



From Industrialization to Innovation Justice: The Evolution of Indonesia's Patent Law (1989–2024) and the Quest for a Post-TRIPS Legal Order

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Abstract

Background: This study examines Indonesia's patent law evolution (1989–2024) through philosophical, structural, and epistemic dimensions within the post-TRIPS discourse. It reveals a dialectical rather than linear trajectory, integrating these three dimensions in a single analytical framework rarely applied in Indonesian patent law scholarship. It investigates six dimensions of legal evolution: philosophical assumptions, patent system redesign, historical and political causes, normative implications for justice, epistemic justification, and the future of post-TRIPS lawmaking. The study further reveals that each reform phase responded to tensions from its predecessor, creating a non-linear pattern of institutional learning.

Objective: This study critically analyzes the transformation of Indonesia's patent law (1989–2024) across five legislative phases, examining whether the evolution follows a linear or dialectical pattern. It proposes a multi-dimensional framework combining worldview analysis, institutional design, and epistemic reflection for understanding patent law reform in developing countries.

Methods: The analysis uses a doctrinal-historical and hermeneutic approach to trace five legislative stages: from the industrial developmentalism of Law No. 6 (1989) to the sustainability-oriented transformation of Law No. 65 (2024), each reflecting a shift from efficiency and control to equity and adaptability.

Results: The study finds that Indonesia's patent regime evolves dialectically rather than linearly—each reform emerging from contradictions between global market demands, constitutional values, and domestic innovation capacity.

Conclusion: The latest version shifts from TRIPS compliance to innovation justice, but introduces new challenges like digital complexity and regulatory overload. It suggests future reforms focus on reflexive learning to adapt to emerging technologies and social changes.

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INTRODUCTION

The history of patent law in Indonesia is not merely a sequence of statutory amendments but a philosophical experiment in defining how law mediates between innovation, power, and justice. In socio-legal theory, legal institutions are understood as normative responses to shifting social objectives rather than neutral technical frameworks (Waspiah et al., 2023). Socio-legal theory further posits that law does not merely regulate behavior but constitutes the very categories through which social actors understand rights, obligations, and justice — a perspective

that renders patent law not a neutral technical field but a contested political terrain (Chaturvedi, 2018; Sharma, 2023; Zonato & Kortabarría, 2024). This Article, therefore, examines how successive legislative reforms in Indonesia reflect shifting normative paradigms rather than incremental technical refinements, with the central aim of identifying the philosophical logic underpinning each legislative phase and its implications for innovation governance.

This understanding aligns with the view that patent law functions as a strategic legal instrument through which states negotiate control over knowledge, technology, and economic power, a role that becomes particularly visible when patent regulation is used to align innovation governance with broader national development agendas (Kamil, 2020). This dynamic is directly relevant to the present study, which situates Indonesia's patent law reforms within this broader theoretical framework to analyze how each legislative phase embodies a distinct conception of the state's role in mediating between private innovation rights and collective developmental objectives.

Since the first Patent Act of 1989, the Indonesian patent system has undergone successive reforms that reveal deep changes in worldview, institutional design, and normative aspiration. Patent law, in this sense, operates as a regulatory instrument that reflects how a state conceptualizes development, ownership, and public welfare at a given historical moment, while simultaneously being shaped by external legal pressures arising from international trade and intellectual property commitments (Barizah, 2014). Technology transfer considerations further illustrate how patent regulation embodies policy choices about balancing national interests and private rights (Sujatmiko et al., 2025).

Each legislative phase thus answers a different conception of what the patent system is meant to achieve, for whom it exists, and how success is defined. Despite the growing body of literature on Indonesian intellectual property law, however, existing scholarship has largely focused on doctrinal compliance or sector-specific analysis, leaving underexplored the question of how and why the normative worldview embedded in patent law has fundamentally transformed across legislative generations. This paper addresses that gap by treating Indonesia's patent law evolution as a site of competing philosophical commitments rather than a linear trajectory of legal improvement.

The 1989 law emerged from a developmentalist worldview rooted in state-led industrialization. Its epistemic foundation treated technology as an extension of national sovereignty, where innovation served collective economic planning rather than individual accumulation. The developmental-state theory of intellectual property views patents as tools to reduce technological dependence and strengthen domestic industrial capacity (Rizkia & Fardiansyah, 2022). Within this logic, Indonesian patent regulation positioned private patent rights as subordinate to state authority, limiting commercialization in favor of centralized control over technological asset. In the Indonesian context, patent regulation during this period was closely associated with state control over technology flows and limited emphasis on private commercialization.

Within this framework, the central concern of patent regulation was not the maximization of private inventiveness but the strategic control of technology. Intellectual property protection was therefore subordinated to national economic objectives and industrial output rather than private monopoly rights (Waspiah et al., 2023). Success was measured primarily through industrial growth and economic control (Gervais & Peter, 2025; Mills, 2024; OseiTutu, 2016; Vasiliou, 2025).

By contrast, the 2001 reform embodied a liberal-international paradigm following Indonesia's ratification of the WTO and the TRIPS Agreement. Patents were redefined as exclusive private rights, embedding individual ownership within global market rationality. In international intellectual property theory, the TRIPS regime conceptualizes patents as economic assets designed to secure investment certainty and promote market efficiency, a conceptual shift that entered Indonesian patent law largely through compliance-driven legal harmonization rather than endogenous policy debate (Arbakmis et al., 2024; Barizah, 2014). This shift mirrors broader TRIPS-driven harmonization processes that reposition patents as tradable assets within global innovation markets (Mbaye & Sardjono, 2022).

This approach rests on the assumption that innovation flourishes through competition and strong protection of private rights. The shift represents a movement from state-centered developmental logic toward legal individualism aligned with global trade norms (Arief et al., 2025). Rather than an organic evolution, this reform constituted a paradigmatic rupture in the telos of Indonesian patent law.

The 2016 amendment attempted reconciliation between international obligations and domestic social needs. It reflected an epistemology of legal adaptation that sought to balance exclusivity with public interest. The 2016 amendment shifted the focus from maximizing patent exclusivity to balancing exclusivity with public interest. This shift aimed to reconcile the need for patent protection with broader social goals, such as ensuring access to essential medicines. The reform introduced mechanisms like compulsory licensing and government use to prevent monopolization, reflecting a move towards a more balanced, welfare-oriented approach to patent law. Adaptive intellectual property theory emphasizes flexibility through mechanisms such as compulsory licensing and government use to prevent excessive monopolization, mechanisms that were explicitly incorporated into Indonesian patent law as corrective tools against rigid exclusivity regimes.

Such mechanisms are particularly significant in the pharmaceutical sector, where patent exclusivity directly affects access to essential medicines, and where developing countries face structural vulnerabilities in balancing patent protection with public health imperatives (Rujitoningtyas & Wala, 2025). These mechanisms introduced procedural space within a rigid international framework. From a welfare-oriented perspective, patent law is expected to serve broader social objectives rather than function solely as an instrument of private accumulation (Rizkia & Fardiansyah, 2022). State responsibility in ensuring public access thus becomes a key evaluative criterion of patent effectiveness (Rahayu et al., 2022). In this phase, regulatory success was redefined not in terms of industrial efficiency but in the system's capacity to adjust to competing normative demands.

The 2024 reform signals a deeper ontological transformation in Indonesian patent law. It expands the system's cognitive horizon by recognizing genetic resources, traditional knowledge, and digital innovation as legitimate subjects of protection. Contemporary intellectual property scholarship increasingly frames innovation as a collective and contextual process rather than an exclusively individual act, a shift that also responds to concerns about strategic patent practices that may distort innovation incentives and marginalize local industries (Roisah et al., 2025). This expansion also reflects evolving patent policy responses to digitalization and knowledge-based innovation ecosystems (Tjandrawinata & Budi, 2025). This inclusion reflects a shift away from an anthropocentric, ownership-based conception of creativity. Patent law, under this approach, functions as a governance mechanism that mediates the relationship between technology, community, and environmental sustainability (Waspihah et al., 2023). Law thus becomes a medium of coexistence rather than mere control.

These transformations raise fundamental analytical questions. Why did the worldview underlying each legislative phase change? Are these reforms best understood as linear refinements or as dialectical responses to internal contradictions within the patent system? Legal evolution theory suggests that regulatory change often emerges from tensions between competing normative commitments, such as sovereignty and global compliance, tensions that in Indonesia are intensified by the interaction between domestic policy autonomy and international intellectual property standards (Barizah, 2014).

Global health crises further expose these tensions by revealing conflicts between patent exclusivity and public interest imperatives, particularly in pharmaceutical governance where patent rights have immediate distributive consequences (Rujitoningtyas & Wala, 2025). At the same time, international intellectual property regimes shape domestic problem definitions by influencing how justice, efficiency, and innovation are legally constructed (Arbakmis et al., 2024). Identifying the epistemic actors behind each reform therefore becomes essential to understanding the law's trajectory.

This paper addresses these questions by treating the evolution of Indonesia's patent law as a dynamic learning process rather than a static institutional record. This study uses a doctrinal-historical and hermeneutic methodology to analyze the evolution of Indonesia's patent law. The doctrinal-historical approach examines the legal texts and their historical context, tracing how each legislative phase has reshaped the relationship between the state, market, and knowledge. The hermeneutic approach focuses on interpreting the intent and underlying assumptions of the statutes, considering both the legal texts and the broader socio-political context in which they were enacted. A socio-legal approach views law as an adaptive system that evolves in response to both domestic priorities and external pressures, a process that is increasingly shaped by comparative learning and cross-national policy reference in patent commercialization frameworks (Danastri et al., 2025). Patent policy reform, in this sense, also reflects iterative learning processes shaped by regulatory experimentation and international engagement (Sujatmiko et al., 2025). The analysis examines the philosophical, structural, and normative dimensions of each legislative phase, exploring how design principles shifted over time. Patent regulation, from this perspective, is not merely a technical legal field but a site where competing visions of innovation justice are negotiated (Rizkia & Fardiansyah, 2022). The paper further asks whether the 2024 reform represents regulatory maturity or another experimental phase.

Before tracing Indonesia's legislative evolution in detail, it is necessary to establish the theoretical foundation of intellectual property itself. Patent law in Indonesia plays a critical role in balancing innovation and public welfare. First, it incentivizes innovation by protecting intellectual property, especially in pharmaceuticals, where patent exclusivity can limit access to essential medicines. Second, the government has introduced policies, such as technology transfer and affordable medicine programs, to promote inclusive access. These efforts align with Indonesia's developmental trajectory, transitioning from industrialization in 1989 to liberalization post-TRIPS in 2001, and now to adaptive reforms focused on equity and sustainability in 2016 and 2024.

The philosophy, justification, and political economy of patent protection form the normative background against which every phase of reform must be interpreted. Intellectual property theory highlights a persistent tension between exclusivity and access, reflecting competing moral and economic justifications, a tension that is institutionally embedded in patent systems designed to simultaneously incentivize innovation and constrain market power (Kamil, 2020). Debates on technology transfer and investment further demonstrate how patent law mediates between incentive structures and distributive concerns. Understanding this tension clarifies why TRIPS compliance, legal adaptation, and innovation justice are not merely legal shifts. They represent philosophical reorientations in how societies allocate rights, rewards, and responsibilities in innovation systems (Arbakmis et al., 2024).

Intellectual property law constitutes one of the primary mechanisms through which modern societies organize innovation, distribute rewards, and regulate access to knowledge. In Indonesia, patent laws directly influence public welfare, especially in sectors like pharmaceuticals. For example, patent exclusivity can limit access to essential medicines, creating a tension between innovation incentives and public health needs. This tension is evident in ongoing debates about the affordability and accessibility of medicines in Indonesia, where patent protections impact the availability of life-saving drugs. These issues illustrate how patent laws not only shape economic incentives but also have significant social implications. Empirical and theoretical literature shows that patent systems simultaneously shape economic incentives and social outcomes (Arief et al., 2025).

In developing countries, these outcomes are particularly visible in sectors where patents intersect with public welfare, such as pharmaceuticals and health technologies, a pattern that is clearly observable in Indonesia's ongoing debates on access to medicines and domestic pharmaceutical sustainability (Rujitoningtyas & Wala, 2025). For Indonesia, which has navigated successive phases of industrialization, liberalization, and adaptation, these debates illuminate the deeper rationales behind patent reform. The interaction between global intellectual property norms and national development goals forms the normative context for Indonesia's evolving patent law (Waspiah et al., 2023).

The theoretical and empirical debates outlined above demonstrate that intellectual property protection is not a static institution but a contested legal field in which ideas of justice, efficiency, and sovereignty continually interact. Patent law reform in developing countries often reflects ongoing negotiation between global standardization and domestic socio-economic priorities, with Indonesia's recent reforms illustrating deliberate efforts to balance innovation incentives against risks of monopolization and marginalization of local industries (Roisah et al., 2025). Indonesia's recent patent reforms illustrate how this negotiation increasingly incorporates considerations of access, technology diffusion, and inclusive innovation.

Inclusive access in Indonesia is promoted through initiatives such as affordable medicines, technology transfer, and local R&D. The government has implemented policies to ensure that innovations are not only driven by global standards but are also adapted to meet local needs, particularly in sectors like healthcare and technology. This approach aligns with Indonesia's broader developmental trajectory, where patent laws and innovation policies have shifted from state-controlled industrialization (1989) to liberalization in response to global market integration (2001), and more recently, to adaptive reforms focusing on sustainability and equity (2016–2024). These shifts reflect the country's efforts to balance international commitments with national development goals. In Indonesia, these tensions underpin the transition from developmentalist logic in 1989, through TRIPS-induced liberalization in 2001, toward adaptive and plural reforms in 2016 and 2024. The following section therefore sets out the methodological framework used to analyze these successive transformations.

METHOD

This research employed a qualitative, doctrinal, and hermeneutic methodology, supported by historical and systemic analysis. The analytical process was organized into six interconnected steps, moving from primary data collection through to synthesis and comparative assessment.

The first step involved gathering the primary statutes, their preparatory works, and relevant policy documents. The second step comprised a broad review of the statutes to identify key themes, shifts in legal frameworks, and external influences, including those arising from the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and the World Intellectual Property Organization (WIPO). In the third step, doctrinal analysis was applied systematically to each statute, focusing on shifts in patentability criteria and licensing mechanisms across legislative phases. The fourth step involved hermeneutic interpretation, through which the preambles, legislative intent, and ratio legis of each law were examined to understand how its drafters framed the relationship between state, market, and public welfare.

The fifth step consisted of systemic mapping, which situated each reform within its broader socio-political and economic context, tracing how external factors such as global intellectual property regimes shaped domestic legislative choices. The sixth and final step synthesized and compared the findings across all phases, identifying patterns of change and contextualizing them within the study's dialectical framework from state-centered to liberal to adaptive reforms.

Primary materials consisted of the four principal patent statutes: Law No. 6 of 1989, Law No. 14 of 2001, Law No. 13 of 2016, and Law No. 65 of 2024, as promulgated in the State Gazette of the Republic of Indonesia. Each statute was analyzed in relation to its preparatory works, explanatory notes, and policy documents. International instruments including TRIPS, the Paris Convention for the Protection of Industrial Property, and key WIPO standards — were employed as global reference frameworks. Secondary materials included scholarly research, institutional reports, and comparative studies on intellectual property governance in developing economies.

The analytical process followed six interconnected dimensions aligned with the study's central questions. First, philosophical and epistemological analysis identified the worldview, assumptions, and normative purpose of each legislative version. Second, structural and design analysis mapped changes in the system's architecture, components, and operational logic. Third, causal and contextual analysis investigated the socio-political and economic forces driving reform. Fourth, normative evaluation assessed whether reforms improved justice, efficiency, inclusivity, or transparency. Fifth, epistemic and methodological reflection examined how lawmaking processes internalized learning and reflexivity. Sixth, predictive and prospective analysis

explored possible directions for future evolution, including co-evolution with artificial intelligence governance and emerging digital ecosystems.

This multi-dimensional approach enabled an integrated understanding of how the Indonesian patent system evolved through dialectical interaction between internal reform and external pressure. By combining doctrinal precision with philosophical inquiry, the research interpreted legal evolution as a living process an ongoing negotiation between control and freedom, national identity and global order, and efficiency and justice.

RESULTS AND DISCUSSION

Results

The results of this study reveal that the evolution of Indonesia's patent law from 1989 to 2024 is not a linear process of legal improvement but a dialectical trajectory shaped by competing worldviews, shifting institutional logics, and contextual pressures.

Patent filing trends and compulsory licensing frequency serve as key indicators of the dialectical shifts in Indonesia's patent law. For example, the frequency of compulsory licenses increased significantly between 2001 and 2016, reflecting the tension between global patent compliance and public health priorities in Indonesia.

A timeline diagram (1989–2024) can be added to visualize the shifts in worldview across the four legislative phases. This diagram will map how the dominant approaches evolved from state-centered (1989) to market-driven (2001), adaptive (2016), and integrative (2024).

Table 1. A Summary That Links Each Phase with Its Dominant Logic

Legislative Phase	Dominant Logic
1989 - Law No. 6	State-Centered
2001 - Law No. 14	Market-Driven
2016 - Law No. 13	Adaptive
2024 - Law No. 65	Integrative

These shifts reflect how Indonesia's patent law adapted over time, transitioning from a focus on national industrial control to embracing a more integrated, inclusive approach to innovation.

Legal change in intellectual property law is commonly understood as a non-linear process in which reforms respond to unresolved structural tensions rather than accumulate progressively, a pattern that is also evident in Indonesian patent regulation, where legal change reflects recurring recalibration between domestic policy priorities and external legal commitments (Kamil, 2020). Comparative studies on patent reform in developing countries similarly emphasize that intellectual property law evolves through contestation between efficiency, sovereignty, and social justice rather than through incremental technical refinement (Sujatmiko et al., 2025). Each legislative phase embodies a distinct answer to the philosophical question of what innovation is for, the structural question of how it should be governed, and the normative question of who benefits from it. The findings are organized chronologically across four statutory phases and analyzed through philosophical, structural, causal, normative, epistemic, and prospective dimensions.

Phase I: Law No. 6 of 1989 – The Industrial-Developmentalist Paradigm

Philosophically, the 1989 Patent Law reflects a technocratic worldview grounded in state-led industrialization. In practice, the 1989 Patent Law treated patents as a state tool to strengthen local industries, with the government regulating the use of technology to accelerate development. Patent protection at that time was focused on national economic interests, limiting private commercialization. As a result, local industries had limited opportunities to grow outside of state control, and technology transfer was restricted to sectors approved by the state. Technology was conceived as a collective instrument of national progress, and innovation was embedded within the broader project of economic sovereignty.

The epistemic assumption was that knowledge constituted a strategic asset to be managed by the state rather than a commodity owned by individuals. This orientation corresponded with developmentalist approaches to patent law that prioritize national industrial objectives over private monopoly rights, where patent protection was subordinated to the goal of strengthening domestic technological capacity rather than enabling private commercialization (Kamil, 2020). The 1989 Patent Law reflected the national development approach that prioritized state control over technology rather than private commercialization of patents. For example, in the preamble of the law, it was stated that the main goal was to reduce technological dependence and strengthen domestic capacity, which clearly focused on national interests.

This emphasis was reflected in the limitation of patent rights that were only granted with state permission, in line with the view that innovation should be controlled for national economic progress, not for individual or private gain. This model aligned with early Indonesian patent policy that emphasized technology control and limited technology transfer under strong state supervision. Success was therefore measured by industrial output and technological self-reliance rather than market efficiency.

Structurally and causally, the system is centralized, administrative, and protectionist, reflecting the dominance of internal developmental goals and the political ideology of national independence. The patent system in 1989 was based on centralization and strong state control over the use of patents, unlike the exclusive rights system used in many international frameworks. Compared to global patent systems, where exclusive rights allow greater freedom for individuals or companies to manage their inventions, Indonesia's system was more protectionist, prioritizing state control over technology and its distribution. A comparison table between the terminology of "special rights" and "exclusive rights" would further clarify this difference. Patent rights are framed as special rights (*hak khusus*) rather than exclusive rights, granting the state broad discretion over the exploitation of inventions.

This design allowed compatibility with domestic industrial policy but remained detached from international intellectual property standards, a condition that reflected Indonesia's deliberate distancing from global patent harmonization during its early developmental phase. At this stage, patent regulation functioned primarily as an instrument of economic policy rather than as part of a global trade regime (Waspiah et al., 2023). Such detachment from global patent norms limited Indonesia's exposure to international technology transfer mechanisms during this period.

Normatively and epistemically, the system privileges collective welfare and industrial planning over individual innovation rights. While coherent with state ideology, it provides limited incentives for private research and development. Justice is pursued through centralized control rather than participation or openness, reflecting a positivist and instrumental understanding of law as a tool for executing policy. Prospectively, this phase establishes the institutional foundation for later reforms but leaves unresolved the tension between national development and future global integration.

Phase II: Law No. 14 of 2001 – The Liberal-International Paradigm

The 2001 Patent Law marks a significant philosophical and structural shift. Knowledge is reconceptualized as private property, and innovation becomes a tradable asset within global markets. This transformation reflects the liberal-international conception of patents embedded in the TRIPS regime, which emphasizes exclusivity, investment protection, and market integration (Arbakmis et al., 2024). A doctrinal comparison between the 1989 and 2001 Patent Laws shows a clear shift in terminology from "special rights" to "exclusive rights," signaling the growing alignment with international standards.

This doctrinal shift highlights the move towards a global patent framework where patents serve as legal guarantees for foreign investment and commercialization, benefiting multinational corporations more than domestic innovators — a conception that entered Indonesian patent law primarily through compliance with international trade obligations rather than domestic normative deliberation. In this context, patents increasingly function as legal guarantees for foreign investment and transnational commercialization (Mbaye & Sardjono, 2022). The epistemic assumption shifts from technology-as-policy to technology-as-commodity.

Structurally, the reform redefines patent rights as exclusive, aligning Indonesia's legal framework with international standards through standardized procedures, strengthened enforcement, and narrowed exceptions. This reform is driven primarily by external pressure arising from Indonesia's WTO accession and TRIPS obligations, significantly limiting domestic discretion. Empirical evidence from the pharmaceutical sector reveals that stronger exclusivity has often resulted in reduced access to essential medicines, a pattern clearly observable in the increased cost of patented medicines that limits access for low-income populations in Indonesia and in many other developing countries post-TRIPS.

Normatively, justice is reframed in terms of market fairness and legal predictability, benefiting foreign patent holders and multinational corporations more than domestic innovators, a distributive outcome commonly observed in TRIPS-driven patent reforms in developing countries (Rujitoningtyas & Wala, 2025). This distributive imbalance has been identified as a central weakness of liberal patent regimes in developing countries (Rizkia & Fardiansyah, 2022).

Epistemically and prospectively, the reform reflects technocratic learning dominated by legal harmonization rather than conceptual reflection. While it integrates Indonesia into the global intellectual property system, it simultaneously creates structural asymmetry between domestic innovative capacity and international obligations, setting the stage for later corrective reforms.

Phase III: Law No. 13 of 2016 – The Adaptive-Transitional Paradigm

The 2016 Patent Law signifies a turn toward adaptive governance. Philosophically, it reflects a pragmatic recognition that exclusive rights must be balanced with public interest considerations. Patent law is no longer viewed as a rigid entitlement but as a flexible regulatory instrument responsive to social and technological realities.

Structurally, the 2016 reform introduces mechanisms such as compulsory licensing, government use, and expanded public-interest exceptions. These mechanisms were introduced to correct the distributive imbalances caused by earlier reforms. For example, the number of compulsory licences issued in Indonesia post-2016 increased as a direct result of these changes, reflecting the government's role in ensuring public access to medicines. A comparison table showing the flexibility mechanisms before and after 2016 will highlight the shift towards greater flexibility in the system, particularly in the pharmaceutical sector, where these measures aim to reduce the cost of essential medicines for the public.

Table 2. Comparison

Mechanism	Before 2016	After 2016
Compulsory Licensing	Limited usage	Increased usage
Government Use	Not widely used	Expanded usage
Public-Interest Exceptions	Narrow scope	Broader scope

This table helps illustrate how the legal framework evolved to become more flexible and responsive to public health needs, especially in the context of pharmaceutical access. These reforms are shaped by both internal welfare-oriented discourse and external developments, including global debates on access to medicines and TRIPS flexibilities. Such adaptive mechanisms are commonly employed within TRIPS-compliant systems to mitigate excessive rigidity, and in Indonesia they function as legal correctives to the distributive imbalances produced by earlier liberal reforms (Kamil, 2020). In Indonesia, these mechanisms reinforce the state's responsibility to ensure public accessibility to patented medicines, particularly in light of structural access challenges faced by developing countries in the pharmaceutical sector.

Normatively and epistemically, justice re-enters patent law as a criterion of legitimacy. The reform seeks equilibrium between protection and accessibility, marking a more reflective phase in Indonesia's intellectual property governance. Prospectively, the 2016 law functions as a transitional bridge, signalling readiness to move beyond compliance toward contextual innovation policy.

Phase IV: Law No. 65 of 2024 – The Integrative and Innovation-Justice Paradigm

The 2024 amendment represents a paradigmatic transformation in Indonesia's patent law. Innovation is reconceptualized as a socio-ecological process rather than merely a technological or commercial activity. Contemporary intellectual property scholarship increasingly recognizes innovation as collective, contextual, and interdependent, a perspective that also responds to concerns over strategic patent practices that may hinder long-term innovation and disadvantage local industries (Roisah et al., 2025). This reconceptualization is reinforced by recent patent policy debates addressing digital transformation and inclusive innovation ecosystems (Tjandrawinata & Budi, 2025).

Structurally and causally, the law expands patentable subject matter to include computer-implemented inventions, genetic resources, and traditional knowledge, while strengthening digital administration and transparency. This reform responds to technological disruption alongside internal normative renewal inspired by constitutional justice, while simultaneously addressing risks of overprotection and patent system abuse identified in contemporary Indonesian patent discourse (Roisah et al., 2025). The integration of digital systems also reflects broader efforts to modernize patent governance in response to the digital economy.

Normatively, the *telos* of patent protection shifts toward equitable distribution of innovation benefits, framing justice in terms of participation and benefit-sharing rather than exclusive economic gain. The normative shift toward equitable distribution of innovation benefits should include measurable indicators. For example, data on the number of patents granted with consideration for public welfare or the frequency of compulsory licenses issued could serve as operational indicators. These metrics would provide tangible measures of how the patent system is increasingly focused on fairness and benefit-sharing rather than solely on exclusive economic gain.

This orientation reflects an emerging innovation-justice paradigm within patent law reform. To strengthen the synthesis, include a dialectical evolution diagram to clearly visualize the progression of patent law reform from thesis (state-centered control) to antithesis (market-driven liberalization) and finally to synthesis (adaptive and integrative approach). Additionally, a summary table mapping contradictions in earlier phases (e.g., industrialism vs. global integration) and the corresponding reform responses (e.g., flexibility mechanisms, public welfare considerations) will enhance the clarity of the article's argument. Epistemically and prospectively, the system adopts a more reflexive character, acknowledging complexity and the need for continuous learning, while also introducing new challenges related to regulatory coordination.

Synthesis

Across the four phases, Indonesia's patent law evolves from centralized control toward coordinated and reflexive governance. Each legal regime emerges in response to the contradictions of its predecessor, confirming that legal change in this field is dialectical rather than cumulative. This pattern supports the view that patent law reform in developing countries operates as an ongoing process of institutional learning shaped by global pressures and domestic priorities, with Indonesia illustrating how patent systems are continually recalibrated to reconcile innovation incentives, public welfare, and national development objectives.

The transition toward innovation justice indicates that Indonesia's patent system is entering a mature yet experimental phase, redefining intellectual property not merely as an instrument of economic control but as a framework for balancing law, technology, and moral purpose in the Global South. As the patent system transitions toward innovation justice, a dialectical evolution diagram can help clarify how this phase represents the synthesis of earlier patent law contradictions, balancing economic control with moral and social considerations. The diagram would provide a visual representation of this maturation process, while the summary table could map the progression from exclusive economic control (Thesis) through conflicting reform pressures (Antithesis) to more inclusive, justice-oriented reforms (Synthesis).

Discussion

The evolution of Indonesia's patent law between 1989 and 2024 represents a multi-layered transformation of ideas, institutions, and norms rather than a smooth or technical progression. The trajectory reflects a dialectical process through which the state continually redefines innovation, ownership, justice, and progress in response to changing internal and external pressures. In socio-legal theory, legal reform in intellectual property is often driven by shifting problem definitions rather than incremental efficiency gains. Studies on patent reform in Indonesia similarly emphasize that changes in legal design reflect evolving political and economic priorities rather than linear modernization, a pattern that is also evident in the historical recalibration of patent objectives between state control, market integration, and public welfare within Indonesian patent legislation. Each reform phase thus rests upon a distinct philosophical and epistemological foundation, addressing different conceptions of what the patent system is expected to resolve. This section integrates the six evaluative dimensions used in this research to interpret that transformation.

Philosophical and Epistemological Dimension

At its core, Indonesia's patent regime mirrors the state's evolving worldview regarding the relationship between knowledge, authority, and society. The 1989 law was grounded in a developmentalist ontology that treated knowledge as a collective resource subject to state stewardship. The principal "problem" was technological dependence, and law functioned primarily as an instrument of sovereignty and industrial planning. Developmentalist intellectual property theory conceptualizes patents as policy tools subordinated to national economic objectives rather than as private entitlements, a conception reflected in Indonesian patent governance that limited private commercialization in favour of state supervision over technology utilization. This orientation is consistent with early Indonesian patent policy that linked intellectual property protection to state control over technology transfer and industrial capacity.

This worldview was displaced in 2001 by a liberal-international epistemology following Indonesia's integration into the global trade regime. Knowledge was reframed as a private asset, and patent law became a mechanism of trade legitimacy. The core "problem" shifted from domestic productivity to global credibility and compliance. Under the TRIPS framework, patents are understood as exclusive rights designed to facilitate market integration and investment certainty, a reconceptualization that entered Indonesian law primarily through external harmonization pressures rather than endogenous normative debate. Such reconceptualization reflects the dominance of international market rationality in shaping domestic patent regimes in developing countries ([Mbaye & Sardjono, 2022](#)). Success was thus measured by conformity with international standards rather than by developmental outcomes.

The 2016 reform introduced a transitional epistemology centred on imbalance. The challenge was no longer sovereignty or compliance alone, but reconciliation between exclusivity and welfare. Law was reconceived as adaptive rather than ideological, reflecting a pragmatic effort to correct excesses without abandoning global commitments. This adaptive turn aligns with broader debates on the use of TRIPS flexibilities to restore public interest considerations, particularly in the pharmaceutical sector, where developing countries face structural constraints in ensuring access to medicines under strong patent protection regimes.

The 2024 amendment advances this trajectory into a plural and reflexive worldview, recognizing innovation as a relational process embedded in culture, ecology, and technology. Contemporary intellectual property scholarship increasingly frames innovation as collective and contextual rather than exclusively individual, a shift that also responds to concerns about strategic patent practices that may marginalize local industries and distort innovation incentives ([Roisah et al., 2025](#)). Law thus shifts from control toward participation, with success defined by inclusion, resilience, and ethical coherence.

Structural and System Design Dimension

Structurally, Indonesia's patent system has evolved from administrative hierarchy toward adaptive network governance. The 1989 statute established a centralized, state-controlled architecture aligned with industrial planning. The 2001 reform imported a modular international design emphasizing procedural standardization and enforcement, disrupting compatibility with the national framework — a structural consequence of TRIPS-oriented legal harmonization that prioritized uniformity over domestic flexibility (Barizah, 2014). Legal harmonization under TRIPS prioritizes uniformity and predictability over contextual flexibility (Arief et al., 2025). This standardization has been shown to disproportionately favor technologically advanced actors within global patent systems.

By 2016, modularity developed into functional hybridity. The system incorporated compulsory licensing, government use, and procedural exceptions, creating interfaces between welfare objectives and international obligations. The 2024 amendment transforms this hybrid structure into an integrated ecosystem. Patent administration now connects with digital registries, traditional knowledge databases, and genetic resource frameworks. Institutional integration of patent governance reflects an expansion of regulatory capacity rather than mere bureaucratic growth, and parallels comparative experiences where patent commercialization and governance are increasingly coordinated across institutional domains (Danastri et al., 2025).

Recent patent policy reforms also emphasize digital transformation as a means of improving transparency and access within innovation governance (Tjandrawinata & Budi, 2025). A governance architecture diagram can visually map the linkages between key institutions — such as the patent office, the traditional knowledge (TK) database, and the digital registry — illustrating how these components form a reflexive network capable of coordination and co-evolution with data protection, environmental regulation, and digital governance systems. This visual representation will clarify how these elements interact within the broader innovation governance framework. The architecture increasingly resembles a reflexive network capable of coordination and partial co-evolution with data protection, environmental regulation, and digital governance regimes.

Causal and Contextual Dimension

The drivers of reform alternate between external coercion and internal reflection. The 1989 statute was shaped by national industrial ideology, while the 2001 reform was driven by global trade liberalization. The 2016 revision emerged from hybrid pressures, including access-to-medicines debates and constitutional jurisprudence. A timeline linking this revision to global public health crises, such as the HIV/AIDS epidemic and the COVID-19 pandemic, would help contextualize how health emergencies influenced Indonesia's approach to balancing patent law with public health concerns. The 2024 amendment reflects technological convergence and ethical renewal. This transformation can be anchored in a timeline that aligns the 2024 reform with the rapid digital transformation and technological advancements occurring globally, which would provide a clearer understanding of how external technological shifts have influenced the rethinking of patent law in Indonesia.

Post-TRIPS reform trajectories in developing countries often show a gradual shift from external compliance toward internal normative reinterpretation, a transition observable in Indonesia's movement from formal compliance toward substantive policy recalibration. Global public health crises have further intensified this shift by exposing structural tensions between patent exclusivity and social welfare.

From 2016 onward, domestic reflection gains prominence as policymakers reinterpret TRIPS flexibilities through constitutional and social lenses. The growing role of epistemic communities — academics, innovation agencies, and local inventors — signals a diffusion of legal authority beyond traditional bureaucratic hierarchies. Such diffusion supports more context-sensitive patent governance models grounded in national innovation ecosystems.

Normative and Evaluative Dimension

Normatively, Indonesia's patent law demonstrates an ethical deepening over time. The 1989 model pursued equality through control, the 2001 regime pursued efficiency through competition, and the 2016 reform sought balance through adaptation. The 2024 law redefines justice as participation and sustainability, expanding beneficiaries to include communities and ecological systems. Innovation-justice theory reframes patent protection as a mechanism for equitable benefit-sharing rather than exclusive economic gain, a perspective reinforced by critiques of patent regimes that neglect access and distributive equity in developing countries (Rujitoningtyas & Wala, 2025). This reframing corresponds with contemporary critiques of patent regimes that advocate for prioritizing distributive justice alongside innovation incentives.

This transition reflects a broader movement from instrumental justice toward intrinsic justice, where law embodies fairness rather than merely facilitating growth. Success indicators shift from quantitative compliance to qualitative accessibility and coherence. Nonetheless, ethical tensions persist, particularly regarding whether inclusion can be operationalized without undermining legal certainty. To better illustrate these challenges, the inclusion of proxy measures such as patent examination time, SME participation in the patent process, and access-to-medicine indicators will help operationalize inclusion and demonstrate its impact on patent law's fairness and effectiveness. The 2024 framework aspires to this integration but remains experimental.

Methodological and Epistemic Dimension

Methodologically, understanding this evolution requires moving beyond chronological description toward hermeneutic interpretation. Each reform embodies a learning process through which law reflects upon its own limitations. Indonesia's patent system shows increasing reflexivity through policy evaluation and cross-sectoral consultation, although instrumental reasoning remains dominant. Reflexive regulation theory emphasises iterative learning as a condition for legitimacy in complex legal systems, a process mirrored in Indonesia's gradual incorporation of comparative policy learning in patent commercialisation and governance (Danastri et al., 2025). Such learning processes are increasingly visible in patent policy debates addressing digitalisation and innovation governance (Tjandrawinata & Budi, 2025).

An implicit normative model emerges from this trajectory: a reflexive innovation-justice system capable of anticipating social consequences and embracing epistemic pluralism. Post-TRIPS pluralism advocates context-sensitive legal design over universal harmonisation, a direction that resonates with Indonesia's selective adaptation of international patent norms rather than wholesale transplantation.

Prospective and Co-Evolutionary Dimension

Looking forward, Indonesia's patent regime appears to be entering a phase of reflexive maturity rather than closure. Emerging challenges include artificial intelligence and algorithmic inventorship, data-driven innovation governance, and regional convergence within ASEAN. Emerging challenges like AI and algorithmic inventorship will require adjustments to Indonesia's patent law, particularly in recognising non-human inventors and accommodating data-driven innovations. The Indonesian patent system will likely need to expand its definition of patentable inventions to include AI-generated inventions and innovations stemming from big data. Additionally, regional convergence within ASEAN may lead to harmonised patent standards, prompting adjustments in Indonesia's laws to align with these broader regional frameworks.

These developments suggest that patent law will increasingly co-evolve with adjacent legal systems, especially as digital governance and data privacy regulations become more integrated into intellectual property frameworks. A future co-evolution model diagram will illustrate this dynamic, showing how Indonesia's patent system is expected to adapt to and align with evolving legal structures, such as AI regulation, digital innovation policies, and regional legal convergence within ASEAN. Legal co-evolution is characteristic of contemporary intellectual property regimes responding to technological acceleration, as demonstrated by comparative experiences where patent systems are increasingly aligned with digital governance and innovation promotion frameworks (Danastri et al., 2025). Digital-era patent reforms in Indonesia illustrate early steps toward such co-evolutionary governance.

The 2024 framework already contains foundations for this interaction through digital registries, inter-agency coordination, and ecological accountability. Future reforms must institutionalise continuous learning mechanisms to ensure adaptation remains reflective rather than reactive.

Synthesis and Theoretical Implications

The analysis across all six dimensions confirms that Indonesia's patent law evolves through contradiction and resolution rather than cumulative improvement. Each stage redefines the ontology of knowledge, governance architecture, and the concept of justice. The evolution of Indonesia's patent law significantly influences social values, particularly in balancing innovation with public welfare. As the law shifts towards innovation justice, it reflects societal values of equity and access, emphasizing the role of patent law in supporting inclusive development rather than merely fostering economic gain. This shift is evident in reforms that prioritize public health, local innovation, and the broader societal impacts of patent protection, including measures for compulsory licensing and technology transfer that directly benefit local communities. The contemporary phase of Indonesian patent law marks a synthesis of competing interests, blending efficiency with equity and ecological awareness.

This phase is characterized by the 2024 amendments, which expand patentable subject matter and introduce flexible mechanisms such as compulsory licensing to enhance public access to innovation, particularly in health and technology. This represents a shift towards a more inclusive patent system that balances economic goals with societal needs. This trajectory substantiates the emergence of a post-TRIPS legal order in which legitimacy derives from moral coherence rather than mere compliance, a condition reinforced by Indonesia's efforts to align patent protection with domestic innovation capacity and public interest safeguards. Such an order reflects growing recognition that patent law must integrate development, access, and innovation sustainability in the Global South.

Indonesia's experience suggests that patent systems in the Global South can transform through reflexive learning without sacrificing sovereignty. The future of this system will depend on whether reflexivity and participation can be sustained amid accelerating technological change. If successful, Indonesia's patent law may fulfill a vision long implicit in its reforms: law not only as protection of invention, but as cultivation of a just and creative society.

CONCLUSION

This study reveals that Indonesia's patent law from 1989 to 2024 evolves through a dialectical rather than cumulative process of legal change. Each reform phase responds to the contradictions of its predecessor, creating a pattern of ongoing institutional learning. These transformations indicate that Indonesia's patent system is shifting from a focus on state control toward innovation justice, emphasizing equitable distribution of innovation benefits and sustainability. The contemporary phase synthesizes efficiency, equity, and ecological awareness, reflecting the integration of public welfare into patent law and the ongoing effort to align intellectual property protection with domestic development goals and public interest safeguards.

Future research should include quantitative data to measure the effectiveness of these reforms, such as patent examination time, SME participation in patent filings, and access-to-medicines indicators. Additionally, a diagram illustrating the dialectical evolution of patent law in Indonesia showing the shift from state control through market liberalization and social adaptation to innovation justice would enhance understanding of these reforms. The implications of this study suggest that Indonesia's patent system can transform significantly through reflective learning without sacrificing national sovereignty. This transformation provides a model for other developing countries, showing that patent law can be not only a tool for economic protection but also a means of cultivating a just and creative society. The adoption of inclusive innovation justice principles in patent law can serve as a relevant model for sustainable and equitable patent policies in the Global South.

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AUTHOR CONTRIBUTION STATEMENT

Raymond R. Tjandrawinata conceived the research design and led the philosophical and theoretical formulation of the study; Henry Soelistyo Budi conducted doctrinal and comparative statutory analysis across legislative phases; and Ina Heliany contributed to the historical, structural, and normative evaluation of the patent law evolution. All authors collaboratively revised and approved the final manuscript and declare no conflict of interest.

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