



International journal of basic and applied research

www.pragatipublication.com

ISSN 2249-3352 (P) 2278-0505 (E)

Cosmos Impact Factor-5.86

An Era of Crypto currency: Challenges and Opportunities

Ansu Royit

M. Phil Scholar

Department of Commerce

University of Kerala

Abstract

Cryptocurrency, especially bitcoin is a digital asset used by the cryptocurrency users as a medium for exchanging money in a secure manner instead of transacting physical currencies. It is also referred to as virtual currency or alternative currency. This study mainly focuses on understanding the evolution, process, challenges and opportunities of cryptocurrencies in spite of considering it as non legal tender in Indian context and was specified in the Budget 2018. It was also noted that illegal use of bitcoins will be checked by the Government, as there does not exist any central governing authority in the case of cryptocurrencies. Mainly this study resorts to secondary data obtained from Budget 2018, journals, previous literatures and websites. In spite of the lack of proper centralized control, lack of proper recognition of cryptocurrency transactions from the part of legal authorities, its usage is becoming more popular as a result of low transaction cost, advanced technologies and digitalisation in all the fields in the economy.

Keywords: Cryptocurrency, bitcoin, blockchain technology, opportunities and challenges.

Introduction

Cryptocurrency is a digital currency that can be used alternatively instead of dealing with physical cash or currency. It is referred to as virtual currency because of the reason that it doesn't have physical existence and be transferred from one person to another easily using public - private keys and digital signature used for encryption. Cryptocurrency enables peer to peer transfer of value without having an intermediary in between them. The uniqueness of cryptocurrency is that it enables a decentralized system of financial transactions and the technology used in cryptocurrencies for maintaining public ledger is blockchain technology and the information maintained in the public ledger can be seen by anyone but no one is allowed to reverse or rectify it. The advent new and innovative technologies lead to the development of such an alternative for physical currency. Previously cryptocurrency was only an academic topic and later on it has got a practical implication in the form of bitcoin, litecoin, Zcash etc. This study mainly focuses on evaluating the opportunities and challenges of cryptocurrency especially bitcoin as it is the most frequently traded cryptocurrency in India and also the use of cryptocurrency is on the rise as a result of digitization in all the fields in the economy even though it is not a legal tender and there is no central authority to authorize the transaction.

302 - Received: 8 February Revised: 17 February Accepted: 24 February
Index in Cosmos
March 2019 Volume 9 Number 3
- UGC Approved Journal



International journal of basic and applied research

www.pragatipublication.com

ISSN 2249-3352 (P) 2278-0505 (E)

Cosmos Impact Factor-5.86

Literature Review

Usage of cryptocurrency and studies regarding cryptocurrency are gaining more popularity as a result of increased number of investors in the cryptocurrency platform even though it is not a centralised system of financial transactions. (Eskandari, Barrera, Stobert, & Clark, 2015) made a study mainly for identifying the advantages of bitcoins and for providing design recommendations for prospective bitcoin users. They conducted a survey based study in order to evaluate the effectiveness of bitcoin key management techniques using 10 criterion such as malware resistant, key kept offline, no trusted third party, resistant to physical theft, resistant to physical observation, resilient to password loss, resilient to key churn, immediate access to funds, no new user software and cross device portability. The study reveals that it is better for bitcoin traders to offload key management to trusted third party. (Mohod, Mannarwar, & Badukale, 2018) evaluated the future of cryptocurrency in India. They stated that bitcoins current price hike could reflect its bright future and most of the banks today are trying to apply the blockchain technology used in bitcoins for maintaining records of their transactions and are trying to generate a cryptocurrency of its own named 'Lakshmi'. (Bunjaku, Gjorgieva-trajkovska, & Miteva-, 1857) described about the advantages and disadvantages of cryptocurrency in the present scenario of informal trading platform. The conference obtained from this study is that the future of cryptocurrency cannot be predicted. But they made a suggestion that it can be used as an alternative for physical monetary transactions. (Jani, Universiy, & Systems, 2018) evaluated the response of 21 countries towards the usage of cryptocurrency using questionnaire method. The detailed analytical study indicates the future prospects of cryptocurrency as a currency platform. (Chen, 2018) concentrated on the blockchain technology used for maintaining the public ledger in the case of bitcoin trading and specified about the application of blockchain technology in various fields such as e - business, financial services, public service, social service etc.

Evolution of Cryptocurrency

Cryptography is an academic topic during initial periods and it gained more importance or practical application after the invention of anonymous cryptographic electronic money called ecash in 1983 by David Chaum. In 1995, it was implemented through Digicash and this made it possible to withdraw money from bank without intimating the bank. Such transactions are not traceable by the bank or any governing authority.

The most commonly used and first decentralised cryptocurrency is bitcoin. It was invented by Satoshi Nakamoto in 2008 and it uses blockchain technology for maintaining the public ledger.

303

Received: 8 February Revised: 17 February Accepted: 24 February

[Index in Cosmos](#)

March 2019 Volume 9 Number 3

UGC Approved Journal



International journal of basic and applied research

www.pragatipublication.com

ISSN 2249-3352 (P) 2278-0505 (E)

Cosmos Impact Factor-5.86

Blockchain technology maintains complete list of cryptocurrency transactions just like a ledger in accounting. Later on litecoin and other variances of cryptocurrencies were introduced in India and all parts of the world. Bitcoin is the most commonly used cryptocurrency. Other cryptocurrency types include ethereum, litecoin, ripple, NEM (XEM), Monero, EOS, Bitshares, Startis, Zcash etc of which bitcoin is the most popular one. Recently, some multinational companies like Microsoft, Amazon etc accept payments made through bitcoins. Important bitcoin exchanges through which traders could exchange cryptocurrencies are Unocoin, coinmama, LocalBitcoins, VirWox, bitcoin - OTC, flitpay, zebpay etc. The market value and market capitalisation of bitcoin as of now is around \$3880 and \$64 billion respectively. The demand for bitcoins in India is largely from speculators and around 2500 investors' daily deal in bitcoin.

Bitcoin Transaction Process

By using a public and private key bitcoin address is created and this bitcoin address will enable the investors to send and receive bitcoins. This bitcoin address is obtained through a process of cryptographic hash which makes it possible to convert data of arbitrary size to data of a fixed size. The address returned by the hash function may be in the form of hash codes or hash values. The hash code is in the form of algorithm SHA 256 and its size will be always 256 bits.

The buyer of the bitcoin will send his public key to the seller of the bitcoin. The public key can be opened by the seller using the signature script. The seller will include the amount of bitcoin transaction and close it with the public key script so that only the buyer will be allowed to open the lock.

The transaction will be send to the bitcoin network so that it could be accessed by others in the network.

Miners will ensure the validity of transactions using a number of arithmetic calculations and finally the transaction will be added to the block.

Bitcoin - Legality and Taxability

In Indian context virtual currencies more specifically bitcoin is not regarded as legal tender. During the budget speech made on 2018 Finance Minister Arun Jaitely clearly stated that virtual currencies do not have a legal status and they are just like an investment bubble. There is a chance of loss of money by investing the hard earned money in cryptocurrency as they have no legal status yet. But, the hike in the price of bitcoins during the beginning of this year attracted a large number of

304 | Received: 8 February Revised: 17 February Accepted: 24 February

Index in Cosmos

March 2019 Volume 9 Number 3

UGC Approved Journal



International journal of basic and applied research

www.pragatipublication.com

ISSN 2249-3352 (P) 2278-0505 (E)

Cosmos Impact Factor-5.86

investors in to it. The Government authorities or even RBI does not promote investment in virtual currencies and they consider it as a high risk asset. The warning given through budget is for discouraging people from investing in such risky schemes.

Till now, Government or RBI does not specify that cryptocurrency transactions are legal or not. The taxability of capital gains arising from such transaction is under question during the initial periods. Later, the income tax department specified that the capital gain from cryptocurrency will be considered as a long term capital gain if it is held for a period of 3 years or more and will be taxed at 20% rate. Otherwise, it will be treated as a short term capital gain and will be taxed at slab rate applicable to the individual.

Challenges and Opportunities – Cryptocurrency

In India, still the cryptocurrency has not attained the status of a legal tender even after a long period of its invention. Not only India, but some other countries are also not considering cryptocurrency as a legal tender. The legal authorities are trying to prevent people from making investment in such avenues which are risky in nature. The major reason for risk in the case of bitcoin or such other cryptocurrencies is that it is a decentralised system of monetary transaction as it is not controlled or regulated by an authority and at the same time no legal provisions are stipulated. There is no one to look after the fraudulent practices. The transaction which is performed once cannot be reversed and no protection is ensured against theft or loss. Once it is stolen it cannot be recovered. Because, the Government itself warns the public that there is a chance of loss of money and for the purpose depriving people from making investment in such avenues income tax authority recently starts to charge tax on capital gains arising from bitcoin transaction. The price of bitcoins is showing a greater amount of hike and it is highly volatile in nature. There is chance for steep fall in its price as it is volatile in nature. Whatever be the security system in the case if cryptocurrency the hackers or malicious users can break the security system leading to loss of privacy information and the recent reports supports the same. Just because of the hacking of South Korean cryptocurrency exchange during this year all the digital currencies including the largest bitcoin experienced a steep fall in its price. Several news reports are coming out now a day as evidence regarding the lack of security of cryptocurrency. Black market for cryptocurrency may be developed for earning huge gains. Money laundering activities and the lack of proper guiding system determining the identity of investors are the drawbacks of virtual currency.

In spite of this drawbacks and challenges, the reach of cryptocurrencies are increasing day by day and the number of investors are also increasing numerously. There is a lot of opportunities in the case



International journal of basic and applied research

www.pragatipublication.com

ISSN 2249-3352 (P) 2278-0505 (E)

Cosmos Impact Factor-5.86

of cryptocurrencies i.e., as it is a decentralised system the excessive control if banks and other Government authorities could be gradually reduced in the near future by adopting virtual currencies as major system for monetary transactions. Highly secured blockchain technology is used in the case of bitcoin and that technology can be applied into various sectors like banks, public administration, financial services etc. so that security of information can be ensured and at the same time transparency of transactions can be maintained. Transparency and security of information are given more importance by the users. In the case of bitcoin system the transactions are verified and validated within a timestamp period so that the delay in the case of banking transactions can be avoided by adopting cryptocurrency payments instead of the centralised banking transactions. The huge service charges or transaction cost could be effectively reduced through adopting blockchain technology. Through the application of this technology fund transfers will become possible at least cost and within a finite amount of time.

Conclusion

In the era of digitalisation, cryptocurrencies have a lot of opportunities due to low transaction cost and high security. The schemes like 'digital India' paves way for the growth of cryptocurrencies by reduced use of physical cash and cash related transactions. Even though, there is a high end encrypted security system in the case of virtual currencies there are a lot of challenges with regard to loss of information, hacking and malicious software's.

References

Articles:

1. Bunjaku, F., Gjorgieva-trajkovska, O., & Miteva-, E. (1857). Cryptocurrencies – Advantages and Disadvantages, 31–39.
2. Chen, X. (2018). Blockchain challenges and opportunities : a survey Zibin Zheng and Shaoan Xie Hong-Ning Dai Huaimin Wang. *International Journal of Web and Grid Services*, 14(4), 352–375.
3. Eskandari, S., Barrera, D., Stobert, E., & Clark, J. (2015). A First Look at the Usability of Bitcoin Key Management, (February).
4. Jani, S., Universiy, P., & Systems, M. P. (2018). The Growth of Cryptocurrency in India : Its Challenges & Potential Impacts on Legislation. *Researchgate*, (April).
5. Mohod, A., Mannarwar, A., & Badukale, K. (2018). What is the future of cryptocurrency in India in 2018? - Quora. *International Journal of Research In Science & Engineering*, 4(1 Jan-Feb 2018). Retrieved from www.quora.com/What-is-the-future-of-cryptocurrency-in-India-in-2018
6. Tapscott, D. (2018, May). Bitcoin revolution.

306 | Received: 8 February Revised: 17 February Accepted: 24 February

Index in Cosmos

March 2019 Volume 9 Number 3

UGC Approved Journal



International journal of basic and applied research

www.pragatipublication.com

ISSN 2249-3352 (P) 2278-0505 (E)

Cosmos Impact Factor-**5.86**

Website:

1. www.guardian.com
2. www.coinsutra.com
3. www.en.m.wikipedia.org
4. www.blockchains-expert.com
5. www.qz.com
6. www.coinmarketcap.com