Significance of Crypto currencies with Reference to Indian Economy Context

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Abstract-The article discusses about significance of cryptocurrencies with reference to Indian economy context. There are numerous literatures based on prominence of cryptocurrencies and how cryptocurrencies are trading in global marketplace. This research will reflect various literature that are based on cryptocurrencies market as well as will discuss about cryptocurrency market. In this article analysis of government regulation regarding cryptocurrencies is discussed that will help researchers to get an overview of present regulations prevailing in cryptocurrency market.

Key words: Cryptocurrency, Bitcoin, transaction, exchange, market.

I.INTRODUCTION

Cryptocurrencies are addressed as future currency. Cryptocurrency is a form of digital currency that uses encryption to keep payments safe. It is intended to allow users to make transactions in a much more secure as well as confidential manner.Over through the duration of its brief existence, the cryptocurrency industry has grown irregularly and at an unparalleled rate.The majority of cryptocurrencies have been built on decentralized networks using block chain technology. This method is distinguished by the absence of any government participation. It enables users to protect their businesses from government intervention. The industry growth of cryptocurrencies is mainly being associated to investments as well as advancement in financial technological innovations. As per KPMG report, overall financial technological investments in Asia Pacific hit USD 12.9 billion in the 4th quarter of year 2019.The cryptocurrencies sector has evolved at an incredible rate. The market enables businesses to raise funds without the involvement of investment firms and also to operate without the need to be stock exchange - listed.In 2020, Asia Pacific accounted for roughly 20% of cryptocurrency exchange market dominance, and also from 2021 to 2027, it is expected to increase at an accelerating rate. The potential market is fueled by the large amount of cryptocurrency transactions as well as acceptability as a payment alternative.Cryptocurrencies, like bonds and stocks, are traded internationally on numerous of markets across the globe especially their Initial Coin Offerings (ICO). Their entire market capitalization was at 237 billion dollars in January 2020, with a trade volume of around 124 billion dollars, indicating tremendous expansion in the industry.

II.LITERATURE REVIEW

The world related to currency and finance are rapidly changing right in front of our eyes.As per research study of Hileman, Rauchs(2017), it is stated that digital assets, as well as various advanced financial technology platforms, mechanisms, including technologies, are redefining financial exchange ideal models and building new capital routes.Hofmann, Strewe, &Bosia, 2018, in their study stated that plenty of articles have been reported on the anticipated future and functions of cryptocurrencies in the financial sector.The rising popularity of cryptocurrencies in recent decades has sparked considerable curiosity as well as expectation about its implications for financial inclusionincluding various development in financial sector (Lee et al., 2018). The service-dominant reasoning as per study of Vargo and Lusch (2004), propounded that technology like cryptocurrency allude to a combination of diverse resources. Cryptocurrency intend to relies on data that is both reliable and widely disseminated. It creates a setting for trustworthy transactions &decentralized networks, both of which are essential components of a service delivery system.
As in case of cryptocurrencies, value tend to co-created amongst various partners involved in a service system, thus, trust building component is essential to facilitate collaborative practices. As a result, cryptocurrency fulfils

a critical requirement for the financial industry's smooth operation.As cryptocurrency is projected to even have major influence on economic sectorbecause it promotes correct operation of a service system mainly by assisting co-creation of values as well as guaranteeing information exchange.In his research, Abraham.M.,2019, mentions that cryptocurrencies are mainly built on cryptography, that tend to offer a wide range of benefits that are generally beyond traditional payment systems notably higher liquidity, cheaper transaction fees, as well as confidentiality.

As per study of Jorcano. L &Benito.S, 2020, it is notified that since public corporations as well as fiat money are inseparably connected with the situation of economy, cryptocurrencies may be respected a hedging resource in ordinary situations however a magnificent diversifier amid recessions or moments of uncertain circumstances.As per Limba.T. et al, (2019), while cryptocurrencies enjoy benefits, for example, straightforwardness of transaction and absence of intermediates, they also have disruptive technologies.While cryptocurrencies enjoy benefits, for example, straightforwardness of transaction and absence of intermediates, they also have disruptive technologies. Notwithstanding, the researchers' assessments of bitcoins in Baltic nations recommend that the line among cryptocurrency as well as digital money is blurry.Furthermore, it may introduce new concerns like evading taxes, embezzlement, or the usage of virtual money in the informal economy.

The emergence of cryptocurrencies is one of the main technological developments in the advanced world, drawing in a great deal of public consideration. Some say this is the main technological forward leap in the past 10 years. Subsequently, cryptocurrencies filled in fame rapidly. Cryptocurrencies is a computerized resource whose essential capacity is to fill in for the purpose of trade, and it does as such by utilizing cryptography to guarantee that all exchanges are secure and that any new data that arises is represented by its own framework.Cryptocurrencies can be considered a subcategory of advanced digital standards. In 2009, the Bitcoin turned into the primary cryptocurrency. Following that, a huge number of new cryptocurrencies hit the market, named altcoins since they addressed an assortment of Bitcoin options.

Bitcoin doesn't have a unified framework, and that implies that no single element can completely control it, in contrast to electronic financial frameworks.Numerous other cryptocurrencies have created lately, but most researchers and scholastics accept they are indistinguishable from Bitcoin and are basically a subset of Bitcoin. An enormous number of individuals from the overall population, known as miners, are required for this network to operate (Nakamoto, 2008). The UK government allotted the Treasury homework in light of the fact that nobody had some control over what occurred with cryptocurrency. They were expected to do explore on cryptocurrencies to decide their capacity, importance, and possible effect on the UK economy.

In 2014, the first Bitcoin ATMs showed up in Austin, Texas. Jordan Kelley, the organizer of Robcoin, introduced it, and it contained scanners that could perceive officially sanctioned reports like a driver's permit or a passport. By 2017, an enormous number of Bitcoin ATMs have been conveyed from one side of the globe to the other.Individuals are progressively more keen on cryptocurrencies than in customary government-issued cash (Athey, Catalini, Tucker, 2013). Since banks will not be able to control their basic capacities, the whole finance related and exchange rate strategy might move to a great extent. A few government legislatures have made it absolutely legitimate, considering their utilization and exchange, while others, as China, have chosen to restrict them.What's more, regardless of the way that they are lawful, it is unlawful in Russia to purchase things with any cash other than the Russian ruble. Dr. Garrick Hileman and the Center for Alternative Finance led a review on the significance of cryptocurrencies in June 2017, and as per their discoveries, multiple million people use cryptocurrencies as an elective installment instrument for goods and services.Individuals have started to attend classes and courses on the most proficient method to make investment into Bitcoin and other digital currencies (Chu, Nadarajah, Chan, 2015).

A few legislatures have even endeavored to construct and fabricate their own cryptocurrencies. China has altogether banned the utilization of cryptocurrencies, with just offshore business associations allowed to exchange them.The fundamental reason nations decide not to use cryptocurrencies is to diminish crime and increment tax income. They are reluctant to utilize this creative computerized money since they are worried about not having the option to follow any online-based transactions. Russia is fostering its own cryptocurrencies, which will be known as the cryptoruble. There is little data about it, yet it is realized that it would not be mined and that main government, as traditional currency, would actually able to issue it and keep up with track, all things being considered.Bitcoin, the most renowned and notable cryptocurrency in the globe till date, has been acquiring in prominence. It has a similar fundamental structure as when it was first introduced in 2008, yet repeated occurrences of the globe market changing have brought about a new interest for cryptocurrencies that is far higher than its first appearance.

Cryptocurrency depends on the guideline of tackling encryption methods to produce exceptional, limited number hashes. Individuals can trade hashes as though they were dealing real cash.Bitcoin has esteem in light of the fact that its users trust that assuming they acknowledge it as installment, they will actually want to utilize it to purchase anything more they want or need (Kelly, 2014).The valuable object might be anything like as far as the users retain their faith. Bitcoin's price is dependent on its environment, same to how Native Americans used wampum, a seashell, as their land money (Kelly, 2014). Bitcoin doesn't even have intrinsic worth in the same way that gold would, in that it could be used to create valuable physical goods such as jewellery. Nonetheless, worth exists because of trust as well as acceptance.Paypal, Microsoft, Expedia, Uber, Airbnb, and Ebay are on the whole large companies. In Germany, cryptocurrencies are not simply a product, yet additionally a sort of legitimate cash; an order gave by the Federal Ministry of Finance permits tax-exempt purchases of advanced monetary forms, as virtual currency is considered an identical to fiat cash. Moreover, according to a 2015 judgment by the European Court of Justice, profit in bitcoin speculations are not subject to esteem added tax in European Union part states.

III.THE INDIAN CONTEXT

Cryptocurrencies are commonly indigenous to a blockchain. For example, bitcoin is the indigenous coin (or token) of the Bitcoin blockchain, or, ether is the native currency of the Ethereum blockchain. They can be used as units of account to settle transactions or they can be used as tokens to reward work done in the blockchain, say, for mining. Either of these two functions do not appear to be essential to the basic function of a blockchain. It should be possible to maintain a blockchain without any native cryptocurrency if transactions are authenticated centrally. Even in case of private authentication through consensus mechanisms, accounts can be kept and rewards can be given in any legal tender currency. In other words, creating native cryptocurrencies is just one way of implementing a blockchain; it can be viewed as just one-use case of the blockchain technology. To argue that banning cryptocurrencies would stunt the absorption of blockchain technology is therefore akin to saying that banning human cloning would kill innovations in biotechnology or banning nuclear weapons would hurt nuclear physics as a discipline. There are many other uses of blockchain technology or more generally, distributed ledger technology, that do not involve creation of a virtual currency. Thus, claims that cryptocurrencies must be permitted for blockchain technology to thrive are not sustainable.

According to a report of Reserve Bank of India an argument often led to banning cryptocurrencies, although the advanced economies (AEs) are not resorting to such bans. While emulating the practices followed in AEs is often an acceptable route to reforms, as far as cryptocurrencies are concerned, it has to be noted that India is not similarly placed as AEs. We should particularly be alert to the prospect that these private currencies can be used for global strategic control. If, for example, some private currency substantially replaces the Rupee, the corporate which manages that cryptocurrency (or the country which has control of that corporate) can practically control India’s economic policy. There are a number of other reasons why it might be in the interest of AEs to not ban them, as below.

a.Almost all cryptocurrencies are priced in terms of Dollars (or potentially any of the freely convertible currencies). Wider adoption would actually result in wider use of these currencies. So, cryptocurrencies are not a threat to convertible currencies as they are to the Rupee, which is not an international currency. Following the example of AEs in the matter of cryptocurrencies would effectively amount to working against the interest of the national currency.

b.Most cryptocurrencies are owned by businesses of AEs; therefore, better adoption of cryptocurrencies would add to their growth and employment. Significantly, it might be of advantage to the AEs if cryptocurrencies replace emerging market (EM) currencies as that would give AEs a better strategic control on the EMEs.

c.AEs have more mature markets which can withstand the potential disruption from cryptocurrencies. They are, therefore, in a better position to wait and watch.

d.AEs have quicker legal systems and hence concerns of misuse of cryptos can be addressed through the legal systems. In India, on the other hand none of the major instances of consumer exploitation have been redressed legally (e.g., the mis-selling of derivatives in mid 2000s).

e.AEs have the political power to control the crypto companies. The recent instance where the US recovered bitcoins from the hackers of the oil pipeline in US, is an example that notwithstanding claims of non-traceability of cryptocurrencies, AE Governments wield enough power to access the records. India or most other countries would lack such advantages.

Another argument often advanced is that bountiful Indians have already invested in cryptocurrencies and banning cryptocurrencies would lead to a loss of wealth for them. There are three reasons such arguments do not appear substantiate. One, banning in India does not mean investors would lose money, because they can be provided with a reasonable exit. Two, persons who have invested in these instruments are fully aware of the risks involved. Reserve Bank has been warning investors of the risks for nearly a decade. That an Inter-Ministerial Committee of the Government has recommended banning cryptocurrencies was widely known for the last three years, as was the fact that cryptocurrencies are not regulated products and there are no investor protection norms in place. Investors who have acquired these instruments have done so with their eyes wide open, at their own risk and do not authorize any regulatory dispensation. Three, there is no data to justify how many investors have invested in these instruments and what is the amount of investment. Data informally gathered in November seems to indicate that crypto investments by Indians is nowhere near to being significant (although the pace of growth could make it a concern in future). This data showed that four out of five investor

accounts held investments of less than Rs.10,000, with an average holding size of Rs.1,566. Wealth loss, if at all it is a possibility, is likely to affect only a small fraction of these investors.
The basic arguments being made for regulating cryptocurrencies are as follows:
a.Blockchain or Distributed Ledger Technology is a promising technology where Indians might have a global edge. Banning cryptocurrencies would affect the absorption of DLT technology in India.
b.Most major countries are not banning cryptocurrencies, but are considering some kind of regulation.
c.Many Indians have already invested in cryptocurrencies and banning it may lead to wealth loss for them.
d.Banning in any case is unlikely to be effective because by its very nature cryptocurrencies can be acquired and traded in an anonymous manner.
Interestingly, concentrated ownership appears to be characteristic of cryptocurrencies. As a January 2021 report published in The Telegraph points out: "According to industry data, around 13% of all Bitcoin sits in the hands of just over 100 individual accounts." They are referred to "crypto whales". Such concentrated ownership, usually by creators or initial investors, in what is touted to be (or at least hoped to be) the alternative monetary system, would make that system prone to manipulation.

IV.CRYPTOCURRENCY MARKET

Whenever Nakamoto (2008) published Bitcoin in a white paper following the sub-prime financial crisis in 2007, cryptocurrency as another asset class drew a great deal of revenue in somewhere around a time of its initiation. Following Bitcoin's far and wide acknowledgment, extra cryptocurrency ultimately arose. In reality, the crypto market had 1,568 cryptocurrencies as of March 2018, contrasted with only 40 cryptocurrencies in December 2013(Global Cryptocurrency Exchange Trends, Reports and Statistics, 2018).In contrast with the conventional monetary market, high unpredictability is a typical event in the bitcoin market (Corbet et al., 2018). Despite being warned from various governments, cryptocurrencies are increasingly more connected with investments as well as speculations, regardless of the fact that they were established for peer-to-peer transactions without engaging third - party (Katsiampa, 2019). Moreover, as indicated by Dyhrberg (2016) and Bouri et al. (2017), cryptocurrencies have little resemblance to traditional assets.Furthermore, the fact that the bitcoin industry is still comparatively recent shows that it lacks solid foundations as well as is not well-established (Bohme et al., 2015). As a result, a marketplace with poor foundations is more vulnerable to disruption, and also any effect on marketplace might be passed on to others. As a result, market might crash.

V.GOVERNMENT REGULATIONS

On cryptocurrency, the US has a liberal, moderately nonpartisan position. Administrators are as of now attempting to extend existing guidelines to oblige the exceptional components and difficulties of the cryptocurrency sector. Digital currencies are treated as property instead of currency for tax reasons, and exchanges are dependent upon a similar tax rules as different sorts of property.As per research study of Larry Greenemeier. (2015, April), it is propounded that individual states in the United States likewise play a huge part in creating guidelines for the new currency. As of April 2015, 12 states and Puerto Rico had carried out a virtual coin authorizing plan.Scott Fargo research study stated that California is now the state with the most cryptocurrency circulation, and this has been a leader in integrating cryptocurrencies into traditional economic structures. Cryptocurrency became legalized in California in January 2015, prompting hopes that some other states might follow the lead.New York having taken notice of the developing market, which is presently finalizing its own regulatory structure (Anthony Cuthbertson, 2015).As per findings of Evander Smart research study, Australia has not officially sanctioned regulation for virtual currency, but rather it has constructed a tax collection structure for the currency, with its nationals representing around 7% of Bitcoin clients.Cryptocurrencies trading is dependent upon the nation's current Goods and service tax regulation. Regardless of the way that "Bitcoin is certainly not a legitimately perceived overall method for trade and type of installment under the laws of Australia or some other country," the Australian government has permitted the cryptocurrency to flourish (BitwebMagazinbe, 2015).As per Virtual Currency Today, 2015 article, Canada maybe has the unified and sophisticated regulatory regime, being the principal country on the globe to lay out a tax on virtual monetary forms. This tax collection framework tries to limit the dangers most often connected with digital currencies: tax evasion and terrorist financing. The Bank of Canada has communicated an eagerness to recognize the growing virtual currency market, however cryptocurrencies are now classified as investment instead of currencies by the Bank of Canada. Leon Pick. (2015), research paper stated that the improvement of cryptocurrencies has been met with doubt in Russia. The Bank of Russia communicated worries that the currency might be utilized to help tax evasion and promote the integration of funding to terrorist organizations. Furthermore, the bank claimed that cryptocurrencies contravenes federal law by requiring only one central bank as well as currency.The research study of Allen Scott, 2015, stated that The Russian Prosecutor General's Office expressed in February 2015 that Bitcoin "can't be utilized by individuals or legitimate organizations." "The law,

which gives measures to punishing the utilization of money related proxies, will ultimately be spent for this present year," said Deputy Minister of Finance Alexei Moiseev in April.Nevertheless, Russia's anti-cryptocurrency drive is already visible, with at least a half-dozen cryptocurrency webpages being blocked at the start of 2015 (Caleb Chen, 2015).
The graph below summarizes several governments' effort to introduce legal parameters for cryptocurrency as well as restrict its activities and use.

Content	Country	Additional information
Prohibition	**China**	December 5th, 2013, China's Central Bank prohibited financial institutions from handling Bitcoin transactions. Individuals and private parties can legally trade Bitcoin (Steven Yang. Bloomberg, 2013).
	Russia	In February 2015, Russia's Prosecutor General's Office claimed that Bitcoin "cannot be used by individuals or legal entities." (Ellis Hamburger. (2014, February)
	Iceland	The Icelandic Central Bank said "it is prohibited to engage in foreign exchange trading with the electronic currency bitcoin, according to the Icelandic Foreign Exchange Act". (David Schwartz, Noah Youngs, and Arthur Britto)
Prohibition of ATM's	**Taiwan**	Approval for Bitcoin ATMs refused
Protection from money laundering & illicit activities	**Singapore**	Financial intermediaries to verify the identities of their customers and report suspicious transactions.
	USA	Bitcoin exchanges and most miners obliged to collect information on potentially suspicious transactions and report these to the federal government.
		The sale, exchange or use of Bitcoin for payment in a real-world economy transaction

		may result in tax liability.
Taxing Bitcoin	**Japan**	The tax will cover gains from trading bitcoins, purchases made with bitcoins and revenues from transactions. Banks and securities firms will be prohibited from Bitcoin trades.
	Finland	Rules on taxation of capital gains apply when profits are in Bitcoin after it was obtained as payment is also taxable.
	Germany	Profits from mining or trading subject to capital gains tax unless hoarded for at least one year.
Unclear	**Israel**	The Bank of Israel, the Capital Market, Insurance and Savings Department, the Israel Tax Authority, the Israel Securities Authority, and the Israel Money Laundering and Terror Financing Prohibition Authority issued a joint statement warning of the risk's cryptocurrencies posed to users. However, no regulation has been established.
	India	The Reserve Bank of India's Secretary General, Ajit Prasad, said "The creation, trading or usage of virtual currencies including bitcoins, as a medium for payment are not authorized by any central bank or monetary authority." However, cryptocurrencies are currently not regulated.

Source:Information Derived/Reproduced From Marcin Szczepański, "Bitcoin, 2014 and Virtual Currency Today, "Regulation of Virtual Currencies2015

VI.CONCLUSION

Cryptocurrency offers a new, efficacious and attractive model of payment methods that can boost companiesand operators' revenues. It also provides alternative method of payment, apart from real money, that enableusers to make financial activities such as buying, selling, transferring and exchanging easily. Althoughcryptocurrency platforms open many channels for digital financial transactions and provide a new form ofcurrency with different mechanisms and methods, they are not controlled and regulated as they deserved.The research analyzed cryptocurrency platforms and extracted many concerns and challenges that put suchfinancial system under the risk. The lack of legislations is considered as the main concern in cryptocurrencysystems.

REFERENCES

[1] Aggarwal, V., & Tan, Y. (2019). A Structural Analysis of Bitcoin Cash's Emergency Difficulty Adjustment Algorithm. *Available at SSRN 3383739*.

[2] Banwari, V. (2017). Cryptocurrency scope in India. *International Research Journal of Management Sociology & Humanities*, *8*(12), 82-92.

[3] DeVries, P. D. (2016). An analysis of cryptocurrency, bitcoin, and the future. *International Journal of Business Management and Commerce*, *1*(2), 1-9.

[4] Kyriazis, N. A. (2019). A survey on empirical findings about spillovers in cryptocurrency markets. *Journal of Risk and Financial Management*, *12*(4), 170.

[5] Lánský, J. (2016). Analysis of cryptocurrencies price development. *Acta Informatica Pragensia*, *5*(2), 118-137.

[6] Lánský, J. (2016). Analysis of cryptocurrencies price development. *Acta Informatica Pragensia*, *5*(2), 118-137.

[7] Liu, J., &Serletis, A. (2019). Volatility in the cryptocurrency market. *Open Economies Review*, *30*(4), 779-811.

[8] Luchkin, A. G., Lukasheva, O. L., Novikova, N. E., Melnikov, V. A., Zyatkova, A. V., &Yarotskaya, E. V. (2020, August). Cryptocurrencies in the global financial system: problems and ways to overcome them. In *Advances in Economics, Business and Management Research. Proceedings of the Russian Conference on Digital Economy and Knowledge Management (RuDEcK* (No. 2020, p. 423).

[9] Mikhaylov, A. (2020). Cryptocurrency market analysis from the open innovation perspective. *Journal of Open Innovation: Technology, Market, and Complexity*, *6*(4), 197.

[10] Mikhaylov, A. (2020). Cryptocurrency market analysis from the open innovation perspective. *Journal of Open Innovation: Technology, Market, and Complexity*, *6*(4), 197.

[11] Olusegun, V., &Olaniyi, E. (2019). Can cryptocurrency, mobile phones, and internet herald sustainable financial sector development in emerging markets.

[12] Palit, B., & Mukherjee, S. (2022). Can cryptocurrency tap the Indian market? Role of having robust monetary and fiscal policies.

[13] Rastogi, V., & Kushwaha, P. (2019). Success and failure of digital money and virtual money: Case of cryptocurrency-bitcoin. *IME Journal*, *13*(1), 74-81.

[14] Shanaev, S., Sharma, S., Ghimire, B., &Shuraeva, A. (2020). Taming the blockchain beast? Regulatory implications for the cryptocurrency Market. *Research in International Business and Finance*, *51*, 101080.

[15] Sinel'nikova-Muryleva, E. V., Shilov, K. D., &Zubarev, A. V. (2019). The essence of cryptocurrencies: Descriptive and comparative analysis. *Finansy: teoriyaipraktika= Finance: Theory and Practice*, *23*(6), 36-49.

[16] Sinel'nikova-Muryleva, E. V., Shilov, K. D., &Zubarev, A. V. (2019). The essence of cryptocurrencies: Descriptive and comparative analysis. *Finansy: teoriyaipraktika= Finance: Theory and Practice*, *23*(6), 36-49.

[17] Titov, V., Uandykova, M., Litvishko, O., Kalmykova, T., Prosekov, S., &Senjyu, T. (2021). Cryptocurrency open innovation payment system: Comparative analysis of existing cryptocurrencies. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 102.

[18] Titov, V., Uandykova, M., Litvishko, O., Kalmykova, T., Prosekov, S., &Senjyu, T. (2021). Cryptocurrency open innovation payment system: Comparative analysis of existing cryptocurrencies. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 102.

[19] Titov, V., Uandykova, M., Litvishko, O., Kalmykova, T., Prosekov, S., &Senjyu, T. (2021). Cryptocurrency open innovation payment system: Comparative analysis of existing cryptocurrencies. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 102.

[20] Vincent, O., & Evans, O. (2019). Can cryptocurrency, mobile phones, and internet herald sustainable financial sector development in emerging markets?. *Journal of Transnational Management*, *24*(3), 259-279.

[21] RBI Report

[22] Jani, S. (2018). The growth of cryptocurrency in India: Its challenges & potential impacts on legislation. *Research gate publication*.

[23] Alzahrani, S., &Daim, T. U. (2019, August). Analysis of the cryptocurrency adoption decision: Literature review. In *2019 Portland International Conference on Management of Engineering and Technology (PICMET)* (pp. 1-11). IEEE.