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IPR as Investment in the Digital Economy: Where Do the Qualification Boundaries Lie?

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Original Article

Abstract

The transformation of the digital economy has shifted the sources of economic value from tangible to intangible assets, including Intellectual Property Rights (IPR), while raising questions about their status as investments under international investment law. This study aims to examine the legal status of IPR as an intangible asset within the evolving concept of investment and to identify the legal parameters for its qualification as an investment in the digital economy. The study employs a normative legal research methodology using statutory, international treaty, conceptual, case, and comparative approaches. The findings demonstrate that IPR may qualify as an investment based on its economic value, exclusive legal rights, and potential for commercial exploitation; however, the mere existence of IPR does not automatically satisfy the applicable investment-qualification criteria. Its qualification depends primarily on the definition of investment under the relevant International Investment Agreements (IIAs) and on specific characteristics, including contribution, ownership or control, duration, risk, commercial purpose, and an economic or territorial connection. The study further highlights the need for greater coherence between IPR and international investment regimes to strengthen legal certainty and provide an appropriate legal framework for protecting intangible assets in the digital economy.

Keywords: *Intellectual Property Rights, Investment, Digital Economy, International Investment Law*

Abstrak

Transformasi ekonomi digital telah menggeser sumber nilai ekonomi dari aset berwujud menuju aset tidak berwujud, termasuk Hak Kekayaan Intelektual (HKI), sekaligus menimbulkan persoalan mengenai kedudukannya sebagai investasi dalam hukum investasi internasional. Penelitian ini bertujuan menganalisis kedudukan HKI sebagai aset tidak berwujud dalam perkembangan konsep investasi dan mengidentifikasi parameter kualifikasinya dalam ekonomi digital. Penelitian menggunakan metode yuridis normatif dengan pendekatan peraturan perundang-undangan, perjanjian internasional, konseptual, kasus, dan komparatif. Hasil penelitian menunjukkan bahwa HKI dapat berkedudukan sebagai investasi karena memiliki nilai ekonomi, hak eksklusif, dan potensi eksploitasi komersial, tetapi tidak secara otomatis memenuhi kualifikasi tersebut. Kualifikasi bergantung pada definisi investasi dalam International Investasi Agreements dan karakteristik kontribusi, kepemilikan atau penguasaan, durasi, risiko, tujuan komersial, serta keterkaitan ekonomi-teritorial. Penelitian menegaskan perlunya harmonisasi rezim HKI dan investasi untuk meningkatkan kepastian hukum dalam ekonomi digital.

Kata kunci: *HKI, Investasi, Ekonomi Digital, Hukum Investasi Internasional*

1. INTRODUCTION

The advancement of digital technology has transformed the global economic structure from one primarily dependent on the ownership and control of physical goods into one increasingly driven by data, knowledge, creativity, technology, and rights associated with intangible assets. This transformation is reflected in the rapid growth of digital platforms, blockchain technology, non-fungible tokens (NFTs), crypto assets, cloud-based services, and metaverse ecosystems. These developments have not only created new forms of transactions but have also reshaped the ways in which economic value is created, owned, transferred, and commercially exploited. An asset need not have a physical form to possess economic value; digital accounts, content, software, brands, technologies, licenses, specific datasets, and intellectual property rights (IPR) can all constitute sources of revenue and commercial activity.[1] Developments in international trade in knowledge further demonstrate that digital technology has transformed the ways in which IPR is licensed, managed, and commercialized across national borders.

These developments have significant implications for international investment law. International Investment Agreements (IIAs) generally adopt broad, asset-based definitions of investment, thereby extending investment protection to various types of assets, including intangible assets.[2] Such definitions serve a fundamental function by determining which assets fall within the scope of treaty protection and by delineating the obligations of states toward foreign investors. The United Nations Conference on Trade and Development (UNCTAD) indicates that older-generation IIAs employing open-ended definitions of investment may encompass both physical and non-physical assets, including intellectual property rights. However, digital investments without a physical presence in the host state, such as standalone applications and websites, are not necessarily covered automatically by these investment definitions.

IPR occupies a strategic position as an intangible asset because it possesses economic value, can be transferred or licensed, and is capable of commercial exploitation.[3] Accordingly, IPR functions not only as a mechanism for securing legal exclusivity but also as an intangible asset that may constitute part of cross-border investment activities. The World Trade Organization (WTO) notes that cross-border transactions involving knowledge are increasingly conducted through IPR licensing and that digitalization has further integrated IPR into international economic activities. Nevertheless, economic value and intangible character alone do not automatically qualify every form of IPR as an investment entitled to protection under international

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1 Rosario Girasa, "Intellectual Property Rights and AI," in *Artificial Intelligence as a Disruptive Technology*, by Rosario Girasa (Springer Nature Switzerland, 2025), https://doi.org/10.1007/978-3-032-02827-3_4.

2 Georgios Dimitropoulos, "Investment Law and the Digital Economy," *Journal of International Dispute Settlement* 16, no. 3 (2025): idaf020, https://doi.org/10.1093/jnlids/idaf020.

3 Lailatul Farochah et al., "Intellectual Property Rights as Fiduciary Collateral in Indonesian Legal Framework," *Academia Open* 11, no. 1 (2026): 1–15, https://doi.org/10.21070/acopen.11.2026.13164.

investment law. Such qualification remains contingent on the wording of the applicable IIA and on the specific legal and economic characteristics of the investment concerned.

Previous research indicates that although the relationship between digitalization and IPR has been extensively examined, much of the existing literature focuses on IPR protection rather than on the specific question of whether IPR may qualify as an investment under international investment law. For example, Urbanisasi and Tobing examined copyright and trademark protection in Indonesia's digital economy and found that the effectiveness of IPR protection is challenged by technological limitations, low levels of IPR literacy, limited digital forensic capabilities, platform responses, and cross-border jurisdictional complexities. These findings demonstrate that digitalization has transformed the landscape of IPR protection; however, the analysis remains primarily concerned with the effectiveness of rights enforcement rather than with the legal status of IPR under the international investment law regime.[4]

Janardana, Dantes, and Adnyani expanded this discussion by emphasizing the need for IPR law to adapt to the Fourth Industrial Revolution, including the emergence of NFTs and other forms of digital assets.[5] Similarly, Suprapto and Rohman demonstrated that the digital creative economy has shifted economic value from physical products toward ideas, creativity, and innovation, while also highlighting the asymmetrical relationship between creators and global digital platforms. These studies reinforce the proposition that intellectual assets are increasingly important sources of economic value in the digital economy.[6] Nevertheless, they do not fully explain the legal consequences of this transformation for the concept and qualification of investment under IIAs.

Other studies have also highlighted the limitations of national legal frameworks in addressing digital assets. Suprapto and Rohman, in their study of digital asset inheritance, demonstrate that although digital assets can conceptually be classified as intangible property, they raise complex issues concerning access, transfer, platform terms of service, jurisdiction, and data protection.[7] Putra, Setiawan, and Rae show that digital innovations, particularly software-based inventions and algorithms, have exposed a gap between existing patent standards and rapid technological

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4 Urbanisasi Urbanisasi and Daniel Reynaldi L. Tobing, "Perlindungan Hukum Hak Kekayaan Intelektual Dalam Ekonomi Digital: Tantangan Penegakan Hak Cipta Dan Merek Di Indonesia: Penelitian," *Jurnal Pengabdian Masyarakat Dan Riset Pendidikan* 4, no. 2 (2025): 11899–906, https://doi.org/10.31004/jerkin.v4i2.3745.

5 I. Gusti Ngurah Kesa Janardana et al., "Strategi Perlindungan Hukum Terhadap Hak Kekayaan Intelektual Di Era Digitalisasi Dan Industri 4.0," *Al-Zayn: Jurnal Ilmu Sosial & Hukum* 4, no. 1 (2026): 5922–39, https://doi.org/10.61104/alz.v4i1.4308.

6 Ronald Frediriek Rivelino Suprapto and Adi Nur Rohman, "Hak Kekayaan Intelektual Sebagai Instrumen Daya Saing Ekonomi Kreatif Di Era Digital Dan Platform Global," *Bhayangkara Law Review* 2, no. 2 (2025): 187–205, https://doi.org/10.31599/bhalrev.v2i2.5032.

7 Suprapto and Rohman, "Hak Kekayaan Intelektual Sebagai Instrumen Daya Saing Ekonomi Kreatif Di Era Digital Dan Platform Global."

developments.[8] Lazuardi and Gunawan further emphasize that the proliferation of the internet, big data, and digital technologies has increased the risk of unauthorized use of intellectual property, thereby requiring the adaptation of intellectual property rights (IPR) protection mechanisms.[9]

At the international level, the Organisation for Economic Co-operation and Development (OECD) has demonstrated that IPR is increasingly incorporated into International Investment Agreements (IIAs), while certain investment instruments provide protection that extends beyond the minimum standards established under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). The United Nations Conference on Trade and Development (UNCTAD) has likewise emphasized the need for the international investment regime to adapt to the ongoing digital transformation. Nevertheless, the existing literature has not yet systematically integrated three interconnected dimensions: the nature of IPR as an intangible asset, the parameters for qualifying an investment under international investment law, and the evolving nature of investment resulting from digitalization. In investment law practice, determining whether an asset constitutes an investment does not necessarily depend solely on whether it falls within the textual definition of investment under the applicable treaty. In certain cases, arbitral tribunals have also considered objective characteristics of the investment, including duration, contribution, risk, and its contribution to economic development, although the application and weight assigned to these criteria have varied across cases.

A significant research gap therefore remains concerning the integration of IPR as an intangible asset, the transformation of the digital economy, and the legal parameters governing investment qualification under international investment law. This study addresses this gap by developing a framework for determining when IPR may qualify as an investment through an integrated analysis of investment definitions contained in IIAs, the legal and economic characteristics of IPR, and objective investment parameters developed in international investment law and arbitral practice. Rather than focusing solely on whether IPR possesses economic value, the study examines the circumstances and conditions under which IPR may qualify for protection as an investment within the digital economy.

Accordingly, this study aims to analyze the status of IPR as an intangible asset within the evolving concept of investment under international investment law by examining the relationship between the economic characteristics of IPR, the expansion of the digital economy, and the construction of investment definitions in IIAs. More

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[8] Mierza Darsya Putra et al., "Tinjauan Perlindungan Hukum Terhadap Inovasi Teknologi Digital Dalam Kerangka Hak Paten Di Indonesia Yang Berkepastian Hukum," *Jurnal Hukum Lex Generalis* 6, no. 4 (2025): 1–20, https://doi.org/10.56370/jhlg.v6i4.2113.

[9] Afried Lazuardi and Tri Gunawan, "Perlindungan Hukum Terhadap Hak Kekayaan Intelektual Di Era Revolusi Industri 4.0," *Sciential: Journal of Social Sciences and International Relations* 1, no. 1 (2024): 1–20.

specifically, the study seeks to identify and analyze the parameters for qualifying IPR as an investment in the digital economy, with particular attention to economic value, ownership or control of rights, contribution of capital or other resources, duration, risk, commercial purpose, and other relevant characteristics. These parameters are examined in light of applicable international investment instruments and the evolving practice of international investment dispute settlement.

2. RESEARCH METHODOLOGY

This study employs a normative legal research methodology to examine the status of Intellectual Property Rights (IPR) as intangible assets within the evolving concept of investment and to develop parameters for determining when IPR may qualify as an investment under international investment law in the digital economy. The study applies five complementary approaches: the statutory, treaty, conceptual, case, and comparative approaches. The statutory approach examines the legal framework governing IPR and intangible assets under national law. The treaty approach analyzes the definition and scope of investment under International Investment Agreements (IIAs), particularly provisions that expressly or implicitly encompass intellectual property rights. The conceptual approach distinguishes IPR as a legal right, an economic asset, and a potential investment. The case approach examines judicial decisions and investment arbitration awards addressing intangible assets, licensing arrangements, technology, and economic rights. The comparative approach compares the formulation of investment definitions and the treatment of IPR across selected IIAs.

The legal materials examined in this study consist of primary and secondary legal sources, including national legislation and regulations, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), the ICSID Convention, IIAs, judicial decisions, investment arbitration awards, and relevant academic literature. Legal materials were collected through library research and documentary analysis. The materials were analyzed using qualitative juridical, interpretive, systematic, and prescriptive methods, supported by grammatical, systematic, teleological, and contextual interpretation. The qualification of IPR as an investment is assessed based on several interrelated parameters, including the identifiability and legal recognition of the right, economic value, ownership or control, contribution of capital or other resources, duration, risk, commercial purpose, and consistency with the applicable treaty language. These parameters are treated as contextual rather than universal criteria, recognizing that the qualification of IPR as an investment ultimately depends on the specific wording of the applicable treaty and the circumstances of the investment concerned.

3. RESEARCH RESULT AND DISCUSSION

3.1. The Status of Intellectual Property Rights as Intangible Assets in the Evolution of Investment Concepts

Intangibility does not constitute a conceptual obstacle to classifying an asset as an investment. Indeed, the evolution of international investment law reflects a gradual shift from a paradigm centered on physical property toward one that protects economic rights and interests capable of generating benefits for investors. The relevant inquiry therefore focuses not on whether an investment has a physical form, but on whether it constitutes an asset or economic interest that can be owned or controlled and falls within the scope of the applicable treaty (Ranjan, 2009). The United Nations Conference on Trade and Development (UNCTAD) has consistently identified intellectual property rights (IPR) as a common component of asset-based definitions of investment. Conceptually, there is a strong basis for including IPR within the category of assets capable of qualifying as investments, although such qualification ultimately depends on the specific language and requirements of the applicable treaty.

The economic characteristics of IPR further support this conceptualization. Patents, copyrights, trademarks, industrial designs, and other forms of intellectual property confer exclusive rights that enable their holders to derive economic benefits through use, transfer, licensing, or other forms of commercial exploitation.[10] Their economic value lies not in the physical medium in which a work or technology may be embodied, but in the exclusive legal rights and the capacity to control their use and exploitation.[11] The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) reflects this characteristic at the international level. For example, Article 10 provides protection for computer programs as literary works, while Article 27 establishes the availability of patent protection for inventions that satisfy the applicable criteria. Article 28 further recognizes the rights of patent holders to transfer their rights and to enter into licensing agreements. These provisions demonstrate that international law has long recognized that economic value may reside in intangible exclusive rights.

In the digital economy, software, technological innovations, digital content, platform-based brands, digital designs, and other forms of innovation protected by IPR are increasingly important components of value creation. Investment therefore does not necessarily take the form of constructing factories or acquiring land, machinery, or other physical infrastructure. It may also involve technology development, licensing, technology transfer, software commercialization, or the exploitation of IPR in cross-border business activities. Digitalization, therefore, does not eliminate the relevance of the concept of investment; rather, it broadens the range of economic interests that may

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[10] Ligia Isabel Beltrán-Urvina et al., "Intellectual Property as a Strategy for Business Development," *Laws* 14, no. 2 (2025): 18, https://doi.org/10.3390/laws14020018.

[11] Sriono Sriono et al., "Intellectual Property Rights as Credit Guarantee in Banking: A Legal Review in Indonesia," *Social Sciences & Humanities Open* 14 (2026): 103271, https://doi.org/10.1016/j.ssaho.2026.103271.

need to be considered when determining whether an asset or activity falls within the scope of investment protection.

A conceptual distinction must nevertheless be maintained among digital assets, IPR, and investments. Digital assets constitute a broad category encompassing objects, rights, or interests that exist or are used within digital environments. IPR, by contrast, constitutes a specific category of exclusive legal rights arising from the protection afforded to particular works, inventions, commercial identifiers, designs, or other intellectual creations. Investment is a distinct legal category that determines whether a particular asset, right, or economic interest qualifies for protection under a specific investment instrument. Accordingly, the mere existence of a digital asset does not automatically make it IPR, nor does the existence of economically valuable IPR automatically establish its status as an investment. The latter determination depends on the applicable definition of investment, the status of the investor, the relevant connection with the host state, and other requirements established by the applicable International Investment Agreement (IIA).

The 2018 Indonesia–Singapore Bilateral Investment Treaty (BIT), which entered into force on March 9, 2021, adopts an asset-based definition of investment. The UNCTAD Investment Policy Hub identifies the agreement as employing such an approach and recognizes it as an instrument containing provisions concerning the scope and definition of investment. This treaty structure is significant because it demonstrates that Indonesia operates within an investment treaty framework that recognizes an asset-based approach to defining investment. Consequently, the treatment of IPR as intangible assets is not merely a theoretical issue; it also has practical implications for determining the potential scope of investment protection involving Indonesia.

This perspective is consistent with prior studies that position Intellectual Property Rights (IPR) as increasingly strategic economic assets in the digital economy. Research by Janardana et al., Suprapto and Rohman, and Urbanisasi and Tobing indicates that digitalization has increased the economic significance of intellectual creations while simultaneously generating new challenges for IPR protection and enforcement.[12] These studies support the broader observation that technological transformation has shifted economic activity away from reliance on physical assets toward knowledge, creativity, technology, and exclusive legal rights. However, previous research has primarily examined IPR protection, legal enforcement, the creative economy, or the legal status of digital assets under domestic law. By contrast, this study examines IPR in direct relation to the construction and application of the concept of "investment" under international investment law.

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[12] Janardana et al., "Strategi Perlindungan Hukum Terhadap Hak Kekayaan Intelektual Di Era Digitalisasi Dan Industri 4.0"; Suprapto and Rohman, "Hak Kekayaan Intelektual Sebagai Instrumen Daya Saing Ekonomi Kreatif Di Era Digital Dan Platform Global"; Urbanisasi and Tobing, "Perlindungan Hukum Hak Kekayaan Intelektual Dalam Ekonomi Digital."

Whereas earlier research has generally focused on how IPR should be protected in response to digitalization, this study addresses the point at which IPR may move conceptually beyond its status as an intellectual property right and qualify as an investment entitled to protection under International Investment Agreements (IIAs). This shift in analytical focus demonstrates that economic value alone is insufficient to establish investment status. Rather, qualification depends on the interaction among the legal character of IPR as an exclusive right, its economic character as an asset capable of generating benefits, and the normative construction of investment under the applicable treaty.

The status of IPR under international investment law can be understood through three interconnected layers. First, IPR constitutes an exclusive legal right whose creation, scope, and protection are governed primarily by the intellectual property regime. Second, IPR may function as an intangible asset when the right possesses economic value and can be owned, controlled, transferred, licensed, or commercially exploited. Third, IPR may qualify as an investment when the relevant asset satisfies the definition and applicable requirements established under the relevant IIA. These three layers should not be conflated because each rests on a distinct legal basis and produces different legal consequences.

The concept of investment has progressively moved beyond a paradigm centered on tangible assets, creating greater normative space for intangible assets, including IPR. The development of asset-based definitions in IIAs provides an important foundation for this expansion, while digitalization has further strengthened the role of IPR as a source of economic value and a component of cross-border commercial activities. Nevertheless, recognition of IPR as an asset capable of constituting an investment does not mean that every form of IPR automatically qualifies for investment protection. Investment status remains treaty-specific and must be determined through an analysis of the applicable definition of investment, the characteristics of the relevant asset, the investor–state relationship, and any additional requirements established by the relevant instrument. IPR therefore occupies an important intersection between intellectual property protection and international investment law. Although its economic value enables IPR to function as an investment asset, its status as an investment ultimately depends on legal qualification under the applicable treaty rather than arising automatically from its intangible character.

3.2. Parameters for Qualifying IPR as an Investment under International Investment Law in the Digital Economy Era

Recognition of IPR within investment treaties provides the starting point for determining whether IPR may qualify as an investment. There is no single, universally applicable definition of investment across all International Investment Agreements

(IIAs); rather, the scope of investment protection is determined by the specific treaty that forms the legal basis of a claim. UNCTAD notes that asset-based definitions are widely used in IIAs and may encompass a broad range of assets, although some modern treaties also establish specific characteristics or limitations applicable to investments. This approach is illustrated by the 2018 Indonesia–Singapore BIT, which adopts an asset-based definition of investment. Although the treaty does not provide an exhaustive list of protected assets, it establishes additional characteristics that an investment must satisfy. The agreement entered into force on March 9, 2021. This framework has an important methodological implication: the inclusion of IPR within the category of protected assets should not be understood as establishing that every form of IPR automatically constitutes an investment. Treaty coverage is a threshold requirement, rather than the conclusion of the qualification analysis.

Legal ownership or control and economic value constitute central elements in the relationship between IPR and investment.[13] Unlike tangible property, the economic value of IPR derives primarily from the exclusive rights to use, transfer, license, or otherwise exploit a work, technology, trademark, design, or innovation.[14] Accordingly, the relevant object of analysis is not necessarily the digital object itself, but rather the legal rights attached to that object and the economic interests subject to the investor's ownership or control. In the digital economy, software, technology patents, digital content, trademarks used on e-commerce platforms, and know-how may possess economic value when the associated rights enable their holders to generate revenue or obtain other commercial benefits. This approach is broadly consistent with Indonesian investment law, which adopts a broad conception of capital, although domestic law provides contextual support rather than determining the scope of protection under an international treaty. UNCTAD observes that national investment laws interact with multiple regulatory regimes, including those governing IPR, while cross-border investment at the international level remains embedded within a network of bilateral and regional investment agreements.

Contribution, duration, and risk frequently arise in assessments of whether an investment exists, particularly in cases applying the Salini approach. Arbitral practice, however, demonstrates that these characteristics do not necessarily operate as rigid and universally applicable requirements irrespective of the applicable treaty text. In decisions addressing these criteria, tribunals have identified the contribution of resources, a certain duration, and the assumption of risk as relevant objective elements. The expectation of profit may also be understood in connection with risk because investors commit resources with the expectation of obtaining a return. The application of the Salini criteria

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[13] Gabriel M. Lentner, "The Protection of Intellectual Property Rights through International Investment Agreements," *Korean Arbitration Review* 9 (2018): 30–37.

[14] Sofyan Arief et al., "The Principle of Patent as an Intangible Asset as Collateral Objects in Indonesia," *Indonesia Law Reform Journal* 5, no. 1 (2025): 94–111, https://doi.org/10.22219/ilrej.v5i1.40092.

has not been entirely uniform across arbitral practice, and contribution to the host state's economic development has not consistently been treated as a constitutive element of an investment.

When these parameters are applied to IPR, the relevant contribution need not necessarily consist of monetary capital. It may instead involve patents, technology licenses, software, know-how, trademarks, or other intellectual assets deployed in connection with an economic activity. In Orascom v. Algeria, for example, materials available through the ICSID database indicate that the contributions considered by the tribunal included money, assets, services, know-how, and personnel. This consideration is particularly relevant in the digital economy, where investment frequently involves technology development, knowledge transfer, licensing arrangements, and the provision of digital systems rather than the construction of physical facilities. The intangible nature of IPR therefore does not eliminate the contribution element; instead, it may transform the form of the contribution from conventional physical or financial capital into intellectual, technological, and knowledge-based capital.

Duration should also be understood in functional rather than merely formal terms. It refers not simply to the statutory period of patent or copyright protection, but to the period during which the IPR is involved in an economic activity relevant to the investment. A one-time transfer or sale of IPR, without an ongoing investment relationship, is conceptually different from a patent that is licensed over an extended period for use in production within the host state. Similarly, risk cannot be inferred solely from the existence of IPR. Investment risk arises when an investor faces the possibility of loss or uncertainty concerning resources committed to an economic activity, for example, as a result of unsuccessful technology commercialization, market fluctuations, regulatory changes, IPR infringement, or technological obsolescence that diminishes the value of an innovation. The realization of actual economic value is therefore not necessarily a prerequisite; rather, the relevant consideration is whether the investment activity exposes the investor to economic risk.

IPR held by a foreign investor must also have a relevant connection to economic activities in the host state. This issue is particularly important in the digital economy, where technology enables IPR to be exploited without the physical relocation of assets. Investments may involve software licensing, the use of patented technology in production, the operation of brands through e-commerce platforms, or the transfer of know-how. UNCTAD has identified the digital economy as an environment that presents distinctive challenges for international investment policy and law, including the need to identify digital investments and ensure that they contribute to economic development. Accordingly, the physical location of servers or data-storage facilities does not, by itself, determine the location of an investment. More significant is the

relationship among the rights held by the investor, the economic activities undertaken, and the jurisdiction of the host state.

Worowirasmi positions IPR as an intangible asset relevant to foreign direct investment,[15] while Hutauruk, Disemadi, Sudirman, and Tan examine the relationship between copyright law and investment in Indonesia.[16] Research on IPR protection in the digital era likewise emphasizes the growing economic significance of technology, digital content, and innovation, together with the challenges associated with their enforcement. The critical distinction, however, is that although IPR may possess economic value and may form part of an investment, its qualification as an investment requires the satisfaction of specific legal and economic conditions. The analysis should therefore extend beyond an asset-based inquiry—"What is the asset?"—to a qualification-based inquiry—"Under what circumstances does the asset constitute an investment?"

Against this background, this study develops four interconnected parameters for analyzing whether IPR qualifies as an investment. First, the treaty-based test determines whether the relevant IPR falls within the scope of the definition of investment under the applicable treaty. Second, the legal-right and economic-value test examines whether the investor holds or controls valid IPR and whether those rights possess economic value. Third, the investment-characteristics test considers the contribution of resources, duration, risk, and profit-seeking purpose, to the extent that these characteristics are relevant under the applicable treaty and arbitral practice. Fourth, the territorial-economic nexus test examines whether there is a sufficient connection between the investment and the host state. These four parameters are not intended to constitute a universal checklist to be applied mechanically. Rather, they provide an analytical framework whose application must be determined in light of the text, structure, and requirements of the IIA forming the legal basis for protection.

In the digital economy, IPR may qualify as an investment not merely because it possesses economic value, but because that value is embodied in legally protected rights that are owned or controlled by the investor, deployed or utilized in an economic activity exhibiting the characteristics of an investment, and covered by the applicable investment instrument.[17] Digitalization does not eliminate the traditional parameters associated with

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[15] Farah Widyanti Worowirasmi, "Tinjauan Peranan Hak Kekayaan Intelektual Sebagai Intangible Asset Dalam Rangka Foreign Direct Investment," *Syntax Literate: Jurnal Ilmiah Indonesia* 7, no. 10 (2022), https://www.jurnal.syntaxliterate.co.id/index.php/syntax-literate/article/view/13124.

[16] Rufinus Hotmaulana Hutauruk et al., "Judicial Approaches to Copyright Infringement and Compensation in Indonesia's Digital Era," *Vifada Assumption Journal of Law* 4, no. 2 (2026): 42–57, https://doi.org/10.70184/095fje80.

[17] Rodrigo Polanco, "The Impact of Digitalization on International Investment Law: Are Investment Treaties Analogue or Digital?," *German Law Journal* 24, no. 3 (2023): 574–88, https://doi.org/10.1017/glj.2023.30; Pratyush Nath Upreti, "The Role of National and International Intellectual Property Law and Policy in Reconceptualising the Definition of Investment," *IIC - International Review of Intellectual Property and Competition Law* 52, no. 2 (2021): 103–36, https://doi.org/10.1007/s40319-020-01009-7.

investment—such as contribution, duration, risk, and commercial purpose—but instead changes the ways in which those parameters may manifest. Capital may take the form of technology and know-how; contributions may consist of intellectual assets; risks may arise from technological uncertainty and fluctuations in digital markets; and investment activities may occur without the physical transfer of assets across borders. Accordingly, the principal challenge for international investment law in the digital era is not simply whether IPR can constitute an investment, but rather how to identify the boundaries and conditions under which particular IPR satisfies the requirements for investment qualification under the applicable treaty.

4. CONCLUSION

The intangible nature of Intellectual Property Rights (IPR) does not preclude their qualification as investments, because economic value may be embodied in exclusive rights that can be owned, controlled, licensed, and commercially exploited. However, IPR does not automatically constitute an investment; its qualification depends on the applicable investment treaty and the relevant characteristics of the investment. Four key parameters are particularly relevant: the treaty-based test; the legal-right and economic-value test; the investment-characteristics test, encompassing contribution, duration, risk, and commercial purpose; and the territorial-economic nexus test.

This framework helps clarify the conceptual boundaries between IPR protection and cross-border investment while contributing to greater legal certainty in the digital economy. The study is subject to a limitation arising from its normative approach, which does not empirically examine the implementation of these parameters in practice. Policymakers should therefore consider greater coherence between IPR and investment regulations and provide clearer treatment of digital assets within International Investment Agreements (IIAs). Future research should empirically examine the proposed parameters through investment arbitration cases and conduct broader comparative analyses across different IIAs.

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