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LEGISLATING AI AND IP IN MALAYSIA: A SUSTAINABLE GOVERNANCE FRAMEWORK FOR FAIR REMUNERATION

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ABSTRACT

Artificial intelligence is changing industries and raising important questions about fair compensation for intellectual property owners when their work is used by AI systems. Existing research has focused on global AI regulations, particularly the European Union AI Act, but comparatively little attention has been given examination of how these frameworks compare to Malaysia's National Guidelines on AI Governance and Ethics. This study therefore explores the legal and governance challenges related to AI's use of copyrighted works and patented inventions in Malaysia, where current laws struggle to address issues of authorship, inventorship, and fair remuneration. Analyzing these differences highlights gaps in transparency, enforcement, and accountability in Malaysia's AI governance. This study uses a qualitative legal research approach, reviewing policy frameworks, legal cases, and comparative governance models to propose a sustainable legal framework for AI in Malaysia. This framework provides lawmakers with actionable steps to position Malaysia as a regional leader in ethical AI governance. The findings suggest that regulatory shortcomings must be addressed through clearer legal provisions, stronger enforcement mechanisms, and structured remuneration models to support AI-driven innovation while protecting the rights of IP owners. The study contributes to the discussion on AI governance by offering policy recommendations that balance technological progress with the protection of intellectual property in Malaysia's growing digital economy.

Keywords: AI Governance, Intellectual Property; Copyright; Patents; EU AI Act; National Guidelines on AI Governance and Ethics; Fair Remuneration.

INTRODUCTION

AI is reshaping industries worldwide, influencing how intellectual property (IP) is created, shared, and used. From automated content generation to advanced design tools, AI often builds on existing copyrighted works and patented inventions. This dependence raises important legal and economic concerns, particularly about safeguarding the rights of IP owners and ensuring fair compensation when AI utilizes their creations (Latif, Manap, & Althabhawi, 2024). As AI technologies continue to evolve, they increasingly blur the lines between human and machine creativity. Works and inventions that once clearly originated from individual human effort are now the result of complex interactions between human inputs and machine-driven processes. Traditional IP frameworks developed at a time when creation and invention were exclusively human activities are now being tested in ways never before anticipated (Lucchi, 2023). Fundamental questions arise regarding the attribution of authorship and inventorship, the ownership of AI-generated outputs, and the appropriate legal and economic recognition for original creators whose work may form part of AI's

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training or output material. These challenges are not merely theoretical but they have real-world implications for the sustainability of creative industries, the fairness of innovation systems, and the broader economy (Lauber-Rönsberg & Hetmank, 2019). If left unaddressed, the unchecked use of existing IP by AI systems risks devaluing human creativity, undermining incentives for innovation, and causing significant financial losses for individual creators, businesses, and IP rights holders (Senftleben, 2023). In Malaysia, as in many jurisdictions, existing intellectual property laws do not yet fully account for the complexities introduced by AI technologies. While Malaysia's Copyright Act 1987 and Patents Act 1983 provide a strong foundation for human-centered IP protection, gaps remain in addressing AI's growing role in creative and inventive processes. The absence of clear statutory provisions on AI-generated works and inventions leaves the legal status of such outputs uncertain and exposes human creators to potential exploitation. Before exploring the specific legal and governance gaps facing Malaysia, it is crucial to recognize the deeper problem posed by AI's rapid advancement. AI's ability to generate outputs based on vast amounts of existing intellectual property raises profound questions about the future of authorship, inventorship, ownership, and fair compensation (Gervais, 2020). Without clear legal structures, there is a real risk that human creators will be sidelined, and the fundamental purpose of intellectual property law to protect and reward human creativity will be undermined, leading to an erosion of incentives for innovation and a weakening of the creative and technological sectors. Effective AI governance must not only address the attribution of human authorship and inventorship but must also ensure that fair remuneration frameworks are established to protect the economic interests of IP owners whose works are exploited, directly or indirectly, by AI systems Anantrasirichai & Bull, 2022). To frame these challenges properly, it is essential to revisit the theoretical foundations of intellectual property before this article turn into Malaysia's specific legal gaps and reform proposals.

THEORETICAL FOUNDATIONS OF INTELLECTUAL PROPERTY RIGHTS IN THE CONTEXT OF AI

The protection of intellectual property (IP) has long been justified by several foundational theories, most notably labor theory and personality theory. Labor theory, most prominently advocated by John Locke, asserts that individuals have a natural right to the products of their labor (Vaughn, 1978). When a person expends effort to create something new, that effort imbues the creation with a legitimate claim of ownership. Similarly, personality theory, articulated by Georg Wilhelm Friedrich Hegel, posits that creative works are an extension of the creator's personality and moral being, deserving protection to preserve individual autonomy and dignity (Hughes, 1988). Both theories deeply influence modern IP law frameworks, shaping the way societies perceive authorship, ownership, and the need for exclusive rights.

However, the rise of artificial intelligence (AI) systems capable of independently producing artistic, literary, and inventive works challenges these traditional notions. AI-generated outputs often lack direct, tangible human labor at the moment of creation, and the "personality" embedded in such works is arguably absent (Latif, Manap, & Althabhawi, 2024). Nevertheless, the deployment and operation of AI systems involve substantial human effort in their development, training, curation, and supervision. Scholars have noted, human creativity persists, albeit redistributed across different stages of AI deployment (Wu, Ji, Yu, Zeng, Wu, & Shidujaman, 2021). The labor of designing algorithms, selecting training datasets, and refining AI outputs reflects significant

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human intellectual investment, even if the immediate creator is non-human (Anantrasirichai & Bull, 2022). In this evolving landscape, adhering rigidly to traditional IP doctrines risks marginalizing the substantial human contributions involved in AI development. An equitable governance framework for AI and IP in Malaysia must reinterpret and modernize these theories, recognizing both the human elements underpinning AI systems and the societal need to incentivize innovation. Ensuring fair remuneration for those who contribute to AI's creative capacities not only honours the philosophical roots of IP protection but also strengthens the legitimacy and sustainability of Malaysia's digital economy.

In this context, a 'sustainable governance framework' refers not merely to the enactment of immediate regulatory fixes but to the establishment of a robust, adaptive legal and institutional structure that ensures the long-term protection of intellectual property rights while fostering continuous AI-driven innovation. Such a framework must balance short-term technological gains with enduring economic, cultural, and ethical stability. As such, the discussion below will first examine the main law governing intellectual property rights in Malaysia, focusing on how existing statutes such as the Copyright Act 1987, the Patents Act 1983, Malaysia National Guidelines on AI Governance And Ethics 2024 as well issues related to AI-generated works. to identify best practices and potential lessons for Malaysia's legal and governance frameworks.

MAIN LAWS GOVERNING INTELLECTUAL PROPERTY IN RELATION TO AI IN MALAYSIA

The Copyright Act 1987 (Act 332) is the core legislation governing copyright in Malaysia. It was original drafted to address the protection of copyrightable work encompassing literary, musical, artistic, and dramatic works, along with sound recordings, broadcasts, and films, aiming to establish a legal framework that protects creators' rights and guarantees fair compensation for their intellectual contributions (Parliamentary Hansard, 1986). However, the Act mainly addresses human creators, creating a void in its applicability to AI-generated works. It defines an "author" strictly as a human being (Khaw & Tay, 2017) which raises the issue of ownership when AI systems autonomously generate content.

The ambiguity of authorship and ownership regarding AI-generated works necessitates a reform of the Copyright Act 1987 to acknowledge AI's contribution to the creative process and establish a framework for assigning ownership and attribution. As AI technologies have now reached the capability to independently generate literary, artistic, or musical works without direct human involvement (Latif, Manap, & Althabhawi, 2024), traditional concepts of authorship face significant legal tension (Geiger, 2024). Some legal perspectives argue that AI should remain classified as a tool used by human creators, whereas others advocate for recognition of fully autonomous AI outputs.

The Patents Act 1976 [Act 291], on the other hand, regulates the patenting of inventions in Malaysia. It was designed to promote innovation by granting inventors exclusive rights to their creations, thereby driving technological progress and contributing to economic growth (Parliamentary Hansard, 1982). Similar to the Copyright Act, the Patents Act 1983 does not define the term "inventor" within the legislation. However, it can be reasonably assumed that the term "inventor," as understood under the Patents Act 1983 (Lim, 2004), refers to the individual or group of individuals who have contributed to the creation of an invention that meets the criteria for patentability (Azmi, 2014).

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The lack of clear definitions in both the Copyright Act 1987 and the Patents Act 1976 regarding the roles of AI in the creative and inventive processes presents significant challenges in adapting the current legal framework to the technological advancements brought about by AI. The current framework assumes that authorship and inventorship are exclusive to humans (Gaffar, 2024), an assumption that AI-generated outputs increasingly challenge (Schwartz & Rogers, 2022).

This challenges traditional concepts of intellectual property "authorship" and "inventorship," where the creator or inventor is typically a human. It highlights a significant gap in the legal framework regarding AI-generated works and inventions (Militsyna, 2023). Moreover, the level of human involvement in AI-generated outputs often varies. In some cases, human contribution is minimal, limited to the initial programming or data training phase (Kelly, Kaye, & Oviedo-Trespalacios, 2022). This blurring of roles creates legal uncertainty over how ownership should be attributed and has prompted calls for new categories such as "AI-assisted" works (Geiger, 2024). Without clear legislative updates, Malaysia's IP laws risk falling behind technological realities (Lauber-Rönsberg & Hetmank, 2019).

COPYRIGHT ACT 1987 (ACT 332)

The Copyright Act 1987 [Act 332] was first enforced on 1 December 1987 in Malaysia. The Act consists of six parts, which provide the framework for the protection of copyright in the country. These sections outline key aspects such as definitions, rights and ownership, copyright duration, infringement, and enforcement mechanisms. The Act is designed to protect creative works and provide a legal framework to uphold and enforce intellectual property rights. Section 3 of the Act defines the term "author" in relation to various types of works. Under copyright law, the identification of the author differs based on the type of work. For instance, in the case of literary works, the author is the individual who writes or creates the work. For musical works, the composer is considered the author. For artistic works, the author is the artist who is responsible for its creation. Section 10 of the Act further outlines the criteria for the subsistence of copyright in works created by an author or joint authors. The Act stipulates that an author must be a "qualified person" at the time of creation. Section 3 defines a "qualified person" as either (i) a Malaysian citizen or permanent resident or (ii) a corporate entity established, incorporated, or legally recognized under Malaysian law.

For a work to receive copyright protection, its creator must fall within the definition of a qualified person. This includes Malaysian citizens, permanent residents, or corporate entities incorporated in Malaysia. The Copyright Act 1987 establishes that copyright protection applies only to human creators, excluding non-human entities such as AI systems. By requiring human authorship, the Act limits recognition to individuals or legally recognized entities like corporations. This becomes particularly significant with the rise of AI-generated works, as AI lacks the human intellectual effort and creativity needed to qualify as an author (Watiktinnakorn, Seesai, & Kerdvibulvech, 2023). The growing capability of AI technologies challenges traditional understandings of authorship, raising concerns about ownership rights, enforcement mechanisms, and the fair distribution of economic rewards (Geiger, 2024). At the outset, it is clear that the current structure of the Copyright Act 1987 does not contemplate works generated independently by AI without human intervention. The requirement for human authorship means that creations solely produced by AI systems fall outside the scope of copyright protection under Malaysian law. This legal gap raises critical questions: Who, if anyone, owns the

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copyright in AI-generated works? Can the user of the AI tool, the developer of the AI system, or another party claim rights over such creations? (Latif, Manap, & Althabhawi, 2024).

PATENTS ACT 1976 (ACT 291)

The Patents Act 1976 [Act 291], which came into effect on 1 October 1986, establishes the legal framework for protecting inventions in Malaysia. It sets out the requirements for obtaining a patent, the rights of patent holders, and the procedures for enforcing patent protection. The Act aims to promote innovation by granting inventors exclusive rights over their creations, allowing them to commercially benefit from their inventions for a defined period. Under Section 11, a patent may be granted for an invention that is novel, involves an inventive step, and is capable of industrial application. The Act defines an "invention" broadly, covering any new product or process that provides a technical solution to a problem. However, certain exclusions apply under Section 13, which specifies that discoveries, scientific theories, and mathematical methods do not qualify for patent protection. A key aspect of the Patents Act 1976 is its recognition of an inventor's rights. Section 36 grants patent holders' exclusive rights to exploit their patented invention, assign or transfer the patent, enter into licensing agreements, and use the patent as a security interest. These rights give patent holders control over both the commercial and legal use of their inventions. The Act defines "exploitation" to include making, importing, offering for sale, selling, or using a patented product, as well as stocking it for sale or use. If the patent applies to a process, exploitation also covers the use of the process and handling any product derived from it.

Section 36 also establishes presumptions of infringement related to patented processes, protecting patent holders unless proven otherwise. The Act outlines the process for examining and granting patents, a responsibility overseen by the Intellectual Property Corporation of Malaysia (MyIPO). The examination ensures that inventions meet the required criteria, and once granted, a patent provides the inventor with a 20-year monopoly over its use. As AI takes on a greater role in innovation, the Patents Act 1976 raises important questions about inventorship. AI systems capable of generating new inventions challenge the traditional assumption that only humans can be inventors (Igbokwe, 2024). Since AI can autonomously develop novel solutions without direct human input, uncertainty arises over whether such inventions can be patented and who, if anyone, should be recognized as the inventor (Kim, 2020). At present, the Act does not recognize non-human inventors, restricting patent rights to individuals or legal entities. This issue has gained attention in global discussions on AI and intellectual property, with increasing calls for legal reform to address AI's role in the invention process (Afshar, 2022). Unless legislative reform is undertaken, Malaysia's patent system risks excluding significant AI-generated innovations from protection, undermining incentives for both AI developers and human collaborators. It would be detrimental to the growth of Malaysia's innovation ecosystem if valuable AI-generated inventions are left unprotected due to rigid interpretations of inventorship requirements.

MALAYSIA NATIONAL GUIDELINES ON AI GOVERNANCE AND ETHICS 2024

The Malaysia National Guidelines on AI Governance & Ethics 2024, launched by the Ministry of Science, Technology, and Innovation (MOSTI) on September 20, 2024, provide a framework for integrating AI into various sectors. These guidelines emphasize ethical development, societal values, and national priorities to ensure responsible AI deployment that supports economic growth, societal well-being, and

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technological advancement (MOSTI, 2024). Developed as part of the Malaysian National Artificial Intelligence Roadmap (AI-RMAP) 2021-2025, they align national AI strategies with international standards, reflecting Malaysia's ambition to become a high-tech nation.

Despite these efforts, the guidelines offer only a limited discussion on critical issues such as authorship, inventorship (referred to as "ownership"), and fair remuneration for intellectual property (IP) rights holders. The governance of IP, particularly in the context of generative AI, presents complex challenges, including liability for unauthorized use of creative works and inventions. These concerns remain inadequately addressed in the current legal framework. Additionally, references to the Intellectual Property Corporation of Malaysia (MyIPO) were inaccurately cited, as the guidelines should have referred to the Copyright Act 1987 and the Patents Act 1976. The absence of clear legal definitions for AI-generated works further complicates ownership rights, making it unclear whether authors, inventors, creators, developers, or users should hold legal claims. This legal uncertainty creates challenges in resolving intellectual property disputes and ensuring accountability, particularly in industries that rely on AI for creative or innovative processes (Alhosani & Alhashmi, 2024). Without a well-defined legislative framework, businesses and individuals face difficulties in protecting, licensing, and commercializing AI-generated works. The guidelines also do not outline dispute resolution mechanisms or legal protections for those developing or deploying AI technologies, highlighting the need for a dedicated legal framework to address AI-related intellectual property challenges.

While existing laws like the Copyright Act 1987 and the Patents Act 1976 offer general provisions for IP governance, they were not crafted with AI-generated works in mind. As a result, they fail to fully address the complexities brought about by generative AI technologies, as highlighted in the newly introduced guidelines. Unlike regulatory frameworks in the European Union's AI Act, Malaysia's guidelines lack binding provisions that would compel adherence through penalties or sanctions. This limits the practical effectiveness of the guidelines in regulating AI activities. It would be imprudent for Malaysia to rely solely on non-binding guidelines to regulate the rapidly evolving landscape of AI-driven innovation and creativity. As AI technologies continue to blur the lines between human and machine contributions, the absence of enforceable legal obligations risks creating inconsistencies in rights enforcement, protection gaps for creators and innovators, and uncertainties for investors and businesses seeking to operate within Malaysia.

METHOLODOGY

This study adopts a qualitative socio-legal research methodology to critically analyze Malaysia's intellectual property (IP) laws and AI governance frameworks in light of emerging technological challenges. It combines doctrinal legal analysis, comparative legal study, and policy evaluation to propose a sustainable governance model for AI and IP in Malaysia. The objectives of the study are threefold (i) to identify gaps in Malaysia's current IP and AI regulatory frameworks concerning authorship, inventorship, and fair remuneration, (ii) to evaluate best practices from selected comparative jurisdictions such as the European Union and United Kingdom,; and (iii) to propose concrete legal and policy reforms aimed at harmonizing Malaysia's frameworks with international standards while addressing local socio-legal realities. Primary sources include Malaysia's Copyright Act 1987, Patents Act 1976, and the Malaysia National Guidelines on AI Governance & Ethics 2024, while secondary sources encompass international

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frameworks such as the EU AI Act 2024, TRIPS Agreement, and academic literature on AI and IP law. Comparative case law and statutory models, including the UK's Thaler decision is reviewed to draw reform insights.

This methodology involves analysing statutory texts, judicial decisions, regulatory guidelines, and policy documents, supplemented by a critical review of scholarly commentary. The study also integrates policy-based proposals, including recommendations for statutory amendments, licensing mechanisms, transparency obligations, and the establishment of enforcement institutions like an AI Ombudsman. This multi-layered approach ensures that the study is not purely theoretical but offers actionable policy directions for Malaysia to develop a sustainable, innovation-friendly, and ethically grounded AI and IP governance framework.

CONCEPT OF SUSTAINABILITY IN IP AND AI GOVERNANCE

The concept of "sustainability" in AI governance extends beyond environmental stewardship to encompass long-term legal, economic, and ethical resilience (Mazzi, 2025). In the context of intellectual property (IP), sustainability means designing governance structures that protect creators' rights, foster continuous innovation, and adapt flexibly to technological advancements without undermining established legal norms (Jobin, Ienca, & Vayena, 2019). Building a sustainable AI governance framework demands more than sound principles as it requires deep engagement with realities on the ground. One of the most urgent gaps lies in the lack of localized empirical data (Niazi, 2024). Policymakers cannot meaningfully regulate what they do not fully understand (Candelon, Charme di Carlo, De Bondt, & Evgeniou, 2021). Without clear insights into how AI is being used in Malaysia, how people are responding to the IP issues it raises, and how courts and regulators are handling disputes, any rules or policies risk missing the real challenges on the ground. Grounding policy in real-world data such as sector-specific AI usage trends, stakeholder concerns, and emerging case law is not just a technical task. It is thus essential for building policies that are credible, responsive, and sustainable (Papagiannidis, Mikalef, & Conboy, 2025). However, Malaysia currently lacks comprehensive studies on AI's impact on IP, sector adoption rates, and active or pending litigation, making it difficult to design effective, localized policies.

Beyond just fixing data and literature gaps as highlighted by researcher above, Malaysia must also tackle deeper structural problems to make AI governance sustainable . It's easy to set broad goals like "fairness" and "transparency," but the real challenge is turning them into action (Arora, Gupta, Mehmi, Khanna, Chopra, Kaur, & Vats, 2024). Malaysia's three-pillar framework must therefore move beyond general aspirations and provide clear plans: Which agencies will enforce the rules? How will compliance be checked? What resources are needed, and what trade-offs must be made? Governance always requires tough choices, like balancing innovation with protecting rights (Zhang & Dafoe, 2020). In the end, building sustainable AI governance in Malaysia means realizing that ambition without action is meaningless. Big ideas must be turned into real steps, guided by accurate data, enforced by responsible agencies, and updated over time as technology and society change. To achieve this, Malaysia needs to focus on three key areas: (i) legal adaptability, (ii) economic fairness (iii) ethical transparency and the EU AI act as a regulatory benchmark.

LEGAL ADAPTABILITY

First and foremost, any serious conversation about sustainable governance must begin with Malaysia's legal system itself.

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Malaysia operates under a dualist legal tradition, meaning that international treaties and agreements do not automatically become part of domestic law unless they are explicitly incorporated through national legislation (Hamid, 2006). This characteristic, while common among many nations, poses a distinct challenge: even if Malaysia commits internationally to agreements like the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) under the World Trade Organization or expresses policy support for progressive frameworks such as the European Union AI Act (Guadamuz, 2024), these instruments remain largely aspirational unless Parliament enacts specific legislation to embed them into Malaysia's domestic legal order.

In the context of sustainable governance, it is not sufficient for Malaysia merely to ratify or endorse international standards. Sustainability demands that such commitments are fully domesticated which means that they have to be integrated into binding local statutes, regulations, or guidelines and rendered practically enforceable. Otherwise, Malaysia risks falling into a recurring pattern where international obligations exist on paper but lack tangible legal and operational effects. As such, successful governance requires more than symbolic compliance as it necessitates a legal system capable of internalizing and operationalizing international norms within the domestic sphere.

This structural reality becomes particularly salient when considering Malaysia's obligations under the TRIPS Agreement, which imposes minimum standards for the protection and enforcement of intellectual property rights among WTO members. Failure to fully incorporate these standards can lead to governance gaps, trade vulnerabilities, and weakened intellectual property enforcement frameworks (Correa, 2017). Furthermore, with the rise of complex fields like artificial intelligence, Malaysia must also grapple with emerging global instruments like the EU AI Act, which introduces forward-looking standards for transparency, fairness, and ethical development of AI systems (Guadamuz, 2024). Without proactive domestication efforts, Malaysia risks being left behind in both the innovation economy and the international regulatory landscape. Legal adaptability in Malaysia needs to be seen as an ongoing, active process. It involves updating laws, having open discussions between local and international stakeholders, and, most importantly, having strong political commitment to turn global best practices into real changes in Malaysia. Only by consistently making these efforts can Malaysia create a legal framework that is both strong and flexible enough to support long-term development and keep up with technological progress.

ECONOMIC FAIRNESS

A second key area, equally vital to sustainable governance, concerns economic fairness. In particular, it focuses on how Malaysia proposes to manage the relationship between AI technologies and intellectual property (IP) rights. In recent discussions, including proposals by scholars (Latif, Manap, and Althabhawi, 2024), the idea of introducing compulsory licensing mechanisms for AI training datasets and AI-generated inventions has been floated as a way to promote access to technology, ensure fair remuneration for copyright owners, and encourage innovation. However, such mechanisms must be designed with great caution, especially given Malaysia's obligations under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement).

TRIPS provides three key frameworks governing limitations and exceptions to IP rights. For copyright, Article 13 sets out the three-step test, requiring that any limitation must (i) be

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confined to certain special cases, (ii) not conflict with the normal exploitation of the work, and (iii) not unreasonably prejudice the legitimate interests of the rightsholder. For patents, Articles 30, 31 and 31bis permit compulsory licensing under strict conditions, mandating that each license must be considered on a case-by-case basis, must predominantly serve the domestic market, and must ensure that rightsholders receive adequate remuneration (Igbokwe & Tosato, 2022).

If Malaysia does not design its compulsory licensing mechanisms in compliance with these international frameworks, it could face international disputes, lose the trust of investors, and unintentionally weaken its own innovation environment. Therefore, finding the right balance is crucial. On one hand, it is important to ensure fair access to AI tools and prevent monopolistic control over critical datasets (Kattnig, Angerschmid, Reichel, & Kern, 2024). To address this, scholars in Malaysia have suggested creating a special licensing system specifically for AI. Such a system would allow AI developers to legally use copyrighted and patented materials for training their models, while ensuring that original creators are fairly compensated (Latif, Manap, & Althabhawi, 2024). Their proposals include setting standard royalty rates, establishing collective organizations to manage AI dataset licenses, and requiring transparency in reporting the copyrighted or patented materials used during AI training.

On the other hand, Gervais (2020) warns that if compulsory licensing schemes are too broad or poorly managed, they could discourage creators and investors, both of whom are essential for sustaining long-term technological progress. Over-weakening intellectual property protections risks undermining creativity and innovation. Therefore, ensuring fairness in AI governance is not simply about increasing access; it requires designing careful, TRIPS-compliant systems that balance technological access with the protection of creators' rights.

In this light, Malaysia's policymaking must be guided by a twin focus: (i) protecting the legitimate interests of IP owners and (ii) ensuring that AI development remains inclusive and dynamic, consistent with Article 30 of the TRIPS Agreement. Sustainable governance, as scholars suggest, is achieved not by favoring one side over the other but by creating a fair and stable environment where innovation and rights coexist harmoniously an approach that aligns with the broader objectives outlined in Malaysia's National Guidelines on AI Governance and Ethics (MOSTI, 2024).

ETHICAL TRANSPARENCY AND THE EU AI ACT AS A REGULATORY BENCHMARK

As artificial intelligence (AI) technologies become increasingly integrated into daily life and economic activities, establishing a strong foundation of ethical transparency is vital for any sustainable governance framework. The need for clear, enforceable transparency obligations has never been more urgent, particularly in Malaysia. In this context, the European Union Artificial Intelligence Act (EU AI Act) provides a valuable regulatory benchmark, especially through its comprehensive transparency rules.

Published in the Official Journal on 12 July 2024 and entering into force on 1 August 2024, the EU AI Act represents the first comprehensive legal framework regulating AI technologies across Europe. It seeks to ensure that AI is developed and deployed in ways that are safe, ethical, and aligned with fundamental rights and societal values. While its primary focus is on AI safety and ethics, the Act also addresses intellectual property (IP) concerns associated with AI-generated content. Preamble 48 highlight the obligation for AI

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systems to respect IP rights, ensuring safeguards against unauthorized use of copyrighted, trademarked, or patented content during both training and operation. Preamble 88 further emphasizes the importance of transparency and accountability in AI-generated outputs, highlighting the need to protect creators and maintain public trust (Guadamuz, 2024).

Article 50 of the EU AI Act reinforces transparency by requiring AI providers to clearly inform users when they are interacting with an AI system instead of a human. This applies to AI systems generating synthetic content, such as images, audio, or text, which must be marked as artificially created or altered. Providers must also disclose if AI systems are used for emotion recognition or biometric categorization, ensuring that users are informed about the system's operation. Most importantly, AI-generated or manipulated content, like deepfakes, must be disclosed, especially when it's used for public or informational purposes (Gils, 2024). The Act mandates that these disclosures be clear, accessible, and provided at the time of first interaction. These measures are designed to protect users, uphold intellectual property rights, and maintain trust in AI systems. Similarly, Article 53 requiring AI providers to establish policies to comply with IP and copyright law, including respecting rights reservations (Nordemann & Rasouli, 2025). This provision in way highligting the importance of ensuring that AI systems are designed and operated in a manner that acknowledges and upholds the intellectual property rights of creators. For intellectual property owners, these transparency obligations are particularly important. They empower rights holders to monitor the use of their creations, safeguard against unauthorized exploitation, and ensure fair attribution within AI-generated outputs (Guadamuz, 2024).

In the Malaysian context, embedding transparency standards within the National Guidelines on AI Governance and Ethics, as well as future AI legislation, would represent a significant step forward in which are currently lacking. As Jobin, Ienca, and Vayena (2019) emphasize, transparency is a fundamental principle across AI governance frameworks globally, and it serves as the cornerstone for the trustworthy and sustainable deployment of AI technologies. To incorporate legally binding transparency rules inspired by the EU AI Act could effectively address local challenges, such as ensuring proper attribution and fair remuneration for intellectual property (IP) owner as identified by Latif, Manap, and Althabhawi (2024). However, there is a noticeable gap in the Malaysian legal framework when it comes to addressing these issues, particularly in the realm of IP law. Currently, Malaysia lacks specific provisions within its AI-related legislation that explicitly mandate transparency in AI's use of intellectual property. As AI technologies evolve, there is growing concern over how AI interacts with intellectual property (IP) rights, especially when it comes to creating content, using data, or training models. In Malaysia, there are no clear rules on how AI should handle IP issues, leading to uncertainty for creators, developers, and others involved in the IP field. This is problematic because Malaysia's current IP laws do not fully address the challenges posed by AI-generated works. For example, it is unclear how to fairly attribute credit and compensate original creators whose works are used by AI systems. This gap in the law makes it difficult for stakeholders to navigate and protect their IP rights in the age of AI (Latif, Manap, and Althabhawi, 2024). Below is the summary of the concept of sustainability in IP and AI governance:

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Key Areas	Description	Key International Benchmark
Legal Adaptability	Malaysia must actively incorporate international obligations (e.g., TRIPS, EU AI Act) into enforceable domestic laws, ensuring that IP law remains responsive to AI developments.	TRIPS Agreement; EU AI Act principles
Economic Fairness	Introduce mechanisms like compulsory licensing, revenue-sharing, and ensure compliance with international standards to protect IP creators' rights while promoting innovation. This must align with both the copyright three-step test and the patent compulsory licensing conditions.	TRIPS Agreement (Article 13: Three-Step Test for copyright; Articles 30, 31, and 31bis for patents)
Ethical Transparency	Enforce transparency obligations on AI outputs, including disclosure of AI-generated content, respect for IP rights, and informing users when interacting with AI systems.	EU AI Act (Articles 50–53; Preambles 48 and 88)

COMPARATIVE ANALYSIS AND REFORM DIRECTION ON MALAYSIA CURRENT IP LAWS

In the area of copyright, the United Kingdom's Copyright, Designs and Patents Act 1988 (UKCPA), particularly Section 9(3), offers a valuable model. It attributes authorship of computer-generated works to *"the person by whom the arrangements necessary for the creation of the work are undertaken."* This approach appropriately recognizes the human creative contribution in AI-generated processes without requiring that a human manually produce each element of the output. In terms of patents, the UK Supreme Court decision in *Thaler v. Comptroller-General of Patents* [2023] UKSC 49 affirmed that AI systems cannot be recognized as inventors or authors under current law. The ruling mentioned that the statutory framework under the Patents Act 1977 requires an inventor to be a natural person and that an AI machine, lacking legal personality, could not fulfill the necessary legal criteria for inventorship (Matulionyte, 2024). The Court emphasized that granting patent rights demands accountability, creativity, and ownership qualities inherently tied to human beings. Therefore, even though AI may play a significant role in generating inventive ideas, it cannot independently claim inventorship under UK law.

The United States takes a similar position. In terms of copyright, the U.S. Copyright Office and the federal courts have consistently maintained that works created solely by AI, without human creative input, are not eligible for copyright protection, as seen in *Stephen Thaler v. Register of Copyrights* (2023). This decision emphasized that human authorship is a fundamental requirement under U.S. copyright law. In relation to patents, in *Thaler v. Vidal* (2022), the U.S. Court of Appeals for the Federal Circuit ruled that only natural persons could be named as inventors under the U.S. Patent Act. The court emphasized that the statutory language and legislative intent associate inventorship strictly with human beings. The court further clarified that the definition of "individual" under the Patent Act refers exclusively to natural persons and does not extend to non-human entities such as AI systems (Lavrichenko, 2022). In its reasoning, the court noted that the patent system is designed to incentivize human ingenuity and innovation, which presupposes human intellectual effort, accountability, and legal capacity.

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In Europe, similar developments are observed. Under copyright law, the EU Directive 2019/790 on Copyright in the Digital Single Market stresses the importance of human authorship but acknowledges that limited protections for machine-assisted outputs may be appropriate, provided that the human intellectual contribution remains central. On the patent side, the European Patent Office (EPO) in decisions J 8/20 and J 9/20 clearly confirmed that AI cannot be regarded as an inventor, reinforcing that inventorship under the European Patent Convention (EPC) must be attributed to natural persons only. The EPO reasoned that recognizing an AI system as an inventor would be inconsistent with the purpose of the patent system, which is to reward human creativity and ensure accountability for the innovation process. Even though AI systems are increasingly capable of producing inventive outputs, the EPO maintained that the requirement of a natural person inventor is fundamental to preserving the integrity and enforceability of patent rights across member states (Nordberg, 2022).

MALAYSIA'S LEGAL POSITION

Malaysia's current intellectual property framework, while well-established, does not yet fully address the complexities introduced by AI-generated works and inventions. Under the Copyright Act 1987, as amended, copyright protection is granted to works created by "qualified persons," defined under Section 3 as Malaysian citizens, permanent residents, or corporations incorporated in Malaysia. Importantly, the concept of "author" under Malaysian law is inherently human-centric. Section 3 defines the author according to the type of work, such as a writer for literary works or a composer for musical works, and implicitly presumes that the creator is a natural person. Further reinforcing this, Section 7(3) of the Act requires that a work must involve "sufficient effort" to be deemed original. The requirement of sufficient effort inherently demands human intellectual input, distinguishing it from outputs generated independently by AI. The Federal Court's decision in *YKL Engineering Sdn Bhd v Sungei Kahang Palm Oil Sdn Bhd* [2022] 8 CLJ 32 further clarifies that originality in copyright does not mean novelty but rather sufficient human skill, labor, and judgment. Thus, a work produced autonomously by AI without meaningful human input would likely fail to meet the threshold of originality under Malaysian law.

In the issues of ownership, Malaysian law maintains that the initial ownership of copyright under Section 26 belongs to the author unless the work is created under employment or commissioning, in which case ownership may transfer to the employer or commissioner. Since AI is not a legal person and cannot hold rights, any copyrightable work produced with AI assistance would vest in the human or entity responsible for orchestrating the creative process. The High Court in *Radion Trading Sdn Bhd v Sin Besteam Equipment Sdn Bhd & Ors* [2010] 9 MLJ 648 supported this view by confirming that copyright created in the course of employment vests in the employer, further reinforcing the human-centered structure of Malaysia's copyright ownership rules. The court stated that:

> "At this point, I move on to deal with the question whether the plaintiff is the owner of the copyright at the material time. In relation to this, s 26(2)(b) of the Act provides, inter alia, where a work is made in the course of the author's employment, the copyright in such work shall be deemed to have transferred to the author's employer, subject to any agreement excluding or limiting such transfer. By virtue of this provision, evidently copyright in the design drawings have transferred from PW1 to the plaintiff by virtue of his employment with the company."

In the context of patents, Section 20(1) of the Patents Act 1983 provides that the right to a patent belongs to the inventor.

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However, where an invention is made in the course of the inventor's employment or pursuant to a commission, the right to the patent shall, in the absence of any agreement to the contrary, belong to the employer or the commissioning party. Although the Act defines an "inventor" broadly as the actual deviser of the invention, it implicitly assumes that the inventor is a natural person capable of holding rights, entering into agreements, and assuming responsibilities. This human-centric assumption aligns with the common understanding of inventorship across major jurisdictions. Given the consistent interpretations across the United Kingdom, United States, and Europe that an inventor must be a natural person, there is a strong basis for Malaysia to take a similar stance. Current Malaysian Patent practice, in line with common law principles, expects that patents protect the fruits of human ingenuity as highlighted in YKL Engineering case above. No provision in the Patents Act 1983 presently contemplates the possibility of an AI entity being named as inventor, suggesting an implicit preference for human inventorship. Similarly, inventions created in the course of employment or under commission typically see ownership vesting in the employer, following principles similar to those applied to copyright. In the case of AI-assisted inventions, the employer or commissioning party directing the AI's operations would be the proper holder of the resulting patent rights, not the AI system itself.

Given these existing principles, it is clear that Malaysian IP law presently leans heavily toward a human-centered model of authorship, inventorship, and ownership. However, as AI technologies continue to advance, the absence of explicit statutory provisions addressing AI's role in creation and invention leaves a potential gap that could lead to uncertainty. To ensure that Malaysia's IP laws remain clear, competitive, and future-proof, legislative reform should focus on explicitly affirming that "author" and "inventor" must be natural persons. This approach ensures the protection and remuneration of individuals who contribute intellectual creativity and human ingenuity to the creation or invention. Upholding the rights of human creators aligns with the fundamental objectives of intellectual property law, which are rooted in labor theory and personality theory which aims to encourage innovation, rewarding personal effort, and promoting societal progress even as technological developments continue to reshape the creative and inventive landscape.

REMUNERATION FOR IP OWNERS

The increasing reliance of AI systems on copyrighted works and patented inventions has raised serious concerns about fair compensation for copyright owners. Many AI models, particularly those designed for automated content generation, are trained on vast datasets that include copyrighted materials without clear mechanisms for attribution, acknowledgment, or payment (Lucchi, 2023). This lack of transparency disrupts the balance within the intellectual property ecosystem and threatens the sustainability of creative industries. It also raises deeper legal questions about authorship, inventorship, and ownership issues that existing legal frameworks, built around human creativity, do not fully address (Ducru et al., 2024). While AI can generate content independently, much of its output is derived from protected works, underscoring the need for clear attribution and fair compensation systems for original creators. The absence of clear legal mechanisms leaves copyright and patent owners vulnerable to exploitation and revenue loss (Jones, 2023), particularly in jurisdictions where IP laws have yet to adapt to the complexities of AI. In this sense, Once authorship and inventorship are firmly attributed only to human creators by preserving the human-centric foundation of intellectual property law, a new question naturally arises on how should fair remuneration be ensured in an ecosystem

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increasingly influenced by AI technologies? (Mammen et al., 2024).

In addressing this concern, fair remuneration for IP owners can be achieved through several academic and policy-oriented approaches, such as compulsory (i) licensing schemes, (ii) revenue-sharing mechanisms, and AI-specific (iii) copyright and patent proposals for amended legislation as discussed above. Compulsory licensing, for instance, ensures that the use of copyrighted materials and patented inventions by AI systems is legally permissible while requiring AI developers to compensate copyright owners appropriately (Latif, Manap, & Althabhawi, 2024). Revenue-sharing models, which allocate a portion of profits derived from AI-generated outputs back to original content creators, offer a sustainable solution for equitable compensation (Senftleben, 2023) and should be incorporated into a dedicated AI governance act

Building on this foundation, concrete policy proposals should be considered. Universally, there is only limited precedent for structured remuneration mechanisms in the context of AI-generated outputs, but lessons can be drawn from sectors such as collective management in copyright law and patent licensing regimes. For Malaysia, a three actionable steps approach could be effective. First, a statutory framework for compulsory licensing should be introduced, mandating that AI developers who utilize copyrighted works or patented inventions in training datasets or operational processes must obtain a license and provide fair remuneration to rights holders (Latif, Manap, & Althabhawi, 2024). The issue of AI training on copyrighted material must also be addressed. Scholar argues that Malaysia should expand Section 13(2) of the Copyright Act 1987 to explicitly recognize AI training as a restricted act. Section 13(2) currently prohibits acts such as reproduction and adaptation without authorization but at the same time it does not specifically cover the use of copyrighted works for AI training purposes. It is thus suggested that expanding this section to treat AI model training as a restricted act requiring prior authorization from copyright holders in Malaysia would better align its legal framework with emerging international practices. This would ensure that rights holders are not exploited through the unlicensed use of their works in AI datasets, while simultaneously promoting responsible AI development through licensing mechanisms. Apart from that, this would also ensure TRIPS-compliance under Article 13 (Copyright Three Step test provision) and Article 31 (Patent Compulsory licensing provision) while adapting to local socio-economic contexts. Second, a revenue-sharing scheme should be embedded within a dedicated AI governance act, requiring AI operators and service providers to allocate a proportion of revenues generated from AI outputs to a central remuneration fund.

The end result of these proposed mechanisms is the creation of a balanced and sustainable IP ecosystem in which the rights of patent holders and copyright owners are protected, while AI innovation is encouraged. Ensuring fair remuneration not only addresses the economic interests of IP owners but also reinforces the value of creative works, fostering a climate of trust and collaboration between stakeholders (Kikkis, 2023). For Malaysia, such legal reforms have the potential to position the nation as a leader in ethical AI governance by demonstrating its ability to balance technological progress with the protection of IP rights. Ultimately, achieving fair remuneration for copyright owners will strengthen the creative economy, promote equity within the IP system, and contribute to the sustainable integration of AI into society. It is that in this paper clear rules on authorship, inventorship, and compensation, should be establish in line with Malaysia National Guidelines on AI Governance and Ethics governance framework with international best practices such as EU AI

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Act while addressing the socio-legal concerns unique to its context. A governance model that prioritizes remuneration for copyright owners ensures that AI's potential is realized responsibly, without compromising the rights of those who contribute to its foundational inputs.

TRANSPARENCY IN USING COPYRIGHTED WORKS AND PATENTED INVENTIONS FOR FAIRNESS AND ACCOUNTABILITY

Transparency in AI training datasets is a critical issue in protecting intellectual property rights (Buick, 2024). AI developers often rely on vast amounts of copyrighted and patented materials, yet many systems lack clear mechanisms for disclosing data sources or securing proper licenses. This raises concerns about ownership disputes and fair compensation for creators. Requiring developers to disclose the origins of training data and obtain appropriate licensing agreements would help address these challenges while providing legal clarity for both IP owners and AI developers.

Another important aspect of transparency is ensuring that patented inventions used in AI systems are properly authorized (Foss-Solbrekk, 2021). Without a structured verification process, AI developers risk unintentional infringement, leading to legal uncertainty. A centralized database that allows developers to check the IP status of technologies before integrating them into AI models could minimize these risks and promote a culture of compliance. Strengthening transparency measures in AI governance would not only protect intellectual property rights but also support innovation by fostering trust between AI developers and content creators. Thus, this paper suggest that AI developers disclose the sources of training data and secure proper licensing agreements would not only protect IP owners but also establish a clear and transparent legal framework for AI developers to operate within. Further, AI developers should be required to report on the specific purposes for which copyrighted works and patented inventions are used in their systems. This would provide clarity on how intellectual property contributes to AI outputs, enabling fair compensation mechanisms. At the outset, this transparency mechanism would help ensure compliance with legal and ethical standards (Mylly, 2023), fostering trust among stakeholders in line with with the requirements of the "transparency" under article 13 of EU AI Act ensuring that the IP used in the system is clearly documented and legally obtained.

ENFORCEABILITY OF NATIONAL GUIDELINES

A major challenge in Malaysia's AI governance is the enforceability of national guidelines. While the Malaysia National Guidelines on AI Governance and Ethics mark progress in regulating AI development, they mainly outline voluntary ethical principles, including fairness, transparency, and accountability. Without legal authority, these guidelines lack the strength to ensure compliance, making their real-world impact limited. Many AI developers and organizations may view them as recommendations rather than obligations, reducing their effectiveness.

The voluntary nature of the guidelines means that while AI developers and companies may adhere to ethical recommendations in the short term (Hagendorff, 2020), there is little incentive to ensure long-term compliance or to implement the necessary checks and balances to safeguard the interests of affected stakeholders. As a result, the guidelines may lack the power to address serious concerns about the issues discussed on ownership and fair remuneration for IP owners, or the prevention of discriminatory practices in AI systems. Without binding enforcement measures, these ethical principles risk being relegated to mere recommendations, unable to compel AI

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companies to make the necessary changes to their practices or business models. To strengthen the impact of the National Guidelines on AI Governance, the framework should shift from voluntary principles to legally binding regulations under a dedicated AI governance act. This would require clear compliance monitoring, penalties for violations, and enforcement mechanisms to hold AI developers accountable, regardless of their size or influence. Strict penalties for non-compliance would deter misconduct while ensuring remedies for affected parties (Garcia-Segura, 2024).

In the context of intellectual property, if an AI system infringes on copyrighted content or patented inventions without proper attribution or compensation, the developer could face financial penalties or be required to compensate the copyright owner. AI systems that fail to meet transparency or fairness standards could also be subject to fines or restrictions on their use. With the establishment of the National AI Office (NAIO) on 12 December 2024, there is hope that Malaysia will transition from a voluntary AI governance model to a legally enforceable framework, ensuring stronger protections and accountability in AI development and deployment.

OTHER SUGGESTIONS

Beyond legislative amendments and remuneration mechanisms discussed earlier, further structural and procedural reforms are necessary to ensure a holistic and future-proof approach to AI governance in Malaysia. As AI systems become more deeply integrated into creativeand commercial processes, it is crucial to establish complementary institutions and accountability frameworks that can respond to the emerging challenges. In this regard, two (2) additional proposals are worth considering: (i) the establishment of an AI Ombudsman to manage disputes and ethical issues, and (ii) the enhancement of accountability through mandatory AI Impact Assessments for AI-driven systems engaging with intellectual property rights and innovation ecosystems.

AI OMBUDSMAN

Building upon the earlier proposals, an additional structural reform could involve the establishment of an AI Ombudsman, modelled on Australia's AI Ethics Framework, to handle disputes arising from AI-generated works and inventions (National Justice Project, 2025). Such an Ombudsman could serve as a specialized, independent authority to mediate and adjudicate issues related to authorship, inventorship, ownership, and ethical concerns arising from AI activities. Where the AI Australia Ethics Principles emphasize accountability, transparency, and contestability (Department of Finance, 2025), the Malaysian AI Ombudsman could be empowered to issue non-binding recommendations, facilitate voluntary dispute resolution between parties, and advise on the interpretation of new statutory provisions relating to AI-generated intellectual property. Incorporating such an institution would enhance the adaptability and responsiveness of Malaysia's legal framework to the complexities introduced by AI-driven innovation. It would also promote public trust by ensuring that grievances arising from the deployment of AI technologies are addressed swiftly, fairly, and with due consideration to both innovation and rights protection. To dictate this effectively, the establishment of the AI Ombudsman should be grounded within a formal legislative framework, either as part of a broader AI Governance Act or through amendments to existing intellectual property such as Copyright Act 1987, Patents Act 1983 or and any technology and media legislations and regulations which exist in Malaysia. This framework should clearly define the Ombudsman’s jurisdiction, powers, and procedures, ensuring transparency, independence, and

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accountability in handling disputes. The Ombudsman should also have the authority to develop soft law instruments, such as codes of practice and advisory guidelines, which can guide stakeholders on compliance with ethical and legal standards related to AI-generated outputs.

ENHANCING ACCOUNTABILITY THROUGH AI IMPACT ASSESSMENTS

Strengthening accountability in AI governance apart from AI Ombudsman requires the introduction of mandatory AI Impact Assessments (AIIA) as a regulatory requirement for AI developers and deployers (Bogucka et al., 2024). The Netherlands has successfully implemented the Netherlands' AI Impact Assessment Framework (Information Policy Directorate et al., 2022), while Malaysia already applies the Regulatory Impact Analysis (RIA) framework to evaluate policies and regulations for efficiency, effectiveness, and fairness (Hassan, 2015). Introducing AIIAs in Malaysia would enable a structured assessment of the societal, ethical, and economic impacts of AI systems prior to deployment, thereby aligning AI governance with national objectives of responsible innovation and ethical oversight (Stahl & Leach, 2023). AIIA would serve as a structured evaluation tool, requiring developers to assess AI systems for fairness, transparency, and accountability. This includes identifying risks such as bias, discrimination, and potential infringement of intellectual property rights (Rodrigues, 2020). Documenting data sources, training methodologies, and decision-making frameworks would enhance transparency in AI development. Public disclosure of AIIA findings would further strengthen trust among stakeholders, ensuring AI systems operate within ethical and legal boundaries. Additionally, the findings in the United Kingdom case of *Clearview AI Inc. v. Information Commissioner* [2023] UKFTT 819 (GRC) highlight the consequences of non-compliance with data protection and intellectual property laws in AI development, supporting the need to mandate AI Impact Assessments and strengthen accountability mechanisms.

The *Clearview AI Inc* case decision demonstrates how AI developers who fail to adhere to data protection and intellectual property standards may face significant legal and financial repercussions. In that case, *The Clearview AI Inc.* was found to have unlawfully collected and processed biometric data without proper consent, resulting in enforcement actions and reputational damage. This outcome illustrates the urgent need for proactive measures, such as mandatory AI Impact Assessments, to identify and mitigate risks early in the AI development process. Implementing AIIAs would not only align Malaysia's governance approach with international best practices but also ensure that developers are held accountable for ethical and legal compliance before AI systems are deployed. By embedding such safeguards into the regulatory framework, Malaysia can promote responsible AI innovation while protecting fundamental rights and intellectual property interests.

ACTIONABLE ROADMAP AND WAY FORWARD

To effectively address the identified legal and governance gaps, Malaysia should implement a phased, structured roadmap that in line with immediate actions with medium- and long-term strategic reforms to ensure a resilient, forward-looking intellectual property and AI governance framework.

In the immediate or short term, Malaysia should prioritize amendments to the Copyright Act 1987 and the Patents Act 1976 to explicitly recognize "AI-assisted works" and "AI-assisted inventions" (Latif, Manap, & Althabhawi, 2024; Abbott, 2019). These amendments must clearly define the role of human creators and inventors where AI involvement is significant but not entirely

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autonomous. Concurrently, Section 13(2) of the Copyright Act 1987 should be expanded to classify the use of copyrighted materials for AI training as a restricted act requiring prior authorization. Malaysia should also introduce express disclosure obligations mandating applicants to specify AI's involvement in the creation or invention process (Novelli et al., 2024). Moreover, the establishment of an AI Ombudsman, modelled after Australia's AI Ethics Framework should be expedited to mediate disputes relating to AI-generated authorship, inventorship, ownership, and fair remuneration. Immediate steps should also include the formal adoption of transparency requirements for AI developers to disclose the sources of training data, licensing status, and the purposes for which copyrighted and patented materials are utilized.

In the medium term, Malaysia should move towards enacting a dedicated AI Governance Act that consolidates and strengthens ethical, legal, and regulatory principles in line with the approaches adopted in EU Act Approach. The AI Governance Act should establish legally binding regulations, integrate compulsory licensing mechanisms for AI training datasets incorporating revenue-sharing models to ensure fair compensation for IP owners, and mandate AI Impact Assessments (AIIA) for all high-risk AI applications Furthermore, Malaysia must ensure that its National Guidelines on AI Governance and Ethics transition from voluntary guidelines to enforceable statutory requirements. Enhancing the mandate and operational capacity of the National AI Office (NAIO) to supervise compliance, conduct audits, and impose penalties for breaches will be vital to the successful implementation of these reforms (The National Artificial Intelligence Office, 2024). This phase should also introduce a structured verification system to track and authenticate copyrighted works and patented inventions used in AI systems, minimizing risks of inadvertent infringement (Mylly, 2023).

In the long term, Malaysia should work towards embedding sustainability and international harmonization within its AI and IP governance frameworks. Full domestication of international standards such as the European Union's AI Act (Guadamuz, 2024) and the TRIPS Agreement (WTO, 1994) should be prioritized to align Malaysia's laws with global best practices. The establishment of a centralized IP verification and tracking platform is essential to ensure transparency in the use of copyrighted and patented works for AI training and outputs (Buick, 2024; Foss-Solbrekk, 2021). Malaysia must also foster sustained public-private collaboration to continuously update licensing frameworks, incentivize responsible AI innovation, and protect fundamental rights (Latif, Manap, & Althabhawi, 2024; Senftleben, 2023). Additionally, the country should advocate for the development of ASEAN-wide harmonized AI and IP regulatory standards to secure Malaysia's regional leadership in ethical and sustainable AI governance (ASEAN 2024).

CONCLUSION

As Malaysia embraces the promises of artificial intelligence, it must also confront the deeper questions of fairness, ownership, and accountability. AI may be a powerful tool for progress, but behind every innovation lies human creativity and labor, in which these must be respected and protected. This paper has shown that Malaysia's current legal framework, though well-intentioned, needs urgent reform to recognize AI's evolving role while ensuring that intellectual property owners are not left behind.

Building a sustainable governance framework is not just about catching up with technology, it is more or less about setting the foundation for a future where innovation

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and justice can grow hand in hand. It means redefining authorship and inventorship in a way that honors human contribution, ensuring fair remuneration for creators, and embedding transparency at the heart of AI development. Malaysia now stands at a crossroads: it can either be a passive observer of global trends, or a proactive leader in ethical, sustainable AI governance. The choice we make today will shape not only our economy but also our values as a society. True progress will come not only from what our machines can do but from how wisely, fairly, and courageously we choose to guide them.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest to this study.

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All authors contributed to the final version and approved the submission.

REFERENCES

Abbott, R. (2019). The Artificial Inventor Project. *WIPO Magazine.* Retrieved from https://www.wipo.int/en/web/wipo-magazine/articles/the-artificial-inventor-project-41111

Afshar, M. S. (2022). Artificial intelligence and inventorship – Does the patent inventor have to be human? *Hastings Science & Technology Law Journal*, *13*(1), 55. Retrieved from https://repository.uchastings.edu/hastings_science_technology_law_journal/vol13/iss1/5

Alhosani, K., & Alhashmi, S. M. (2024). Opportunities, challenges, and benefits of AI innovation in government services: A review. *Discover Artificial Intelligence, 4*(18).

Anantrasirichai, N., & Bull, D. (2022). Artificial intelligence in the creative industries: A review. *Artificial Intelligence Review, 55*, 589–656. https://doi.org/10.1007/s10462-021-10036-0

Arora, A., Gupta, M., Mehmi, S., Khanna, T., Chopra, G., Kaur, R., & Vats, P. (2024). Towards intelligent governance: The role of AI in policymaking and decision support for e-governance. In *Information Systems for Intelligent Systems (ISBM 2023)* (Smart Innovation, Systems and Technologies, Vol. 379, pp. 229–240). Springer. https://doi.org/10.1007/978-981-99-8408-0_18

ASEAN. (2024, February). *ASEAN Guide on AI Governance and Ethics*. https://asean.org/wp-content/uploads/2024/02/ASEAN-Guide-on-AI-Governance-and-Ethics_beautified_201223_v2.pdf

Azmi, I. M. (2014). Intellectual property policy and academic patenting in Malaysia: Challenges and prospects. *Pertanika Journal of Social Sciences & Humanities, 22*(S), 1–20. ISSN: 0128-7702.

Bogucka, E., Constantinides, M., Šćepanović, S., & Quercia, D. (2024). Co-designing an AI impact assessment report template with AI practitioners and AI compliance experts. *arXiv*.

Buick, A. (2024). Copyright and AI training data—transparency to the rescue? *Journal of Intellectual Property Law & Practice*. Advance online publication.

Candelon, F., Charme di Carlo, R., De Bondt, M., & Evgeniou, T. (2021, September–October). AI regulation is coming. *Harvard Business Review*. https://hbr.org/2021/09/ai-regulation-is-coming

[Received: 6 March 2025; Accepted: 5 August 2025; Published: xx xx xxxx]

Correa, C. M. (2017, February). *Mitigating the regulatory constraints imposed by intellectual property rules under free trade agreements* (Research Paper No. 74). South Centre. https://www.southcentre.int/wp-content/uploads/2017/02/RP74_Mitigating-the-Regulatory-Constraints-Imposed-by-Intellectual-Property-Rules-under-Free-Trade-Agreements_EN-1.pdf

Cuntz, A. (2024). Artificial intelligence and intellectual property: An economic perspective (WIPO Economic Research Working Paper Series No. 77). World Intellectual Property Organization (WIPO). https://www.wipo.int/edocs/pubdocs/en/wipo_pub_econstat_wp_77.pdf

Department of Finance. (2025, March 19). *Implementing Australia's AI Ethics Principles in government*. https://www.finance.gov.au/government/public-data/data-and-digital-ministers-meeting/national-framework-assurance-artificial-intelligence-government/implementing-australias-ai-ethics-principles-government

Ducru, P., Raiman, J., Lemos, R., Garner, C., He, G., Balcha, H., Souto, G., Branco, S., & Bottino, C. (2024). AI royalties—An IP framework to compensate artists & IP holders for AI-generated content. *arXiv preprint arXiv:2406.11857*.

European Commission. (2024). *Artificial Intelligence Act*. https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai

Foss-Solbrekk, K. (2021). Three routes to protecting AI systems and their algorithms under IP law: The good, the bad and the ugly. *Journal of Intellectual Property Law & Practice, 16*(3), 247–258.

Gaffar, H. (2024). Copyright protection for AI-generated works: Exploring originality and ownership in a digital landscape. *Asian Journal of International Law*.

Garcia-Segura, L. A. (2024). The role of artificial intelligence in preventing corporate crime. *Journal of Economic Criminology*, *5*, 100091

Geiger, C. (2024). Elaborating a human rights-friendly copyright framework for generative AI. *IIC - International Review of Intellectual Property and Competition Law*, *55*, 1129–1165.

Gervais, D. (2020). Is intellectual property law ready for artificial intelligence? *GRUR International*, 69(2), 117–118. https://doi.org/10.1093/grurint/ikz025

Gils, T. (2024). A detailed analysis of Article 50 of the EU's Artificial Intelligence Act. In C. N. Pehlivan, N. Forgó, & P. Valcke (Eds.), *The EU Artificial Intelligence (AI) Act: A commentary* (forthcoming). Kluwer Law International.

Guadamuz, A. (2024). The EU's Artificial Intelligence Act and copyright. *The Journal of World Intellectual Property*.

Hagendorff, T. (2020). The ethics of AI ethics: An evaluation of guidelines. *Minds and Machines, 30*, 99–120

Hamid, A. G. (2006, March 31). *Judicial application of international law in Malaysia: An analysis*. Malaysian Bar. https://www.malaysianbar.org.my/article/news/legal-and-general-news/legal-news/judicial-application-of-international-law-in-malaysia-an-analysis

Hassan, K. H. (2015). Regulatory impact analysis in legal research: Way forward for Malaysian legislation. *Mediterranean Journal of Social Sciences*, *6*(3), 520.

Hughes, J. (1988). The philosophy of intellectual property. *Georgetown Law Journal, 77*, 287–366.

Igbokwe, E. M., & Tosato, A. (2022, February 8). Access to medicines and

[Received: 6 March 2025; Accepted: 5 August 2025; Published: xx xx xxxx]

pharmaceutical patents: Fulfilling the promise of TRIPS Article 31bis. *University of Pennsylvania Carey Law School, Legal Scholarship Repository*. https://scholarship.law.upenn.edu/faculty_scholarship/2802

Igbokwe, E. M. (2024). Human to machine innovation: Does legal personhood and inventorship threshold offer any leeway? *The Journal of World Intellectual Property*.

Information Policy Directorate, Human Environment and Transport Inspectorate, & Directorate-General for Public Works and Water Management. (2022). *AI Impact Assessment: A tool to set up responsible AI projects*. Ministry of Infrastructure and Water Management.

Jones, E. (2023). Digital disruption: artificial intelligence and international trade policy. *Oxford Review of Economic Policy*, 39(1), 70–84

Kattnig, M., Angerschmid, A., Reichel, T., & Kern, R. (2024). Assessing trustworthy AI: Technical and legal perspectives of fairness in AI. *Computer Law & Security Review, 55*, 106053. https://doi.org/10.1016/j.clsr.2024.106053

Kelly, S., Kaye, S.-A., & Oviedo-Trespalacios, O. (2022). What factors contribute to the acceptance of artificial intelligence? A systematic review. *Telematics and Informatics*, *68*, 101925.

Khaw, L.T., & Tay, P.S. (2017). Khaw on Copyright Law in Malaysia (4th ed.). Selangor: LexisNexis.

Kikkis, I. (2023). Raising awareness on intellectual property for creative industries in the digital environment: Guidelines for organizing awareness-raising campaigns 2022. Prepared for WIPO Committee on Development and Intellectual Property.

Kim, D. (2020). 'AI-generated inventions': Time to get the record straight? *GRUR International*, *69*(5), 443–456.

Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. *Nature Machine Intelligence, 1*(9), 389–399. https://doi.org/10.1038/s42256-019-0088-2

Lavrichenko, M. (2022). *Thaler v. Vidal: Artificial intelligence—Can the invented become the inventor? Cardozo Law Review, 44*(2), 643–680

Latif, M. S. A., Manap, N. A., & Althabhawi, N. M. (2024). Proposal for copyright compensation for artificial intelligence (AI) data training in Malaysia. *IIUM Law Journal, 32*(2), 159–192. https://doi.org/10.31436/iiumlj.v32i2.978

Latif, M. S. A., Manap, N. A., & Althabhawi, N. M. (2024). The transformative use of user-generated content: Discovering the fine line between permitted use and copyright infringement from a Malaysian perspective. *UUM Journal of Legal Studies, 16*(1), 54–69.

Lauber-Rönsberg, A., & Hetmank, S. (2019). The concept of authorship and inventorship under pressure: Does artificial intelligence shift paradigms? *Journal of Intellectual Property Law & Practice*, 14(7), 570–579.

Lucchi, N. (2023). ChatGPT: A case study on copyright challenges for generative artificial intelligence systems. *European Journal of Risk Regulation, 15*(Special Issue 3), 1–15.

Mammen, C., Collyer, M., Dolin, R. A., Gangjee, D. S., Melham, T., Mustaklem, M., Sundaralingam, P., & Wang, V. (2024). *Creativity, artificial intelligence, and the requirement of human authors and*

[Received: 6 March 2025; Accepted: 5 August 2025; Published: xx xx xxxx]

inventors in copyright and patent law. SSRN

Matulionyte, R. (2024). 'AI is not an Inventor': *Thaler v Comptroller of Patents, Designs and Trademarks* and the patentability of AI inventions. *The Modern Law Review*. https://doi.org/10.1111/1468-2230.12907

Mazzi, F. (2025). AI governance and environmental sustainability: Evaluating SDGs' impact assessment with a case study on AI integration in the supply chain. In *Oxford intersections: AI in society* (Article 26). Oxford University Press. https://doi.org/10.1093/9780198945215.003.0026

Militsyna, K. (2023). Human creative contribution to AI-based output – One just can('t) get enough. *GRUR International*, *72*(10), 939–949.

MOSTI (Malaysian Ministry of Science, Technology and Innovation). (n.d.). *The National Guidelines on AI Governance & Ethics*. Retrieved from https://mastic.mosti.gov.my/publication/the-national-guidelines-on-ai-governance-ethics/, accessed on 18 December 2024.

Mylly, U.-M. (2023). Transparent AI? Navigating between rules on trade secrets and access to information. *IIC - International Review of Intellectual Property and Competition Law, 54*, 1013–1043.

National Justice Project. (2025, March 21). *Launch of Australia's first AI-powered complaints platform*. https://www.justice.org.au/launch-of-australias-first-ai-powered-complaints-platform/

Niazi, M. (2024). *Conceptualizing global governance of AI*. Digital Policy Hub Working Paper, Centre for International Governance Innovation. https://www.cigionline.org/documents/2558/DPH-paper-Niazi.pdf

Nordemann, J. B., & Rasouli, A. (2025, February 3). The AI Act provisions relating to copyright – Possibility of private enforcement? Germany as an example – Part 1. *Kluwer Copyright Blog*. https://copyrightblog.kluweriplaw.com/2025/02/03/the-ai-act-provisions-relating-to-copyright-possibility-of-private-enforcement-germany-as-an-example-part-1/

Nordberg, A. (2022). Creative machines, orphan inventions: AI and the concept of inventor at the EPO. In M. Karlsson-Tuula, P. J. Nordell, F. Papadopoulou, & A. H. Persson (Eds.), *Magna Mater Marianne Levin (Festskrift)*

Novelli, C., Casolari, F., Hacker, P., Spedicato, G., & Floridi, L. (2024). Generative AI in EU law: Liability, privacy, intellectual property, and cybersecurity. Computer Law & Security Review, 55, 106066.

Parliament of Malaysia Hansard. (1982). Official website of Parliament of Malaysia. Accessed December 18, 2024 from https://www.parlimen.gov.my/files/hindex/pdf/DR-14031983.pdf

Parliament of Malaysia Hansard. (1986). Official website of Parliament of Malaysia. Accessed December 18, 2024 from https://www.parlimen.gov.my/files/hindex/pdf/DR-08121986.pdf

Papagiannidis, E., Mikalef, P., & Conboy, K. (2025). Responsible artificial intelligence governance: A review and research framework. *The Journal of Strategic Information Systems, 34*(2), 101885. https://doi.org/10.1016/j.jsis.2024.101885

Rodrigues, R. (2020). Legal and human rights issues of AI: Gaps, challenges and vulnerabilities. *Journal of Responsible Technology, 4*, 100005.

[Received: 6 March 2025; Accepted: 5 August 2025; Published: xx xx xxxx]

https://doi.org/10.1016/j.jrt.2020.100005

Schwartz, D. L., & Rogers, M. (2022). "Inventorless" inventions? The constitutional conundrum of AI-produced inventions. *Harvard Journal of Law & Technology*, *35*(2).

Senftleben, M. (2023). Generative AI and author remuneration. *IIC - International Review of Intellectual Property and Competition Law, 54*: 1535–1560

Stahl, B. C., & Leach, T. (2023). Assessing the ethical and social concerns of artificial intelligence in neuroinformatics research: An empirical test of the European Union Assessment List for Trustworthy AI (ALTAI). *AI and Ethics*, *3*, 745–767

Stundziene, A., Pilinkiene, V., Vilkas, M., Grybauskas, A., & Lukauskas, M. (2024). The challenge of measuring innovation types: A systematic literature review. *Journal of Innovation & Knowledge, 9*(4), Article 100620. https://doi.org/10.1016/j.jik.2024.100620

The National Artificial Intelligence Office (NAIO). (2024). *Malaysia establishes the National AI Office to advance AI agenda*. Retrieved from https://www.mydigital.gov.my/initiatives/the-national-ai-office-naio/

Vaughn, K. I. (1978). John Locke and the labor theory of value. *Journal of Libertarian Studies, 2*(4), 311–326.

Watiktinnakorn, C., Seesai, J., & Kerdvibulvech, C. (2023). Blurring the lines: How AI is redefining artistic ownership and copyright. *Discover Artificial Intelligence*, *3*, Article 37

Wu, Z., Ji, D., Yu, K., Zeng, X., Wu, D., & Shidujaman, M. (2021). AI creativity and the human-AI co-creation model. In M. Kurosu (Ed.), *Human-computer interaction. Theory, methods and tools* (Lecture Notes in Computer Science, Vol. 12762, pp. 171–190). Springer. https://doi.org/10.1007/978-3-030-78224-5_12

Zhang, B., & Dafoe, A. (2020). *U.S. Public Opinion on the Governance of Artificial Intelligence*. arXiv preprint arXiv:1912.12835. https://doi.org/10.48550/arXiv.1912.12835

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