The Legality of Using Blockchain Technology in Enforcing Music Royalty Rights

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Abstract. The rapid progress in the field of Intellectual Property Rights (IPR) globally has been driven by the advancement of information technology. Currently, blockchain technology is being increasingly utilized in specific sectors by several countries. The accountability, security, transparency, and permanence offered by blockchain are widely acknowledged. Its potential in various sectors, including IPR, is perceived due to its sophistication. This raises the issue of how the legality of using blockchain technology in music royalty rights. To address this question, the research analysis utilizes a normative juridical research approach. The results of the study show the implementation of blockchain as a backbone serves to connect copyright owners (musicians) with consumers. Additionally, this system will provide data for calculating royalty amounts. The use of blockchain technology in royalty management requires clear regulations among stakeholders, including musicians, record labels, distributors, and music streaming platforms.

Keywords: Blockchain Technology, Intellectual Property Rights, Music Royalty Rights

1 Introduction

The impact of globalization and technological advancement occurring presently brings about significant developments in various aspects of life. One of the benefits experienced is in the economic domain. The benefits of this progress and development can certainly facilitate and simplify economic activities and financial services. The current technological advancements are akin to a double-edged sword, capable not only of providing positive impacts but also potentially yielding negative consequences in their usage.

The rapid advancement of information technology has been driving significant progress in the field of Intellectual Property Rights (which is hereinafter referred to "IPR") globally.[1] Economic growth in developing countries, including Indonesia, is heavily reliant on foreign investment, and the IPR system plays a crucial role in attracting investors to invest their capital in Indonesia. Its role is to create a conducive and secure environment for the exploitation and commercialization of IPR, including providing adequate protection for patents, trademarks, industrial designs, trade secrets, copyrights, and other forms of IPR. [2]

The recognition of human rights to freedom of expression and opinion is reflected in Copyright, which encompasses the creation of sound, images, writing, or other artistic and

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economically valuable creations. This definition is articulated in the Preamble and Body of the 1945 Constitution of the Republic of Indonesia. Indonesia protects copyright through legislation established in a lex specialis manner, notably with the enactment of Law Number 19 of 2002 as amended by Law Number 28 of 2014 concerning Copyright.

Among the creations safeguarded by copyright are songs and/or music. Songs and/or music, as defined in Article 40 letter (d) of the Law Number 28 of 2014 concerning Copyright, are interpreted as comprehensive creations incorporating elements such as songs or melodies, poems or lyrics, and arrangements, including notations, thereby constituting a unified copyrighted work. Therefore, Copyright represents a right that necessitates protection; failure to safeguard it may adversely affect individuals who invest effort in inspiring, imagining, and creating. Hence, it is imperative to emphasize that Copyright is a crucial component of IPR, particularly encompassing creations in science, art, and literature. The government issued Government Regulation of the Republic of Indonesia Number 56 of 2021 concerning the Management of Royalties for the Copyright of Songs and/or Music as a derivative regulation of Law Number 28 of 2014 concerning Copyright.

However, shortly after the enactment of Government Regulation No. 56/2021 on the Management of Copyright Royalties for Songs and/or Music, efforts to enhance transparency in music royalty management were incorporated into Government Regulation No. 56/2021 through the establishment of the Song and/or Music Information System (SILM) by LMKN. This system will function as a repository storing all forms of commercial music/song usage in Indonesia and is anticipated to aid in the collection, calculation, and distribution of royalties. Despite expectations for the system's completion within 2 (two) years following the enactment of Government Regulation No. 56/2021, considering the delays in its enactment and discussion, there is public skepticism regarding the system's timely completion

Currently, Indonesia has entered the era of 5.0, which integrates virtual and physical spaces. This development impacts several aspects of human life, one of which is the creation of intellectual works. In this digital era, it is conceivable that intellectual works can also take digital form, and indeed, there are already numerous intellectual works available in digital formats. These digital creations are widely traded in the market and have become popular due to their perceived practicality compared to physical intellectual works, which require additional storage space for collection. [3] This integration is done to make everything easier, especially with the advent of blockchain technology. Blockchain technology is a distributed database of transaction records validated and maintained by a network of computers worldwide.

The term blockchain is often recognized as a platform for digital financial organization, particularly within the cryptocurrency or crypto currency system. However, since 2014, this technology has continued to evolve and generate new innovations that impact various aspects of human life. Presently, blockchain technology has been integrated into various sectors of technological innovation. The European Commission report indicates that the trend of blockchain usage in various countries has transformed into various technological services; approximately 600 companies utilize blockchain in the financial sector, 500 companies are developers of blockchain technology, 200 companies are involved in developing consumer services, and other distributions encompass sectors such as health, energy, and material industries.

This development significantly demonstrates that blockchain is a transformative technology that radically alters the way businesses and governments interact. Technological innovation

continues to evolve to unimaginable quantities and qualities and tends to modify human life towards desired directions. This phenomenon is not merely a narrative description; it is evident with the emergence of blockchain technology as a new era of digital reform and its influence on various sectors of technological innovation today.

One of the products/services utilizing blockchain technology is Non-Fungible Tokens (NFTs). NFTs combine a time-based media art subsequently supported by Blockchain technology. NFTs employ blockchain exploration services to transform digital art and other collectibles into unique, verifiable, and easily tradable assets. NFTs are frequently used for purchasing and selling digital artworks such as GIFs, tweets, virtual trading cards, images of physical objects, video game skins, virtual real estate, and many more.[3]

Due to its phenomenon and unique characteristics, which have non-interchangeable exchange value, many Indonesians are flocking to create or purchase artworks in the form of NFTs, either as an investment or merely for collection purposes. However, the emergence of NFTs, particularly in the utilization of blockchain technology in Indonesia, brings about new issues regarding legal certainty and protection. Therefore, this research focuses on the legality of using blockchain technology in enforcing music royalty rights. This research utilizes a normative normative juridical approach, employing conceptual and legislative regulation approaches.

The research methodology employed in this study is the normative legal research method (Juridical Normative). The approach utilized in this research encompasses the legislative approach, conducted by examining all relevant legislative regulations and statutes pertaining to copyright especially regarding music, as well as the conceptual approach, which provides an analysis of issue resolution in a study by considering the background concepts of law.

This study utilizes the normative legal method, with data collection techniques conducted through literature research. The types and sources of data used are secondary data consisting of primary legal materials, secondary legal materials, and tertiary legal materials. This paper is then presented descriptively.

2 Discussion

2.1 The Essence of Blockchain Technology in Intellectual Property Rights

The clarity of the meaning of intellectual property encourages creators to register their rights, as it relates to creative ideas and products resulting from intellectual abilities. IPR or its equivalent term used in Indonesia, Intellectual Property, has become a highly significant subject matter.[4]

The concept of "intellectual property" is a Western concept regarding human rights, property, and intellectual achievements. When this concept is transplanted into national law, law learners need to understand the essence of Copyright. The legal concept of Copyright is a "legal transplantation," involving the incorporation of principles from other legal systems into the national legal system. These legal principles are found in the Berne Convention and various complementary provisions.

IPR are governed separately in IPR law. This IPR law covers a legal field that deals with the juridical rights of works or creations resulting from human thought linked to economic and moral interests. The scope of IPR is vast, as it includes all intellectual property consisting of literary, artistic, and scientific creations. Meanwhile, according to Otto Hasibuan, intellectual property is formulated as personal rights, prompting the idea of protecting it. [8] Every human creation must be respected and granted rights, thus IPR are based on the right to ownership in the general sense, namely ownership rights as fundamental rights.

The usage of the term IPR also brings its own consequences, namely the separation between IPR and the tangible results that embody them, referred to here as tangible objects. For example, copyright in the field of science is IPR, but the tangible result that embodies it is a book. Therefore, what is protected within the framework of IPR is the rights themselves, not the embodiment of those rights. In other words, the embodiment of those rights can be protected by property law.

The sophistication of Blockchain technology can be utilized in various sectors, one of which is in the field of IPR. A digital data storage system consisting of multiple servers is known as Blockchain.[5] In blockchain technology, data generated by one server can be replicated and verified by other servers. Initially, blockchain was merely a system designed to facilitate bitcoin transactions, but with the advancement of technology and information, it has evolved into something greater. Blockchain was first adopted and utilized in the banking system. It can record various forms of financial transactions, and the recorded data can be accessed by anyone and cannot be altered or revoked (tamper-proof). Blockchain is claimed to be a technology with high transparency and a robust system for safeguarding privacy data. With the unique features it offers, blockchain can serve as a storage platform for various records, including documents, identities, and digital assets, for individuals, organizations, and communities alike.

Blockchain is hailed as a rapidly advancing technology expected to penetrate various sectors due to its three main characteristics, which have earned recognition and made it appealing. These characteristics are transparency, decentralization, and immutability. Transparency in this context is exemplified by the ability of blockchain to display all transactions within its technological framework, accessible to anyone utilizing the blockchain system without exception. Furthermore, decentralization refers to data being dispersed across all blockchain entities and interconnected. Subsequently, immutability signifies that each transaction data entered and recorded within the system cannot be tampered with due to the interconnected blockchain data chains.

In decentralized environments, such as blockchain technology or peer-to-peer networks, numerous challenges emerge concerning intellectual property rights (IPR). One of the primary difficulties lies in identification and monitoring. Accurately pinpointing the owners of IPR within decentralized networks proves arduous, as does monitoring their usage and detecting violations. This environment facilitates the dissemination of illegal or unlicensed content with less oversight and control. Furthermore, decentralized networks lack a central authority to address IPR violations, making enforcement challenging in the event of unauthorized use.

Moreover, decentralized technology introduces cross-jurisdictional legal challenges. Conventional methods for tracking and protecting IPR may become ineffective, given the diverse legal jurisdictions involved in decentralized networks, complicating law enforcement and dispute resolution. To navigate these challenges, innovation in relevant legal systems

becomes imperative. Decentralized environments demand innovative legal frameworks to handle IPR cases in alignment with decentralized models. Continual updates to relevant laws and regulations are essential to address these challenges adequately and ensure the appropriate protection of intellectual property rights within decentralized contexts. Consequently, governments and regulatory bodies must develop appropriate legal frameworks to regulate digital art within NFT and metaverse environments, encompassing regulations pertaining to copyright, royalty distribution, and consumer protection.

The utilization of blockchain technology strengthens the security and authenticity of digital artworks, reduces the risk of counterfeiting, and facilitates transparency in copyright transactions.

2.2 The Legality of Blockchain Technology in Music Royalty Rights

Current developments indicate that the interconnection between different branches of IPR often occurs, making the separation as mentioned above difficult to maintain. IPR in Indonesia have various forms and are all regulated within legislation. In its journey, the regulation of IPR in Indonesia still exhibits shortcomings. Deficiencies in law enforcement, such as insufficient attention from the community, are evident. Laws protecting IPR in Indonesia seem to be not fully comprehended by the general public. The rampant illegal copying by irresponsible individuals has led to numerous copyright owners feeling severely disadvantaged, as their painstakingly created works are distributed without receiving royalties.[6]

In the modern era, such as the present, numerous creative works are disseminated on the internet through applications like TikTok, Instagram, Twitter, and many others. In the realm of music alone, there are countless royalties that cannot be distributed to their rightful copyright owners. The government struggles to control the dissemination of music works on the internet. Hundreds of billions in royalties scattered across the internet remain unclaimed by their rightful creators. This is due to the government's failure to find methods or legislation to address this issue. Current laws in Indonesia only protect physical and visible forms of music copyright. There is no specific regulation governing and addressing cases of copyrighted works distributed on the internet. [7]

The enactment of Law Number 28 of 2014 concerning Copyright poses challenges for creators or copyright holders, particularly songwriters, as numerous instances of societal disregard for economic and moral rights, which should exclusively belong to creators or copyright holders, persist. In this scenario, many users who employ musical works act irresponsibly, as their usage lacks a solid legal foundation, namely permission from the creator or copyright holder. Presently, oversight provides legal safeguards for users utilizing songs authored by others, encompassing activities related to the economic and moral rights of the creator or copyright holder.

Legal safeguards for music are delineated in Article 40, Paragraph (1), Letter (d) of Copyright Law Number 28 of 2014 concerning Copyright. Within copyright law, legal safeguards target the exclusive rights possessed by the creator who generates a work, thereby conferring legal protection upon the music creator. Music creators serve as legal entities who craft works containing elements such as melody, poetry or lyrics, rhythm, tempo, dynamics, harmony, timbre, and scales arranged to constitute a cohesive whole.

According to Article 4 of Law Number 28 of 2014 Concerning Copyright, protection for music creators or music copyright holders encompasses both economic and moral rights. Moral rights are intrinsic to creators or performers and cannot be waived or annulled without justification, even upon transfer. Article 5, Paragraph (1) of Law Number 28 of 2014 delineates the moral rights of music creators into two categories: the right to be acknowledged as the creator (authorship right or paternity right), stipulating that the creator's identity must be attributed in the work, and the right to preserve the integrity of the work, prohibiting alterations to works that may tarnish the creator's reputation.

The protection of the economic rights of creators or copyright holders mirrors that of other creations, such as cinematographic works, and is also governed by Article 9, Paragraph (1) of Law Number 28 of 2014. In the context of copyright, pursuant to the provisions of Article 9, Paragraph (1), third parties are prohibited from commercially utilizing music or songs belonging to the composer without the songwriter's consent.

Indonesian Government Regulatuions No. 56 of 2021, concerning the Management of Royalty, Song Copyright, and Music, has exerted a positive influence, albeit with imperfect law enforcement. Many corporate entities still perceive no obligation to remit royalties, yet there exists no clear legal recourse. The suboptimal payment of royalties stems from a lack of legal consciousness and acknowledgment of music and songwriters by business actors. As stipulated in Article 1 Paragraph (1) of Law No. 28 of 2014 concerning Copyright, copyright entails an exclusive entitlement for creators or rights holders to disclose or reproduce their creations or grant permission for such actions, without diminishing restrictions imposed by relevant laws and regulations. This exclusive entitlement precludes any other individual from exercising the rights of the creator without authorization.

Article 1 Paragraph (2) of Law No. 28 of 2014 concerning Copyright delineates royalties as remuneration for the utilization of economic rights pertaining to creations or products of associated rights received by the Author or Related Rights Owner. Royalties denote payments made by users of copyrights or associated products to creators and/or related rights holders in connection with authorizing the exploitation or utilization of works or associated rights products. In the realm of music or songs, copyright holders as subjects of copyright include creators of song melodies (composers), creators of song lyrics (lyricists), music arrangers (arrangers), adapters of lyrics (sub-lyricists), publishers, and sub-publishers.

One of the measures that can be undertaken regarding the issue of music royalty distribution is the utilization of blockchain technology. A technology known as Blockchain has been utilized by several countries such as the United Kingdom, the United States, Singapore, Japan, and China. Additionally, research concerning the potential utilization of Blockchain in the field of Intellectual Property has been conducted by the World Intellectual Property Organization (WIPO) in recent years. Blockchain, a digital data storage system consisting of multiple servers, allows data generated by one server to be replicated and verified by other servers. Blockchain holds the potential to significantly impact the field of intellectual property due to its accountability, security, transparency, and permanence. Currently, Blockchain is still in the early stages of development, but more advanced applications of Blockchain technology may be utilized for intellectual property in the future.

Understanding how the Blockchain network operates provides insight into the workings of Blockchain. It comprises a collection of nodes (clients) operating on the same Blockchain through copies held by each node. Typically, a node can serve as an entry point for different

users on the Blockchain. However, for simplification, each user is considered to transact on the Blockchain through their own node.

Considering the efficiency of Blockchain applied in various sectors, it opens opportunities for utilization in the realm of IPR. One such opportunity is the management of IPR, particularly in the domain of music. Creators can publish their works on the blockchain and then "use smart contracts to automate control over who has access to their work and under what conditions" and to receive rewards. Smart contracts are automatic codes that can facilitate transactions and rules within the blockchain network. These can be employed to regulate royalty distribution each time an artwork is resold and ensure that the creators of digital artworks continue to receive compensation whenever the artworks change hands.

Intellectual property management is currently complex, with competing rights management bodies worldwide and an international system that is not integrated, often requiring arrangements between institutions in different countries. The music industry, in particular, has been identified as one where new management methods can have a greater impact, as existing management methods often cannot adapt to current conditions.

The main characteristics of blockchain technology can ensure a significant role in the realm of Intellectual Property protection. However, blockchain is still in the developmental stage, and it may announce more advanced features in the future. Currently, there are also various challenges related to blockchain in the IPR ecosystem, particularly regulatory uncertainty. For example, there are no definite answers regarding the regulation of some new features and applications of blockchain technology. Additionally, there is no unified criteria across the multi-jurisdictional nature of blockchain networks. Furthermore, legal uncertainty is multidimensional as many aspects are regulated by diverse legal fields (data protection, contract law, telematics, etc.), not just IPR regulations.

Moreover, legal uncertainty has significant implications for the development and adoption of technology. One clear implication is that governments may face difficulty in promoting blockchain as the technology is quite complex to comprehend. Even in Indonesia currently, the Directorate General of Intellectual Property (DJKI) is still striving to raise awareness among the public regarding the importance of IPR protection. Therefore, at present, technology developers encounter numerous obstacles in designing blockchain, especially concerning multidimensional and geographically diversified legal aspect.

Although there is legal uncertainty surrounding the utilization of blockchain technology, the products derived from the use of blockchain technology are essentially regulated under Law Number 28 of 2014 concerning Copyright. This can be observed with the existence of Non-Fungible Tokens (hereinafter referred to as "NFTs"). NFTs are digital tokens of cryptocurrency type derived from smart contracts, yet they differ from classic cryptocurrencies like bitcoin. Intellectual property products that can be traded within NFTs can include images, photos, paintings, videos, songs, and various other digital creations. NFTs are part of blockchain technology with a digital data storage system that enables users to transfer data confidentially through encryption schemes in cryptography, thereby making the data untraceable and owned only by users who possess the data.

NFTs are one part of the data existing on the blockchain in the form of digital certificates usually embedded in images, photos, videos, or other digital artworks. If a digital artwork becomes an NFT, it means it has been encrypted within the blockchain. Therefore, the digital artwork cannot be duplicated on the internet by anyone other than the original owner. Simply

put, NFTs are digital copyright certificates that can certify the authenticity of the artwork; however, NFTs are in the form of digital certificates.

Similar to conventional copyright works, digital copyright works also require protection. However, as a new product, NFTs do not yet have established regulations in Indonesia, although some rules regarding NFTs have already been enacted. One of these rules addresses the relatively high violation level, concerning the protection of copyright works that serve as objects within NFTs as digital certificates, commonly referred to as Copyright. Article 1 paragraph (1) of Law Number 28 of 2014 concerning Copyright defines Copyright as the exclusive right of creators that arises automatically based on declarative principles after a creation is embodied in tangible form, without diminishing restrictions as stipulated by laws and regulations. However, NFTs are not tangible objects; rather, they are only digital entities. Indonesia acknowledges the existence of digital goods, which are intangible items in the form of electronic information, as regulated by Government Regulation Number 80 of 2019 concerning Trade through Electronic Systems. Therefore, NFTs that utilize string of codes as tokens can be classified as digital goods under Indonesian law.

The implementation of blockchain as a backbone serves to connect copyright owners (musicians) with consumers. Musicians who register their works on the platform will directly be informed of how many times the song is accessed or downloaded online. Additionally, this system will provide data for calculating royalty amounts. The data can also be directly connected with government institutions, such as the Directorate General of Taxes, Ministry of Law and Human Rights regarding intellectual property, and other relevant parties. The use of blockchain technology in royalty management requires clear regulations among stakeholders, including musicians, record labels, distributors, and music streaming platforms. Appropriate licenses must also be obtained from the relevant authorities.

Exploration of the Legal Documentation and Information Network (JDIH) indicates that there is currently no regulation in the form of legislation governing the implementation of blockchain in Indonesia. There are only two regulatory policies that serve as operational standards for the application of blockchain. Firstly, Bank Indonesia Regulation Number 19/12/PBI 2017 regarding Financial Technology Implementation. This regulation does not explicitly regulate blockchain; the connection between the implementation of blockchain and this regulation is due to the utility of blockchain, which can be utilized as one of the financial technology implementation platforms in the category of payment systems.[3]

The next regulatory policy can be found in the Financial Services Authority of the Republic of Indonesia Regulation Number 37/POJK.04/2018 Concerning Fundraising Services Through Information Technology-Based Share Offerings (Equity Crowdfunding), hereinafter referred to as Regulation OJK 37/POJK.04/2018. This regulation only regulates to the extent of the use of blockchain related to activities of technology-based share offerings. Blockchain is classified as a technology-based supporting service to enhance the quality of Fundraising Services.

Therefore, it can be concluded that both regulations are insufficient to serve as a legal foundation for further developing the implementation of blockchain in Indonesia. In addition to the highly limited formulation of norms, both regulations do not hold the status of primary legislation, making it difficult to formulate implementing regulations and rendering harmonization of legislation governing the utilization of digital technology, especially blockchain technology, unlikely. This completely fails to meet the principle of legal certainty

in facilitating the utilization of technology based on positive law in Indonesia. Based on legal logic and reasonable reasoning, the formulation of regulations governing the potential and implementation of blockchain is deemed necessary and a legislative priority.

The need for sound regulations would align with Indonesia's cyber legal policy, which seeks to derive benefits from technology usage while preventing its misuse, considering the evolving societal values. This should be conducted in line with principles such as legal certainty, utility, caution, good faith, and the freedom to choose or remain neutral regarding technology.

3 Conclusion

Based on the results and discussions above, it can be concluded that Intellectual Property Rights (IPR) in Indonesia have been regulated under several provisions which, in practice, have yet to function flawlessly. There are various challenges or issues such as ambiguous articles and the ongoing prevalence of IPR violations. Through the various advancements offered by blockchain technology, this technology emerges as an ideal solution to the current issues in IPR, particularly in the music industry, such as royalty distribution to musicians.

Blockchain has the potential to revolutionize the way IPR is managed and enforced. The sophistication of this technology needs to be aligned with public awareness of the importance of IPR protection. The unique innovation offered by blockchain, not present in other technologies, stems from its original design to operate autonomously and in a decentralized manner. Based on a study of potentials and risks, this research formulates a prototype blockchain design in Indonesia, taking into account priority scales and goal-oriented orientation.

From a regulatory standpoint, the implementation of blockchain has been addressed in two Indonesian regulations, namely Bank Indonesia Regulation Number 19/12/PBI 2017 concerning Financial Technology Provision and the Financial Services Authority of the Republic of Indonesia Regulation Number 37/POJK.04/2018 Regarding Fundraising Services through Information Technology-based Share Offers (Equity Crowdfunding). However, both legal regulations do not clearly and comprehensively address blockchain. Hence, clearer regulations regarding blockchain technology are needed for every sector, especially the music sector. This is because it would facilitate musicians in obtaining their royalties through the structured use of blockchain.

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