

## FUTURE OF VIRTUAL CURRENCY IN INDIAN CONTEXT

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### **ABSTRACT**

With the invent of Internet and the digital world, one of the most important part of society i.e. exchange through currency is also transforming from physical to digital. Online payment and settlement systems are bringing in major change in the 'transaction methodologies' of the world and India is no exception.

India is looking at new world of initiatives from the government. With the introduction of the digital currency in the world, the methodology and challenges of the transactions are changing. This paper tries to look at the current scenario about the digital/virtual currencies like 'Bitcoin', 'Linden \$s' and other similar systems to see the future of digital transactions with its efficiency and effectiveness. The financial institutes are looking at digital/virtual options for the transactions. Objective of this paper is to find out the acceptance, efficiency and effectiveness of virtual currency and its reliability from audit and auditability perspective.

The methodology used for this research is exploratory and descriptive. As the use of virtual currency in India is comparatively new, it needs to be explored from 'inclusive finance' perspectives.

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The research focuses on finding out the current status and explaining how in Indian context the use of virtual currency (like bitcoin which is unregulated and not redeemable for its value in gold or any other such commodity) is still to go long way for acceptance because of unawareness/trustworthiness of such currency. The research also shows that the fear of using virtual currency because of unreliability and no acceptance by financial institutes is one of the major hurdles in acceptance of the virtual currency though it is preferred from the financial institutes perspective. The traditional mindset of personal connect is also affecting the acceptance of such currency. The auditability of such currency transaction is yet at questionable stage even RBI (Reserve Bank of India) accepts the strengths of 'Bitcoin' type of currency.

**Keywords: - virtual currency, bitcoin, digital currency, crypto- currency**

### Introduction

The last century has seen the technological advancements. The 'Globalized economy' seems emerging trend in the world. With the advent of the Internet, the use of digital resources for transactions is ever increasing. The technology is helping to bring in speed, accountability, agility and many other characteristics for transactions. It has also added the multilevel perspective to the transactions like technical, legal, financial, systemic, industrial etc. The origin<sup>1</sup> of the digital currency goes back in the period of dot-com bubble in 1990s. Very recently China seems became active in crypto-currency and its use in the market.

Global adaptation of digital currencies seems underway. In last one year the digital transactions with the bitcoin itself is nearing 300k<sup>2</sup>. There are number of cryptocurrencies today in the market to name few like Bitcoin, Litecoin, Dash, Dogecoin, Peercoin, Namecoin etc. If we see the money involved in this transaction is large and it's increasing.

Cryptocurrency market itself is booming and looking at growth worldwide. The scenario is getting morphed into more and more technologically advanced and sophisticated modes of exchanges using digital currency. The growing use of credit cards, net transfers, online banking are posing kind of a threat to physical transactions. It seems that laws and regulations are still a grey area as per NASDAQ<sup>3</sup>.

We can see the share of bitcoin and other currencies from the chart. The chart shows market capitalization, transaction and average transaction values of currencies which show the growing participation of these currencies.



**Image 1**

Source:- <https://bitinfocharts.com/charts.html>

### Objectives:

Objective of this research was to have a consolidated holistic view about the current situation about crypto-currency/digital currency/virtual currency from the operational perspective. This was also intended towards finding out the qualitative parameters through the secondary data and primary data which was interview based.

### Background of the Study

The idea of looking at this domain came from the thought of bringing in auditability in the transactions. And the study will not be complete without looking at current scenario and different perspectives about payment and settlement systems and the tools for the same.

Overcoming difficulties in the effective use of technology in all domains of life has become priority for everybody today. Technology has changed the way exchanges are happening. Databases, networks and networked world is trying to look at leveraging the tools and technologies to get benefitted tactically and strategically. Financial domain is also trying to get restructured by adopting the best practices available bringing in the speed, efficiency, effectiveness and accountability to the transactions. Anonymity from auditability perspective seems interesting for using virtual currency.

### India and Crypto currency

Reserve Bank of India (RBI) formally spoke<sup>4</sup> about virtual currencies topic related to regulations an infrastructure of the financial sector in June 2013. They have also touch upon the IT risks and risk management framework. Since the introduction of bitcoin in 2009, the globalized economy is looking at the future of transactions through digital use. But there seems a gap between the operational reality and the promises which digital currency or virtual currency makes. As per RBI, there are different challenges to this like 'The unregulated link between virtual currency, and traditional currency with a legal tender status poses challenges as the complete control over the differently dominated virtual currency is given to its issuer, who governs the scheme and manages the supply of money at will<sup>5</sup>.'

It is evident from the news<sup>6</sup> that in US and UK increased regulations are making crypto-currencies worried. But in Asia it's gaining some progress. In India, it is reported that more people are buying bitcoin using Indian rupees to take advantage of potential changes in prices. The data shows that there have been more than 53,000 download of bitcoin software in last six years. The information on site also says that there are a total of 80,000 bitcoin wallets opened.

In India, RBI has issued a caution statement to users, holders and traders who are using virtual currency about potential financial, operational, and legal, customer protection and security related risks.

Apart from this from the newsbtc.com, bitcoin startups are making progress in India<sup>7</sup>. Bitcoin based ventures like SearchTrade.com by Vishal Gupta and Searchcoin created by him, wants to disrupt the present search industry paradigm. They are looking at replacing it with a more collaborative system.

On the other hand people like William Mougayar who is angel investor are cautioning in crowd-sale practices, that lack of governance and transparency<sup>8</sup> in reporting for bitcoin making it fragile and may become reason of crash. The Mattermark study also shows that more than \$800 has been invested in digital currency which is called as disruptive technology since 2012<sup>9</sup>.

Blockchain technologies everybody is interested in because of potential for high growth. Bitcoin and cryptocurrencies are generating funding for startups.

Even the RaguramRajan, RBI Governor commented upon bitcoins in his interview saying, <sup>10</sup>“I have no doubt that down the line, we will be moving towards a primarily cashless society...and we will have some kinds of currencies like this (bitcoin) which will be at work.” He further added, “I think these virtual currencies will certainly get much better, much safer and over time will be the form of transaction, that’s for sure.” He further added, “I think these virtual currencies will certainly get much better, much safer and over time will be the form of transaction, that’s for sure.”

Startups Zebpay has already came with app-enabled bitcoin mobile wallet and its users now can buy vouchers from Amazon, Flipkart, Freecharge, Bookmyshow and Makemytrip. Interestingly it has also enabled the payment for telecom operators through its offerings. Recently ePaisa, a mobile point-of-sale (POS), started accepting bitcoins.

In India surprisingly its not only limited to e-commerce sites but Dharwad International School in Karnataka introduced bitcoins as an online payment facility for school fee. ETravelSmart is seeing average 5 bitcoin transactions every month. Now a day 1 Bitcoin is equals to approx. 27,500/- Rs. This is a high value for the exchange.

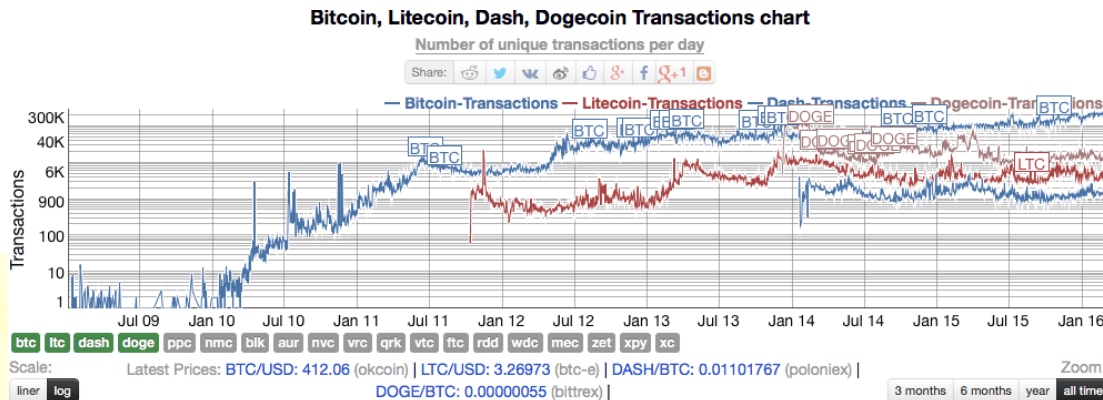
### Research Methodology

Exploratory and qualitative methodology was used to carry out this research. First approach was to look at current resources for the secondary data available about the issue. Secondly through interviews with the people who have experience and don't have experience of using virtual currency, the information was analyzed and validated which is discussed in this paper.

### Discussions

From all the evidences from primary and secondary data, it seems that there are certain promises and challenges offered by virtual currency like Bitcoins and many others. Primarily it is seen that

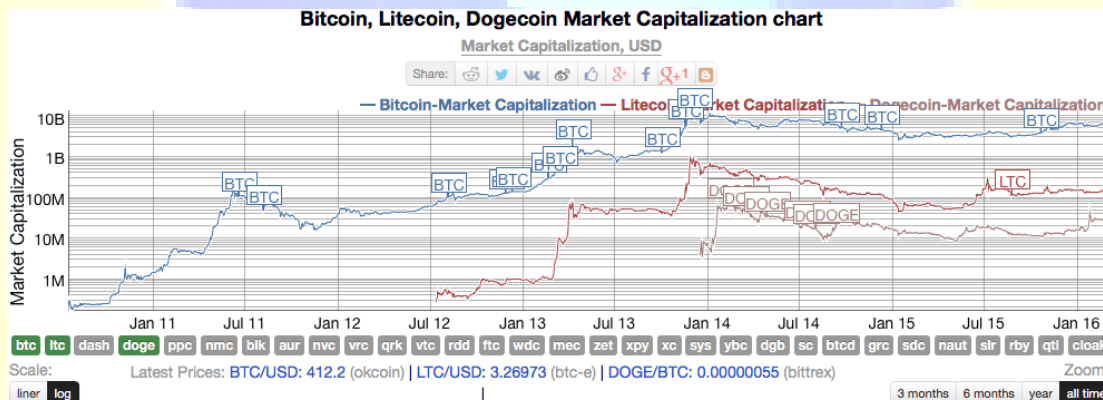
virtual currency is getting space now in the domain of transactions. Since 2009 the number of transactions is increasing.



**Image 2**

Data Source: - <https://bitinfocharts.com/comparison/transactions-btc-ltc-dash-doge.html#log>

Though it is considered as parallel currency, which is illegal as far as Indian acts are concerned, still it's started making its own way to be part of the mainstream economics in India. Market capitalization is increasing day by day in last 5 years. The log plot is showing increasing capitalization.



**Image 3**

Data Source: - <https://bitinfocharts.com/comparison/marketcap-btc-ltc-doge.html#6m>

7 day Simple Moving Average



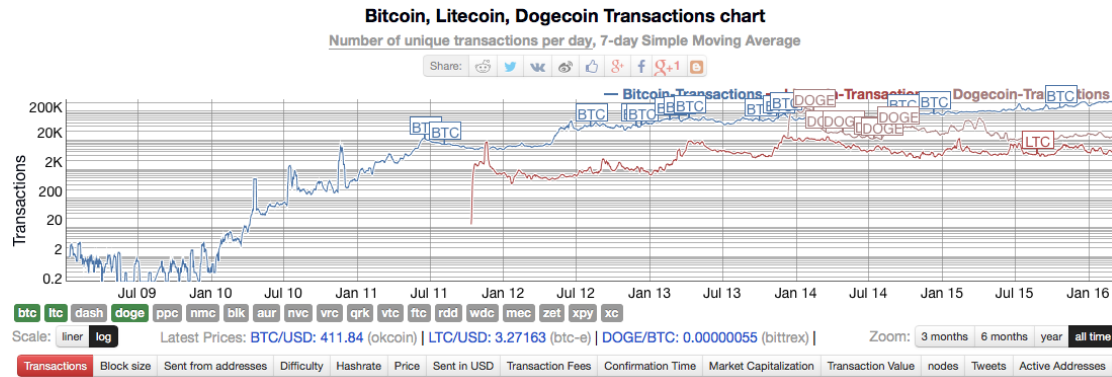


Image 4

Data Source:- <https://bitinfocharts.com/comparison/transactions-btc-ltc-doge-sma7.html#6m>

Governance, regulatory and legal areas are very grey as far as India is concerned. Digital currency like online transfers, wallets are still dominant for the official formal transactions for common users, financial institutions and government operationally.

Taking the representative example of Bitcoin within crypto-currencies, it differs from conventional currencies in some very fundamental ways. Bitcoin uses P2P technology without a central authority. This means that it's without the governance as against conventional currency which is issued by central bank as part of national monetary policy. Though physical bitcoins are available, it's primarily a digital in nature. It is capped at 21 million limits and is a complex product. The interviews show that it has limited acceptance and cannot be used with brick-and-mortar storefronts. Eventually it may make way to the sale front, but it's still not accepted. There seems time limitation for the transaction to confirm which don't exist with conventional currency. As it is digital in nature, if you're hard driving crashes where bitcoins are stored, you loose the amount. So it is not insured.

There are many exchanges like coinsecure, BTCXIndia, Unocoin and LocalBitcoins.com, Zebpay etc. As per the news<sup>11</sup> from Times of India, Zebpay that is Ahmedabad-based startup has raised \$1 million funding to promote bitcoin in India. Apart from all the consequences and environments, virtual currency potential can't be challenged as the news mentions<sup>12</sup> "India has

around 50,000 enthusiasts, with 30,000 of them actually owning the currency”. It also mentions that it is transitioning from trading units to shopping currency.

It is also cautioned that ‘<sup>13</sup>it may be a shortcut to convert or transfer black money, and moreover, it would be a bigger and larger threat to existing currency in India’. The same source also speaks about the losses incurred because of the bankruptcy of the Japan-based Mt Gox – the world’s largest bitcoin exchange and its collapse having very large losses for India.

In this domain, there are different groups of interests like User, Merchants, Developers, Investors, Government and private financial institutes and virtual currency interests are different for each of them. The virtual currency is bringing in speed and also increasing in usages<sup>14</sup>.

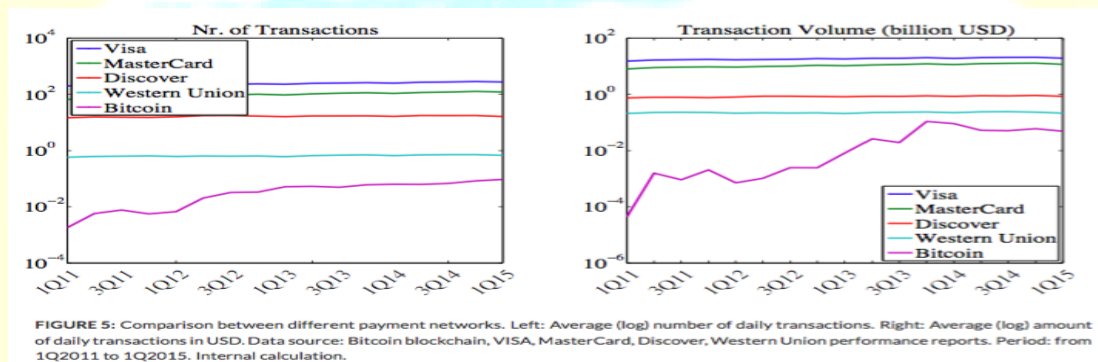


Image 5

## Conclusion

From the data and discussions, it is evident that the potential of virtual currency cannot be ignored. It is slowly making way to the main economics because of startups and Venture Capitalists supporting Bitcoins. Though there is not much of awareness among the citizens about the digital currency/virtual currency other than online transactions awareness. Some of the promises that CEO's and others are observing are more stable, quicker, easy to use replacement for conventional currencies. The data shows both the trends of calling the virtual currency transaction for making fraud and preventing the same. Some of the benefits are mentioned like lower transaction cost/fees, no chargebacks, fraud prevention and quick payments. The dialogue around the legality of the use of virtual currency is still on as a debate, but the authorities in India have started recognizing the block chain technology strengths and use of virtual currency as



efficient and effective way of transactions with the appropriate changes in the frameworks that will enable use of the same. It is also promising non-repudiation. Maintaining the anonymity, the transactions are traceable technically. It is also irreversible once a transaction is made.

Online Banking and other digital currencies are still more trusted than the virtual currencies like Bitcoins. After the losses incurred after Mt Gox collapse, the threats became evident to such virtual currencies. There are inherent promises and threats/challenges of using the virtual currency like anonymity. There has to be substantial changes in the infrastructure and framework from policy perspective to make virtual currency accepted in the economy. There are inherent threats like hacking, crashing digital space, trustworthiness etc.

The feature like Anonymity is defying the objective of auditability of the transactions but the transactions are fully traceable with technical support. With the very basic definition of audit, still the subjectivity matters lot even after the different approaches to have factual evidences for transaction validations. The infrastructure, technology, mindset, social acceptance, economic reform, legal/regulatory requirements are major domains to be studied to understand the short term and long term impacts of the virtual currency.

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<sup>2</sup><https://bitinfocharts.com/comparison/transactions-btc-ltc-doge.html#6m>

<sup>3</sup><http://www.nasdaq.com/article/bitcoin-indias-evolving-stance-on-the-cryptocurrency-cm564389>

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<sup>6</sup> <http://www.indiabitcoin.com/bitcoin-startups-make-progress-in-india-newsbtc/>

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<sup>8</sup> <https://mattermark.com/mattermark-daily-monday-february-9th-2015/>

<sup>9</sup> <http://www.indiabitcoin.com/venture-capitalists-pouring-money-into-bitcoin-benzinga/>

<sup>10</sup> <https://www.youtube.com/watch?v=Tqmc9a12LYo>

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