

# Impact of Cryptocurrency in India

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## ABSTRACT:

Cryptocurrency is a digital coin money of a country which is established electronically in which methods are accepted for encoding and are recycled to manage the whole of created money and it is also beneficial to check the transaction of cash which are performing its function freely and without any restrictions of a central bank. One of the most ordinary instances of cryptocurrency is Bitcoin which is gaining popularity in India every now and then even with restrictions upon it to use in India. The main difficulty to use these cryptocurrencies is its safety controversy. These digital coins are not as much protected as the people think they are. The second difficulty faced by many people is the variation problem of the currency is not known to anybody as it is uncertain. Anything which varies so much is the most ineffective thing to use. There are many things which India needs to learn from this digital era are that some are for their benefit but some of them are to create tension and to worry about. Even though we all know that India is moving fast towards the era of Digital age and that day is not far away that India will also be considered as one of the most developed nation in the world. These virtual digital coins will be more popular in the coming future. However, there is no confirm institution to determine the number of bitcoins and to decide about the number for the production, keeping the document about how many are there and to interrogate in case of any issue. It can be considered as association of connections. They are controlled by the non-centralized network. Their actions are guarded by their owners and the highly strict codes are developed to safeguard their boundaries in which they work accordingly.

Keywords Cryptocurrency, History, Types, Future, Threats

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## I. INTRODUCTION

A digital coin of the country in which the encryption methods are being observed to determine the creation of whole of paper money and prove the validity of transaction of money, worked freely for a central bank. So, we can say that this definition can be used to define cryptocurrency which is the other assets of currency to be kept by the peoples. It does not also designate some of the things. So, we can say that a cryptocurrency can be said as another way of assets coin which is digital for which group of people have specifically agreed that it has some value. It has all the basic element of currency but there is no real value of cryptocurrency and still people take it as an investment for their needs. We all exchange the things in terms of money exchange like dollar, euro, rupees etc. In older century the exchange of services is with wheat and rice grains, which added the value of services in terms of grains in barter system and vice versa between buyer and seller. These current techniques are a failure as the person who is the agent can easily fool the consumer with the actual value of the wheat and the services taken by him. At present we use the currency which is in printed form. So, we all know the actual value of both wheat and services, and now consumer can buy the things easily in exchange of the money he owns. Basically, currency note gave the solution to the problem of exchange system of wheat and services in older times. And now we see easily the future of the digital currency in the coming future. If the

coin currency of Utopia rejected against the money of Atlantis, the more benefit goes to Utopia rather than Atlantis and vice -versa. These all things depend upon certain factors. If Utopia has things or personal possession of things and services whose demand is higher in Atlantis then with the simple rule followed of law of demand and supply, Utopia can have more profits and capital provided that Atlantis can take the money and stand for itself to pay for its imports. But as the case is this that there is no enough money available to pay for the imports from Atlantis, there will be the point in the near future when imports of it have to be reduced and the people of Atlantis will suffer as they have to live below the standard living and automatically Utopia will not gain the capital from Atlantis as he used to be . The explanation that Atlantis may consider decreasing the value of their currency to become the good seller for Utopia for a shorter period. This might be considered as good planning if Atlantis have the good natural resources such as oil and bauxite for sale purpose, and if such things remain normal in Utopia then there will be chance for the comeback of imports from Atlantis. Once again people will enjoy their normal standard of living. Economists call this thing the state of affairs or the equilibrium point. The disadvantage which occur after this is the money appreciation may decrease the amount of currency from exports and the countries might reduce the imports and those countries who is revaluing will decrease the value of their product only gets advantage when the product is available in their country in unlimited form. The benefit to buying country is that they can begin again the quantities of their exports and thus increase their standard of living. Variation in the value of currencies boost the short period trading in the currencies and may further can difficult the things in the trading countries which have the political associations.<sup>1</sup>

## II. HISTORY OF CRYPTOCURRENCY

Cryptocurrency can be traced as a written construction back in the days of its first digital substitute currencies. In the beginning cryptocurrency advocate common ambition of applying maths and computer science assumption to clarify what they attain as realistic and political weak points of the traditional “fiat” currencies.

### Occupational Foundation

Cryptocurrency occupational foundations can be evidence in the ancient days in 1980s by a famous cryptographer who is American named as David Chaum who invented the blinding algorithm innovation that act as a central to modern web-based encryption. The algorithm grant for safe, no changing facts which barter between parties, creating the groundwork for forthcoming electronic money transaction. This can be defined as blinded money. In the end of 1980s, Chaum recruited ewother cryptocurrencies addicted in an effort to develop as a business the concept of blinded money. After moving to the Netherland, he established DigiCash, a profit

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<sup>1</sup> Sunil Kumar Sharma & Krishma & Nihda Nisar & Er. C.K. Raina, Survey Paper on Cryptocurrency, 2IJSRCSEIT 307 (2017).

gain organization that originated whole of currency located in the blinding algorithm. As in case of Bitcoin and other present cryptocurrencies, the control of DigiCash wasn't decentralized. The company of Chaum's had a monarchy on the authority which is same as to the central bank monarchy on the fiat currencies. In the initial stages of DigiCash, it directly deals with the individuals, but the central bank of Netherlands destroys this idea. Facing the problem of final offer, DigiCash have the agreement to trade and sell only with the banks which are licensed, which seriously cut shortits market promising deals with others. Microsoft after come to the DigiCash about a possibly well-paid alliance that can give permission early to the Windows users to buy in its currency but the two alliance had not agreed to the terms and conditions and the DigiCash wind up in the late 1990s. At the same time a well-established software engineer named Wei Dai circulated a white paper on b-money a currency which is virtual in nature and which include the components of basic modern cryptocurrencies, such as safeguards and decentralization. But, b-money was never expand as a means of exchange. In the meantime, Nick Szabo established Bit Gold which uses the system of blockchain, but it never gained popularity as much DigiCash and no longer can be used as a means of exchange.

### **Pre-Bitcoin Virtual Currencies**

After the wrapping up of DigiCash and its impact in the society many people gain their interest in doing research and investment in transaction of the financial which is electronic to more convenient methods such as PayPal the technology which become popular over the past ten years. After seeing the gaining popularity of DigiCash, other parts of the country started to imitate such as Russia WebMoney continue in other parts of the world. In the United States of America in the late 1990s uses the most important and famous virtual currencies at that time which is known as e-gold. e-gold is that virtual currency which is invented by Florida company of the same name. Its basic function is to act as digital gold buyer. For example, in this customer or users who wants the digital gold to send their old jewellery and coins to the warehouse of e-gold and in return receive the digital currency of e-gold who acts as demoniated of ounces of gold. e gold then uses it as trading option for their holdings with other user being used as a cash for physical gold or exchange their gold for US dollars. e-gold had gained so much popularity that in the mid 2000 there are million of active accounts and the process of billion dollars in transfer of funds are there annually. But it lacks the safety issues and the hackers, and the phishing scammers can easily target the e gold which left the users with no option but to leave it as it causes the financial loss to them. And much of the transfers of e gold was not legal and it lacks the legal policies which attracts the laundering of the money in many sectors and in small scale schemes. It finally windup in the year 2009.

### **Bitcoin and the boom of the modern Cryptocurrency**

Bitcoin as we all know and heard of is the first modern and present cryptocurrency. It is used publicly as an exchange mean to control the decentralized area, the invisibility of users, keep track of the record via using blockchain and to build the scarcity. A person or group in 2008 established white paper which is not known till date and after that person in 2009 released Bitcoin publicly and group of people and supporter started using it as a mining and exchange of money in the world After that in the end of 2010 another digital currency gained popularity as an alternative of the Bitcoin which is Litecoin. The first major exchange of Bitcoin was back in 2012 where WordPress became the first merchant to accept the payment of Bitcoin Others include Newgg.com, Expedia and Microsoft who follows it and number of merchants started using it. From these other cryptocurrencies are also accept as an exchange by the holders as it contains the flexibility and liquidity.<sup>2</sup>

### III. TYPES OF CRYPTOCURRENCIES

- **Bitcoin**– Bitcoin is the cryptocurrency which is worldwide payment system. It is the currency which is decentralized digital currency as the central bank system not worked in this and there is no administrator which is single in it. There is peer to peer networking and all the transfer of digital currency took place without any help of intermediary. The transfers which occurred are properly verified by the network codes which use special kind of cryptography and blockchain record has been made for the ledger of the public distribution. An unknown person or group of people released the Bitcoin and it created the software which is open source in the year 2009. Bitcoin cryptocurrency is used as a process of rewarding which is known as mining. This thing can be used for as a mean of exchange for other currencies, products and services. Over one lakh merchants and vendors accepted bitcoin as payment method from February 2015.
- **Ethereum**- Ethereum can also be defined as Ether because of its generation on the platform of Ethereum. It is like platform which is public with source opening and has blockchain computing. Smart scripting facility is also available in it. It works based on the version which is modified in cryptocurrency and has transaction-based payment system. It was first set up in the year 2013 by Vitalik Buterin who was a computer programmer and was also the researcher in cryptocurrency. Ethereum software development was funded by a crowd sale between July and August 2014 also developed a system that goes live on 30 July 2015. Earlier in the first step 11.9 million coins was premined for the crowd sale and its circulation increases with almost 13% of its total circulation of currency. The price of Ethereum grew in the past years of 2014 to 2017.
- **Litecoin** – Litecoin is that cryptocurrency which is giving tough competition to the leading development of Bitcoin currently and the main agenda to design Litecoin was to do the transaction for the smaller value in a fast way. Litecoin was found in the year 2011 and the founder of Litecoin was Charles Lee. The main

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<sup>2</sup>Brian Martucci, What is Cryptocurrency-How it Works History and Bitcoin Alternatives, (Nov. 29, 2018, 5:25p.m.) <https://www.moneycrashers.com/>

difference between Litecoin and Bitcoin is that for the Bitcoin mining process is very heavy and the fast computing is required on the other hand Litecoin normal desktop computer with slow processing is enough. As comparison to Bitcoin, today Litecoin is four times bigger that is 84 million.

- **Ripple** – Ripple was established in the year 2012 by a company named OpenCoin with its founder Chris Larsen. It is a cryptocurrency which worked same as payment method like Bitcoin. The mechanism payment method of Ripple is very fast which enables the funds transfer in any currency to another user on the ripple network within seconds.
- **MintChip**– Mintchip is creation of government institution like Royal Canadian Mint unlike most other cryptocurrencies. MintChip is a smartcard which holds the electronic value and transfer it securely from one chip to another. Like Bitcoin, Mintchip does not need personal identification but unlike Bitcoin is backed by the physical currency like Canadian dollar.<sup>3</sup>

#### IV. THREATS REGARDING CRYPTOCURRENCY

Cryptocurrency when it was being used for the first time, no one knows about it and only handful of persons knows what cryptocurrencies is. It was mostly used to do illegal deals by drug dealers, smugglers and black marketers for the transaction of their funds as it is the safest, untraceable and fastest method to do all over the world. After the introduction of new cryptocurrencies in the market, few companies started taking interest in the digital mode of cryptocurrencies and invented their own cryptocurrencies like Litecoin etc. India assets in digital world has grown tremendously in the last few years but it also going through a phase of uncertainty. Uncertainties also created various types of complications in the industry of digital assets in country mainly for the digital exchanges. Various exchanges of digital had a mission to involve India into blockchain technology but as per the new RBI guidelines, banks have been told to not to continue with any services which involves virtual currencies which leaves all the virtual currencies into the question of legal challenge. It is also a warning sign for all the investors who will deal with these types of virtual cryptocurrencies.<sup>4</sup>

There are many risks involve in investing cryptocurrencies: -

- Entrance is wide, but exit is narrow-As clear from the heading it is easy to invest in Bitcoin because all the things have been done digitally so it creates a less barrier for the cryptocurrency and a very high risk to exist from the digital world of Bitcoin.

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<sup>3</sup>Jaysing Bhosale & Sushil Mavale, Volatility of select Crypto-currencies: A comparison of Bitcoin, Ethereum and Litecoin, 6 ARJSCMS, 133, 135 (2018).

<sup>4</sup>Ashish Kheskani & Harsha Bucha & Yogita Aggrawal & Dr. Varsha Aggrawal, A Study on Cryptocurrencies and Its Issues, 5 IJRAR, 48a, 49a (2018).

- Intangible and Unsecured-The intangible and unsecured form of nature of cryptocurrencies. The blockchain technology-based cryptocurrencies has eliminate the bank and banker which can act as an intermediary in between and which can also solve the issue of unsecured cryptocurrency, but this feature captured the thing of security which can be assured by banks.
- Manipulation by extortion-even though the amount is nominal there is no way that the investors will not be prepared in anyway to lose their ownership as a crypto holder and they easily become victim of social engineering as well as misinformation risks. So, market manipulation and extortion risk are more common in the investment of cryptocurrency.
- Protection, Care and Control-Although cryptocurrencies are intangible in form and act as an asset which is digital in nature. It became one of the biggest issues for the care, control and custody of the cryptocurrency as wealthiest investors will invest in security vault to take care of their cryptocurrency but those who can't afford it will easily become target of the frauds and the hackers for the custody of their cryptocurrency.
- Cyber risks always-It is obvious that cyber threats will always be there to keep the cryptocurrency. Risks are always involved for the ransomware attack and various types of viruses which can attack to the cryptocurrency and create many problems to the investors of the cryptocurrency.<sup>5</sup>

In today's world, cryptocurrency is becoming the target for the cybercriminals as they can easily demand from the crypto holders the ransomware in the form of cryptocurrency. It is also becoming famous because in this no one will block the address of you, no one will catch you and moreover there is very less chance of being tracked by the officials. Web mining is another technique used in browser with a special script which is installed in the web browser and the attackers are well known about the fact that it is very easy to upload such type of web page in the browser and can easily mining the things out of the cryptocurrency holders. So, the nature of the cryptocurrency is becoming more and more dangerous as cyber threats are increasing day by day for example by changing the address of the electronic wallet and stealing the electronic wallet are the things which can be done by the hackers. So, in other way we can say that cryptocurrency have opened the new and unprecedented ways to monetize the activities which are done maliciously.<sup>6</sup>

### **Fiat Currency versus Cryptocurrency**

Fiat currency has both governmental and financial powers. The importance of fiat currency is a result of the connection between number of supply and the maximum number of demand and not depend upon the actual

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<sup>5</sup>Dante Disparte, Beware of Crypto Risks-10 Risks to watch, (Dec. 12,2018,5:32p.m.)<https://www.forbes.com/>

<sup>6</sup>Kaspersky Lab, Threat Predictions forCryptocurrencies in 2018, (Dec.12,2018,5:58p.m.) <https://www.securelist.com/>

tangible material which are used to make the money. It has an importance of the selective things because of the bureaucratic uses their power for the enforcement of the value of their fiat currency. Many all over the the industry of finance organisation had thought bank governs had abolish the warning in the recessions, but the crisis in mortgage in the year of 2007 and financial meltdown have quickly abate the belief. A money which is given in gold is more constant than the money in the form of fiat currency due to the limitation on the supply of gold. This is used to be the fact that the gold that will be used better than fiat currency then people will be wish to adopt the form of currency that their intention need will be satisfied. Therefore, when the crisis of mortgage in 2007 have appeared and brought the meltdown of financial organizations, cryptocurrency was escorted in to take the responsibility of the emptiness. The addition of cryptocurrency has removed the third-party legal tender in removing the powers of these. With the help of Internet, cryptocurrencies are going like a viral all over the world. The capacity of global currency is a whole of accounts which designate the worldwide transactions of economic currencies, a midway to deal with the economic transfer and as a collection of value for the investment of the stock and capital of the currency. Cryptocurrencies are performing these functions currently. It acts as a medium exchange as well as the whole of the accounts. One report suggested that how the people of Cyprus are using their paper currency to the cryptocurrency upon their official's allotment into accounts of the individual; the downfall of the economy of Greece also observed their public store of their cash reserve in cryptocurrency. China has also using the fiat currency in the past, but they have closed it recently by the government of China. According to the survey of 2015 online malls and the physical merchants have started to gain cryptocurrency as the transaction for their financial funding. The main difference between the fiat currency and cryptocurrency is fiat currency have the global tender whereas cryptocurrency does not has the global tender. Cryptocurrency have the function to act as global supreme and to introduce the imperfection of issuing the gold and fiat currencies. In this manner the governments, organizations, corporation and billions of business make use of it to establish their presence as online.<sup>7</sup>

### **Banks versus Cryptocurrency**

As we all know banks have both primary and secondary functions. Cryptocurrency has been acclaimed to carry out the same primary functions as of bank. The objective of this is to aid as a mediator between the fund gathering and allocation of it. Cryptocurrency is also giving the same intermediary role and the most important thing is the boycott of the supervision of each transaction. Now a day's internet has become worldwide popular, depositors will deal with cryptocurrency in a more convenient method and it also provide to the users the intermediate actions. It will make the banks to focus on their functions which are secondary in nature for their survival. Cryptocurrency collision on all the banks of centre and the government is the removal of issuance of

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<sup>7</sup> Williams Kwasi Pephrah & Amos Oppong Afriyie & Joseph A Abandoh Sam & Emmanuel Oppong Afriyie, Dollarization 2.0 a Cryptocurrency: Impact on Traditional Banks and Fiat Currency, 8 IJAR BSS, 345, (2018).

fiat currency by them. A large drive by the banks of centre to dissolve the money which has been going long enough before the arrival of cryptocurrencies. Technology is giving the central bank attempts to issue the money which is digital in nature. According to some sources, 79% of cryptocurrency amount of the firms have introduced to introduce some relationship with banking institutions, but it is difficult in attaining and maintaining this relationship is challenging due to competition.<sup>8</sup>

## V. FUTURE OF CRYPTOCURRENCY IN THE PRESENT WORLD

The market of the cryptocurrency is wider than any other currency in the world. Even though the development of blockchain technology is a new concept for all but still all the new coins are competing with each other in order to stay in the market of the cryptocurrency. In future we can say that there will be only three or four coins to be in working mode for the entire payment, trading and other banking infrastructures. It will be expected to say that every person in future will use the application of blockchain in the modern era.<sup>9</sup> Central Banks and other banks are of the view that cryptocurrencies are a long run thing and are here to stay for quiet long time. Bitcoins are rapidly in the process of converting and act as a real money that will give a competition to the centralised bodies of government. Bitcoins have a very bright future in the coming era. This currency is of this type that is decentralised, and anyone can use it which is eliminating the rates of exchange in the market of the world makes the future by becoming centralised across the country and the days are not far away when there will be one world and one currency.<sup>10</sup>

## VI. CONCLUSION

With the revolutionary changes in the cryptocurrency the future of the virtuality cannot be determined in near future. Moreover, virtual currency is illegal in almost all over the world. Some organisations are still using this currency, but majority of companies completely ban them in transaction. If the cryptocurrency in the modern era have become famous, then it is impossible for the countries to completely ignore it. Moreover, cryptocurrencies have the power to become one global currency. There is legality to the use of Bitcoin is a debate, but the acceptance of cryptocurrencies can be happened in the next few years in the digital world.<sup>11</sup> Eventually we can say that needs of the customers for the cryptocurrency application it is essential to note that that what are the main success factors for learning the application on cryptocurrency. One obvious thing we see for the use of cryptocurrency is that the people who are the investors in cryptocurrency are having the income which is higher from others and they are also possessing the other methods of investment. By

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<sup>8</sup> Id., at p.346.

<sup>9</sup> Krishna Kumar Thakur & Dr. G.G. Banik, Cryptocurrency: Its Risks and Gains and The Way Ahead, 9 IOSRJE, 42, (2018).

<sup>10</sup> Ashish Mohod & Anmol Mannarwar & Kaustubh Badukale, What is the future of Cryptocurrency in India? 4 IJRSE, (2018).

<sup>11</sup> Paras Vishwakarma & Mr. Zohaib Khan & Dr. Taruna Jain, Cryptocurrency, Security Issues and Upcoming Challenges to Legal Framework in India, 5 IRJET, 215 (2018).

keeping in mind, the importance of cryptocurrency those persons who are investing their profiles can be decided and which results in the m-learning application of cryptocurrency which is the main planning of the customer caring. One more thing is to be added also that by using the deductive logic the application which we use in mobiles the success factors can be used for the application of cryptocurrency also and highest factor rate can be given special attention for the safeguard, accomplishment, easy use and invention in order to design the application of mobile. However, the most important feature in using the m-learning on cryptocurrency is that it will become the one stop app for the persons who are interested in cryptocurrencies. The only problem comes after researching on this topic is that the concept of blockchain technology and the cryptocurrency is totally new to the people and it is known mainly to the IT field department. The market of cryptocurrencies are growing day by day and all the spotlight are on the concept of new ecosystem of cryptocurrencies.<sup>12</sup> As we all now cybercriminals are always fast in work, they are smart and can adopt in unbelievable situations as they always want to know new tricks and techniques, opportunities to make the things easy, changeable and according to their environment. Ransomware we can say in this is such an example of virus or malware that prevents the users and limit their jurisdiction regarding the use of their resources of system. It forcefully makes the victims to pay the ransom through various modes of online method of payment to access their system or to get their data back which belongs to victim only. Cybercriminal main agenda is to refine their techniques and tools so that their ransomware will progress. So, it became important for the existing users to protect themselves in a best possible way against the threat of ransomware. The most famous ransomware case is of the mobile attacks as it is increasing day by day due to the shifting of the business in the hands of the person and so it become important to identify how, when, where and why the operation of threat came.<sup>13</sup> In the last few years, the word cryptocurrency has increased in a faster way which is visible to the eyes of the general public. On today's world, cryptocurrency is becoming important to the public who knows the value of privacy and the idea for whom there is use of cryptography to authoritative power does not sound like the farfetched. The creation and sharing of currency. Now a day's cryptocurrency is leading by the Bitcoin, Litecoin, Ether etc. are creating the world of finance by storm as more and more people investing and they are buying these currencies. But still there are confusion worldwide regarding the business which is also creating impact on the overall effectiveness policy of cryptocurrency. The education about cryptocurrency to the user must be given which is very essential as its nature is in volatile form. In this article we provide a wide outlook towards the cryptocurrency and it is affecting the world as we all know today. The usage of cryptocurrency is all time high and there are many misconceptions about its usage. Some people still ask some questions about it as why use Bitcoin? As different algorithms are used for the currencies and many unconventional ways are used for the trade of the

<sup>12</sup> Octavian Dospinescu & Miruna Elena Caramangiu, The Key success factor for an M-Learning Cryptocurrency Application, (Dec. 17, 2018, 12:53p.m.), <http://www.researchgate.net/publication/>

<sup>13</sup> Dr. P.B. Pathak, A Dangerous Trend of Cybercrime: Ransomware Growing Challenge, 5IJARCET, 373, (2016).

cryptocurrency so many people have to look different characteristics before investment in the Bitcoin. This includes the trading of the daily volume and the capitalization of the market which can be seen overall. Cryptocurrency in the capitalization of the market is in its worth form as its value is higher than the normal currency which are currently circulating in the market. Although the form of this new cryptocurrency is not acceptable by many people and availability of the cryptocurrency is little bit difficult therefore the high market capitalization is not there. Moreover, the trading of the cryptocurrency depends upon the volume which can be considered successful if it is higher. The channels of verification of each cryptocurrency have its own method. The common method which is used for verification in cryptocurrency is known as Proof of Work. To verify the transaction computer, must take time and spend it and power of the computing to solve the problem of mathematics which is difficult. Proof of Stake method on the hand allows the user with the cryptocurrency with the largest share to verify the transactions and it also requires the less power of computing. The cryptocurrency acceptance is of issue now a days unless it is not accepted by the retailers its does not stand much use. Bitcoins is still the most popular form of currency which is digital in nature because of its widespread and is accepted by many businesses and by the retailers.<sup>14</sup>

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<sup>14</sup><https://www.outsource2india.com/software/articles/impact-cryptocurrency-bitcoin.asp> (Dec 27,2018,1:04p.m.)