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Emerging Rise of Cryptocurrency in India

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ABSTRACT

Cryptocurrency is a most interesting topic in all over the world. Whether it could be a computer scientist who is working hard to know about block chai technology or a economist who is debating on impacts of cryptocurrency on India. This research includes history of cryptocurrency i.e., who invented it? What were the reasons to invent it? Proceeding further research provides conceptual framework of cryptocurrency which implies overview,t ransaction methodology, how can we create bitcoins ? Through research we got to know that how cryptocurrency is impacting on india and reaction of government on cryptocurrency. Market survey demonstrates interest of population in cryptocurrency which shows effect of it on economy.

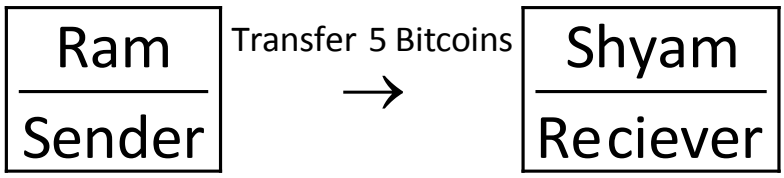
I.HISTORY OF CRYPTOCURRENCY

Although it's often referred to as new, Bitcoin has existed since 2009 and the technology it is built on has roots going back even further. Although Bitcoin was the first established Gthere had been previous attempts at creating online currencies with ledgers secured by encryption between 1998-2009. Two examples of these were B-Money and Bit Gold, which were formulated but never fully developed. After great depression 2008, due to financial contagion general public and investors had fear of losing their money. They don't want to rely on banks for the security of their savings and investments. So some hi-tech minded personalities started discussing on new method of currency i.e., Crytocurrency.A paper called Bitcoin – A Peer to Peer Electronic Cash System was posted to a mailing list discussion on cryptography in 2008. It was posted by someone calling themselves Satoshi Nakamoto, whose real identity remains a mystery to this day. Satoshi Nakamoto on February 11, 2009 at 22:27 posted that the Bitcoin software is made available to the public for the first time and mining – the process through which new Bitcoins are created and transactions are recorded and verified on the blockchain – begins.

II.CONCEPTUAL FRAMEWORK OF CRYPTOCURRENCY IN INDIA

Overview of Cryptocurrency: - Crytocurrency is a digital asset designed to work as a medium of exchange that uses cyptography to control its creation and management, rather than relying on central authorities. Famous example of crytocurrecy is bitcoin. Bitcoin provides you a convenience for transaction of money like sending an email or text message to anyone. Customer will use a wallet app on the phone to transact money. And latterly money will convert into bitcoin (cryptocurrency) or vice versa.

2.1) Transaction methodology in Cryptocurrency:



If Ram will transfer 5 Bitcoin to Shyam, 5 bitcoins will be debited from Ram's account simultaneously 5 bitcoins will be credited to Shyam's account as soon as this transaction will complete, this transaction will be seen in a public ledger which is known as blockchain. Blockchain maintains bitcoin ledger. As soon as when Ram will type 5 bitcoin in his phone, put Shyam's account number and click on send button, bitcoin network will receive a message from Ram's side which contains that, " I am sendig 5 bitcoin to this n this account.", at that time both public as well as private key will be used to accomplish the transaction. This is basic p2p-technology

The transaction is known almost immediately by the whole network. But only after a specific amount of time it gets confirmed. Confirmation is a critical concept in cryptocurrencies. You could say that cryptocurrencies are all about confirmation. As long as a transaction is unconfirmed, it is pending and can be forged. When a transaction is confirmed, it is set in stone. It is no longer forgeable, it can't be reversed, it is part of an immutable record of historical transactions: of the so-called blockchain.

Now question arises if a clever thief will send a message to bitcoin network as Ram had sent , then would he will not steal Shyam's money ?

Answer to this question is a big no. because when ramu will send a message his message would contain a unique code which is encrypted, this encrypted code will go to bitcoin networking. So that no one can cOpy it and ramu's money will remains safe.

Cryptocurrency uses a system of cryptography (AKA encryption) to control the creation of coins and to verify transactions. In simple meaning cryptography is an art of writing or solving codes. For instance, I want to write a simple sentence such as;

Hello Viewers ← Normal sentence

Hdzjdjknz,czj98qyekwqndalk8 ← Encrypted Code of above sentence

2.2) Public Ledger:

Ledger will contain public key as well private key and encrypted information from ramu's side so that bitcoin network can verify that yes, a transaction has been done and no one could copy it. For every transaction sender & receiver will have new encrypted code. That's why it is known as cryptocurrency because it is based on cryptography. The beautiful part of public ledger is whatever transactions have been done till today, it have

records of all transactions whether they have been completed in USA or in Japan. All confirmed transactions from the start of bitcoin's creation are stored in public ledger.

2.3) Block Chain:

Public Ledger's complete record of transactions is kept in the block chain, which is sequence of records called blocks.

2.4) Creation of Bitcoin:

Satoshi set the rule that the miners need to invest some work of their computers to qualify to create Bitcoin. In fact, they have to find a hash – a product of a cryptographic

function –that connects the new block with its predecessor. This is called the Proof-of-Work. In Bitcoin, it is based on the SHA 256 Hash algorithm. that it can be the basis of a cryptologic puzzle the miners compete to solve. After finding a solution, a miner can build a block and add it to the blockchain. As an incentive, he has the right to add a so-called coinbase transaction that gives him a specific number of Bitcoins. This is the only way to create valid Bitcoins. Bitcoins can only be created if miners solve a cryptographic puzzle.

2.5) Blockchain:

The blockchain network lives in a state of consensus, one that automatically checks in with itself every ten minutes. A kind of self-auditing ecosystem of a digital value, the network reconciles every transaction that happens in ten-minute intervals. Each group of these transactions is referred to as a "block". Two important properties result from this:

2.5.1) **Transparency** data is embedded within the network as a whole, by definition it is public.

2.5.2) **It cannot be corrupted** altering any unit of information on the blockchain would mean using a huge amount of computing power to override the entire network.

In theory, this could be possible. In practice, it's unlikely to happen. Taking control of the system to capture Bitcoins, for instance, would also have the effect of destroying their value.

III.GOVERNMENT V/S CRYPTOCURRENCY

A Union Budget speech has talked about cryptocurrencies and blockchain technology, which indicates that the government is clearly focused on bringing in regulations on cryptocurrencies. The finance minister in his Union Budget 2018 speech said, "The government does not consider cryptocurrencies legal tender or coin and will take all measures to eliminate use of these crypto-assets in financing illegitimate activities or as part of the payment system." However, the government has recognized blockchain and said that a "distributed ledger system or the blockchain technology allows organization of any chain of records or transactions, without the need of intermediaries. The government will explore use of blockchain technology proactively for ushering in digital

economy." This means they are not a currency. However, it doesn't mean that holding cryptocurrencies such as bitcoin is illegal or banned.As of now, the government has not termed it illegal. However, as a cryptocurrency user you should treat with caution.

IV. REVIEW OF LITERATURE

Nakamoto (2009) specified that bitcoin is a global distributed database, with additions to the database by consent of the majority, based on a set of rules they follow. Whenever someone finds proof-of-work to generate a block, they get some new coins. The proof-of-work difficulty is adjusted every two weeks to target an average of 6 blocks per hour (for the whole network).The coins given per block is cut in half every 4 years

Singh (2018), opines that the mobile wallet company is considering cryptocurrency, as is reportedly RelianceJio. There are, at least 5-6 million investors in India.

Christopher (2018) advocates India has 15 around cryptocurrency exchanges, The total revenue of the top 10 bitcoin exchanges in Indian is estimated to be about Rs 40,000 crore.

Suprita (2018) told that the Indian Union Cabinet chaired by PM Modi has approved to introduce the Banning of Unregulated Deposit Schemes Bill, 2018 in the parliament. The bill creates three different types of offences, namely, running of unregulated deposit schemes, fraudulent default in regulated deposit schemes, and wrongful inducement in relation to unregulated deposit schemes

Vishwanathan (2018) advocates that the government does not consider cryptocurrencies legal tender or coin, However, the government has recognized blockchain. The government will explore use of blockchain technology proactively for ushering in digital economy.

Balaji (2018) said that right now, the general understanding of the term Bitcoin in India is vague. There are a lot of people in India who are intrigued by the technology but don't understand it well enough.

V. OBJECTIVES

To check the emerging rise of cryptocurrency in india and impact of it on indian economy as well as on indian government.

VI. RESEARCH METHODOLOGY

6.1) Population: 10 Investors who were willing to invest in cryptocurrency or have invested in cryptocurrency.

6.2) Research Design: The study is partly descriptive and partly analytical. The study is based on both primary and secondary data. Research type is empirical in nature.

6.3) Sampling Method: The questionnaire was distributed to both the users who were willing to invest in cryptocurrency or have invested in cryptocurrency. A total of 10 questionnaire were distributed among the

investors of Kota, Rajasthan region. The researcher have used convenience research sampling for research. Study period for the research was from January 3,2018 to March 20, 2018.

6.4) Data collection: Questionnaire consist of 10 questions and it has been administered on the investing sector. The study was consisting of both primary data and secondary data.

6.4.1) **Primary data collection:** This data were collected through well structured closed ended questionnaire.

6.4.2) **Secondary data:** The data from secondary sources was collected through, journals, reports, research studies, internet sources, to understand the basic concepts and literature pertaining to stress on emerging rise of cryptocurrency.

VII. DATA INTERPRETATION:

7.1) Current employment

	Percentage
Student	2
full-time empl	4
self empl	2
seeking empl	2
other	0

According to survey, out of 10 sample size, 20% are students, 40% are full time employeed,20% are self employeed and 20% are seeking employement. It denotes that investors who are having stable income are more likely to invest in cryptocurrency.

7.2) Gender of investor

	Percentage
Male	9
Female	1

According to survey, 90% are males and 10% are females. It describes that male candiates are more active in cryptocurrency as compare to female candidates.

7.3) Age Group of investors

	Percentage
<20	1
20-30	8
31-40	0
41-50	1

50-Ritered	0

As per the survey out of 10 sample size, 10% are under the age of 20 years, 80% are in the age of 20-30 years and 10% are in the age of 41-50 years. This ensures that youngsters under the age 0f 20-30 are taking actively participation in cryptocurrency as compare to any other age group.

7.4) Cryptocurrency Knowledge

	Percentage
Yes	8
No	2

As per the survey out of 10 sample size, 80% thinks that they have knowledge of cryptocurency and 20% believes that they do not have knowledge about it.

7.5) Cryptocurrency will make rich

	Percentage
Yes	7
No	3

As per survey out of 10 sample size, 70% believes that cryptocurrency will make them rich and 30% don't believe the same. This is the main reason in rising demand of bitcoin.

7.6) Crytocurrency portfolio v/s initial investment

	Percentage
Yes	5
No	4
About the same	1

As per the survey out of 10 sample size, 50% believes that their current cryptocurrency portfolio is more than their initial inivestment. 40% believes that their cryptocurrency portfolio is not more than initial investment and 10% believes that their cryptocurrency and initial investment portfolio is at equilibrium

7.7) Repeatancy in checking the price of cryptocurrency

	Precentage
>10 time/day	3
3-10 time/day	0
1-2 time/day	1
few time/week	2
NA	4

As per survey out of 10 sample size 30% users check price of cryptocurrency more than 10 times per day. While on the other hand 10% checks price of cryptocurrency 1-2 times per day and 20% users checks few times per week and 40% users were not applicable because they were dependent on other persons.

7.8) Cryptocurrency is non govt. regulated which offers more freedom

	Precentage
Yes	9
No	1

As per survey out of 10 sample size 90% believes that cryptocurrency provides them more freedom because it is not regulated by government. Out of 10 sample size 10% do not believe that. Freedom is vital cause of investor's interest in cryptocurrency. Till now no is collected by investors because of cryptocurrency.

7.9) Cryptocurrency requires fewer fees to operate

	Precentage
Yes	9
No	1

As per survey out of 10 sample size 90% believes that cryptocurrency requires fewer fees to operate that increase their interest in it. Out of 10 sample size 10% do not believe that.

7.10) Cryptocurrency is govt. regulated but remained intangible

	Precentage
Yes	9
No	1

As per survey out of 10 sample size 90% believes that if govt. will regulate cryptocurrency but will remains intangible that will increase their interest. Out of 10 sample size 10% will remain uninterested.

VIII. SUGGESTIONS

8.1) Consumers need to be alert and extremely cautious as to avoid getting trapped in Ponzi schemes.

8.2) Transactions of VCs are encrypted they are also likely being used to carry out illegal/subversive activities, such as terror-funding, smuggling, drug trafficking and other money-laundering acts.

8.3) Transactions of VCs are encrypted they are also likely being used to carry out illegal/subversive activities, such as terror-funding, smuggling, drug trafficking and other money-laundering acts.

8.4) If you have incurred gains from sale of bitcoins, you should declare it in your income tax return it will make our economic system stable.

IX.CONCLUSION

Blockchain is decentralised and records all transactions in real time unlike the central command operations of core banking systems. By working through user consensus and storing data across its network, blockchain eliminates the risk of holding data at one place.The government has not necessarily closed the door on future regulation of cryptocurrencies, especially as certain large Indian banks are working on their own version of currencies and with the exchanges. Cryptocurrency was never legal tender in India. In India, it is not used to pay for goods and services. But that does not mean it is banned**.** Indian Govt. is just promoting trading in cryptocurrency through Indian exchanges. The government is exploring the use of blockchain in areas such as digital payments. Blockchain technologies make crypto-currencies possible. The block chain technology might also find its way in maintenance of land records. However, it is one of the far-fetched ideas that are still being mulled over.

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