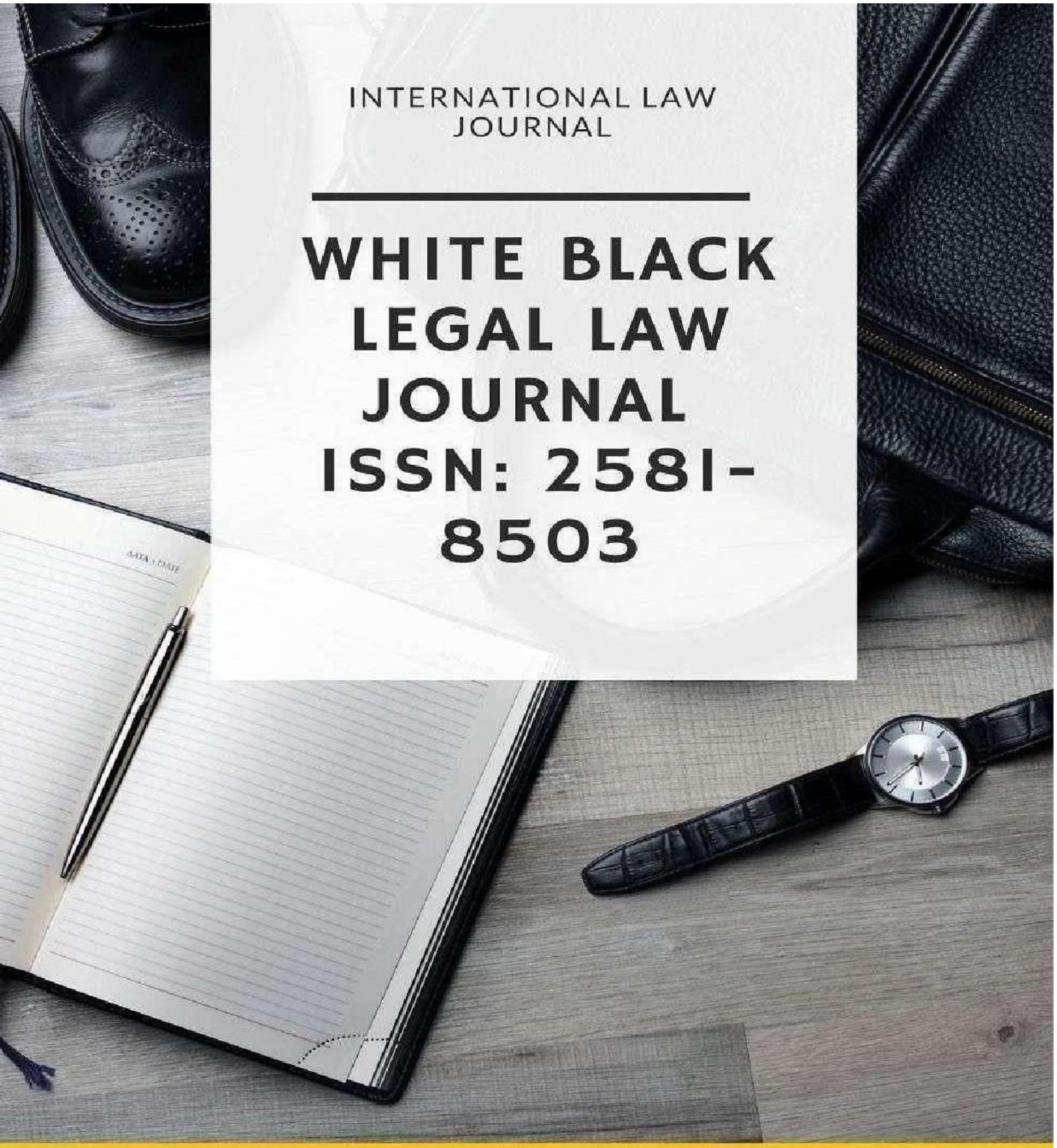

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"CRYPTO REGULATIONS IN THE AGE OF NETWORKED INTELLIGENCE"

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ABSTRACT:

Cryptocurrency is an area of uncertainty which finds relevance in the modern-day investment market. It has a much higher risk-ratio percentage as compared to traditional stock market and is a go to investment option for enthusiastic investors who are ready to take up high risks. However, there is an inherent void in the sense that, there is a lack of regulation and clarity regarding the position of cryptocurrency in the market. This paper traces the evolution of cryptocurrency in India by conducting a systematic study of the various positions and propositions put forth by the government and analyses the same. This paper also elucidates the nature of regulations to be brought in with respect to blockchain and cryptocurrencies, so as to secure the interest of various stakeholders against the risks associated with it. This paper also identifies nuanced multilateral solutions for the adoption of this technology by regulation through centralized policy schemes which is an essential need of the hour. Further, the interplay of Competition law and blockchain technology has been discussed to provide a unique framework. This paper puts forth the potential interplay between competition law and blockchain technology so as to provide an overview of the same. This paper further discusses the idea of fostering a sustained economic growth through the regulation of cryptocurrency under the ambit of the United Nations' Sustainable Development goals.

Keywords: Cryptocurrency, Virtual Currency, Blockchain, Regulations, Competition Law

INTRODUCTION:

Finance, trade, and commerce have been a quintessential component in world economics from time immemorial and all transactions, sales, exchanges, etc., have included the exchange of money and financial instruments. The history of money began with the barter system of

exchange around 5000 years ago. As time passed, money evolved as a medium of exchange and it was in 600 A.D. that the first currency in the form of coins was minted. This marked the evolution of money into a unit of value and a store of value. Later on, paper currency was introduced which traversed through history and financial institutions as fiat and fiduciary money. This later evolved to centralized digital transactions such as net banking, mobile wallet payments etc. It was in the 21st century that the concept of decentralized digital currency gained relevance. However, the roots for decentralized virtual/cryptocurrencies steamed from late 1980s with David Chaum founding the first ever digital currency, called Digicash in 1990. Digicash failed to establish due relevance primarily because it relied on a centralized third-party application and also the lack of awareness of the consumers which forced the company into bankruptcy in 1998. In 1997, Adam Black released *hashcash* which intended to solve the problems Digicash faced, but did not live up to its expectations. This was followed by Nick Szabo's Bitgold, which failed as well. It was Wei Dai's *b-money* which gained recognition for introducing the idea of creating money through a decentralized framework, but it did not prove to be operable. Hal Finney later on gave his own idea of creating money through a separate proof-of-work (Gamage & Weerasinghe & Dias, 2019 & Madey, 2017). However, none of these ideas worked in unity and all the above *Cypherpunks* failed at arriving at a consensus regarding cryptocurrencies. It was in 2008 that the first successful cryptocurrency was introduced by Satoshi Nakamoto in their white paper on Bitcoin. Their object was to introduce a cryptocurrency which could solve the problem of all the attempted virtual currencies by integrating a peer-peer online transaction system through an easy, yet secure system known as the blockchain along with a proof-of-work mechanism. Blockchain is a distributed ledger which is open to everyone in a peer-peer network. It consists of multiple blocks which link the buyer, to the seller in the database without the interference of any third-party or government organizations. A block contains data (details of the seller and buyer and other transactional details), a hash (identification of its own location) and the hash of the previous block (identification of the previous block). A blockchain technology ensures a secure transaction through its proof-of-work, which essentially increases the time of creating new blocks in the peer-peer system, which makes it difficult for hackers to tamper with (Satoshi Nakamoto, 2008 & Madey, 2017 & Jain, 2019). Bitcoin became popular in international markets and its market share increased substantially. At the start, one Bitcoin was equivalent to less than $1. However, as markets and consumers changed, Bitcoin started achieving new heights. At present, one Bitcoin is equivalent to $30,343.82 (Rs. 23,57,002.35). After the evolution of Bitcoin, various other cryptocurrencies have emerged such as Ethereum, Dogecoin, Tether, USD Coin, BNB

etc. At present there are more than 18,000 cryptocurrencies in the world.

LITERATURE REVIEW:

Madey (2017), stated that this paper would highlight the intrinsic value of Bitcoin and other cryptocurrencies by analysing the risks and threats associated with this. The paper would further provide solutions in the form of regulations which are need to combat these risks.

Clement (2018), stated that in the study of cryptocurrencies including Bitcoin, so as to understand its growth potential and growth history, it is important to understand the views and opinions of different individuals. In this paper he has cited comments which are entirely different.

Jain (2019), examines how the Blockchain technology developed and traces its historical and evolutionary route. He further analysis how the Blockchain technology be aptly applied in India and what would be its response.

Gamage, Weerasinghe & Dias (2020), state the multiple uses of the blockchain technology, one of which being the cryptocurrency. They highlight the problems and uses of blockchain technology by government and non-government sources while discussing about the emergence of cryptocurrencies at brief.

Rajvansh (2021), stated that the mere recognition of anti-competitive problems does not guarantee their resolution. As a result, a temporary technique to incapacitate and prevent the creation of such problems is urgently needed. Although it is clear that blockchain is covered by the Act, the present framework under Section 3 may not be sufficient to address any issues that arise.

Hutchinson (2020), stated that due to the fact that decentralized organizations like blockchain are not recognized as legal persons, problems about the capacity to discover anti-competitive actions and their perpetrators emerge. If a rival is denied access to technology unfairly, it may be seen as putting a barrier in the way of his or her entry into the market, which might be a violation of a country's economic competition rules. If it helps to fix pricing for their products/services or develop other kinds of coordination between such businesses, the exchange of information between participants in the same market might pose antitrust hazards.

Nissen (2018), stated it should be stressed that the application of competition rules is never static. As the cooperation within a given blockchain evolves the factual situation may change, which again may have an impact on the competition law assessment of that particular blockchain.

Peder, (2017) The majority of these currencies are designed to replace or enhance existing national currency-based payment systems. Cryptocurrencies have the potential to play a large role in the payment system. The emergence of cryptocurrencies, however, presents a number of public policy problems.

Sirimanne, (2021), To create and implement blockchain regulations, a coordinated effort is required. For poor countries, the dilemma is dual. To begin, they should consider boosting their involvement in international projects that are establishing blockchain regulatory frameworks so that they may learn from the process. Second, they should build their own national skills for developing and enforcing blockchain legislation at the same time. Success requires close collaboration with the business sector. A whole-of-government strategy is also required, in which ICT, finance, trade, and science, technology, and innovation ministries collaborate with central banks and regulators.

CRYPTOCURRENCIES IN INDIA:

Period of Realization (2012-2018):

As Bitcoin and other cryptocurrencies were establishing their mark in the rest of the world, it was in 2012-13, that cryptocurrencies became relevant in the Indian markets and people started recognizing them as investible options. It was on December 24, 2013 that the Reserve Bank of India (**"RBI"**) pursuant to its Financial Stability Report in June, issued its first circular cautioning users of virtual currencies against risks associated with it. It was in this circular that the RBI recognized the development of digital and cryptocurrencies in India through their increased use and trading. They cautioned against the creation, trading or usage of virtual currencies primarily because they were neither regulated nor authorized. The possible risks which underlie dealing and trading in virtual currencies include: hacking and permanent loss of information stored in the digital wallet; lack of regulatory framework which would disable customer dispute redressal; loss in value due to high volatility and instability; legal and financial risks as no legislations are in place to decide jurisdiction and cause of action; breach of information in case of anti-money laundering and combating financing of terrorism (AML/CFT) laws (Reserve Bank of India, 2013). However, the RBI only issued a cautionary circular to refrain from indulging in activities involving cryptocurrencies, but did not ban cryptocurrencies *per se*.

During 2013-16, the government as well as the RBI were very particular about the position of cryptocurrency and strongly discouraged the use of cryptocurrencies. It was during this period

that the reports of the Financial Action Task Force (**"FATF"**), an inter-governmental organization formed by the G-7 nations to combat money laundering and the Bank of International Settlements (**"BIS"**), an international organization based in Switzerland, owned by 60 Central Banks (which RBI is part of) gained importance. The reports of these organizations mainly focused on defining virtual currencies depending on the effects it would have to the object of these organizations. They were of the collective opinion that cryptocurrencies may pose potential threat for terror financing and using of such virtual currencies for funding pro-terrorist efforts. The BIS in its report recognized the legal treatment of virtual currencies from jurisdiction to jurisdiction as a central problem of virtual currencies. The report also pointed out the issue of virtual currencies not being backed by any recognized authority. The report further cautioned against the trading of virtual currencies over money as the legal tender would lose its value over time and the role of the Central Banks would be reduced. These reports influenced the RBI to a great extent.

In the Financial Stability Report 2016, the standing committee observed the developments in Financial Technology (**"Fin Tech"**). The report also noted the risk that virtual currencies pose towards data protection and the interplay between consumer protection and monetary policy. This report was the first to suggest the introduction of a digital currency by the Central Bank (Financial Stability Report, Reserve Bank of India, 2016). In 2017, a whitepaper on the *Applications of Blockchain Technology to Banking and Financial Sector in India* was published by the Institute for Development and Research in Banking and Technology ("**IDRBT**"), where it discussed the applications of blockchain technology in India as well as its advantages and disadvantages (Institute for Development and Research in Banking and Technology, Reserve Bank of India, 2017). In pursuance of this paper, the RBI issued a circular dated February 01, 2017 encouraging everyone to follow its circular released in 2013 and re-stated that any users, traders, investors and holders of cryptocurrencies/virtual currencies would be carrying out in their own risk and the RBI has not given any authority or license to such persons or group of persons (Reserve Bank of India, 2017). The RBI again issued a circular on December 05, 2017 cautioning the risk of virtual currencies including Bitcoin. The RBI referred to its previous circulars issued in 2013 and 2017 regarding the risks which are associated with the dealing and trading of cryptocurrencies and further stated its concerns regarding the valuation of virtual currencies and rapid growth of Initial Coin Offerings. (Reserve Bank of India, 2017)

Period of Significant Development in Indian Crypto Market (2018-2022):

Various inter-ministerial and development committees discussed the pros and cons of crypto

and digital currencies at large lengths. The same was discussed in the parliament during the budget session and the Government stated that it would bring in measures to curb the use of cryptocurrencies as they are not recognized as legal tenders and that the Government would itself explore the pastures of blockchain and virtual currencies. The Government and RBI made their initial action to outlaw cryptocurrencies in 2018. On April 6, 2018, the RBI issued a circular titled "Prohibition on dealing in Virtual Currencies" under the authority granted to it by sections 35A and 36(1)(a) of the Banking Regulation Act, 1949, sections 45JA and 45L of the Reserve Bank of India Act, 1934, and section 10(2) of the Payment and Settlements Act, 2007. This circular stated that entities under the RBI's regulation are forbidden from engaging in business with or offering services to facilitate engaging in business with virtual and digital currencies. (India's Reserve Bank, 2018)

The terms of the above circular portrayed a restrictive framework of the position of cryptocurrencies in India. Soon after the circular of RBI was published, an inter-governmental financial committee submitted its report along with a draft bill. However, this bill was not introduced in the Parliament and the contents of the same were not made available to the public. Even though this bill was never formally introduced, it clearly laid out the position of the Government regarding cryptocurrencies; they wanted to ban all activities relating to the trading of cryptocurrencies in India.

An inter-ministerial committee constituted in 2017 under the authority of the Department of Economic Affairs, Ministry of Finance, after thorough research and ground work submitted its final report on 28th February, 2019. In order to understand the true nature of virtual currencies and the applicability of blockchain technology in India, the committee undertook a review of the legal and regulatory framework of virtual currencies. The committee discussed various issues relating to cryptocurrencies and its regulation in India and how other countries have considered the position of cryptocurrencies. In order to understand the nature and risks associated with cryptocurrencies, the committee conducted research on the distributed ledger technology and how such a technology could be applied in a country like India. The committee held meetings at regular intervals over the two-year phase. Depending on their findings, the committee recommended the following:

- The committee expressed its concern on the formation of cryptocurrencies only by private entities and their mushrooming all over the globe.
- They also expressed their concern over the pricing and valuation of cryptocurrencies. Since they are not a currency, they do not have a fixed valuation and their intrinsic value

can change drastically. These would not only affect the holders of such cryptocurrencies but would affect the economy as a whole.

- Non-recognition of Cryptocurrencies as legal tenders in any other country.
- The committee recommended the banning of all cryptocurrencies except the virtual currency introduced by the State and upholds the circular of the RBI issued in 2018. The committee annexed a draft bill for the consideration of the Government titled **Banning of Cryptocurrency & Regulation of Official Digital Currency Bill, 2019**. (Department of Economic Affairs, Ministry of Finance, 2019)

This committee report laid the clear stance of the Government regarding private cryptocurrencies and digital currencies. The Government considered the draft bill submitted by the committee and started working on preparing a final version of the proposed bill. It is pertinent to note the salient provisions of the Banning of Cryptocurrency & Regulation of Official Digital Currency Bill, 2019 to understand what the Government intended to implement with regard to cryptocurrencies. A brief summary of the Bill has been provided as under:

Banning of Cryptocurrency & Regulation of Official Digital Currency Bill, 2019:

- The object of this bill was to prohibit the use of cryptocurrency and regulate the official digital currency introduced by the Government.
- The bill aimed at introducing a 'Digital Rupee' which would be issued by the RBI and would be considered a legal tender and defined the same under section 2(1)(d) of the Bill.
- The bill prohibited the mining, generating, selling, dealing, issuing, transferring and disposing of cryptocurrencies in India by providing few exceptions to the use of the distributed ledger technology for creating financial delivery mechanisms without the creation of cryptocurrencies under section 3 of the Bill.
- Section 6 of the Bill further prohibits the use of cryptocurrencies and states that cryptocurrencies are not legal tenders or currencies and hence cannot be used as a store of value, a medium of exchange or a unit of account.
- The Bill empowered the Central Government to approve the Digital Rupee introduced by the RBI as a legal tender with the consultation of RBI from such date as it specifies under section 4 and 5.
- The Bill went a step further in criminalizing and penalizing people who indulged in cryptocurrencies. Under the ambit of sections 8,9,10, offenders who were directly or indirectly involved in the mining, trading, holding, selling, transferring, etc., of

cryptocurrencies shall be punished with a fine or an imprisonment which may be between 1 and 10 years or a combination of both fine and imprisonment. The schedule attached to the Bill provides the fine to be applied for various illegal and prohibited transactions specified under section 8 of the Bill.

The above mentioned are the key highlights of the proposed Bill. However, this bill was also not introduced in the Parliament primarily because of the judgement of the hon'ble Supreme Court in 2020 in the matter of *Internet and Mobile Association of India v. Reserve Bank of India* (2020).

Internet and Mobile Association of India v. Reserve Bank of India (2020)

The basis of this case is the writ petition initiated by the petitioner in 2018 against the circular of the RBI dated April 6, 2018, prohibiting the trading activities of cryptocurrencies by agencies and institutions which are regulated by the RBI. Because of this circular, institutions having a business relating to the trading and commerce of cryptocurrencies were forced to shut down and faced losses. The said circular was challenged by the petitioner for not being proportional and being biased and against public policy. The petitioners also challenged the circular on grounds of Article 19(1)(g) of the Constitution which grants the freedom to practise any profession, or to carry on any occupation, trade or business. The Supreme Court permitted the petition on the grounds of proportionality which was laid out in the case of *Modern Dental College and Research Centre and Others v. State of Madhya Pradesh and Others* (2016)

The Supreme Court held that in the last 5 years the RBI has not found the adverse impact of the virtual currency exchanges in the market. Further, the stand of the RBI as to virtual currencies not being banned but being regulated is clear from its past circulars, inter-ministerial meetings as well as the provisions of the Crypto Token and Crypto Asset (Banning, Control and Regulation) Bill, 2018. Moreover, there has been no instance where an entity regulated by RBI, dealing in the exchange of virtual currencies faced a loss or was adversely affected by its nature of business. Due to the above-mentioned observations, the Supreme Court set aside the circular of RBI dated April 6, 2018 on the grounds of proportionality.

Outcome of decision in Internet and Mobile Association of India v. Reserve Bank of India:

In pursuance of the order of the hon'ble Supreme Court in the case of *Internet and Mobile Association of India v. Reserve Bank of India* (2020), due to its enforceable nature and binding nature, the Government and Ministry of Economics did not introduce its draft bill titled **Banning of Cryptocurrency & Regulation of Official Digital Currency Bill, 2019** in the Parliament, as the contents of the proposed bill would obliviate the decision of the Supreme

Court. The RBI also released a circular dated May 31, 2021 in which it stated that the circular released by it dated April 06, 2018 is null and void in light of the decision of the hon'ble Supreme Court and entities regulated by it must not cite the circular. It further stated that such entities could however, carry out the customer due diligence processes in line with the governmental regulations.

In light of the decision of the hon'ble Supreme Court, the Government, inter-ministerial committees and RBI started working on a new bill which would legislate and regulate cryptocurrencies without banning them. The said bill was to be introduced in the 2021 winter session of the Parliament, but its introduction was deferred as the Government needed more time in framing an apt policy.

Budget 2022-23:

On February 01, 2022, the finance minister presented the Union Budget 2022-23 before the Parliament. In her speech, she stressed on the need to regulate virtual currencies. She stated that the government would impose a 30% tax on any income from the transfer of virtual currencies. It was further stated that there would be no deductions from the income accruing out of the transfer of digital currencies and the same cannot be used to set off against any other payments. Gifting of digital currencies was also brought under the 30% slab rate. In her speech, the finance minister also assured the introduction of the Digital Rupee based on the blockchain technology by the RBI during 2022-23. (Nirmala Sitharaman, Minister of Finance, Government of India, Budget 2022-2023)

Speech of Deputy Governor of RBI:

T Rabi Shankar, the deputy governor of RBI was the keynote addressee at the Indian Banks Association 17th Annual Banking Technology Conference and Awards held on February 14, 2022. In his speech, the deputy governor focused on the impact cryptocurrencies would have in the Indian economy and market. He argued that cryptocurrencies are an evil for the economy and by allowing their continued trade, the economy and the markets would perish in the long run. He argued that the blockchain technology seems promising for the Indian markets and that banning cryptocurrencies (most of which are based on the blockchain) would not derail the process of the Government employing the blockchain technology of its own. Even though many, including industry experts, Parliamentary committees etc. have suggested for the regulation of cryptocurrencies, he states that banning cryptocurrencies would be most effective in attaining a sustained growth in Fintech markets. (T Rabi Shankar, Deputy Governor, RBI)

The new bill on Cryptocurrencies is expected to be introduced in the 2022 Winter Session of the Parliament. Even though the provisions of this Bill are not available in the public domain, industry experts and government officials are of the opinion that this bill will be revolutionary in regulating cryptocurrencies and refurbishing the digital economy. This paper now conducts an analysis on the key aspect of the research question by considering the legal and sustainable aspects of cryptocurrencies.

ACHIEVING SCALABILITY THROUGH CRYPTO-LEGALITY:

Cryptocurrencies are widely circulating in the Indian market and have market value measured in terms of national currencies. The advantages with which it comes, accelerated by blockchain technology has resulted in wide-spread adaptation to it. Many advertisements have also been on roll, creating awareness about this currency. Cryptocurrency is the new way forward for creating a path towards development and also placing ones' country in a global pedestal. But this new development may change the existing payment structure in the near future and can bring in a host of new effects, maybe adverse or positive depending on the application of it.

Therefore, to minimize the adverse effects, surrounding the implementation and usage of cryptocurrency in the Indian markets, it has to be weighed against the public policy of the country. One such major determining factor is to judge it in the light of competition policy of the country.

In the pursuit of globalization, India responded to globalization and opened economy by resorting to liberalization and promoting trade. The outcome of this is that India must be ready to face both internal and external competition. (Statement of Objects and Reasons appended to *the Competition Bill, 2001).* This made the Monopolies and Restrictive Trade Practices Act, 1969, inoperable in certain instances mainly relating to the promotion of competition as the act enabled a restrictive framework alone.

To view cryptocurrency in the lens of competition policy, we first have to satisfy certain basic tenets of the Act, and then base our suggestions with respect to it. Our focus point over here is to bring this technology into the purview of competition policy in order to secure the users against certain negative externalities that this technology brings with itself, in order to achieve sustained economic growth with security.

The encrypted character of the cryptocurrency, decentralized ledger of record-keeping and peer-to-peer transactional nature provides the much-needed efficiency and transparency without any interference of the third-party. But then after a period of time, the system might

come in the crosshairs of competition policy, as it being devoid of any regulatory authority, and also certain bigshots in the blockchain market who provide the services and store data, can indulge in certain anti-competitive practices which is against the basic tenets of competition law.

In order to determine whether cryptocurrencies are under the jurisdiction of competition law, we may need to consider three relevant questions or criteria. First, blockchain needs to be included in the definition of a "business" as stated in the Competition Act of 2002. Any person or government agency involved in a certain economic or commercial activity is referred to as an enterprise. The following factors make blockchain-backed cryptocurrency subject to the definition of an enterprise. First, under Section 2(1) of the Competition Act, "persons" are defined as "individuals, artificial juridical persons, associations of persons, or bodies of individuals, whether incorporated in India or outside India.". In the second instance, "service" as defined by Section 2(u) includes any type of service that is made available to potential users and includes the delivery of services related to any type of industrial or commercial activity, including banking, communication, education, financing, insurance, chit funds, etc. In this case, a blockchain-based cryptocurrency that offers finance services via its distributed ledger falls under the definition of services. As a result, we can say that cryptocurrency based on blockchain is covered by this act.

In view of Section 3, whether or not blockchain participation can be treated as an agreement is essential to the Act's applicability to blockchains. This rule purports to forbid the creation of agreements among enterprises that are anti-competitive. The term "agreement" is defined in Section 3 of the Competition Act, 2002, as any arrangement, understanding, or joint activity, whether or not such an arrangement, understanding, or joint action is formal or in writing and whether it is intended to be enforced by legal action. The court has expanded the concept to encompass circumstances where the parties act based on a nod or a wink in "Builders Association of India vs. Cement Association of India and Ors., (Case No. 29 of 2010)". Consequently, under blockchain technology backed by cryptocurrencies, the participants act in consensus or in concert of a common transactional requirement to modify the status of the distributed ledger, which is essential in facilitating peer-to-peer activity. As a result, they are acting in agreement and meet the criteria in Section 3 of the definition. One of the main features of cryptocurrency is its decentralized nature. This renders same amount of access and information available to all participants. One way of looking at it is the transparency that such system or arrangement provides, thereby promoting healthy competition. On the flipside, when the technology is in its initial stages, such impactful information at the disposal of the

participants can result in some anti-competitive practices where in some influential participants can indulge in unlawful concert and commercially sensitive information is at stake. The Competition Commission of India (**"CCI"**) recently reaffirmed the old legal position in In *Re: Cartelization in Industrial and Automotive Bearings* (Suo Moto Case No.5 of 2017), the court stated that Section 3 forbids not only agreements that have a significant harmful effect on competition, but also those that are likely to have such an effect. The exchange of economically sensitive information is an anti-competitive behavior, according to the case. The CCI's tight stance on information exchange is detrimental to the operation of blockchains and contradicts the fundamental concept upon which they are built.

Country Comparison:

In the race to catch up with the popularity surrounding cryptocurrency, many countries are making several decisions regarding the regulatory frameworks governing cryptocurrency. Few countries have outrightly banned cryptocurrencies, whereas few ardently advocate for the technology. With its increasing relevance in sight, complete restrictions on the working of cryptocurrencies are not feasible, but regulations in its working would be the way forward. But much of its application and suitability depends on the country's payment mechanism, investment derivatives, tax structure, technical literacy, infrastructural development. Certain countries are grouped as developed countries and certain countries are grouped under developing countries. Therefore, a country can take cue from the fellow countries and modify according to the existing conditions of it. Here are few countries who have done certain modifications in their existing mechanism to suit crypto regulations.

1. **El Salvador**

This South American country has officially recognized cryptocurrency (Bitcoin) as a legal tender. This resolution was passed with the promise of no taxation being imposed on the cryptos and the President of the country has also vouched to build a geo-thermal powered city to try to attract bitcoin mining. But the international organizations like IMF have expressed concerns over the country. (Hammond, Ehret, 2022)

2. **United States of America**

In America, the exchange of cryptocurrency is considered to be legal, pursuant with regulations, which varies from state to state, however, cryptocurrencies *per se* have not been recognized to be legal. Here exchanges are considered as money transmitters, recognized as

tokens as value that substitutes for currency and this value is taxed accordingly. The cryptocurrency exchanges fall under the regulatory framework of Bank Secrecy Act. In future, the government wants to address this pressing issue of regulating cryptocurrencies in order to combat criminal activities.

3. United Kingdom

In United Kingdom, the exchange of cryptocurrency is considered to be legal, pursuant with registrations with Financial Conduct Authority (FCA), however, cryptocurrencies *per se* have not been recognized to be legal. In this country the crypto assets are supposed to be complied with certain regulatory authorities like Money Laundering, Terrorist Financing and Transfer of Funds Regulations 2017. Before Brexit, the crypto regulations were consistent with the EU, but in future they may diverge. the government in 2022 addressed the issue of 'misleading crypto asset promotion'.

4. Japan

In Japan, the cryptocurrencies are recognized as legal and is treated as property. Japan's regulatory network is the most efficient in the world as it provides a conducive environment for Bitcoins and other digital currencies under the Payment Services Act (PSA). The investors in crypto are taxed under income from miscellaneous sources. The legislation is proposed in 2022 which would address new security protocols and services to report suspicious activity.

5. China

In China, the cryptocurrency is not recognized as a legal tender and the exchanges are illegal. The National banks in China have banned financial institutions to indulge in Bitcoin transactions. It has outrightly outlawed cryptocurrency mining in the country. In future China intends to introduce its official digital currency and has also completed pilot tests in several cities.

What needs to be a part of the New Bill – The Authors' Suggestions:

The new Bill should include provisions which regulate the use of cryptocurrencies and aptly differentiate them from the legal tenders of the nation. The Bill must incorporate provisions which ensure regulated entities dealing in cryptocurrencies comply with the Know Your Customer (KYC), Anti Money Laundering (AML) and Combating Financing of Terrorism (CFT) norms laid out by the central government. These regulations are a must to ensure the

safe transaction of cryptocurrency and protection of consumer interests.

Under the ambit of the Bill a special office must be set-up which oversees and accounts all the trading and commerce of cryptocurrencies. The special officer must be allotted powers under his own jurisdiction and undertaking so as to take necessary action against entities and individuals who do not comply with the regulatory norms set out by the necessary authority. The punishment awarded must however be civil in nature, such as penalty, fines etc., and not criminal in nature unless the transaction or other activities connected therewith attract penal provisions.

The Bill must also bring crypto transactions under the ambit of SEBI's notification dated 17 April, 2020 granting relaxations for furthering *innovation in technological aspects relating testing products, processes, services, business models, etc.* SEBI is the frontline authority regulating the exchange market in India. It thus becomes pertinent for SEBI to closely monitor domestic as well as transnational transactions of cryptocurrencies so as to ensure fair practices and strict compliance of basic 'exchange market' practices.

The taxation scheme of the profits accruing out of cryptocurrencies is to be laid out clearly along with TDS deduction at 1% as mentioned in the Union Budget.

Despite the fact that algorithms are employed in almost every transaction in blockchain technology, the CCI has not deemed the use of specific tools, such as algorithms, to be a source of competitive concern. However, since these transactions are exempt from these compliances, the pseudonymous nature of these algorithms will result in their non-compliance with the relevant rules, which is more critical. In order to control such algorithms and bring them under the compliance framework, which is necessary for a competitive economy, the Commission should expand the applicability of section 3.

Jurisdictional element surrounding the applicability of the legal regime and to bring blockchain based cryptocurrency under the purview of competition act is a matter of concern. The pseudonymous nature of the participants and the network cutting across countries might act as an impediment for regulatory authorities as it would make it uncertain for the authorities to impose liability and demand accountability in this network. Even though the CCI has the authority to exercise jurisdiction over global blockchains in circumstances where there is a significant detrimental effect on competition in the relevant market in India; nevertheless, its implementation would be a major roadblock. Therefore, government or the authorities must widen the jurisdictional capacities and bring in the capability to entertain such cases as well.

When a load of information is out there for the participants to access then it might bring certain anti-competitive collusions to utilize unfair advantage of the available information which is

meant only to increase the transparency. The government must be acutely aware of the sorts of data and how they will be made public via the blockchain. To safeguard highly commercially sensitive data, it may be essential to add a layer of cryptographic security to specific information, or even to move certain commercially sensitive data off-chain.

Government must increase the national capacity to increase the innovation ability and develop infrastructure to strengthen themselves to reap the benefits of this new technological wave. A necessary collaboration with the private sector in building resilient infrastructure to develop cryptographical technical developments may act pivotal in building national capacity. A country may also adopt whole-of-government approach while adjudicating matters in this regard. This will help the government to understand concerns regarding cryptocurrency from different standpoints and then can come up with a comprehensive reform in this regard.

The ultimate aim of the New Bill must be to foster a sustained economic and financial development.

Cryptographically Sustaining Development:

The world is moving towards global partnership with fostering international connections to place itself in the world forum. But this growth has to be taken into consideration only if it is backed by some sustenance in the future. Mindful growth is the need of the hour, we need to consume, keeping in view the posterity to come. Therefore, United Nations Organization has adopted a sort of a blueprint for achieving sustainable development in its Agenda for 2030. It places all such issues that need urgent call for action and recognizes them. It not only places them on an international perspective, but also gives ways in which improvements can be made in the regard of health, infrastructure, inequality, education and economic growth.

Blockchain technology, which is the underlying technology for cryptocurrency's functioning is a catalyst in bringing a revolutionary shift to increasing levels of automation. In this era of increasing complexity, regulating becomes a tough task, and this can lead to corruption, malpractices, in order to get the work done. Such kind of activities can be detrimental for the future because tasks are being fulfilled at the cost of resources being wasted. This wasteful expenditure of resources directly reflects the governance models that are being practiced in the countries. Blockchain technology is such a revolutionary concept which brings in technology to an individual level, through a decentralized model and ensures peer-to-peer transactions. Therefore, it negates any sort of malpractices that can happen otherwise. When such personalized technologies have the capacity to negate negative externalities then they can lead

to sustained economic growth. Therefore, this technology can be used as one of the tools for good governance.

Blockchain technology is a global digital ledger and the matrix of it is quite technical with several algorithms and mathematical calculations, therefore, such technical advancements ensure global transparency in the working of it and no influence or interference can take place in this regard. Since there is responsible usage of resources, it leads to sustainable growth and development.

Since it is decentralized in nature, and equips itself with nuanced technology, it brings in security and resilience in the transactions taking place and leaves no room for any manipulation whatsoever, therefore, it is a fair technological alternative (Icommunity Labs and Tech, 2022). Decentralized character of blockchain ensures to achieve network scalability, this helps the technology to reach a nuanced level, thus fostering digitization which is very pivotal to achieve sustainable economic growth.

Sustained growth in the country ensures there is consistent progress and fosters creation of decent job in the market. Cryptographic developments have the ability to, with its technical support offer jobs in the market. The technicalities of this realm are such that it has a trickle-down effect to the disadvantaged section of the society and the flow of opportunities and jobs becomes easier because of its transparency and traceable nature of the technology.

Change is constant and a universal concept. With increasing technicalities in the functioning of the government, innovation, new ideas have to be proposed and brought in order to ensure smooth governance. This innovation can only be fostered when the government has adequate infrastructural facilities to support the proposition. Therefore, blockchain can facilitate in bringing in the necessary ancillary infrastructure to foster innovation and achieve sustainable growth.

But this technology, which currently in its incubation stage and is being tested for its various consequences can sometimes prove to be a very risky venture. People might not possess much of technical soundness that it requires which increases its risk level. And if any unintended consequence takes place, then it will happen at the cost of resources being wasted and the users may lose their trust. To prevent such an event from happening, the government must take into account the socio and economic effects of this technology and sensitize people towards it. The government, for the welfare of the people can regulate the technology to suit the economic conditions of the state.

Conclusion:

Any new proposition is weighed against both positive and negative externalities. To understand these determinants, one has to thoroughly fathom the deep technicalities of the new proposition to get a clearer picture. Cryptographic development is a revolutionary step towards the process of development. Development of this technology and its subsequent adoption by the countries would foster further innovation in this field. But the nuances of these technical developments demand some safety regulations to concern itself with. Therefore, to reverse the negative externalities of this technology which might give rise to anti-competitive practices, money laundering issues, terrorist activities, abusing dominance and anti-trust activities, it is prerogative to back it up with certain supervisory regulations. The blockchain-based cryptocurrency cuts across economic paradigm and can transform social interaction, public institutions and its relationship with the environment, thereby affecting countries' options for pursuing sustainable development and fostering economic growth proportionally.

REFERENCES

1. Banning of Cryptocurrency and Regulation of Official Digital Currency Bill 2019 (Ind.).
2. Benigno, Schiling, Uhlig, (2022). Cryptocurrencies, currency competition, and the impossible trinity. Journal of International Economics. https://doi.org/10.1016/j.jinteco.2022.103601
3. Clements, R. (2018). Assessing the evolution of cryptocurrency: demand factors, latent value, and regulatory developments. *Mich. Bus. & Entrepreneurial L. Rev.*, *8*,73.
4. Deshmukh, (2020). 3 ways blockchain can accelerate sustainable development. Platform Curator, Blockchain and Digital Currency, World Economic Forum https://www.weforum.org/agenda/2020/09/3-ways-blockchain-can-contribute-to-sustainable-development/
5. Gamage, H. T. M., Weerasinghe, H. D., & Dias, N. G. J. (2020). A survey on blockchain technology concepts, applications, and issues. *SN Computer Science*, *1*(2), 1-15. https://d1wqtxts1xzle7.cloudfront.net/70961130/s42979-020-00123-0-with-cover-page-v2.pdf?Expires=1653071451&Signature=X1WH-5FFxRVgMk45jPgbWep2AeyjRN227hg58o5sYYxbOAKsA9k41Sfv9P2h-Hho7Qqcjx35bni0wMHTcNx51T~M6emy6NIC2ljsvWPXB4EvhtuSVkh7WjuRfoj8Nl5v74Ufnz2aR8n0Myhy0bO13vzYvF3g0Eq5yWvVkqoe1A-

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6. Giudici, G., Milne, A. & Vinogradov, D. Cryptocurrencies: market analysis and respectives. J. Ind. Bus. Econ. 47, 1–18 (2020). https://doi.org/10.1007/s40812-019-00138-6
7. Hutchinson, (2020). Potential Legal Challenges for Blockchain Technology in Competition Law. Baltic Journal of Law and Politics. https://content.sciendo.com/view/journals/bjlp/bjlp-overview.xml
8. *Internet and Mobile Association of India v. Reserve Bank of India* (2020) 10 Supreme Court Cases 274 (Ind.).
9. Institute for Development and Research in Banking Technology. (2017). *Applications of Blockchain Technology to Banking and Financial Sector in India*. https://www.idrbt.ac.in/assets/publications/Best%20Practices/BCT.pdf\
10. Jani, S. (2019). The Emergence of Blockchain Technology & its Adoption in India. https://www.researchgate.net/profile/Shailak-Jani/publication/334163042_The_Emergence_of_Blockchain_Technology_its_Adoption_in_India/links/5d1afde5458515c11c096234/The-Emergence-of-Blockchain-Technology-its-Adoption-in-India.pdf
11. Madey, R. S. (2017). *A study of the history of cryptocurrency and associated risks and threats* (Doctoral dissertation, Utica College). https://www.proquest.com/pagepdf/2008188467?accountid=31785
12. Malik, (2021). Competition Commission paper on blockchain tech spells regulatory risk. Business Standard. https://www.business-standard.com/article/markets/competition-commission-paper-on-blockchain-tech-spells-regulatory-risk-121042000335_1.htmM
13. Nissen, (2018). Blockchain technology and competition law - issues to be considered. Bird & Bird. https://www.twobirds.com/en/insights/2018/global/blockchain-technology-and-competition-law-issues-to-be-considered
14. Østbye, Peder, The Adequacy of Competition Policy for Cryptocurrency Markets (August 24, 2017). Available at SSRN: https://ssrn.com/abstract=3025732or http://dx.doi.org/10.2139/ssrn.3025732

15. Raj, (2021). Cryptocurrency v/s Law in India. Lexlife India. https://lexlife.in/2021/07/16/cryptocurrency-v-s-law-in-india/
16. Rajvansh, (2021). The Interaction Between Blockchain and Competition Law in the Indian Competition Regime. Kluwer Competition Law Blog. http://competitionlawblog.kluwercompetitionlaw.com/
17. Reserve Bank of India. (2013). *RBI cautions users of Virtual Currencies against Risks*. 2013-2014/1261. Retrieved from: https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=30247
18. Reserve Bank of India. (2017). *RBI cautions users of Virtual Currencies*. 2016-17/2054. Retrieved from: https://www.rbi.org.in/commonman/English/Scripts/PressReleases.aspx?Id=2152
19. Reserve Bank of India. (2017). *Reserve Bank cautions regarding risk of virtual currencies including Bitcoins*. 2017-2018/1530. Retrieved from: https://www.rbi.org.in/commonman/English/Scripts/PressReleases.aspx?Id=2474
20. Reserve Bank of India. (2018). *Prohibition on dealing in Virtual Currencies (VCs)*. 2017-18/154. Retrieved from: https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11243
21. Reserve Bank of India. (2021). *Customer Due Diligence for transactions in Virtual Currencies (VCs)*. 2021-22/45. Retrieved from: https://rbi.org.in/Scripts/NotificationUser.aspx?Id=12103
22. Shankar, Rabi. (2022, February 14) *Keynote Address at the Indian Banks Association 17th Annual Banking Technology Conference and Awards*. RBI Archives. https://rbi.org.in/Scripts/BS_SpeechesView.aspx?Id=1196
23. Sitharaman, Nirmala. (2022, February 01) *Budget 2022-2023, Speech of Nirmala Sitharaman, Minister of Finance*. Indian Budget. https://www.indiabudget.gov.in/doc/budget_speech.pdf
24. Sirimanne, Freire, (2021). How blockchain can power sustainable development. UNCTAD.https://unctad.org/news/how-blockchain-can-power-sustainable-development
25. Stylianou, (2019). What can the first blockchain antitrust case teach us about the crypto-economy? Jolt Digest. https://jolt.law.harvard.edu/digest/what-can-the-first-blockchain-antitrust-case-teach-us-about-the-crypto-economy