



BIT COIN AND ITS PROSPECTS IN INDIA

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ABSTRACT

A private initiative that has created a virtual currency and a payment system based on cryptography and decentralized management, Bit coin is considered not only an interesting, but also a disruptive technical innovation by many observers. This online payment system is not controlled by government and any institutions. It sends values directly from one party to another. It is fast, safe and anonymous way to send money. This paper mainly covers working with Bit coin in India. The objectives of this paper are to understand the awareness about the existence of bit coins, to evaluate the perception of bit coin as the future currency and to analyze the probability of legalization of bit coins in India.

Key words: Bit coin, crypto currencies, Block chain, Zebpay, Decentralized

I. INTRODUCTION:

Bit coin is the first worldwide, decentralized money that enables transfer of money from one individual to another without including a third party, for example, a bank. A computer system is needed to make exchanges as Bit coin is basically a software. As Bit coin is a decentralized money so it is not controlled by anybody. It's open so anybody can make use of it. Lack of control could mean chaos, but that's not true at all. That's because of Block chain, the

technology behind Bit coin is one of the most accurate and secure systems ever created. Bit coin is a Crypto-Currency which means: • It is a digital asset and no physical object in the world can be referred to as 'One Bit coin' or any amount in its smaller units (Satoshis:: 1 Bit coin= 10^8 Satoshis) • It uses Encryption Techniques for validating transactions and even for its self-generation. SHA-256 in the case of Bit coin. It is a peer to peer, decentralized electronic cash system and does not rely on any centralized authority such as a Bank or VISA or any other organization.

II. Research Problem

The primary reason why people are investing in Bit coins is because they do not want government interference; they want complete control of their capital. Today, corporate giants like Microsoft, Wal-Mart etc accept payments in Bit coin. It is the reserve currency for all other crypto currencies i.e. any normal currency first has to be converted into a Bit coin and then exchanged for the other types. Bit coins are held in 2 ways: The customer stores the keys to their Bit coins in a wallet on their hard drive or a third party wallet service performs this function for them. The first option could be dangerous if the hard drive fails or due to any errors or malicious software, unless we have a good backup system. The second option is not safe either because they're prone to security failures as well. It is also necessary to ensure that the operators of the Bit coin wallet are trustworthy and are not fraudulent. There have been a number of cases where the operators of Bit coin financial institutions have lost client funds because of alleged security breaches.

In context to the above, the objectives for this paper seeks –

1. To understand the awareness about the existence of Bit coins.
2. To evaluate the perception of Bit coin as the future currency.
3. To analyze the probability of legalization of Bit coins in India.

III. Methodology

This research paper has been sourced from primary data collected through surveys. Secondary data is compiled from newspaper articles along with the references from various research article

and certified journal publications. A well-structured questionnaire consisting of closed ended questions is used to collect 166 responses by adopting random sampling technique. Awareness about the existence of Bit coins and perception of Bit coin as the future currency is measured with a five point liker scale ranging from “1: strongly disagree to 5”. To examine the demographic profile of respondents, descriptive analysis in terms of frequency and percentage is used for summarizing. The difference between demographic profile of respondents and awareness about the existence of Bit coins and perception of Bit coin as the future currency is tested through ANOVA (Analysis of Variance).

IV. BIT COIN IN INDIA

Bit coin demand is growing day by day in India. People in India are now understanding the power and advantages that these virtual currencies can offer. If we consider Bit coin in India then all the rules and regulations which are presently applicable to Indian currency will become applicable to Bit coin also. This rules and regulations for Indian currencies are controlled by RBI. As per Indian constitution, article 246 gives the list of all activities that are legislate by central and state government. Entry 36 and 46 of List I of the Seventh Schedule of the Constitution states that the Central Government is allowed to legislate in respect of currency, coinage, legal tender, foreign exchange and bills of exchange, cheques, promissory notes and other like instruments respectively. If Bit coin falls any of this categories the central government would have exclusive power to legislate. The principal laws concerning Indian currency are: I. The Constitution of India, 1950; II. The Foreign Exchange Management Act, 1999 (“FEMA”); III. The Reserve Bank of India Act, 1934 (“RBI Act”); IV. The Coinage Act, 1906 (“Coinage Act”); V. The Securities Contracts (Regulation) Act, 1956 (“SCRA”); VI. The Sale of Goods Act, 1930 (“Sale of Goods Act”); VII. The Payment and Settlement Systems Act, 2007 (“Payment Act”). VIII. Indian Contract Act, 1872 (“Contract Act”) These laws will become applicable to Bit coin if RBI wants to treat it as a currency. As Bit coin is decentralized digital currency, the creation, trading or usage of Bit coin as a medium for payment is not controlled by RBI or any other trusted authority unlike fiat currency. Therefore using Bit coin as a payment system may create following issues:

- Bit coins are stored in digital wallets. Thus they are liable to suffer from hacking, loss of password, malware attack etc. and as they are not created or traded through any authorized central agency, the loss of e-wallet could result in the permanent loss of Bit coins held in them.
- As Bit coin transactions are peer-to-peer without central authority which monitors the payment, there is no system for customer problems/disputes/charge back etc.
- No one is responsible for malfunctioning. 4. Being an anonymous currency system it leads to unintentional breaches of money laundering and combating the financing of terrorism laws.

Bit coin: Concept and Features

Bit coin is a type of crypto currency which operates on digital platform and peer to peer based network. Unlike other currencies it has neither any physical form nor any intrinsic value and its value being based on mathematical proof. Many unique feature including faster transactions, ease of use, decentralized uncontrolled framework is contributing to its popularity. It uses block chain network for its operation which is based on encryption technology. Some of the unique features of Bit coin are: a) No intrinsic value b) No physical form c) No central authority to control it d) Decentralized setup e) Use of secured block chain network f) Price determined on average basis of all exchanges g) An open source where everyone can take part h) Created and held digitally.

The Future of Crypto currencies in India

With regards to the Block chain, India can't be overlooked. It is an incredible nation with more than a billion people who recently experienced demonetization. That is the time that numerous Indians started capitalizing their cash in Bitcoin and proceed to owe them now. This spike drove some tech-savvy citizens to purchase Bitcoins as well as accomplish something with the block chain protocol itself.

Calling bit coins, the “next big thing since the internet and computing” themselves are major statements to make. Bit coin and other crypto currencies may not be much of a threat to fiat currencies today.

“Virtual currencies are in a different category because they provide their own unit of account and payment systems. These systems allow for peer-to-peer transactions without central clearinghouses, without central banks. Reaching across borders will be critical as the focus of regulation widens- from national entities to border-less activities, from your local bank branch to quantum-encrypted global transactions” as stated by Christine Lagarde

This year, we have seen the crypto network growing at a rapid pace. While until today there is no clear policy or regulation on cryptocurrency. The government and courts stand have been unclear. Though entrepreneurs in the country are making the most of the opportunity.

In a country like India, where we value everything by its monetary worth, the sure-shot way to beat cash is to make currency that is more valuable than cash.

Apart from that, there is no one who understands Indian consumers better than native companies. A crypto exchange and a wallet that would allow hundreds of millions of citizens to become part of the crypto economy will be a great leap for the entire blockchain community.

V. Challenges ahead

One of the most challenging battle that humanity has ever faced would bring the masses to the blockchain. In the current times, we understand that there is no need for hierarchy. There will always be bureaucrats, politicians and corporates who may not like it over giving up the control or power. Thus, making it a tough journey.

In fact, blockchain and cryptocurrencies can't be prohibited without banning the internet itself. What if in future a nation decides to declare blockchain or cryptocurrency to be illegal? While it would probably be impossible to identify everyone, who owns crypto assets and put them behind bars, a move such as this could disincentives merchants, businesses, and websites from advertising their willingness and putting put up a banner saying, “Cryptos accepted here.” When that happens, in my view, you take away an entire leg for an economy to stand on. Without merchants to accept crypto, its value proposition as a replacement for money goes away.

In India, there are no regulations around cryptocurrencies yet. It is also less likely that the country will bring its own cryptocurrency. Also, government and courts stand have been unclear. Nobody knows which way the camel will sit. It can become an opportunity to put the nation as a forward-thinking one or remain an incumbent.

VI. How Bitcoin Works

Bitcoin is a cryptocurrency, meaning it's supported by a source code that uses highly complex algorithms to prevent unauthorized duplication or creation of Bitcoin units. The code's underlying principles, known as cryptography, are based on advanced mathematical and computer engineering principles. It's virtually impossible to break Bitcoin's source code and manipulate the currency's supply.

Although it was preceded by other virtual currencies, Bitcoin is known as the first modern cryptocurrency. That's because Bitcoin is the first to blend certain key features shared by most subsequently created cryptocurrencies.

- **User Anonymity**

Intense privacy protections are baked into Bitcoin's source code. The system is designed to publicly record Bitcoin transactions and other relevant data without revealing the identity of the individuals or groups involved. Instead, Bitcoin users are identified by public keys, or numerical codes that identify them to other users, and sometimes pseudonymous handles or usernames.

Additional protections allow users to further conceal the source and flow of Bitcoin. For instance, special computer programs available to all Bitcoin users, called mixing services, privately swap a specific Bitcoin unit for another Bitcoin unit of identical value, and thereby obscure the source of the owner's holdings.

- **Bitcoin Exchanges**

Bitcoin exchanges allow users to exchange Bitcoin units for fiat currencies, such as the U.S. dollar and euro, at variable exchange rates. Many Bitcoin exchanges also exchange Bitcoin units for other cryptocurrencies, including less popular alternatives that can't directly be exchanged for fiat currencies. Most Bitcoin exchanges take a cut, typically less than 1%, of each transaction's value.

Bitcoin exchanges ensure that the Bitcoin market remains liquid, setting their value relative to traditional currencies – and allowing holders to profit from speculation on fluctuations in that value. That said, Bitcoin users must understand that Bitcoin’s value is subject to wild swings – weekly moves of 50% in either direction have occurred before. Such swings are unheard of among stable fiat currencies.

- **Block Chain**

Bitcoin’s block chain is vital to its function. The block chain is a public, distributed ledger of all prior Bitcoin transactions, which are stored in groups known as blocks. Every node of Bitcoin’s software network – the server farms and terminals, run by individuals or groups known as miners, whose efforts to produce new Bitcoin units result in the recording and authentication of Bitcoin transactions, and the periodic creation of new blocks – contains an identical record of Bitcoin’s block chain.

Because new Bitcoin transactions constantly occur, the Bitcoin block chain, though finite, grows over time. As long as miners continue their work and record recent transactions, the Bitcoin block chain will always be a work in progress. In other words, there’s no predetermined length at which the block chain will stop growing.

On average, miners create a new block chain, which includes all prior transactions and a new transaction block, every 10 minutes. Every two weeks, Bitcoin’s source code is designed to adjust to the amount of mining power devoted to creating new block chains, preserving the 10-minute average creation interval. If mining power increased during the most recent two-week span, new block chains become more difficult to create during the subsequent two-week span. If mining power decreases, new chains become easier to create. For most of Bitcoin’s history, the trend has been toward greater mining power.

Bitcoin’s block chain is the sole arbiter of Bitcoin ownership. No complete record exists anywhere else. The block chain also serves as a payment processing system, like Visa or PayPal, with the miners functioning as the system’s employees.

A Bitcoin transaction hasn’t technically occurred until it’s added to the block chain, at which point it becomes irreversible – unlike traditional payment processors, Bitcoin doesn’t have any standardized facility for chargebacks or refunds. During the window between the transaction itself and the moment it’s added to the block chain, the relevant Bitcoin units are essentially held in escrow – they can’t be used by either party to the

transaction. This prevents duplicate transactions, known as double-spending, and protects the system's integrity.

- **Private Keys**

Every Bitcoin user has at least one private key (basically, a password), which is a whole number between 1 and 78 digits in length. Individual users can have multiple anonymous handles, each with its own private key. Private keys confirm their owners' identities and allow them to spend or receive Bitcoin. Without them, users can't complete transactions – meaning they can't access their holdings until they recover the corresponding key. When a key is lost for good, the corresponding holdings move into a sort of permanent limbo and can't be recovered.

Users either manually create their own private keys or use a random number generator to do the same. Keys can be stored online (either in private cloud storage or on public Bitcoin exchanges), on physical storage media (such as thumb drives), or on paper, and only entered online during transactions.

Since private keys essentially give Bitcoin holdings value, security experts advise against storing private keys in easily accessible online locations or keeping only one private key copy. Savvy users store identical key copies on paper printouts and physical media not connected to the Internet.

- **Wallets**

Actual Bitcoin units are stored in “wallets” – secure cloud storage locations with special information confirming their owners (Bitcoin users) as the guardians of the Bitcoin units contained within. Though wallets theoretically protect against the theft of Bitcoin units that aren't currently being used, they're vulnerable to hacking – particularly public wallets used by Bitcoin exchanges, online marketplaces, and specialized websites that exist solely to store Bitcoin wallets known as “wallet services.”

The largest and most notorious Bitcoin hack involved wallets held by Mt. Gox, a Japanese Bitcoin exchange that shut down after hackers stole hundreds of millions of dollars in Bitcoin (in contemporary valuations) from its supposedly secure servers. Hackers often target public wallets that store users' private keys, enabling them to spend the stolen Bitcoin.

VII. How to buy Bit coins?

There are various digital currency exchanges to buy Bit coin. It can be purchased with a credit card. Coinbase.com and Coindesk.com are the most popular exchanges. They also offer tutorials on digital currencies. In India, you can purchase Bit coin from Zebpay exchange. Zebpay has Android and iPhone app which lets you link your bank account for quick transfers. Bit coin can also be purchased by making a payment to Zebpay's bank account. One can also withdraw the money to his bank account, and track data on Bit coin valuation in the country. There is a KYC requirement and ID need to be verified by simply clicking a photo on the PAN card. Unocoin, another India-based exchange also offers trade Bit coins. It assist in buying, selling, storing, using and accepting Bit coin. The company claims it has over 1,50,000 customers. Indian government's initiative to make India a less cash economy, digital cryptocurrency has caught the attention of many Indians. Post demonetisation, leading Bit coin exchanges in India witnessed a rise in user base by up to 250 per cent. Indians are enquiring about Bit coins as an alternative and safe investment option. They are downloading Zebpay as they want to experiment with digital currencies. There has been a 50% increase in Zebpay downloads.

VIII. Conclusion

In terms of creation, Bit coins are definitely one of the greatest innovations of man. With the amount of popularity that it enjoys, it may not be possible for the government to completely ban Bit coins. Most banks these days are trying to use the block chain technology and since the government has not authorized Bit coins, it has decided to introduce its own crypto currency named „Lakshmi“. This information was revealed by RBI's executive chairman Sudarshan Sen who also mentioned that the committee that proposed this idea is in its process of research. Therefore, whether Bit coin or not, a major part of transactions in the future will happen through the use of cryptocurrencies.

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