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"Bitcoins: An Economic Bubble[1]"

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Bitcoin is a technological tour de force.
- BILL GATES [2]

The term 'Bitcoin' incites a lot of curiosity from people all over the world. Though most people know the word, and know that it has an equivalent of lacs of Rupees, very few actually know what the term stands for and how the Bitcoin system works. Bitcoin as we think is not a Coin with a specified value for it. It's working is much more complicated to how normal currency works.

Bitcoin was introduced by an anonymous Cryptocurrency activist Satoshi Nakamoto in 2008, in a research paper named 'Bitcoin: A Peer-to-Peer Electronic Cash System" and its aim was to present the world with a non-cash system which was free from intermediaries, which was as the name suggests, peer-to-peer. And it has successfully created just that. It is justified to say that this system of transacting is a revolution brought to the world economy

This paper is an attempt to clarify on what bitcoins are, how they work, are they legal in our country and across the world.

Keywords: Cryptocurrency, bitcoins, digital economy, Peer-to-Peer

INTRODUCTION:

This is the age of cashless transactions. Digital transactions have been rapidly growing in the recent past. The trend towards use of other than cash method of transactions began in 1990s when electronic method of banking gained popularity. In today's world digital payment methods have become widespread in most countries.

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[2] https://medium.com/@MartinRosulek/14-bitcoin-quotes-by-famous-people-6e7a1a009281

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The World payment reports, 2018 from Capgemini and BNP Paribas states that India experienced a non-cash boom of 33.2% during 2015-16. And majority of the populace have shifted to the e-wallets such as Paytm, Amazon wallet, etc. Factors that act as alternatives for cash usage such as Cards issuance, POS terminals, Access to bank accounts, all show strong growths in India as well as other developing countries. This indicates a shift towards a digital economy. However such non cash methods only cover digital currencies that are centralized.

There is another unobserved branch of digital currency, called as Cryptocurrency. The term Cryptocurrency might be unheard of for many people, but the term 'Bitcoin' has gained popularity and almost everyone has either heard of it or read about it. The majority of us just know the term Bitcoin, without really understanding what it is. And again most of us have an unknown curiosity about Bitcoins and its working.

There is also this popular belief that bitcoin is illegal and can be used only for illegal purposes. This paper aims at providing a basic understanding about how Bitcoins and Cryptocurrencies in general work, and also covers the legal status that Bitcoins hold in India.

THE DIGITAL ECONOMY:

To understand the working of Bitcoin, one must have a basic understanding of how digital economy works. Digital currency, as the name suggests, is cash available in electronic form. It has similar properties and value as any physical currency (cash or coins) does. A major drawback of physical currency is that it can only be transferred physically or in-person and this might prove to be impractical for certain cases, such as geographical barriers, and time constraints . The major advantage of digital currency over physical currency is that it allows for a borderless and instantaneous transfer of ownership. Digital money can either be centralized or decentralized.

In the centralized system, there is an intermediary between the two transacting party, which ensures the authenticity of the transaction. The Centralized system is commonly seen in today's economy in form of Card payments, and online payments where the banks act as the intermediaries regulating such transactions.[3]

[3] Amit Joshi, *Digital economy: The great Indian leapfrog*, (Nov.22, 2017), http://www.forbesindia.com/article/imd-business-school/digital-economy-the-great-indian-leapfrog/48705/1

Whereas in a decentralized currency system, the function of such intermediaries, say banks, are completely eliminated by use of cryptography and mathematics, which is precisely why the decentralized currency is commonly called as Cryptocurrency.

To put it simply, cryptocurrency is essentially a type of digital currency, which has not come into common usage in India.

CRYPTOCURRENCY:

In the existing monetary economy, the central banks or federal banks determine how much money should be in circulation and accordingly mint fiat money. The economic value of such money is therefore determined by the actions of such central banking systems, coupled with other factors. Cryptocurrency, being only a type of digital currency, has to be acquired in exchange for digital or physical cash. However after such conversion, Cryptocurrency leads to the formation of a parallel economy. In such an economy, Currency cannot be created by the central or federal banks and only a limited amount of cryptocurrency can be in circulation. The price of a cryptocurrency is determined by the economy, which keeps fluctuating based on demand and supply. [4]

WORKING OF BITCOINS:

The most prominent feature about Bitcoin is that it is Peer-to-Peer, which means it does not involve an intermediary administrating the system. Let us understand how transacting a bitcoin is different from a regular digital transaction.

In a digital transaction, for instance an online payment using a Debit/Credit card, first the user has to provide the card details which is verified by the online banking portal. After the user gets verified, the transaction details are entered which the bank compares with the amount available in the users account before clearing the transaction. Essentially the transaction between two parties is directed only through the intermediary.

In a bitcoin network, cryptography and a Blockchain act as the substitute for the function performed by the intermediary. From the user's perspective transacting a bitcoin is very simple. The user sends the specified units of bitcoin from the mobile app or a computer program from their bitcoin wallet, using the user's private key and a digital signature.

[4] Nathan Reiff, *What are centralised cryptocurrency exchanges*, (Mar.16,2018), https://www.investopedia.com/tech/what-are-centralized-cryptocurrency-exchanges/

However behind the scene, the transaction gets recorded in a world wide ledger called as Blockchain by the user's node. This means the Blockchain contains all the transaction that has ever happened in the bitcoin economy and is open for anyone to inspect.[5]

For instance, If A wants to buy a Lamborghini from B using bitcoins, B's node scans the bitcoin network to verify if A actually has the Bitcoins proposed to be transacted and whether A has not already sent the Bitcoins to someone else, and after ensuring this, the transaction is processed.

BITCOIN AND DIGITAL CASH: DIFFERENCES:

After understanding both the types of digital currency, the most obvious question is why do we need a decentralized currency system, and what purpose does it serve. The major differences in Digital cash and a bitcoin are listed below:

1. **TRANSACTION MANIPULATION:**

As already discussed in this paper, the key difference between centralized and decentralized system is the presence of an intermediary to regulate transactions taking place. For example, Digital currencies have a central authority to deal with issues arising. It is possible to cancel the transactions or freezing of funds by the intermediaries upon the request of the user or by authorities on suspicion of fraud or money-laundering. Whereas Cryptocurrencies are regulated by the community and it is unlikely that the changes made in the blockchain will get approved by users.

2. **ANONYMITY:**

User identification is required in Digital currencies. Some documents issued by the public authorities and a photo needs to be uploaded. Cryptocurrencies do not require any of that. This means that the transaction cannot be tied up to a specific person, which is the reason that it is being used for many illegal transactions. Yet cryptocurrencies are not fully anonymous. Though the cryptocurrency addresses do not contain any information on the name or residential address, etc of the person, each transaction is registered in the blockchain. This means that the sender's and the receiver's address are exposed publicly. Thus, all the transactions are tracked. If at any point of time, a person's address becomes public

[5] Venson Khaosan, *How a bitcoin transaction works*, (Oct.6, 2014), https://www.ccn.com/bitcoin-transaction-really-work.

knowledge, all the transactions done by the same address can be publicly tracked by anyone from the blockchain.[6]

3. **TRANSPARENCY:**

Digital currencies are not transparent. The address of the wallet cannot be chosen to see all the transactions which are confidential. Cryptocurrencies are transparent. The transactions of any user can be viewed since all the currency flows are placed in a public chain.

ADVANTAGES AND DISADVANTAGES:

ADVANTAGES:

Some advantages are listed below

Bitcoin transactions are anonymous and private and cannot be linked to a specific person. Though the address of the bitcoin wallet can be known, the person holding such wallet remains unknown.

1. **FREEDOM OF PAYMENT:**

Payment through bitcoin can be made without any intermediaries, with no geographical boundaries, payment limits and irrespective of bank holidays/ strikes.

2. **TRANSACTION SPEED:**

The transaction speed of Bitcoin is very high compared to Banking transactions. It can be as fast as sending an E-mail.

3. **NON- INFLATIONARY:**

When the economy of a country is under-inflation, Governments increase the flow of currency into the economy, which in turn lowers the value of such currency. Since the government cannot control the flow of Bitcoins, it is free from such inflationary tendencies.[7]

DISADVANTAGES:

Some of the disadvantages of Bitcoin are as follows:

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[6] Andrew Tar, *Digital currencies V. Cryptocurrency*,(Dec.13, 2017), https://cointelegraph.com/explained/digital-currencies-vs-cryptocurrencies-explained
[7] Rohit Kukreja, *Advantages and disadvantages of bitcoins*, (Apr.25, 2017), https://kryptomoney.com/advantages-and-disadvantages-of-bitcoins/

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1. **VOLATILITY:**

Bitcoins are highly volatile and its prices keep changing at a high pace. This means that Bitcoins are too risky to be used as currency.

2. **USAGE IN BLACK MARKET:**

The most common usage of Bitcoins today is in the black market and dark-web. Bitcoins do not reveal the identity and other details of the transacting person which makes it easier for people to use for illegal activities. That is why it is considered as notorious by many countries, and even illegal by some.

3. **LACK OF CONTROL:**

A centralized Control is absent in Bitcoin transactions. As digital transactions have an intermediary i.e. banks, they can be controlled to a certain extent. Therefore fraudulent and mistaken transactions can be tracked and controlled to some extent, which is not possible in bitcoins.

BITCOINS: LEGAL STATUS AND RECOGNITION IN INDIA:

Bitcoin is not legal tender in India. However 'Not a legal tender' does not imply that Bitcoin is illegal. Legal tender only means that exchange of such tender has been recognised by an act in the constitution.

The laws prevalent in India regarding the currency applicability are given below:

The coinage Act, 2011:

As per Section 2(a) of the Coinage Act, 2011 Coin as defined as follows:

"*coin" means any coin which is made of any metal or any other material stamped by the Government or any other authority empowered by the Government in this behalf and which is a legal tender including commemorative coin and Government of India one rupee note.* [8]

<u>*Explanation*</u>*.--For the removal of doubts, it is hereby clarified that a "coin" does not include the credit card, debit card, postal order and e-money issued by any bank, post office or financial institution; "*Bitcoin, being not covered under The coinage Act, cannot be taken as a coin or valid currency.

[8] The Coinage Act, 2011, No.11, Acts of Parliament, 2011 (India).

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Securities Contracts (Regulation) Act, 1956:

Section 2(h) of Securities Contracts (Regulation) Act, 1956 defines the term "securities" which includes :

1. *Shares, stocks, scrips, bonds, debenture stock or other marketable securities like derivative, units or any other instrument issued to investors as defined in SARFAESI Act;*
2. *Government securities and instruments notified as securities by Central Government;*
3. *Rights or interest in such securities.*

As Bitcoin cannot be grouped under any of the above categories, it cannot be considered currency as per the Securities Contracts (Regulation) Act, 1956.[9]

Foreign Exchange Management Act (FEMA):

"Currency" as defined under the Foreign Exchange Management Act does not include Bitcoin, in addition to which RBI has specifically prohibited bitcoin and other virtual currencies. Therefore Bitcoins cannot be considered as currency under FEMA.[10]

RBI'S STAND ON BITCOINS:

RBI through the Circular RBI/2017-18/154, has stated that entities regulated by the Reserve Bank shall not deal in Virtual currency or provide services for which facilitates any person/entity in dealing with or settling Virtual currency. It has also stated that such Regulated entities which already provide the abovesaid services shall exit the relationship within 3 months from the date of the circular.[11]

As stated in the circular, RBI's action is as a result of the various risks associated in dealing with such virtual currencies.

[9] Securities Contracts (Regulation) Act, 1956, No. 42, Acts of Parliament, 1956 (India) .
[10] Foreign Exchange Management Act, 1999, No. 42, Acts of Parliament, 1999 (India).
[11] RBI: Press Release, *Reserve Bank cautions regarding risk of virtual currencies including Bitcoins*, (Dec.5, 2017),
https://rbidocs.rbi.org.in/rdocs/PressRelease/PDFs/PR15304814BE14A3414FD490B47B0B1BF79DDC.PDF .

JUDICIAL APPROACH:

The Supreme Court of India recently has issued a notice to the Ministries of Finance, Law and Justice, Information Technology, and to the SEBI and the RBI after hearing a Public Interest Litigation (*Writ Petition10 (Civil) no.1076 of 2017*) under Article 32 of the Constitution against the Union of India seeking a regulatory framework to be laid down on virtual currency and that the virtual currency be made accountable by the exchequer. The case is ongoing and has not reached a conclusion.[12]

CONCLUSION:

Bitcoins today have become recognized currency in many parts of the world. USA and UK have been using Bitcoins at par with the Fiat currency. Japan has also recognized Bitcoin as a recognized mode of payment, with tax policies for Bitcoins. Indian government is vehemently against the use of Bitcoins today, and there is a high chance that this might change in the near future. Even if Bitcoin gets the title of legal currency in such countries, Bitcoin today, cannot be considered as a currency. The basic criteria of any currency is to have a stable relative value. Bitcoin shows very high fluctuation of value. This means that it involves a high risk for the holders of bitcoin. For this reason Bitcoin is seen today as an Asset and not as a currency. People buy Bitcoin not with the view to transact with it, but to make a profit from the from the fluctuations existing in the Bitcoin market.

Bitcoin presents itself with a number of features, which show both positive as well as negative attributes. Positives such as Lower transaction charges, scalability of transactions, anonymity of the user and thereby security from leakage of personal information can no doubt benefit the larger public. At the same time the negative aspects such as its utility in the dark web and illegal usage cannot be disregarded. It is, to some extent, in the hands of the government to design some form of control on utility of such bitcoins. And, to a larger extent, in the hands of the user to use it for the benefit of one and all.

[12] Dwaipayan Bhowmick V. Union of India & Ors..