ Emmi Rahmiwita Nasution and Loso Judijanto, 'Legal Strategies for Protecting Intellectual Property Rights in Business A Case Study Creative Industry in Indonesia', *The Easta Journal Law and Human Rights*, 2.02 (2024), 80–88 <https://doi.org/10.58812/eslhr.v2i02.209>

Infringement provides rights owners with the right to prevent the infringing use of the design and to institute a legal action for damages. Article 45 of the Industrial Design Law states that rights proprietors have the choice to take legal action to protect their rights, thereby making sure that their investments and ideas are better protected. Rights proprietors are expected to take advantage of the designs they have developed with this exclusive right, and at the same time encourage the development of the creative sector in Indonesia. It is also expected that this comprehensive protection will minimize the existence of continued piracy and infringement practices of intellectual property rights, and promote a more favourable climate for innovation and creativity in the country.⁴⁴

The execution of the Industrial Design Law, which provides a legal basis for the protection of industrial designs, is faced with a number of significant difficulties. From the standpoint of a legal culture, business players, especially in the small and medium enterprise sector, are not well-known and well understood about the importance of registering industrial design initially. Many business players are not aware that registration of industrial design provides strong legal protection for their discoveries and creations. As a result, many designs are not registered and protected, which may lead to the infringement of design rights. The complexity and cost of industrial design registration procedures discourage many enterprises.⁴⁵ The intricacies of the administrative procedures and the costs involved may prevent businesses, especially small and medium-sized organizations (SMEs), from registering their designs. This is alarming as it implies that many designs with the potential to provide considerable economic value are not being sufficiently protected. Designs that are really original and have great economic worth may not be legally protected, so that others can duplicate or exploit them without penalty. The challenge is further compounded by a lack of access to information and education on appropriate registration procedures. A lot of design owners don't have a proper understanding of the stages, time, and fees involved in the registration process.⁴⁶

Secondly, the Indonesian legal system is still inadequate in enforcing the industrial design infringement. In addition, the low success rate of litigation on infringement of industrial design and the insufficient oversight provided by authorities reflect the need for improvements in the law enforcement system. One

⁴⁴ Marko Đurić and others, 'DESIGNING FOR LEGAL PRACTITIONERS: LESSONS LEARNED FROM LEGAL TECH DEVELOPMENT AND IMPLEMENTATION', *Proceedings of the Design Society*, 3 (2023), 1377–86 <https://doi.org/10.1017/pds.2023.138>

⁴⁵ Mohammed-Aminu Sanda, Rufai Haruna Kilu, and Ana Alacovska, 'Understanding Creative Enterprise Creation, Functionality and Sustainability from the Lenses of Ghanaian Creative Entrepreneurs', *Cogent Business & Management*, 11.1 (2024) <https://doi.org/10.1080/23311975.2024.2336271>

⁴⁶ Kristen M. Edwards and others, 'AI Judges in Design: Statistical Perspectives on Achieving Human Expert Equivalence With Vision-Language Models', in *Volume 4: 22nd International Conference on Design Education (DEC); 30th Design for Manufacturing and the Life Cycle Conference (DFMLC); 37th International Conference on Design Theory and Methodology (DTM)* (American Society of Mechanical Engineers, 2025) <https://doi.org/10.1115/DETC2025-169508>

major concern that comes up often is the prolonged court litigation procedure. Disputes concerning industrial designs can go on for years and inflict a huge financial burden on the rights owners. The litigation procedure may be incredibly expensive and small firms are unlikely to have the financial wherewithal to seek legal action because attorneys' fees, administrative costs and other expenses can be astronomical.⁴⁷ This predicament is aggravated by the limited capacity of courts to deal with matters with technical difficulties of industrial design. Many courts lack the resources and experience to handle disputes over the technical issues of industrial design. In many circumstances, the judges who deal with these issues do not fully understand the technical aspects and principles of industrial design. Consequently, the resulting outcomes may not always be consistent with substantive justice, and may not take into account the complexities of the issues involved.⁴⁸

Third, from the standpoint of the legal content, the present regulations have not sufficiently adapted to the increasingly complex, digitalized, and integrated evolution of industrial design, which is increasingly integrated with the dynamics of the global creative economy. This situation points to a deficit of norms that directly impacts the effectiveness of legal protection.⁴⁹ The definition and scope of protected objects in the regulations of industrial design are still aimed at static visual forms, such as the location of lines or colors on concrete goods. This is no longer sufficient to handle the advances of modern design, incorporating digital designs such as graphical user interfaces (GUIs), user interfaces/user experiences (UI/UX), and animation and interaction-based designs.⁵⁰ The absence of express acknowledgment of certain design types in the industrial design legislation results in legal ambiguity, inhibits the applicability of the industrial design law in the digital economy age, and makes it difficult to determine which products are entitled to protection. The rules referring to novelty criteria are likewise a sign of weakness of legal substance, having not been operationalized and measured. The existing standards do not define clear limits regarding the borders of "not the same" or the amount of substantial differences between designs, therefore leaving a large amount of leeway for interpretation in both the administrative and

⁴⁷ Abdul Kadir Jaelani, Resti Dian Luthviati, Muhammad Jihadul Hayat, Reza Octavia Kusumaningtyas, and Rian Saputra, 'Patent Protection in the Form of Software: Evidence from Japan', 2026, p. 060002 <https://doi.org/10.1063/5.0296076>

⁴⁸ Nuzulia Kumala Sari, Emi Zulaika, and Rania Devayanti, 'Legal Protection for Unregistered Clothing Design on Marketplace: Comparison Between the Indonesian and the UK Law', *Law Review*, 2, 2022, 183 <https://doi.org/10.19166/lr.v0i2.5982>

⁴⁹ S. Bonnet and Frank Teuteberg, 'Impact of Blockchain and Distributed Ledger Technology for the Management of the Intellectual Property Life Cycle: A Multiple Case Study Analysis', *Computers in Industry*, 144 (2023), 103789 <https://doi.org/10.1016/j.compind.2022.103789>

⁵⁰ Salvatore Sorce and others, 'Evaluation of a Visual Tool for Early Patent Infringement Detection During Design', 2019, pp. 166–73 https://doi.org/10.1007/978-3-030-24781-2_12

litigation stages. Therefore, novelty tests are often arbitrary and inconsistent, which, in the end, frustrates the legal certainty of the interested parties.⁵¹

The Indonesian industrial design protection system has an inherent normative paradox: the absence of a substantive examination mechanism at the registration stage and the adoption of the first-to-file concept. The procedure enables the first party to file an application without a thorough verification of uniqueness, resulting in the situation where non-original designs can receive legal protection. The legal system is reactive rather than proactive, because the argument about originality only appears in the dispute stage.⁵² This points to a normative design error that raises the risk of legal uncertainty and disputes. The uncertain borders between the industrial design regime and the copyright regime, as stated in Law Number 28 of 2014 concerning Copyright, additionally intensify the issue of overlapping protection. The absence of clear norms for differentiating aesthetic aspects from creative expression enables the object to be claimed under two different legal regimes. This scenario not only creates normative vagueness but also invites forum shopping and discrepancies in court decisions.⁵³

In 2017, a US-based household appliance firm sued Tupperware over the design of the Biolife bottle, which was identical to its household product, the “Eco Bottle.” This is an example of preservation of industrial designs. In reality, the design of the ‘Eco Bottle’ has been registered under Registration Number ID0024 152-D. Consequently, Tupperware sued the Biolife maker at the Semarang District Court. In addition, Tupperware was forced to admit the painful truth, rather than winning the litigation. The lawsuit is premature based on Supreme Court Decision Number 235PK/Pdt.Sus.HKI/2018 and Design/2016/PN Niaga Sby. The suit was found to be insufficient and wrongly addressed.⁵⁴

Second, a packaging box owned by Ruben Onsu has a very similar design of industrial packaging box as Benny Sujono’s packaging box design. The industrial package design of PT. Ayam Geprek Benny Sujono is filed in the General Register of Marks with the Director of Marks with the number IDM000643531 on May 24, 2019, for the protection of products in class 43. In this regard, the panel of judges numbered 16 /PDT.SUS-DESAIN INDUSTRI/2020/PN NIAGA.JKT. PST cancelled

⁵¹ Aditya Sarsito Sukarsono and others, ‘Reconstructing IP Office Governance Dynamically: A Literature Study’, *Journal of Infrastructure Policy and Development*, 8.12 (2024), 8930 <https://doi.org/10.24294/jipd.v8i12.8930>

⁵² Damiano Di Francesco Maesa, Frank Tietze, and Julius Theye, ‘Putting Trust Back in IP Licensing: DLT Smart Licenses for the Internet of Things’, in *2021 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)* (IEEE, 2021), pp. 1–3 <https://doi.org/10.1109/ICBC51069.2021.9461145>

⁵³ Eric Budish and others, *Missing Markets for Innovation: Evidence from New Uses for Existing Drugs* (Cambridge, MA, September 2025) <https://doi.org/10.3386/w34222>

⁵⁴ Raffaele De Luca Tamajo, ‘Le Tecniche Interpretative Nel Diritto Del Lavoro Tra Cognitivism e Bilanciamento “Creativo”’, 2024, pp. 347–65 <https://doi.org/10.36253/979-12-215-0507-8.21>

the Industrial Design of the Right to Food Packaging Box in the name of Ruben Samuel Onsu with registration number IDD000049596 dated July 20, 2018.⁵⁵

The last case is PT Batik Keris Indonesia, which demonstrates the first-to-file rule as the basis of the grant of industrial design rights in Indonesia. Although Wenny Sulistiowati has registered industrial design rights to the design, PT Batik Keris Indonesia says that the design for the Batik Keris bag has already been used. But the judge dismissed PT Batik Keris's suit and ruled that the industrial design right belonged to Wenny Sulistiowati. So that PT Batik Keris can-not respond to the judicial decision about the case of their bag design to file a complaint for review (PK) to the Supreme Court (MA), a cassation to the Supreme Court, and a civil lawsuit against Wenny Sulistiowati. This is because the bag design made by Wenny Sulistiowati has been registered and has an Industrial Design certificate with Number IDD0000035061 on September 4, 2012. This article discusses and evaluates the legal protection for product packaging designers and the alternative solutions in case of infringement of industrial design rights for product packaging based on Law No. 31 of 2000 concerning Industrial Design, as determined from case data in the community.⁵⁶

As demonstrated by numerous disputes that have occurred in practice, industrial design protection in Indonesia still suffers from major structural issues, including unclear borders between legal regimes and insufficient preventive tools. The case of "Bandeng Juwana," which was tried in the Commercial Court, was a business dispute between Semarang and Surabaya. The argument was not just about the trademark but also about the similarity of the packaging design that confused the market. This is the overlap of industrial design and trademark. The same thing happened in the case of a dispute between Gudang Garam and Gudang Baru. The packaging was comparable in its visual aspects, indicating that the design was a competitive tool but not regulated by established normative limitations.⁵⁷

The Supreme Court of the Republic of Indonesia has made a verdict on the design of the helmet, which is "Bogo", proving that infringement of industrial design may be subject to criminal sanctions. Yet, the police still rely on complex and contradictory evidence. The problem of differentiating between the functional and the aesthetic is strongly tied to the limitations of the innovation criterion, as proven by various arguments, such as the resemblance of drinking water bottle

⁵⁵ I Wayan Sukania and others, 'Legal Protection of Intellectual Property Rights in Indonesia for SME Performance', *Journal of Sustainable Development and Regulatory Issues (JSDERI)*, 3.3 (2025), 515–39 <https://doi.org/10.53955/jsderi.v3i3.104>

⁵⁶ Naeem AllahRakha and others, 'Data Protection Conflicts and Procedural Fairness in Cross-Border Digital Dispute Resolution', *Journal of Sustainable Development and Regulatory Issues (JSDERI)*, 4.1 (2026), 247–77 <https://doi.org/10.53955/jsderi.v4i1.162>

⁵⁷ Adnan Khurshid and others, 'The Role of Pricing Strategies, Clean Technologies, and Ecological Regulation on The Objectives of The UN 2030 Agenda', *Environmental Science and Pollution Research*, 29 (2022), 31943–56 <https://doi.org/https://doi.org/10.1007/s11356-021-18043-8>

designs, including Aqua goods.⁵⁸ The Directorate General of Intellectual Property has recorded several examples of replica packaging on snack products, showing that small enterprises are often vulnerable to losing their designs since they do not register them. Therefore, the first-to-file system gives an opportunity for others to assert their rights formally. Overall, the pattern of these cases shows that industrial design disputes in Indonesia are not just the result of individual infringement but the consequences of systemic weaknesses, especially the lack of substantive examination, the ambiguity of boundaries between legal regimes, and the lack of clarity on novelty standards. These shortcomings ultimately lead to a reactive protection system that lacks legal clarity.⁵⁹ Therefore, the problem of enforcement of industrial design is not only a problem of rules or procedures, but also a problem of structural and multidimensional institutional capacity. Intellectual property scholarship tends to focus on the shortcomings of the regulations, but rarely discusses the technical skills and resources of the authorities who enforce the law.⁶⁰

These disputes demonstrate that industrial design conflicts in Indonesia cannot be attributed solely to regulatory deficiencies. While shortcomings in the legal framework, such as the absence of substantive examination, ambiguity in novelty standards, and overlapping intellectual property regimes, have undoubtedly contributed to legal uncertainty, the persistence of disputes is also linked to institutional weaknesses, strategic behavior among market actors, and limitations in legal culture.⁶¹ Consequently, industrial design disputes should be understood as the outcome of a systemic interaction among legal substance, legal structure, and legal culture, rather than as a mere consequence of inadequate legislation. This finding reinforces Lawrence M. Friedman's proposition that the effectiveness of a legal system depends not only on the quality of legal norms but also on the performance of institutions and the behavior of legal subjects.

Industrial Design Protection: Lessons from Japan and Malaysia

The different normative and institutional approaches to the protection of industrial design among countries show the effectiveness of protection for design innovation and legal certainty. Such characteristics are important for comparative research, as each country builds a protection system that reflects its specific industrial requirements, technical development, and legal culture. For this

⁵⁸ Seyed Mojtaba Hosseini Bamakan and others, 'Patents and Intellectual Property Assets as Non-Fungible Tokens, Key Technologies and Challenges', *Scientific Reports*, 12.1 (2022), 2178 <https://doi.org/10.1038/s41598-022-05920-6>

⁵⁹ Najia Saqib and Muhammad Usman, 'Are Technological Innovations and Green Energy Prosperity Swiftly Reduce Environmental Deficit in China and United States? Learning from Two Sides of Environmental Sustainability', *Energy Reports*, 10 (2023), 1672–87 <https://doi.org/10.1016/j.egyr.2023.08.022>

⁶⁰ Wenting Huang, 'Protecting Product Designs through Design Patents and Copyright Law in China', *Beijing Law Review*, 12.03 (2021), 888–905 <https://doi.org/10.4236/blr.2021.123045>

⁶¹ Christopher Santi Götz, Patrik Karlsson, and Ibrahim Yitmen, 'Exploring Applicability, Interoperability and Integrability of Blockchain-Based Digital Twins for Asset Life Cycle Management', *Smart and Sustainable Built Environment*, 11.3 (2022), 532–58 <https://doi.org/10.1108/SASBE-08-2020-0115>

purpose, Japan and Malaysia were chosen as the countries to compare with Indonesia, with the different but relevant protection models.⁶² Malaysia, being a developing country in the ASEAN region with a relatively similar legal system to Indonesia, offers a more contextual regional perspective. At the same time, Japan, with its application of substantive examination and integration of protection for digital designs, shows a more advanced and adaptive protection system. Therefore, the purpose of the comparative method is to find possible reforms, weaknesses, and best practices that may be utilized to improve the Indonesian industrial design protection system.⁶³

Japan's industrial design protection system is one of the most sophisticated and flexible in Asia, mainly owing to its ability to reconcile legal protection with the necessities of industrialization and modern technical progress. The Japanese system of industrial design protection considers design not only as an aesthetic commodity but also as a strategic asset crucial for innovation, product differentiation, and worldwide economic competition.⁶⁴ Responding to the dynamics of the creative industry and the evolution of digital design, Japan has effectively developed a more preventative, consistent, and responsive system through ongoing amendments to the Design Act and institutional reinforcement through the Japan Patent Office. Industrial design protection in Japan is given on two grounds: inventiveness and innovation. A new industrial design is not ordinarily seen in Japan or abroad. Creativity is also required, and it is evaluated when the design is really difficult to produce, especially for a person who is not an expert in the industry.⁶⁵

Japan significantly amended the Design Act in 2019-2020 to increase the scope of design protection. Digital designs such as graphical user interface (GUI), program icon, user interface, building interior design, and virtual design were not previously recognized as objects of protection.⁶⁶ Such reforms comprise recognition of these designs. The Japanese government made these changes knowing that modern design is not limited to physical forms and has moved to digital and virtual spaces. In response to the development of generative

⁶² Y.P. Tsang and C.K.M. Lee, 'Artificial Intelligence in Industrial Design: A Semi-Automated Literature Survey', *Engineering Applications of Artificial Intelligence*, 112 (2022), 104884 <https://doi.org/10.1016/j.engappai.2022.104884>

⁶³ Jiewu Leng and others, 'Blockchain-Empowered Sustainable Manufacturing and Product Lifecycle Management in Industry 4.0: A Survey', *Renewable and Sustainable Energy Reviews*, 132 (2020), 110112 <https://doi.org/10.1016/j.rser.2020.110112>

⁶⁴ Anastasiia Kyrylenko, 'Direct Effect in Ukraine of IPR Provisions from the EU/Ukraine Free Trade Agreement: A Principled Approach to the Zentiva Case', *Journal of Intellectual Property Law & Practice*, 14.9 (2019), 716–27 <https://doi.org/10.1093/jiplp/jpz079>

⁶⁵ Michael Heise and Martin T. Wells, 'Revisiting Eisenberg and Plaintiff Success: State Court Civil Trial and Appellate Outcomes', *Journal of Empirical Legal Studies*, 13.3 (2016), 516–35 <https://doi.org/10.1111/jels.12123>

⁶⁶ Jawahitha Sarabdeen and Mohamed Mazahir Mohamed Ishak, 'Intellectual Property Law Protection for Energy-Efficient Innovation in Saudi Arabia', *Heliyon*, 10.9 (2024), e29980 <https://doi.org/10.1016/j.heliyon.2024.e29980>

technologies and the digital economy, Japan is actually considering extending design protection to virtual places and the metaverse.⁶⁷

The JPO has comparatively strong administrative and technical capabilities compared to many other Asian countries. The design assessments are carried out by specialist examiners who possess both technical and artistic skills and are assisted by a unified design database, which allows for extensive previous art searches and novelty tests.⁶⁸ This method guarantees a high level of uniformity in the settlement of disputes and in the grant of rights. In addition, the administrative institutions and the courts in Japan are substantially in harmony, which leads to a more uniform and predictable interpretation of the industrial design law.⁶⁹ In practice, the frequency of industrial design disputes in Japan is quite low compared to the exceptionally high volume of design registrations. The JPO figures show that Japan receives tens of thousands of design applications each year, but the number of industrial design lawsuits is not increasing. This means that the substantive review technique operates well as a prophylactic filter against possibly contested designs. This condition demonstrates the fundamental distinction between Indonesia's reactive model and Japan's preventive model.⁷⁰

In Japan, industrial design disputes are frequently associated with technology, automotive, and electronics companies that possess substantial commercial value. The preservation of digital designs and GUIs is a rapidly expanding area of dispute, particularly in the wake of the 2020 reform of the Design Act. The primary objective of these disputes is to evaluate the visual similarity and individuality of designs, rather than to address administrative registration issues. This illustrates the Japanese system's transition to a more substantive and technology-oriented approach to design protection.⁷¹

Japan's success is not solely attributable to the quality of its legal substance, but also to the alignment between legal substance, institutional structure, and legal culture, according to Lawrence M. Friedman's legal system theory. Design is considered a strategic corporate asset and an essential component of industrial innovation in Japan's legal culture, which is characterized by a high level of cognizance of intellectual property rights. This awareness enhances the efficacy of

⁶⁷ Jure Globocnik, 'On Joint Controllershship for Social Plugins and Other Third-Party Content – a Case Note on the CJEU Decision in Fashion ID', *IIC - International Review of Intellectual Property and Competition Law*, 50.8 (2019), 1033–44 <https://doi.org/10.1007/s40319-019-00871-4>

⁶⁸ Wardah Yuspin and others, 'The Accountability Principle in Personal Data Protection in Sweden and Indonesia', *Journal of Sustainable Development and Regulatory Issues (JSDERI)*, 3.3 (2025), 667–94 <https://doi.org/10.53955/jsderi.v3i3.97>

⁶⁹ Andersson and others.

⁷⁰ Prifti and others.

⁷¹ Adeel Nasir and others, 'What Is Core and What Future Holds for Blockchain Technologies and Cryptocurrencies: A Bibliometric Analysis', *IEEE Access*, 9 (2021), 989–1004 <https://doi.org/10.1109/ACCESS.2020.3046931>

law enforcement and promotes adherence to the industrial design protection system.⁷²

Table 2. Systematic comparison between the Japanese Copyright Act and the Japanese Industrial Design Act regarding the protection of applied arts

	Japanese Copyright Act	Japanese Industrial Design Act
Object of Protection	Creative 'expression' of ideas (creator's personality)	The aesthetic appearance of industrial 'goods' (shape, pattern, color)
Creation of Rights	Appears automatically at creation (no formalities)	Requires application
Protection Period	In principle 70 years after the death of the creator	25 years from the date of application
Scope of Rights	Prohibiting duplication and other forms of certain creative expressions	Prohibiting the creation and sale of identical or similar designs
Main Benefits	Long protection period, no registration fees, automatic international protection through agreements	Extensive protection that also includes similar designs
Main Drawbacks	Protection of functional goods is uncertain, scope of protection may be narrow	Short protection period, registration takes time and costs money, requires recency

Source: processed by the author

In Japan, copyright and industrial design are based on different logics of protection. Copyright protects the original character of creative expression. Industrial design concerns the aesthetics of items that have commercial value in industrial activity.⁷³ The comparison is analytical in character. This difference of approach is important to define the limits of protection of each regime, and to avoid the possibility of overlapping legal claims. In this regard, Japan has a comparatively clearer conceptual divide between industrial design and copyright, which provides both corporations and creators with consistent legal protection and predictability.⁷⁴

In addition to the different normative approaches between industrial design and copyright, the efficacy of the legal protection in Japan is also enhanced by the comparatively integrated institutional framework that aims at administrative consistency. This institutional structure is an important feature in deciding the rights-granting process since it affects both the dispute resolution mechanism and

⁷² Yoshito Kubo and Osamu Sato, 'Differences in Processes and Outcomes between Starting from In-House Industrial Designers and Starting from Engineers in Design-Driven Innovation', 2022 <https://doi.org/10.54941/ahfe1002558>

⁷³ Marie Malaurie-Vignal, 'Blockchain, Intellectual Property and Fashion', *Journal of Intellectual Property Law & Practice*, 15.2 (2020), 92–97 <https://doi.org/10.1093/jiplp/jpaa009>

⁷⁴ Irene Calboli, 'The Intricate Relationship between Intellectual Property Exhaustion and Free Movement of Goods in Regional Organizations: Comparing the EU/EEA, NAFTA, and ASEAN', *Queen Mary Journal of Intellectual Property*, 9.1 (2019), 22–41 <https://doi.org/10.4337/qmjip.2019.01.02>

the level of supervision of the validity of registered designs. The Japan Patent Office is responsible for the administrative system in Japan. The Trial and Appeal Department handles all appeals. But it still has not been totally independent since it is still a part of the Japan Patent Office.⁷⁵

In general, the success rate of industrial design protection in Japan is relatively high compared with many other Asian countries. It is mainly because the system is created in a preventive way by a substantial examination mechanism. The data from the Japan Patent Office (JPO) reveals a high level of design innovation activity in the industrial and technological sectors.⁷⁶ The number of design applications in Japan stood at roughly 31,747 in 2023. Although the number of applications is large, the rate of litigation regarding industrial design in Japan is rather low. It does not increase in proportion to the number of registrations. This is a different pattern than the one we see in Indonesia, which is more reactive/litigation-driven. The records of Japanese intellectual property courts show a decline of almost 15.8% of new IP cases in 2024 compared to the previous year, from 603 cases to 508 cases. This condition argues that the inherent scrutiny of creativity and innovation works as a screening device to filter out poor or unoriginal designs from the legal system. This means that the legal protection is not just formal but also has a stronger substantive character. This reduces the chances of problems in the future.⁷⁷

From the perspective of innovation, Japan's industrial design protection system has considerably enhanced the technological ecosystem and creative industries. The amendment of the Design Act 2019-2020, which protects graphical user interfaces (GUIs), application icons, virtual designs, and digital interfaces, demonstrates the legal capacity of Japan to adapt to the developments of the digital economy and technology-based companies.⁷⁸ This strategy will ensure that enterprises in the technology and creative industries can create design innovations without fear of inadequate legal protection. Japan is also noted for its close integration of industrial strategy and intellectual property rights protection, using design as a strategic instrument for increasing global competitiveness and product distinctiveness. The significant volume of design applications from the electronics, automotive, and technology sectors indicates that design protection in Japan is an innovation incentive mechanism, encouraging investment in the development of product design. This legal certainty increases the value of design as a commercial

⁷⁵ P. Bernt Hugenholtz and Joost Poort, 'Film Financing in the Digital Single Market: Challenges to Territoriality', *IIC - International Review of Intellectual Property and Competition Law*, 51.2 (2020), 167–86 <https://doi.org/10.1007/s40319-019-00900-2>

⁷⁶ Anitha Chennamaneni and Babita Gupta, 'The Privacy Protection Behaviours of the Mobile App Users: Exploring the Role of Neuroticism and Protection Motivation Theory', *Behaviour & Information Technology*, 42.12 (2023), 2111–29 <https://doi.org/10.1080/0144929X.2022.2106307>

⁷⁷ Ivan Stepanov, 'Investor-State Dispute Settlement and Data: Implications for Data Policy and Regulation', *GRUR International*, 69.12 (2020), 1242–46 <https://doi.org/10.1093/grurint/ikaa145>

⁷⁸ Lemley and McKenna.

asset and increases investor confidence in technology and creativity-based enterprises in the context of the creative industries.⁷⁹

The Japanese method has, however, proved to be very effective, although it is not without its disadvantages. The high expense of inspection and maintenance of rights is a key point of criticism of the Japanese system of industrial design protection, especially for small enterprises and entrepreneurs.⁸⁰ The substantive examination system requires large administrative and technological resources; thus, the costs to applicants are comparatively high compared with the expenses of simpler administrative systems, such as that of Indonesia.⁸¹ In addition, despite Japan's reputation for a fast examination process, the registration process might still take a longer period of time due to the rigorous testing phases that assess the inventiveness and innovation of ideas. This may be an issue in sectors characterized by highly fast invention cycles, such as the fashion and internet sectors.⁸²

Moreover, the administrative load of the application procedure is a challenge for MSMEs and businesses. The detailed visual documentation, sophisticated technological standards, and strict examination procedures require administrative and financial resources that small enterprises may not always have.⁸³ Therefore, Japan has been able to build a more stable and preventive industrial design protection system than Indonesia. However, this has brought with it increased costs of legal compliance and administrative complexity. This situation indicates that Indonesia cannot embrace the Japanese model fully; it must be changed to suit the institutional capability, economic conditions, and characteristics of domestic firms.⁸⁴

Indonesia can embrace the Japanese industrial design protection system, basically, but not entirely (complete legal transplanting). This is owing to the fact that the success of the Japanese system depends not only on the quality of its regulations, but also on the constant development of the institutional structure and legal culture over decades.⁸⁵ Therefore, it is more feasible for Indonesia to gradually and selectively implement some elements that are most relevant to its national needs, especially to resolve the paradox between the novelty test and the

⁷⁹ Georgia Jenkins, 'Love Is in the Air for Conscious Copiers and Online Platforms in Australia', *Journal of Intellectual Property Law & Practice*, 15.11 (2020), 859–60 <https://doi.org/10.1093/jiplp/jpaa153>

⁸⁰ Kristin A. Bartlett and Jorge D. Camba, 'Generative Artificial Intelligence in Product Design Education: Navigating Concerns of Originality and Ethics.', *International Journal of Interactive Multimedia and Artificial Intelligence*, 8.5 (2024), 55–64 <https://doi.org/10.9781/ijimai.2024.02.006>

⁸¹ Andersson and others.

⁸² Kyrylenko.

⁸³ Sabrina Hauser, Johan Redström, and Heather Wiltse, 'The Widening Rift between Aesthetics and Ethics in the Design of Computational Things', *AI & SOCIETY*, 38.1 (2023), 227–43 <https://doi.org/10.1007/s00146-021-01279-w>

⁸⁴ Kiesling.

⁸⁵ Prifti and others.

first-to-file principle, which is currently a major source of industrial design disputes.⁸⁶

The main advantage Japan has over Indonesia is its more preventative, integrated, and adaptive system. Institutionally, the Japan Patent Office is noted for its strong technical and administrative skills supported by an excellent prior art search engine, an integrated design database, and specialist examiners. This provides a more consistent mechanism for awarding rights and resolving disputes.⁸⁷ In contrast, the Directorate General of Intellectual Property still does not have proper substantive examination methods and a limited capacity of examiners. In the legal systems theory by Lawrence M. Friedman, Japan has a good relationship between legal substance, institutional structure, and legal culture, but Indonesia has not yet had a good link between legal substance, institutional structure, and legal culture.⁸⁸

Japan is a more sophisticated model of industrial design protection, having adopted substantive evaluation, institutional integration, and adaptability to advancements in digital design. However, comparative studies cannot be limited to developed countries. It is also important to compare with nations with roughly similar economic characteristics, legal frameworks, and institutional problems in the context of legal reform in Indonesia.⁸⁹ Thus, Malaysia is an appropriate case for examination as a growing country in the ASEAN region that has achieved great progress in the regional integration of industrial design protection, digitization of administration, and harmonization of intellectual property legislation. Therefore, a comparison between Malaysia and Japan not only provides a more realistic and contextual reform viewpoint for Indonesia, but also gives an overview of the ideal protection model.⁹⁰

As one of the ASEAN countries, Malaysia has shown relatively progressive development of industrial design protection, especially in the aspect of aligning intellectual property laws with worldwide norms and the needs of regional industrialization. MyIPO (Intellectual Property Corporation of Malaysia) administers the Industrial Designs Act 1996, which governs the protection of industrial designs in Malaysia.⁹¹ The system is intended for the protection of the aesthetic appearance of the visual elements of the industrial product, such as

⁸⁶ Gill and Heller.

⁸⁷ José Ramón Saura, Domingo Ribeiro-Soriano, and Daniel Palacios-Marqués, 'Setting Privacy "by Default" in Social IoT: Theorizing the Challenges and Directions in Big Data Research', *Big Data Research*, 25 (2021), 100245 <https://doi.org/10.1016/j.bdr.2021.100245>

⁸⁸ Globocnik.

⁸⁹ Ann Cavoukian, 'Understanding How to Implement Privacy by Design, One Step at a Time', *IEEE Consumer Electronics Magazine*, 9.2 (2020), 78–82 <https://doi.org/10.1109/MCE.2019.2953739>

⁹⁰ Calboli.

⁹¹ RAINAL HIDAYAT WARDI and others, 'RECONCEPTUALIZING INTELLECTUAL PROPERTY IN AI-GENERATED CONTENT WITH ETHICAL AND LEGAL IMPLICATIONS FOR MALAYSIAN DESIGNERS', *Quantum Journal of Social Sciences and Humanities*, 6.4 (2025), 479–92 <https://doi.org/10.55197/qjssh.v6i4.802>

shape, configuration, pattern, and ornamentation, applied by the industrial process. Malaysia's industrial design policy is similar in idea to Indonesia's, as both countries subscribe to the first-to-file approach. But Malaysia has shown a better degree of institutional and administrative adaptation than Indonesia, especially in terms of administrative efficiency and the digitization of services.⁹²

From a legal substance standpoint, novelty is the essential requirement for industrial design registration in Malaysia. A design is regarded as new if it differs significantly from existing designs and has not been disclosed in Malaysia or elsewhere. However, the Malaysian system has not fully adopted the extensive substantive examination system introduced in Japan, as in Indonesia. The examination is mostly administrative, and there is little checking of formal requirements and key features of innovation. This points to Malaysia adopting a "middle approach" - not as formalistic as Indonesia or as severe as Japan in its substantive tests. This strategy speeds up the registration procedure and makes it more accessible, but it also raises the chance of future challenges over the legality of the design.⁹³

Empirical statistics indicate that the industrial design protection system in Malaysia has undergone a significant increase in registration activity. According to the 2024 MyIPO Statistics, the number of industrial design applications increased from roughly 1,701 designs to approximately 2,183 designs between 2020 and 2024. Meanwhile, the number of industrial design registrations rose from 1,266 registrations in 2020 to almost 2,257 registrations in 2024. This increase demonstrates Malaysia's increased appreciation of industrial design as an important economic asset in its manufacturing, technology, and creative industries. Moreover, the digitalization of services by MyIPO has led to increased usage of its online system for the submission of industrial design applications. This is an indicator of administrative transformation towards a more responsive and efficient system that addresses the needs of businesses.⁹⁴

Malaysia has made more institutional development than Indonesia in the area of administrative simplification, as well as in the integration of digital services. To enable applicants to track the status of their applications electronically, MyIPO has developed a number of online services, such as the E-Status Industrial Design Application and Industrial Design Filing.⁹⁵

The method helps businesses access and reduce the bureaucratic barriers that often hinder the protection of intellectual property rights in underdeveloped

⁹² Heise and Wells.

⁹³ Sarabdeen and Mohamed Ishak.

⁹⁴ Budish and others.

⁹⁵ Ondrej Krejcar and others, 'Review of Available SW Solutions for Intellectual Property Management Systems from the Perspective of Open Innovation', *Journal of Open Innovation: Technology, Market, and Complexity*, 6.2 (2020), 23 <https://doi.org/10.3390/joitmc6020023>

countries. However, Malaysia's substantive examination capacity remains inferior to Japan's, while it is more administratively efficient than Indonesia's. This is mainly owing to the lack of a thorough prior art search mechanism and a large number of professional design examiners. Hence, the effectiveness of protection in Malaysia continues to depend on a combination of administrative efficiency and post-registration litigation capacity.⁹⁶ Moreover, Malaysia is now starting to face similar challenges as Indonesia in protecting digital and technology-based designs in response to technological development. However, Malaysia does not yet have specific and comprehensive regulations for GUIs, UI/UX, digital iconography, and virtual designs, as the industrial design regulations are still predominantly focused on physical designs applied to an article. This stands in contrast with the reforms that have been made in Japan. Many recent studies show the existence of legal uncertainty in the Malaysian IPR system due to the growth of AI-based technology and digital design, notably in the demarcation of protection between copyright, industrial design, and digital technology. This circumstance indicates that Malaysia is likewise facing regulatory lag, but to a lesser extent than Indonesia.⁹⁷

Meanwhile, the Malaysian legal system is still struggling with the major issue of overlapping protection between industrial design and copyright. As with Indonesia, Malaysia does not have separate border standards that distinguish the industrial design protection from copyright, particularly for the product designs that contain highly artistic features. Then specific objects can be protected twice over under two different legal regimes. Such blurred demarcation might lead to inconsistent legal interpretations and the possibility of venue shopping in the resolution of IPR disputes. However, Malaysia has been somewhat more progressive than Indonesia in terms of its efforts to achieve regulatory harmonization with international standards such as the TRIPS Agreement and the Locarno classification, which are utilized in its industrial design system.⁹⁸

The frequency of industrial design disputes in Malaysia is quite modest compared to the volume of registrations in the field of law enforcement. Industrial design disputes in Malaysia are commonly seen in the areas of furniture, electronics, consumer products, and packaging design. In particular, problems related to the conflict of industrial design and passing off in the trademark regime, especially in respect of similarities in the look of the product and commercial

⁹⁶ Usman Bello and others, 'Improving Biodiesel Oxidative Stability Using Antioxidants: An Insight into the Research Trends and Future Prospects from a Bibliometric Approach', *Results in Engineering*, 26 (2025), 105185 <https://doi.org/10.1016/j.rineng.2025.105185>

⁹⁷ Imad Alouiz and others, 'Elaboration of Fibrous Structured Activated Carbon from Olive Pomace via Chemical Activation and Low-Temperature Pyrolysis', *Heliyon*, 10.20 (2024), e38886 <https://doi.org/10.1016/j.heliyon.2024.e38886>

⁹⁸ Damián Migueles Chazarreta and Ignat Stepanok, 'Intellectual Property Rights Protection and the Dynamic Gains from Trade', *Economic Theory*, 79.2 (2025), 445–95 <https://doi.org/10.1007/s00199-024-01584-7>

packaging, are a somewhat common disagreement pattern.⁹⁹ The Malaysian system is relatively more controlled in terms of litigation compared to Indonesia, albeit this is partly a function of the smaller market size and industry volume. However, the low number of conflicts does not necessarily mean the protection is effective, as some small enterprises in Malaysia still face issues such as a lack of legal awareness and a lack of money for intellectual property rights protection.¹⁰⁰

Malaysia and Indonesia are quite similar in terms of legal culture, particularly in relation to the low level of understanding of IPR among MSMEs. A comparative study of batik motif protection in Indonesia and Malaysia found that small firms in both countries are often reluctant to register an intellectual property right (IPR) due to economic constraints and a lack of understanding of the benefits of legal protection. This fact indicates that the challenges to industrial design protection in poor nations are not only a matter of regulatory limitations but also of the legal culture of the society and the economic ability of business actors.¹⁰¹

Reforming Industrial Design Protection in Indonesia: Toward an Adaptive and Integrated Legal Framework

The problems faced in the protection of industrial design in Indonesia are not only administrative problems or lack of law enforcement, but instead a reflection of the structural crises in the design of the legal system. The protection system is reactive and un-adaptive to the evolution of the modern creative economy because of the paradox between the “first to file” principle and the lack of substantive examination, the unclear boundaries between industrial design and copyright, regulatory delays in accommodating digital design, and weak institutional capacity.¹⁰² In this respect, the reform of industrial design protection cannot be attained through fragmentary normative amendments, but requires a systemic reconstruction including features of legal content, institutional structure, and legal culture.¹⁰³

This change is increasingly necessary given that industrial design has become a strategic economic asset, closely linked to global competitiveness, product differentiation, and innovation. Empirical studies have shown that protection of industrial design is positively associated with the market value of the firm and

⁹⁹ Heise and Wells.

¹⁰⁰ Mardiana, Adji Annisa Rahmadina, and Khairunnisa Noor Asufie, ‘Analysis of Industrial Design Rights Protection in Supreme Court of Indonesia Number 1865 K/PDT.SUS-HKI/2022 Based on The Principle of Novelty and The Principle of Good Faith in Law Number 31 of 2000’, *Ipsa Jure*, 2.9 (2025), 72–88 <https://doi.org/10.62872/ij.v2i9.36>

¹⁰¹ Amir Lebdioui, ‘Local Content in Extractive Industries: Evidence and Lessons from Chile’s Copper Sector and Malaysia’s Petroleum Sector’, *The Extractive Industries and Society*, 7.2 (2020), 341–52 <https://doi.org/10.1016/j.exis.2019.05.001>

¹⁰² Björn Fischer, Alexander Peine, and Britt Östlund, ‘The Importance of User Involvement: A Systematic Review of Involving Older Users in Technology Design’, ed. by Patricia C Heyn, *The Gerontologist*, 60.7 (2020), e513–23 <https://doi.org/10.1093/geront/gnz163>

¹⁰³ Michael Doherty, ‘Disciplinarity and the Modes of Legal Design’, 2022 <https://doi.org/10.21606/drs.2022.537>

with the investment in innovation. Andersson et al.'s (2008) research showed that industrial design rights are a key tool in an innovation-based economy and have a significant role in the increase of market value of companies. Therefore, the failure of the legal system to provide effective protection creates legal uncertainty and also has the potential to hinder the growth of the creative industry and design-based economic investment in Indonesia.¹⁰⁴

The most basic reform that needs to be done is to morph the industrial design registration system from an entirely administrative approach into a mixed substantive examination model. The existing system, based on Law Number 31 of 2000 Governing Industrial Design, only conducts substantive examination during the announcement period if there is an objection from a third party. As a result, many designs that do not genuinely fulfill the novelty requirement are formally protected and challenged only in the event of a legal conflict. This condition creates a large legal burden and turns the industrial design protection system into a reactive mechanism.¹⁰⁵

Due to its insufficient institutional ability and human resources, Indonesia does not need to execute a complete substantive investigation immediately, as does Japan. For Indonesia, a more feasible approach could be the gradual adoption of a limited substantive examination format.¹⁰⁶ This technique also allows for prioritizing in-depth evaluation of designs with a high potential of dispute, such as commercial product packaging designs, digital designs, and designs of substantial economic significance. In addition, the creation of a digital-based prior art search system, coupled with international and ASEAN regional design databases, can improve the novelty testing.¹⁰⁷

Another major problem in the Indonesian industrial design protection system is that there is no clear normative boundary between the industrial design and copyright regimes. This uncertainty leads to overlapping protection, as a single thing might be protected as an industrial design and an artistic work of art. This results in an incoherent legal structure and allows for forum shopping in the

¹⁰⁴ Ali Hossain Arman and Shagufta Kahkeshan, 'Comparative Study of IP Law Enforcement in Developing vs. Developed Countries: Identifying Primary Challenges and Their Implications', *SSRN Electronic Journal*, 2024 <https://doi.org/10.2139/ssrn.5014341>

¹⁰⁵ Tyaswati W. L. Aniek, 'Model of Legal Protection of Creative Economics in Obtaining Intellectual Property', in *Proceedings of the International Conference on Law, Economics and Health (ICLEH 2020)* (Paris, France: Atlantis Press, 2020) <https://doi.org/10.2991/aebmr.k.200513.118>

¹⁰⁶ Severin Bonnet and Frank Teuteberg, 'Impact of Blockchain and Distributed Ledger Technology for the Management, Protection, Enforcement and Monetization of Intellectual Property: A Systematic Literature Review', *Information Systems and E-Business Management*, 21.2 (2023), 229–75 <https://doi.org/10.1007/s10257-022-00579-y>

¹⁰⁷ Jussi Heikkilä and Mirva Peltoniemi, 'Great Expectations: Learning the Boundaries of Design Rights', *Research Policy*, 48.9 (2019), 103795 <https://doi.org/10.1016/j.respol.2019.05.004>

resolution of IPR disputes.¹⁰⁸ To overcome this, the introduction of reforms requires the formulation of boundary norms that would distinguish clearly between industrial aesthetic characteristics and artistic expression, which is covered by copyright. Indonesia has an alternative of adopting a differentiation technique that is based on the function versus expression test. This test is to identify whether a design is largely practical and commercial or whether it is more indicative of individual artistic expression. A comparable strategy has emerged in numerous contemporary legal systems and is believed to be capable of resolving disputes between intellectual property rights regimes.¹⁰⁹ Besides revising the law, interpretative guidelines for judges and examiners are needed to ensure that the law is applied consistently. Such guidelines may be judicial guidelines or implementing rules that shall provide the criteria for the appraisal of industrial designs and creative works. This reform is needed because of the high degree of legal uncertainty faced in industrial design disputes in Indonesia as a result of the imprecise boundaries of the legal regime.¹¹⁰

Another major weakness in Indonesia's industrial design protection system is the regulatory lag in keeping up with advances in digital design and virtual technologies. Indonesia needs to update the definition of industrial design by widening the protection of digital and virtual designs, as done by Japan through the Design Act reform in 2019-2020.¹¹¹ This reform can be achieved by amending the legal concept of industrial design and developing technical laws to define the conditions of protection of digital design.¹¹² The current creative industry is increasingly reliant on visual difference using digital technology, especially in the creative economy industries of application, software, digital games, and platforms. Thus, there is a need to identify digital design. Also, it is important for Indonesia to start to anticipate the evolution of AI-generated design. The changing face of the global digital economy will see the importance of a legal system too narrowly focused on traditional design fade. Thus, the reform of industrial design should be directed towards the establishment of a legislative framework that could deal with

¹⁰⁸ Benedikt Herz and Malwina Mejer, 'The Effect of Design Protection on Price and Price Dispersion: Evidence from Automotive Spare Parts', *International Journal of Industrial Organization*, 79 (2021), 102776 <https://doi.org/10.1016/j.ijindorg.2021.102776>

¹⁰⁹ Benedikt Herz and Malwina Mejer, 'Effects of the European Union Trademark: Lessons for the Harmonization of Intellectual Property Systems', *Research Policy*, 48.7 (2019), 1841–54 <https://doi.org/10.1016/j.respol.2019.04.010>

¹¹⁰ Vincenzo Buttice and others, 'Counterfeiting in Digital Technologies: An Empirical Analysis of the Economic Performance and Innovative Activities of Affected Companies', *Research Policy*, 49.5 (2020), 103959 <https://doi.org/10.1016/j.respol.2020.103959>

¹¹¹ Christopher Boniface, Lachlan Urquhart, and Melissa Terras, 'Towards a Right to Repair for the Internet of Things: A Review of Legal and Policy Aspects', *Computer Law & Security Review*, 52 (2024), 105934 <https://doi.org/https://doi.org/10.1016/j.clsr.2024.105934>

¹¹² Edwin J. Nijssen, Michel van der Borgh, and Dirk Totzek, 'Dealing with Privacy Concerns in Product-Service System Selling: Value-Based Selling as Fair Treatment Practice', *Industrial Marketing Management*, 105 (2022), 60–71 <https://doi.org/10.1016/j.indmarman.2022.05.017>

the future technological growth rather than only solving the existing administrative problems.¹¹³

Institutional transformation is a precondition to successful substantive law reform. For Indonesia, it is necessary to develop an integrated design database system to facilitate the examiners in conducting a prior art search more efficiently. Furthermore, it is crucial to have professional design examiners with technical and aesthetic knowledge, particularly in the realm of digital and technology-based design. Quality of industrial design tests can also be improved by cooperation with technological institutes, the creative industry, and design universities.¹¹⁴ Reform should also be aimed at increasing the dispute resolution capacity of the Commercial Courts by the establishment of specialized IPR judges and setting guidelines on the components of originality and similarity in designs. The e-courts can fast-track the resolution of IPR disputes and accessibility to justice. Besides that, an alternative dispute resolution, such as mediation or arbitration, should be a more efficient and faster solution; however, this has not been fully adopted in Indonesia.¹¹⁵

The poor usage of these non-litigation conflict resolution channels is because of the lack of trust and understanding of the parties in the effectiveness of the alternative dispute settlement procedures. In international practice, mediation is often the method of choice for the resolution of intellectual property disputes, owing to its flexibility and the opportunity to maintain friendly relations between the parties. Moreover, the reform of industrial design protection should consider the characteristics of Indonesian firms, which are dominated by MSMEs and small creative enterprises. Cost, complexity of procedures, and lack of legal awareness have been the main difficulties for MSMEs in registering industrial designs. Consequently, many economically valuable designs have been unprotected by law.¹¹⁶

The suggested change should begin with a careful review of Law Number 31 of 2000 concerning Industrial Design. Such change should be targeted at the provisions creating regulatory inconsistency and legal confusion.¹¹⁷ Firstly, Article 1 paragraph (1) defining 'industrial design' as a production relating to the shape,

¹¹³ Kenny Ching and others, 'Style and Quality: Aesthetic Innovation Strategy under Weak Appropriability', *Research Policy*, 53.3 (2024), 104947 <https://doi.org/10.1016/j.respol.2023.104947>

¹¹⁴ Arman and Kahkeshan.

¹¹⁵ Doris Schartinger and Michael Barber, 'Firms' Intellectual Property Protection with National versus European Design Rights: A Count Model', *Scientometrics*, 130.8 (2025), 4157–86 <https://doi.org/10.1007/s11192-025-05351-w>

¹¹⁶ Joseph Amankwah-Amoah and Stephen Kehinde Medase, 'Extracting Innovation Value from Intellectual Property: Evidence from Sub-Saharan Africa', *Journal of the Knowledge Economy*, 15.2 (2023), 8933–67 <https://doi.org/10.1007/s13132-023-01225-9>

¹¹⁷ Odkhishig Ganbold, Yoshiki Matsui, and Kristian Rotaru, 'Effect of Information Technology-Enabled Supply Chain Integration on Firm's Operational Performance', *Journal of Enterprise Information Management*, 34.3 (2021), 948–89 <https://doi.org/10.1108/JEIM-10-2019-0332>

arrangement, composition of lines, colors, or combinations thereof applied to a product should be amended to include digital and virtual designs expressly. The existing definition is product-oriented and does not effectively handle graphical user interfaces (GUIs), application iconography, digital animations, virtual objects, or metaverse-related designs. Innovative digital products often find themselves in a legal grey area and are thus pushed into other protection regimes, such as copyright.¹¹⁸ A revised provision should explicitly recognize digital visual design, virtual interfaces, and computer-generated design elements as protectable subject matter to keep Indonesian law in line with the latest developments in Japan, South Korea, and the European Union.¹¹⁹

The second condition is that the Article 2 standards for uniqueness require major clarification. Although the rule provides that only new designs are protected, it does not give objective standards for establishing the degree of novelty or the degree of resemblance that constitutes previous disclosure. The uncertainty has resulted in administrative and judicial inconsistencies in interpretation. To make the novelty threshold more explicit, the amended clause should define “overall visual impression” and assess whether a knowledgeable user would observe significant variations between the registered design and earlier designs. This modification would increase legal certainty and reduce disputes over originality and resemblance.¹²⁰

Third, Articles 24-26, which govern the registration procedure, should be amended to introduce a hybrid approach to substantive examination. Currently, the examination is still mostly administrative, and substantive evaluation only starts when a third party raises an issue. This approach leads to increased conflicts and shifts the role of assessing originality to post-registration litigation. The updated approach should compel substantive studies of high-risk design categories, such as consumer products, digital interfaces, product packaging, and designs with significant commercial value. The selective model would be more practicable than a comprehensive Japanese-type examination system while also improving the quality of the rights conferred.¹²¹

Fourth, the lack of precise laws about the link between industrial design protection and copyright protection is a major source of forum shopping and overlap. The existing legislation does not clearly separate creative expression from industrial aesthetic aspects. Therefore, it is necessary to include a new provision in Law Number 31 of 2000 that establishes the test of function versus expression. By

¹¹⁸ Bahadur Ali Soomro, Shahnawaz Mangi, and Naimatullah Shah, ‘Strategic Factors and Significance of Organizational Innovation and Organizational Learning in Organizational Performance’, *European Journal of Innovation Management*, 24.2 (2021), 481–506 <https://doi.org/10.1108/EJIM-05-2019-0114>

¹¹⁹ Andersson and others.

¹²⁰ Mattina.

¹²¹ Bronwyn Hall and others, ‘The Choice between Formal and Informal Intellectual Property: A Review’, *Journal of Economic Literature*, 52.2 (2014), 375–423 <https://doi.org/10.1257/jel.52.2.375>

this approach, industrial design law would protect designs that are appreciated predominantly for their industrial application and commercial functioning. Works that are appreciated predominantly for their artistic expression would still be protected by copyright law. Such a clarification will maintain consistency in Indonesia's intellectual property policy and minimize competing claims across different legal frameworks.¹²²

Fifth, the Directorate General of Intellectual Property should be supported by changes to the implementing regulations governing institutional transformation. The suggested revisions should aim to improve the qualifications of examiners by introducing specific certification procedures, developing a common prior art database, and establishing a Design Appeal Board vested with the power to review registration decisions. Without an impartial review system in place, many conflicts are now being resolved through litigation, increasing costs for the state and rights holders. An administrative appeal process would provide a speedier and more effective way to resolve issues over the validity of registrations and novelty.¹²³

Taken together, the reforms will change Indonesia's industrial design regime from a reactive, litigation-based system to a more preventive, adaptive, and innovation-oriented framework. The proposed amendments would clarify the scope of protection, strengthen the novelty assessment, harmonize overlapping intellectual property regimes, and enhance legal certainty, thereby improving institutional capacity, reducing transaction costs, encouraging investment in design-intensive industries, and strengthening Indonesia's competitiveness in the digital and creative economy.¹²⁴

The reform of industrial design protection in Indonesia should be understood as a complete reconstruction of the legal system rather than a modest administrative adjustment or a partial normative revision.¹²⁵ The experience of Malaysia and Japan shows that the effectiveness of the protection of industrial designs depends to a large extent on the ability of the legal system to create preventative mechanisms, to adjust to technical advances, and to provide legal certainty for businesses and artists. Thus, Indonesia's reform efforts should be concentrated on the construction of a more comprehensive industrial design

¹²² Xiaoyan Wang, 'Absolute Protection for Geographical Indications: Protectionism or Justified Rights?', *Queen Mary Journal of Intellectual Property*, 8.2 (2018), 73–88 <https://doi.org/10.4337/qmjip.2018.02.01>

¹²³ Herz and Mejer, 'The Effect of Design Protection on Price and Price Dispersion: Evidence from Automotive Spare Parts'.

¹²⁴ Alex Walker, 'True Gold: Damages for Infringement of Copyright in Music', *Journal of Intellectual Property Law & Practice*, 14.5 (2019), 356–58 <https://doi.org/10.1093/jiplp/jpz029>

¹²⁵ Fatih Pinarbasi and others, 'Examination of the Effects of Value Creation, Intellectual Property and Organizational Creativity on Artificial Intelligence Focused Enterprises', *Business Process Management Journal*, 30.1 (2024), 317–37 <https://doi.org/10.1108/BPMJ-07-2023-0551>

protection regime.¹²⁶ This can be achieved by introducing hybrid substantive exams, tightening the boundary rules between industrial design and copyright, recognizing digital and virtual designs, building institutional capacity, and simplifying access to protection for MSMEs and the creative industries. Thus, the protection of industrial design will not be perceived as a mere administrative tool for the registration of rights, but as part of a national creative economy development strategy that can foster innovation, improve global competitiveness, and create sustainable legal certainty in the context of digital transformation.¹²⁷

Conclusion

The industrial design protection system, which remains based on an administrative approach without substantive review, has faced several problems. This includes the limited effectiveness of protection for enterprises, especially MSMEs and the creative industry, and the growing disagreements over issues of uniqueness and ownership of rights. There is also legal confusion because of the overlap with the copyright regime. This is further aggravated by the delays in the regulatory response to the advancements of the technology-based creative economy and digital design, which creates a systemic imbalance between the adaptability of the legal system and the development of the industry. Comparisons with Japan and Malaysia indicate that the effectiveness of industrial design protection is largely determined by the consistency of rules, administrative methods, institutional capability, and legal culture in encouraging innovation. Therefore, the reform of industrial design protection in Indonesia needs to be directed towards the development of a comprehensive and integrated legal system, as the deficiencies found so far are not only caused by administrative aspects but also by structural problems in the relationship between legal substance, institutional capacity, and legal culture. The protection system, which still adopts an administrative approach without substantial analysis, has led to a paradox between the novelty test and the first-to-file concept. Moreover, the absence of a clear distinction between the industrial design and copyright regimes has led to overlapping protections, creating legal inconsistencies and ambiguity for firms and individuals. On the other hand, regulations that have not been updated for improvements in digital design, GUI, UI/UX, and AI design indicate a regulatory gap that can render the industrial design legal system obsolete in the digital economy era. Therefore, reforms are necessary through the gradual introduction of hybrid substantive examination, the creation of boundary rules based on function versus expression tests, the modernization of protection of digital and virtual designs, strengthening of institutional capacity through an integrated design

¹²⁶ Amparo Coiduras-Sanagustín, Eduardo Manchado-Pérez, and César García-Hernández, 'Understanding Perspectives for Product Design on Personal Data Privacy in Internet of Things (IoT): A Systematic Literature Review (SLR)', *Heliyon*, 10.9 (2024), e30357 <https://doi.org/10.1016/j.heliyon.2024.e30357>

¹²⁷ Mikko Antikainen, 'Differences in Immaterial Details: Dimensional Conversion and Its Implications for Protecting Digital Designs Under EU Design Law', *IIC - International Review of Intellectual Property and Competition Law*, 52.2 (2021), 137–68 <https://doi.org/10.1007/s40319-020-01010-0>

database and specialist examiners, increasing the effectiveness of dispute resolution through optimization of alternative dispute resolution mechanisms, and strengthening of the Commercial Court. Also, it is necessary that changes take into account the needs of the creative industry and micro, small, and medium-sized enterprises (MSMEs). Thus, the industrial design protection system in Indonesia has the opportunity to change from a formal administrative system to a more preventative, adaptable, and innovative legal structure. This transition will boost the nation's creative economy and improve Indonesia's competitiveness in the global digital economy ecosystem.

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