July 2022, pp. 48-63

CRYPTOCURRENCY, INTELLECTUAL PROPERTY RIGHTS AND COMPETITION LAW- CHALLENGES AND IMPLICATIONS

Narender Kumar[*]

Abstract

Blockchains are a growing technology and most applications based on them are at an experimental stage. There is no scientific data on the behaviour of its applications, particularly in the context of Intellectual Property Rights (hereinafter "IPR") and Competition Law, where the former confers a degree of exclusivity on the owners while restricting others' access to the same, and the latter attempts to encourage competition and improve market access. There appears to be an inherent tension between the two. However, there is a growing consensus that the two worlds may not only coexist but also complement one another. The current study aims to identify the most significant risks associated with the application of this technology to the enforcement process under IPR and competition law in India. This study begins with the evolution and the various dimensions of Cryptocurrency. It examines the constitutional validity of cryptocurrency and the interface between IPR and competition law for economic development. The result shows that the government of India and concerned authorities have failed or ineffective in regulating this currency and its application to the above-mentioned laws in India. In addition, it also demonstrates that the existing legislation (IPR and competition law) is required to be transformed by considering scientific developments. Finally, it confirmed the value of addition in the field of law, especially among academicians, stakeholders, and government officials, for enhancing knowledge, efficiency, and formulation of policies in India.

Keywords: Blockchain, Cryptocurrency, Competition Law, Intellectual Property Rights (IPR).

[*] Assistant Professor, Vivekananda Institute of Professional Studies (VIPS), Delhi.

1. Introduction

Cryptocurrency is a technology that disrupts businesses and organizations all around the world. While the Internet provides for the publication and digital flow of information, it enables asset identification and traceability by giving the trust necessary to perform transactions and eliminating ambiguity. It is the foundation technology upon which several crypto currencies[1], such as Bitcoin[2] and Ethereum,[3] are based, but its unique technique of securely preserving and distributing information has consequences that extend beyond it.

Despite the risks associated with virtual currencies in India, the nation garnered $638 million in crypto fundraising and block chain investments over 48 financing rounds in 2021.[4] Global funding for crypto and blockchain investments also increased.[5] It is also worth noting that India is the ninth-largest e-commerce market with sales of US $63 billion in 2021, contributing to the worldwide growth rate of 29 percent with a 26 percent increase. According to the World Economic Forum, by 2027, blockchain will have stored 10 percent of global GDP, demonstrating the rapid and continuing expansion of the digital market and blockchain technology, which has now become a significant worry under competition law and concerned authorities.[6] The concerns surrounding cryptocurrency legal regulation, as well as the hazards connected with the use of blockchain technology in terms of IPR's and Competition Law, appear to be a difficult challenge for the national enforcement agencies. It is also discovered that the legal regulation of cryptocurrencies as a payment method necessitates an integrated strategy that is hard to achieve without taking into consideration the properties of blockchain technology. Now, technical protections must be included in the implementation of any

1 S. Corbet, B. Lucey, *et.al*., "Cryptocurrencies as a financial asset: A systematic analysis", 62 *International Review of Financial Analysis* 182-199 (2019).
2 A. Urquhart, "The inefficiency of Bitcoin", 148 *Economics Letters* 80-82 (2016).
3 C. Dannen, "Introducing Ethereum and solidity", 1 *Berkeley: Apress* 159-160 (2017).
4 A. Pandey, "Astounding Turnover of $638 Million in Crypto This Year" (January 3, 2022), *available at*: https:/ /themorningcrypto.com/astounding-turnover-of-638-million-in-crypto-this-year/ (last visited on May 30, 2022).
5 R. Caferra, and D. Vidal-Tomás, "Who raised from the abyss? A comparison between cryptocurrency and stock market dynamics during the COVID-19 pandemic", 43 *Finance Research Letters* p.101954 (2021).
6 T. Philbeck and N. Davis, "The fourth industrial revolution", 72(1) *Journal of International Affairs* 17-22 (2018).

prospective choices in these areas, as well as the development of a single platform for all players in future blockchain applications.[7]

2. Overview of Cryptocurrency

Digital currency is the world's largest virtual currency, which continues to alter numerous sectors as its benefits become apparent. In barely a decade, it has surged in both value and adoption from the first mention of digital ledger networks in Satoshi Nakamoto's white paper in 2008 to the end of digital money's largest 'Bull Run'.[8] Bit coin was the first digital ledger-based digital gold, and it is still the most widely used and appreciated. The underlying technological basis on which decentralized virtual money is launched in full force in 2009 with the publication of a white paper detailing the fundamentals relating to this technology. This notion was developed by computer engineer Wei Dai, more than ten years before the advent of digital money, and the idea of digital currency emerged in the late 1980s.[9] The concept was to create a currency that could be transmitted in an untraceable manner without the use of centralized institutions. It was initially distributed as open-source software as a decentralized form of money with no need for a central bank or middleman.[10] This was initially utilized following the introduction of open-source software in 2009, and its popularity quickly grew.[11]

Furthermore, other currencies were issued using the same method. Since the currency's formal introduction, an increasing number of digital gold advocates have begun trading and mining in it, which is the most valuable and is regarded as the first modern virtual currency since it was the first widely used exchange that combined a decentralized regulator, user confidentiality, and inherent inadequacy. It is frequently used to describe coins and

---

7 M. Mihajlović, "The History of Crypto", (February 11, 2022), *available at*: https://academy.shrimpy.io/lesson/the-history-of-crypto (last visited on April 27, 2022).

8 S. Faustino, I. Faria, *et.al.*, "The myths and legends of king Satoshi and the knights of blockchain", 15(1) *Journal of Cultural Economy*, 67-80 (2022).

9 Team Koinex, "A Brief History of Cryptocurrency", *available at*: https://medium.com/koinex-crunch/a-brief-history-of-cryptocurrency-889fed168555 (last visited on April 27, 2022).

10 Ledger, "A Brief History of Bit Coin & Cryptocurrency", *available at*: https://www.ledger.com /academy/crypto/a-brief-history-on-bitcoin-cryptocurrencies (last visited on April 27, 2022).

11 S. Steiniger and E. Bocher, "An Overview on Current Free and Open Source Desktop GIS Developments", 23(10) *International Journal of Geographical Information Science* 1345-1370 (2009).

tokens created after bit coin and is also protected by cryptography[12], which does not have its dedicated digital ledger but instead uses the cryptographic ledger of another crypto-asset called tokens and is built on block chain machinery, a scattered record created by a different computer grid. At the heart of the allure and usefulness of this digital money is that it is thought to keep a virtual record of all transactions ever completed, which is sufficiently safe and coordinated by the whole system of a single node. Furthermore, it has been discovered that its continual growth might impact investment and trading decisions in digital currency. Recently, bit coin made news when the price of a single unit of the cryptocurrency surpassed $11,500 for the first time. The constant rise in demand for virtual currency drew the financial sector's attention, indicating that it began utilizing the block chain for purposes other than monetary transactions, resulting in the evolution of smart contracts in the market.[13]

The growth of the internet and the digital economy raised concerns about the IPR's and competition law's capacity to disclose new rivalry issues that occurred as online platforms became more widespread. Various observers argue that with the expanding internet, a new set of norms for determining competition problems in cyberspace may be necessary. Learning about blockchain machinery can also help competition regulators handle competition issues related to blockchain submissions.[14] Furthermore, discussions between blockchain firms and competition experts on various market dynamics and trends may benefit from gaining a critical perspective.[15] In most circumstances, bitcoin has been deemed to be a product rather than a legal tender that complies with the levy rules provided by the relevant bodies with comparable tax effects. The legal definition of "financial product" excludes digital currencies, their trading is not classified as a commercial facility.[16] Some countries also observed that it is neither currency nor asset but could technically be classified as

---

12 M. Campbell-Verduyn, "Bitcoin, Crypto-Coins and Global Anti-Money Laundering Governance", 69(2) *Crime, Law and Social Change* 283-305 (2018).

13 Ernst & Young LLP, "Discussion Paper on Blockchain Technology and Competition, CCI", (2021), *available at*: https://www.cci.gov.in/sites/default/files/whats_newdocument/Blockchain.pdf (last visited April 27, 2022).

14 A. Farouk, A. Alahmadi, *et.al*., "Blockchain Platform for Industrial Healthcare: Vision and Future Opportunities", 154 *Computer Communications* 223-235 (2020).

15 *Supra* note 13.

16 F. Black and M. Scholes, "From Theory to a New Financial Product", 29(2) *the Journal of Finance* 399-412 (1974).

securities, and some government bodies expressed a cautious attitude toward the possible approval of settlements in it, even though it is not directly prohibited and is not even recognized as a legitimate method of payment.[17] It is also critical to understand the distinction between bitcoin and digital currency. When Finance Minister Nirmala Sitharaman announced in her 2022 Budget speech that the Reserve Bank of India (hereinafter referred to as the "RBI") would launch its digital currency, there was much speculation about what a digital currency is and how it would differ from crypto currencies such as Bitcoin, Dogecoin, and other popular tokens.[18] The digital version of fiat cash that you carry in your wallet or withdraw from an ATM is referred to as digital money. It is the same money that is backed by an institution and may be exchanged for real money when it is released in 2023.[19] Simply explained, it is a digital asset that is spread among several computers in a shared network. They are impervious to government regulatory agencies' monitoring because of the network's decentralized nature.

The word "Cryptocurrency" refers to the encryption techniques used to safeguard the network, which includes certain significant elements, such as the lack of a centralized expert and the management of everything through distributed networks. The system keeps track of bitcoin components and who owns them, as well as determine if additional units may be generated and, if so, the origin and ownership terms. The ownership of cryptocurrency components may be proven cryptographically. The approach permits transactions in which the names of cryptographic components are changed.[20]

Moreover, with the development in cryptocurrency use, experts question if the technology's exponential expansion would be hampered by IP protection such as copyright, patent, or trademark; especially, crypto currencies related with them. There has always been

[17] O.S. Bolotaeva, A.A. Stepanova, *et.al.*, "The Legal Nature of Cryptocurrency", 272(032166) *IOP Conference Series: Earth and Environmental Science* 2 (2019).

[18] "Budget 2022: Full Text of Nirmala Sitharaman's Speech", *Indian Express*, (Feb. 1, 2022), *available at*: https:// indianexpress. com/ article / business /budget /budget-2022-full-text-of-nirmala-sitharamans-speech-7751059/ (last visited on May 30, 2022).

[19] P. Panurach, "Money in Electronic Commerce: Digital cash, Electronic Fund Transfer and eCash", 39(6) *Communications of the ACM* 45-50 (1996).

[20] A.A.A. Ahmed, H. Paruchuri, *et. al.*, "Cryptography in Financial Markets: Potential Channels for Future Financial Stability", 25(4) *Academy of Accounting and Financial Studies Journal* 1-9 (2021).

tension between the functionality of legal protections offered by intellectual property law and the significance of entrepreneurship. While both opponents and advocates of intellectual property law may understand how intellectual property law may either stimulate or restrict innovation depending on the circumstances, it is important to emphasis that current IP legislation is yet to be amended for incorporating this type of technology.

Cryptocurrency and IPR are intricately connected, and ready to use blockchain to unlock hitherto unused capacities in a range of industries, thereby emphasising the essential role to be played by intellectual property (IP) in the future.[21] Blockchain technology's dependability and security could be used to strengthen every stage of the IP rights life cycle, such as resolving ownership disputes, creating licensing agreements via crypto agreements, identifying counterfeits, or actually creating an IP document for registration and recording all forms of IP rights. It is challenging to provide IP protection for cryptocurrencies since determining ownership of cryptocurrency is imprecise.[22] If a cryptocurrency's sole job is to serve as a medium of exchange, such as a traditional money, it may not qualify as a product or service. An item or service related with a function, on the other hand, may allow the cryptocurrency's name to be trademarked. As a result, claiming ownership of the coin would be impossible for an individual or corporation. Many people are opposed to registering blockchain as a trademark because they feel blockchain is a machinery, not a symbol. Hence, everybody in the domain might use it and may not be held by a single company. As a result, the aforementioned issues lead to ambiguity regarding acquiring IP protection for bit coin or block chain.[23]

In addition, the application of this technology to the competition law and policies also raises important issues including the transformation of various existing legal provisions including the definition of market, price, person, enterprises, anti-competitive agreements,

---

[21] G.M.D.C. Mello, P. Nakatani, *et.al*., "Dollar Hegemony under Challenge and the Rise of Central Bank Digital Currencies (CBDC): A New Form of World Money?", in G.M.D.C Mello, H.P. Braga (eds.), *Wealth and Poverty in Contemporary Brazilian Capitalism* 143-182 (Palgrave Macmillan Cham, 2022).

[22] M. Chawki, "Cybercrime and the Regulation of Cryptocurrencies", in Arai. K. (ed.), *Advances in Information and Communication*: *Proceedings of the 2022 Future of Information and Communication Conference (FICC)*, 694-713 (Springer, 2022).

[23] Amlegals, "Cryptocurrency and IPR in India-A Legal Perspective", *available at*: https: //amlegals.com/cryptocurrency-and-ipr-in-india-a-legal-perspective/ (last visited on May 27, 2022).

cartels, abuse of dominant position, leniency programme etc. for economic development and consumer welfare. It has also become a major concern before the competition law enforcement authority on how to meet all such hurdles connected with cryptocurrency in India.[24]

3. Constitutional Dimension

Simply explained, Bitcoin is a digital asset that is distributed. For several quarters, Indian lawmakers have debated the risks of trading cryptocurrencies and are testing a digital currency backed by the central government. The Indian government is considering on presenting a new bill dubbed as the Cryptocurrency and Official Digital Currency Regulation 2021 (hence "New Bill"), which is similar to previous versions but wants to restrict reserved cryptocurrency with rare exceptions, to promote the core technology and transactions of virtual currency in India and provide the foundation for the formation of an authorized digital currency to be issued by the RBI. The "Cryptocurrency and Official Digital Currency Regulation Bill 2021", which has been put on the legislative agenda, would also provide a "simplification framework" to create an official digital currency for India.[25] However, India has chosen a different approach and intends to introduce legislation prohibiting the trade of any digital currency other than those authorized by the government.

It should also be noted that the government attempted, through the RBI, to prohibit any banking transactions with persons or businesses who hold or trade bitcoins, thereby killing the vehicle. The Government of India organized a high-level inter-ministerial committee in November 2017 to draught studies on different problems relating to the usage of virtual money and later that year.[26] The Supreme Court decided that the RBI's restriction on financial institutions trading all types of virtual currency went beyond the RBI's authority and violated Article 19 (1) (g), lifting the ban on banks and financial institutions engaging

[24] J.S. Saini and N. Kumar, "Issues pertaining to growth of digital economy: An arduous challenge before CCI", 20(4) *Journal of Public Affairs*, e2301 (2020).

[25] N. Hildreth, "India: Cryptocurrency Bill 2021: The Road Ahead", *available at*: https:// www.mondaq. com/india/fin-tech /1145012/ cryptocurrency –bill - 2021-the -road -ahead #:~:text= According %20to %20the%20Lok%20Sabha, the% 20Reserve%20 Bank %20of%20India (last visited on May 30, 2022).

[26] S. Prabhu, "On Crypto Bill, More Changes Likely, Government Goes Slow: 10 Points", *available at*: https://www.ndtv.com/business/crypto-bill-wont-be-tabled-before-cabinet-today-more-changes-expected-2652033 (last visited on April 27, 2022).

with cryptocurrency owners and exchanges. The key argument in favour of prohibiting financial institutions from dealing with cryptocurrencies is that they do not have an authorized form of virtual currency to ban.

In *Internet and Mobile Association* v. *The Reserve Bank of India*,[27] the Internet and Mobile Association claimed that cryptocurrency trading is a lawful and licensed company over which the RBI has no jurisdiction because it is regarded as a commodity rather than a national currency. The Internet and Mobile Association of India immediately appealed the RBI's decision to prohibit the functioning of cryptocurrencies, claiming its rights. In India, the highest financial body defined cryptocurrency as a type of virtual money formed by a sequence of transcribed processer codes based on cryptography and hence independent of any central issuing authority. Through economic policy, it exerts control over the creation of currency by banks. Administrations often ban the possession and sale of other kinds of currency to safeguard the legitimacy of the legal currency for the benefit of all residents. So far, patterns suggest that most of the time, other countries have influenced India to implement technology-related legislation. It is believed that India should play an active role in the implementation of new technical regulations, with a particular emphasis on the Metaverse. The need of the hour in India is intelligent legislation and strong control of existing digital money and crypto-assets.[28]

4. Interface of Cryptocurrency with Intellectual Property Rights (IPR) and Competition Law

The potential of blockchain as an all-purpose technology is now being tested in a number of areas, including Intellectual Property Rights (IPR). As user numbers grow, the system will be more valuable and capable of engaging larger groups of users.[29] However, it is still unclear what the threshold number of users would be in order to start disrupting the

[27] Writ Petition (Civil) No.528 of 2018.

[28] M. Guruswamy, "India Needs Thoughtful Legislation on Digital Currency", *available at*: https://indianexpress.com/article/opinion/columns/india-legislation-digital-currency-7689252/ (last visited on April 27, 2022).

[29] M. Finck and V. Moscon, "Copyright Law on Blockchains: Between New Forms of Rights Administration and Digital Rights Management 2.0", 50(1) *IIC-International Review of Intellectual Property and Competition Law*, 98 (2019).

existing status quo.[30] It thus seems merely a matter of time before the law addresses the potential obstacles to a broad-scale legal application of distributed ledger technologies, such as questions about the laws and jurisdictions that will be applied; smart rights that can be enforced; data security and privacy concerns; robust rules and definitions for smart contracts--and that will seep into intellectual property laws and practices. The uncertain status of who owns a blockchain has not affected its rapidly growing adoption.[31]

In the context of IP-heavy industries, blockchain and related distributed ledger technology provide obvious opportunities for IP protection, registration, and evidence, either at the registration phase or in court. It also promises a low-cost way to accelerate such processes. Potential use cases include: authentication of creatorship and provenance; registering and clearing IP rights; controlling and tracking the distribution of (un) registered IP; providing evidence of genuine and/or first use in trade and/or commerce; digital rights management (e.g., online music sites); establishing and enforcing IP agreements, licenses, or exclusive distribution networks; and transmitting payments to IP owners in real-time. Blockchain can also be used for authentication and provenance in the detection and/or recovery of counterfeit, stolen, and parallel-imported goods. The significance of this technology could be appreciated in determining "Smart" IP rights, evidence of use of IP rights, creatorship, smart contracts and digital rights management, enforcement of IP rights, supply chain management, etc. Supply chain management etc.[32] For its better management, the Chamber of Digital Commerce recently launched a Blockchain Intellectual Property Council (BIPC) as a defensive patent strategy led by industry experts in order to fight against patent trolling on the blockchain. It facilitates in balancing the need for specialised digital security with the accountability required for innovation.[33]

---

30 *Ibid.*

31 O. Dalgıç, "Could Regulating Blockchain Technology Improve Competition in Digital Markets?", (March 20, 2020), *available at*; https://turkishlawblog.com/read/article/215/could-regulating-blockchain-technology-improve-competition-in-digital-marketsg (last visited on July 5, 2022).

32 D.J. Durie and M.A. Lemley, "A Structured Approach to Calculating Reasonable Royalties", 14 *Lewis & Clark L. Rev.* 627 (2010).

33 S. Yanisky-Ravid and E. Kim, "Patenting blockchain: Mitigating the Patent Infringement War", 83 *Alb. L. Rev.* 603 (2019).

In addition, blockchain technology has the potential to improve competition in digital markets as a disruptive technology.[34] It attracts investment and raises expectations for influencing market conditions, which may or is likely to have a significant negative impact on competition. It is also noticed that India received $638 million in crypto funding and blockchain investments across 48 rounds in 2021, and global funding for cryptocurrency and blockchain investments totaled $24.86 billion, spread across 930 funding rounds.[35] This raises serious questions, such as, what would be the nature of the investment and the person involved in it; what would be the threshold limits; how to determine jurisdiction; what is the legal status of investors in cryptocurrency. It is most likely that such large participants or investors will abuse economic strength. Further, it is also very difficult to determine a dominant position and its abuse regarding cryptocurrency.

5. Challenges imposed by Cryptocurrency on IPR

The interaction of blockchain technologies, cryptocurrencies, and intellectual property (IP) laws is experiencing exponential growth. With blockchain technology's growing popularity alongside cryptocurrencies, the world is intrigued by the technology's underexplored potential across different industries. Blockchain is one of those revolutionary technologies that will prove beneficial in providing better intellectual property protection.[36] Blockchain, as it is designed, could be used to make sure there is no doubt regarding ownership or rights to intellectual property.[37] Therefore, it is hard to identify owners of such technologies and currencies to give them intellectual property (IP) protection, including trademarks. Such a granting of trademark rights to Bitcoin has been opposed worldwide since Bitcoin and Blockchain operate on open-source software that anyone can access to offer services in the crypto-currency.[38] Patents enable a '*Non-Fungible Tokens*' (hereinafter

---

34 S. Saberi, Kouhizadeh, *et. al.*, "Blockchain Technology and Its Relationships to Sustainable Supply Chain Management" 57(7) *International Journal of Production Research* 2117-2135 (2019).

35 "India bags $638 million in cryptocurrency, blockchain funding in 2021", *available at*: https://economictimesindiatimes.com/news/economy/finance/india-bags-638-million-in-cryptocurrency-blockchain-funding-in-2021/articleshow/88626670.cms?frommdr (last visited on July 5, 2022).

36 *Supra* note 23.

37 E. Hanapole, "The Metaverse of Intellectual Property", *available at*: https://www.ibm.com/blogs/journey-to-ai/2022/04/the-metaverse-of-intellectual-property/ (last visited on May 27, 2022).

38 "Trademarking of Cryptocurrency" (2021), *available at*: https://www.kashishworld.com/blog/ trademarking- of-cryptocurrency/ (last visited on May 27, 2022).

'NFT') blockchain holder to license the technology that he or she uses to run his or her NFT and allow consumers to own the actual brand collectibles. With the increased usage of cryptocurrencies, experts are wondering whether this technology's explosive growth could ultimately be hindered by intellectual property protections like copyright, patents, or trademarks; in particular, the cryptocurrency associated with it.[39] With the regulatory bills enactment, crypto is set to be an established term in India. It is an open question if its unpredictability can be controlled by assigning ownership, something which could be done with the help of IP protection such as copyright, patents, and trademarks. It is expected that once the regulation bill is implemented in India, many startups might emerge which adopts the technology behind cryptocurrency might turn towards IP laws to gain legal protection for their methods and processes.

Apart from the regulation, there is also legal uncertainty present in the IP and crypto domains, which the author shall further discuss. [40] Blockchain and smart contracts may develop into a hugely useful and necessary technology in terms of protecting IP. In other words, when a new technology is developed, the law protects it as an intellectual property (IP) resource; similarly, laws must be tailored to technology to gain additional leverage. The new bill acknowledges the grey areas in cryptocurrency laws and suggests banning all private cryptocurrencies completely. Yet, this is still a grey area wherein all types of cryptocurrencies would be covered by the Private Cryptocurrency Act. The Indian Government is considering drafting a new law called the Cryptocurrency and Regulation of Official Digital Currency Act, 2021 (New Bill), which is identical in spirit to the previous version.[41]

6. Challenges imposed by Cryptocurrency on Competition Law

The legal issues involved with Non-Fungible Tokens (NFTs) are debatable in India due to the lack of a legislative framework for regulating crypto assets. The uncertainty

[39] Khurana and Khurana, "NFT and Its Relationship with IPR", *available at*: https://www.khuranaandkhurana.Com /2021/11/15/nft-and-its-relationship-with-ipr/ (last visited on May 27, 2022).

[40] *Supra* note 23.

[41] Ahlawat and Associates, "The Legality of Cryptocurrency in India", *available at*: https://www.legal500.com/developments/thought-leadership/the-legality-of-cryptocurrency-in-india/ (last visited on May 27, 2022).

associated with such assets is exacerbated by the fact that cryptocurrencies and NFTs, while not considered illegal in countries, are not subject to any kind of regulation. In India, there is no specific legal framework applicable to cryptocurrencies.[42] Moreover, the application of the competition law on cryptocurrency raises various serious concern. One side, it deals with the economic growth and consumer welfare by preventing unfair business practices. It also promotes and sustains competition. It supports business investment for economic development. But, on the other side, the competition law enforcement mechanism faces an arduous challenges including online platform.[43]

Further, it is evidenced that the legal status of cryptocurrency with reference to the competition law is still yet to be decided. It is also found that the Competition (Amendment) Bill 2020 have been ineffective in dealing with the issues relating to cryptocurrency including the determining factors of jurisdiction person, price, participant, thresh hold limits etc. There has not been a specific case of competition law and intellectual property rights under the combined rules and combinations in general governed by Section 6 of the Competition Act. This issue must be answered by investigating the legislation of nations that have legalized cryptocurrencies and determining whether India has the legal framework to sustain them.[44] According to CCI, One of the key reasons for the increased interest in blockchain technology is its influence on economies, maintaining records, exchange of information, negotiation, and identity management.[45] In particular, every process related to the functioning of the blockchain is based on an algorithm that is sure to create a dilemma for CCI. However, it has the right to exercise jurisdiction over global Blockchains in cases where there is a noticeable contrary consequence on rivalry in the significant marketplace in India, its application would not be, to say the least, a practical obstacle.

---

42 C. Abrol, "Cryptocurrencies and NFTs are all the rage", *available at*: https:// www.managingip.com/article /b1tb4hb8j56syw/cryptocurrencies-and-nfts-are-all-the-rage (last visited on May 27, 2022).

43 *Supra* note at 22.

44 K. Lalchandani, "The intersection of IPR and Competition Law", *available at*: https://www.newindianexpress.com/opinions/2021/sep/16/the-intersection-of-ipr-and-competition-law-2359297.html (last visited on May 27, 2022).

45 Lexlife India, "Cryptocurrency v/s Law in India", *available at*: https://lexlife.in/2021/07/16/cryptocurrency-v-s-law-in-india/ (last visited on May 27, 2022).

7. Implications of Cryptocurrency on Intellectual Property Rights and Competition Law in India

The interaction of blockchain technologies and intellectual property (IP) laws is experiencing exponential progress. Although the opponents and supporters of IP law including how IP laws may either foster innovation or inhibit novelty, are reliant on the circumstances. It is essential to realize that today's IP laws are actually still not fully utilized within the context of blockchain technology.[46] Since a basic perspective, and in light of the nature of the basic assets NFTs represent, intellectual property rights law (especially copyright law) and the laws surrounding the IT industry cannot be ignored when analyzing legal rights and obligations that may accompany NFTs. When considering the IP implications of NFTs, it is important to differentiate between the NFTs' property rights and those underlying IP. That is, simply holding the NFT representing a musical composition in a blockchain does not confer rights to publish, distribute, or receive royalties on that musical composition, unless the artist expressly grants the NFT-holder the copyright to such composition via contractual agreement.[47]

In reality, NFT sales do not only include smart contracts; they are usually also accompanied by text-based terms that restrict exactly what IP (intellectual property) rights are transferred. As creative works get into the NFT market, there are issues associated with IP rights that arise in a transaction.[48] Distributed ledger technology may potentially play an important role in the area of unregistered IPRs, such as copyright and unlicensed industrial designs, by providing proof of creation, usage, qualifying conditions, and status.[49] Blockchain technology's trustworthiness and security can be used to strengthen each stage of an IP rights lifecycle, for example, to settle property disputes, to establish license agreements through blockchain contracts, to identify counterfeit products, or to just build a

---

46 *Supra* note 22.

47 P. Sulakshya, "India: NFT and Its Relationship with IPR" (November 17, 2021), *available at*: https://www.mondaq.com/india/fin-tech/1132188/nft-and-its-relationship-with-ipr (last visited on May 29, 2022).

48 *Supra* note 29.

49 B. Clark and B. McKenzie, "Blockchain and IP Law: A Match made in Crypto Heaven?" (February 2018), *available at*: https://www.wipo.int/wipo_magazine/en/2018/01/article_0005.html (last visited on May 29, 2022).

record of IP for recording and tracking various types of IP rights.[50] Another relevant issue surrounding the application of legal regimes for blockchain is jurisdiction. As a result, the legal implications of certain blockchain actions differ from those of a conventionally centralised computer network. Potential legal challenges and disputes include those related to privacy rights, picture rights, security laws, fraud, consumer protection, taxation, and others.[51] Although the copyright could be claimed under the Indian Copyright Act, 1957, regulatory issues posed a murky risk for the investors and purchasers of the new NFTs. Sheppard Mullins' nationally recognised intellectual property practice has deep expertise advising clients on comprehensive intellectual property strategies for blockchain technologies and digital currencies. The creation of a mind can be regulated and protected within a framework of laws known as intellectual property rights, or IP rights. [52]

8. Conclusion and Suggestions

The interaction of blockchain technologies, cryptocurrencies and intellectual property (IP) laws is experiencing exponential growth. There has always been great tension between innovation and the role of the legal protections provided by IP law. There is a need for legal practitioners in this specialist field to ensure innovators are provided with high-quality legal advice since the patentability of blockchain technologies involves complex legal and technical issues.[53] It has been proposed that block chain-related innovations may be non-patentable because the majority of the services created on top of the block chain merely take an earlier concept (distributed ledger technology) and design a new application. On a larger scale, one could argue that there is an urgent need for streamlining the existing laws and guidelines in such a way as to allow the granting of patents on inventions generated by these systems. The emergence of digital spaces calls for an overhaul of the IP guidelines and adequate training for the examiners and legal professionals in both the domains of patents

[50] S. Pahari, Cryptocurrency and its legal implications: A comparative analysis (July 22, 2019), *available at*: https://blog.ipleaders.in/legal-implications-cryptocurrency/ (last visited on May 29, 2022).

[51] *Supra* note 33.

[52] S. Mullin, "Blockchain", (2022)", *available at*: https://www.sheppardmullin.com/industries-87 (last visited on May 29, 2022).

[53] S. Kumari, "India: Is It Possible to Patent a Cryptocurrency?" (April 27, 2022), *available at*: https://www.mondaq.com/india/patent/1186000/is-it-possible-to-patent-a-cryptocurrency (last visited on May 29, 2022).

and trademarks to completely capture the fantastic possibilities that Blockchain technologies can unlock, and it will be interesting to see the trend in the future of patents and trademarks being granted to blockchain-related technologies.[54] Thereby, it seems that law will address possible obstacles to massive legal implementations of Blockchains, such as issues about the regulations and jurisdictions to regulate, the accuracy of intelligent rights, information security and privacy concerns and robust rules and definitions to be applied for smart contracts, and it pervades IP legal frameworks.[55]

In 2013, a press release issued by the Reserve Bank of India warned users about potential financial, operational, legal and security-related risks associated with trading cryptocurrency. The RBI indicated that it does not consider bitcoin to be legal cash or currency and that it is worried about the use of crypto assets to support illicit activities, pledging to take all necessary measures to address such risks. It is worth noting that the Prohibition of Cryptocurrency and Regulation of Official Digital Currency Act, 2019 (the Bill, 2019) proposes to prohibit mining, producing, retaining, selling, trading, issuing, transferring, disposing, or using private crypto assets of any kind, while making exceptions for the use of Blockchain technologies in certain circumstances.[56] Notably, the legislation places the same requirements on cryptocurrency-to-cryptocurrency exchanges that are presently placed on digital assets with law-tender providers (so-called cryptocurrency-to-fiat exchanges). In furthermore to the other clauses, the regulations cover service providers such as financial companies, notaries, and lawyers.

Furthermore, the new directive applies to both crypto currency systems and custodians of cryptocurrency wallet providers. The proposed regulations would, among other things, necessitate blockchain information service providers to register with the state, verify their users' identities, and keep track on all material on their operating systems for at least

[54] J. Trivedi, "Dawn of Blockchain Technology in the Indian Patent Regime", (2022), *available at*: https://www.aipla.org/list/innovate-articles/dawn-of-blockchain-technology-in-the-indian-patent-regime (last visited on May 29, 2022).
[55] *Supra* note 38.
[56] *Supra* note 29.

six months.[57] Although cryptocurrency platforms have opened up several channels of arithmetical economic businesses and provided original currencies with numerous devices and approaches, they are unmonitored and unregulated. Similarly, the Competition Commission of India (CCI) is also facing numerous challenges in dealing with the digital market[58], including cryptocurrency.[59] The Competition (Amendment) Bill, 2022 aims to strengthen the regulatory structure by boosting CCI accountability, flexibility and enforcement efficiency but still has many challenges, including regulation of crypto assets before CCI, which seems unanswered.[60]

In the end, it is revealed that cryptocurrency regulations are at a working stage and result in numerous challenges before enforcement authorities in India. Hence, this study suggests that in India, a central level institutional framework with effective cryptocurrency regulation should be developed. In addition, some important definitions, time-bound processes and artificial intelligence (AI)-based enforcement mechanisms are required to be incorporated on an urgent basis.

---

57 Perkinscoie, Digital Currencies: International Actions and Regulations (2021), *available at*: https://www.perkinscoie.com/en/news-insights/digital-currencies-international-actions-and-regulations.html (last visited on May 29, 2022).

58 *Supra* note 25.

59 *Ibid*.

60 V.M. Kumar, "The Competition (Amendment) Bill, 2022: A Low-Key Bill Wider Implications", (March 18, 2022), *available at*: https: // www.livemint.com /opinion /online- views/ a-low -key-bill-with-wide-implications-for-our-economy-11647548332989.html (last visited on May 29 2022).