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### **Bit Coin: Is The Cashless Economy A Myth Or Reality?**

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#### **Abstract:**

*With the growth in human development over the years people have developed many systems of exchanges for commercial transactions. The history says people started with product-to-product system (barter system), gradually moved to the present system of monetary transactions as measures for value. Since the growth in information technology there has been a lot of commercial transactions taking place through the virtual medium. Bitcoin is a gift of Information Technology. It is a medium of transaction that has an assigned value but is in the virtual form. It was promoted by Satoshi Nakamoto in 2009 although there is an element of controversy about the promoter still. It has fast acquired popularity and also attracted controversy with it. There is now a worldwide opinion about whether Bitcoin can be given the position of a currency or not. This paper voices the opinion of the author in not conferring the status of a currency to Bitcoin and the reasons thereof.*

***Key Words: Bit coin, Virtual Money, Currency.***

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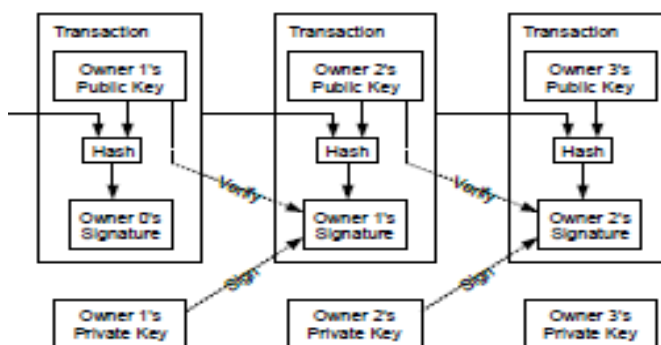
**Introduction:** Bitcoin also popularly termed as BTC is a system of payment online used in the open-source software model since 2009. The concept is marred in controversy due to the conflict regarding the actual creator of the same. Yet for all the practical purposes the creator of Bitcoin system is called Satoshi Nakamoto an obscure personality whom no one has met in person till date. The source of the system is laid to an academic paper published by Nakamoto in the year 2008 under the title “*Bit coin: A Peer –to-Peer Electronic Cash System.*”

The system has resemblance to the currency trading in which one of the parties can send one unit of the currency (in virtual form of string of codes) to the other party in exchange of products and services. Thus, Bitcoin assumes the role of a virtual currency also called “*crypto-currency*”. All the transactions undertaken under the Bitcoin system are recorded in the “*Block Chain*” which is a public ledger system. Bitcoin became a buzz word in the world of finance during the year 2013 to 2014. Users can buy the Bitcoins in an online exchange. These exchanges act as dealers or agents that allow the users to convert their currencies like the US Dollar, The Pound or the RMB into Bitcoins. The first Bitcoin exchange started sometime in February 2010 and another exchange MtGox started in July 2010 (Velde 2013).

Comparing the values of the Bitcoins with the US Dollar values it was seen during the year October 2010 as more than \$ 1 million. By the year 2013 the market capitalization of Bitcoins exceeded \$ 1 billion. By this time Bitcoin became as a popular and accepted mode of payment used by business organizations across the world. Even small businesses like coffee shops and antique sellers accepted Bitcoins as payment system (Fung 2013). This essay examines the concept of Bit coin and a look at the paradox surrounding the financial world regarding whether Bit coin can be treated as a currency.

**Discussion: Process of Bitcoin Transaction:** The process of trading in Bitcoin is much like the traditional currency system but the whole concept is executed in the virtual platform. In order to carry out a transaction in Bitcoin the intending party has to broadcast to the Bitcoin network, that is the public key where the payee is available and discloses the amount of Bitcoin one has a desire to transfer. Each one of the Bitcoin addresses has a private key that is attached to it which is like the password in order to ensure the authentication of all the transactions. The private key is given along with the public key to ensure safety in the virtual transactions that allows the person to digitally sign all the transactions. Following picture illustrated the transaction process of Bitcoin as given in the original Paper of Satoshi Nakamoto.

**Figure 1: Transaction in Bit coin system**



While transacting through Bitcoins the major concern of the payee is that the amount which is transferred does not belong to the payee because it is already paid. The second most important concern is that how will the rate of inflation be overcome as higher degree of

inflation might very well reduce the value of a person's holdings. All these issues are resolved through the concept of mining of Bitcoins. This is done by miners when any transaction is broadcasted in a group, the miners work to collect the transactions into strata known as "block" that is added to the block chain. There is a string of characters that accompany the blocks in the form of hash. This depends on the list of dealings. This hash is a validity of the work being performed. When an acceptable hash is located the miner broadcasts the block to the network. As a reward the miners are given newly created Bitcoins. The features of Bitcoin growth rates are known to the general public; therefore, its circulation is not at all affected by the monetary policy of the country. The early history of Bitcoins says that Nakamoto mined and introduced the concept with 50 units to a group of online computer enthusiasts. The popularity of Bit coins grew to such an extent that it began to be traded at Mt. Gox an online exchange and the first traded volume was of 20 Bitcoins at a price of 4.951 centsWallace (2011).

*Legality of Bitcoin perspectives from United Kingdom:* The legality of Bitcoin varies from country to country. Here we will briefly discuss about the legality of the concept in terms of policies in United Kingdom. A legislation of the policymakers in United Kingdom suggested in the year 2013 that they would not have to register. For some time, Bitcoin was regarded as vouchers of single purpose carrying VAT (Value Added Tax) but it is not treated as money in the UK.

However, the rule was changed on the 3<sup>rd</sup> of March 2014 as per the HM Revenue and Customs (HMRC) Bitcoins are now treated as any mode of payment used for taxation. Its ruling under the revenue and Customs Brief (2014) is: "In all instances, VAT will be due in the normal way from suppliers of any goods or services sold in exchange for Bitcoin or other similar crypto-currency."

*Bitcoin lacks the features of a currency:* An economist's definition of money says that it is having three attributes one is that it is a medium of exchange; it has a store of value and the third one being used as a unit of account. Looking at the characteristics of Bitcoin, we find that it has the first one of these three characteristics. A Bitcoin is used as a medium of exchange in the online forum. However, if we take a global look at the Bitcoin use and proliferation it is seen to be very small when compared to the use of traditional means of exchange (currency).

In case of Bitcoin, it is required to have traders to quote the price of the general retail products up to four or five decimal places along with leading zeroes. Such a process is rarely used in the product and service market transacting with the help of currencies. There are extremely volatile market situations in the case of Bitcoins therefore the chances of arbitrage do not exist. These characteristics curtail the chances of Bitcoin being used as a unit of account.

On examining Bitcoin with respect to the third criteria of money, that of use as a store of value it is seen that it completely lacks this characteristic. This is because Bitcoins are continuously prone to hacking attacks. Thus, if Bitcoin is examined as a substitute for

currencies, it totally falls short due to its inherent characteristic of highly risky product with near impossible chances of hedging the risks.

Besides the characteristics discussed above Bitcoins also lack the ancillary features of currencies seen in modern economies. Bitcoins cannot be saved in any banks; they can only be possessed as units of value in e-wallets which again is a rather vulnerable mode of saving. Along with lacking these features there are no financial instruments like credit or debit cards that are linked to Bitcoins.

Money supply is regulated by central banks across nations, but Bitcoins are not. But as per CNBC (2014) assuming that based on an algorithm, when the mining power is kept constant since the first Bitcoin was mined, the final Bitcoin is predicted to be mined sometime on 8<sup>th</sup> October 2140. But it is indeed a difficult proposition to predict the mining power growth in near future. There are two factors at play in determining the growth in mining power—one is the technological progress at the rate that is going on now and other methods SHA2 calculation maybe discovered Goldman Sachs (2014). But all these are mere speculations with no concrete monitoring and regulatory process to the Bitcoin system. As against this speculation, a Bit coin entrepreneur says that even after the expected last Bitcoin there is a chance to create more of it but that would need some 51% network of the computing prowess in order to change the software to adopt the changes necessary. The complexity of the process, the vulnerability of the system and the inability to control makes Bitcoin a weak substitute for traditional currency.

**Conclusion:** Finally, we would like to conclude that Bitcoin totally fails to conform to the traditional standards of currency. A currency is a medium of exchange, a store of value and a unit of account--Bitcoin fails to meet any of these criteria completely. There is no intrinsic value attached to Bitcoin and its worth depends on its acceptance in the consumer market. Although, when the same is regulated and some more features are added to it we may well start accepting this as a system similar to currency. The first company to accept Bit coin as payment system was Overstock.com in 2013, over one year after that, major companies like Microsoft and Dell started to accept also. But these companies as of now do not do it directly, they have partnered with Coin base and Bit Pay that take Bit coins from the customers and in turn deposit cash into the account of the companies. So, these companies do not accept Bitcoins *per se* Davidson (2015). Thus, in the present scenario Bitcoins use in the commercial domain is made possible due to the presence of the intermediaries that facilitate its transaction. Otherwise, there is no *locus standee* that the concept can assume as a commercial replacement of transaction. It does not hold its worth on its own unless it is endorsed by a third party. This is perhaps the biggest determinant of crypto currencies being labeled as parallel to the conventional currencies. If any time soon the crypto- currencies can hold their worth on their own they may well be accepted as currency but for now there is no reason to believe that these are any forms of currency. Human development and technological up gradation have indeed brought about massive changes all over the world. Yet the development is skewed and not spread all over the world evenly. As per records available through Internet live stats (2016) about 40% of the world today is using internet.

So there are 60 % people who are still deprived of this. Bit coin's popularity depends on the use of internet. Unless it is globally used, and every human is adapted in making use of it and that occupies relevance to every human irrespective of rich or poor it cannot be objectively termed as currency. Till then, the author feels that it is not possible to visualize the acceptance of Bit coin as a currency when its acceptance is only possible within among 40% of people in the world. Therefore, the author concludes that the controversy and speculation in trying to label something with just 40% population as potential user, is impossible and Bit coin can in no way be like a currency.

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