

The Struggle of Virtual Currencies in India

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EXECUTIVE SUMMARY: Virtual currency or cryptocurrency is a digital currency operating independently of a central bank, in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds.

Virtual currency provides great opportunities and strengths. However, there is a greater focus on its weaknesses. Some of the threats posed by it are integration, cyber security, interoperability, anonymity, governance, regulatory vetting, transaction speed and scalability. Virtual currency is not accepted by a minority of central banks around the world due to its decentralised nature. It faced a similar situation in India.

Government entities like the Reserve Bank of India and Ministry of Finance have repeatedly shown their disapproval for its usage. On April 6th, 2018, the Reserve Bank of India issued a circular declaring that, with immediate effect, entities regulated by it shall not deal in, or provide services for facilitating any entity or person in dealing with or settling virtual currencies. However, on March 4th, 2020, this circular was set aside by the Supreme Court on the grounds of ‘proportionality’

As media has great influence over the opinions and thought process of the public, news articles have been used to conduct a historical review to observe the chronology of cryptocurrency in India.

The research objectives formulated are to study the various factors which affect the adoption of cryptocurrency in India and to assess the knowledge of cryptocurrency amongst the general population in India. Primary data is gathered using survey as a research instrument for descriptive research. This survey consists of a qualitative questionnaire with multiple choice questions. On analysis, the data revealed that most people do not possess sufficient knowledge of cryptocurrency.

The research is concluded by the view that a legal and regulatory framework needs to be formed as putting a ‘ban’ on such progressive technology would not work. Also, regulatory bodies should take the initiative to spread awareness of cryptocurrency amongst the general public to familiarize them with the threats it poses.

I. INTRODUCTION

The world of money and finance is transforming before our eyes. Digitalised assets and innovative financial channels, instruments and systems are creating new paradigms for financial transaction and forging alternative conduits of capital. (Hileman & Rauchs)

A similar paradigm is the rise of different cryptocurrencies and their increasing acceptance throughout the world. Cryptocurrency is a digital currency operating independently of a central bank, in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds. (Cryptocurrency)

Some of the ‘trending’ cryptocurrencies as of 2020 are as follows:

Table 1.1: Popular Cryptocurrencies in India

Name of Cryptocurrency	Symbol	Current Price (₹)
Bitcoin	BTC	688,412.92
Ethereum	ETH	17,704.75
Tether	USDT	74.98
Ripple	XRP	15.05
Bitcoin Cash	BCH	16,885.77
Litecoin	LTC	3,198.75
EOS	EOS	187.78
Monero	XMR	5,113.05

Due to its decentralized nature, virtual currency is not accepted by central banks of certain countries. It has many compelling features such as its accessibility, peer-to-peer focus, user autonomy, elimination of banking fee, low transaction costs etc. Yet, a number of countries are not prepared to accept and adapt to these features yet. It faced a similar backlash by the Indian Government.

II. RESEARCH OBJECTIVES

- To study the various factors which affect the adoption of cryptocurrency in India.
- To assess the existing knowledge or awareness of cryptocurrency amongst the general population in India.

III. RISKS AND CHALLENGES

The focus on the threats posed by virtual currency is higher than that on its strengths and opportunities. Keeping this in mind, the threats have been elaborated below:

3.1 Technological Risks and Challenges

- Interoperability:

If the technology is to be introduced at scale into the financial systems, interoperability amongst its different versions is a major requirement.

- Cyber security:

Network security solely depends on the nature of the technology. There is a possibility of networks being compromised if a malicious agent takes over 51% of the nodes on the network. Unless encrypted strongly, the technology does not ensure security of the account or wallet.

- Transaction Speed and Scalability:

Current versions of blockchains face challenges with respect to scalability both in terms of transaction volume and speed of validation. In the current setup, also known as 'permission-less' setup, a particular amount of time is required to validate transactions and to propagate through the network. The blockchains with the existing setup have limited transaction speed.

- Integration:

The cost of integration of this technology into the financial infrastructure is exceptionally high and would require industry-wise collaboration and coordination, which is tough to achieve.

3.2 Regulatory and Legal Risks

- Anonymity:

Public key encryptions are used to hide the identity of members in the network. This is not compliant with Combating the Financing of Terrorism and the Anti-Money Laundering requirements.

- Governance:

Financial sector regulators are modulated by a central entity. The absence of a centralisation in cryptocurrencies is a major area of concern for the RBI. Due to this feature, there are legal concerns in regard to cross border transactions.

- Regulatory vetting:

The upcoming technology is at a developmental stage. There is no existing regulatory framework for it and creating one would be a strenuous process.

IV. BATTLE WITH THE GOVERNMENT

In the (Financial Stability Report) of June 2013, it was identified that the use of online and mobile technologies has been driving the proliferation of virtual currencies, virtual banks and

provision of payment and banking services by unlicensed entities. RBI discerned that these developments pose challenges in the form of regulatory, legal and operational risks. It was further announced that the regulators were studying the impact of online payment options and virtual currencies in order to determine potential risks associated with them.

Since the emergence of crypto-assets in India, RBI has repeatedly shown its dislike for cryptocurrency. The first press release titled (RBI cautions users of Virtual Currencies against Risks) was issued on December 24th, 2013 stating that the creation, trading or usage of virtual currencies as a medium for payment is not authorised by any central bank or monetary authority. It cautioned its users, traders and holders about the potential financial, operational, legal, customer protection and security related risks they will be exposing themselves to.

A second press release, sharing the same title was issued on February 1st, 2017 stating that the RBI has not given any licence/ authorisation to any entity/ company to operate such schemes or deal with any virtual currency and any user, trader, holder, investor, etc. dealing with the same will be doing so at their own risk. (Press Release: 2016-17/2054)

Another press release was issued on December 5th, 2017 reiterating concerns conveyed in the previous press releases in the wake of rapid growth in Initial Coin Offerings and significant spurt in the valuation of various virtual currencies. (Press Release: 2017-2018/1530)

The (Budget 2018-19) clearly stated that the Government does not consider cryptocurrencies coin or legal tender, and will take all possible measures to eliminate the use of these crypto-assets in financing illegitimate activities as well as a part of the payment system. It also mentioned that Government would explore the use of 'blockchain' technology proactively for ushering in the digital economy.

The (Statement on Developmental and Regulatory Policies) acknowledged the potential of these technological advancements to improve the efficiency and inclusiveness of the financial system but also noted the concerns of consumer protection, market integrity and money laundering, among others, raised by the same. In view of these associated risks, RBI decided on 'ring-fencing' regulated entities from virtual currencies.

This was followed by a formal circular dated 06-04-2018, declaring that, with immediate effect, entities regulated by the Reserve Bank of

India shall not deal in, or provide services for facilitating any entity or person in dealing with or settling virtual currencies. It mentioned the list of prohibited services, clarifying that regulated entities which already provide such services shall exit the relationship within the next three months. (RBI/2017-18/154)

Chapter 6 of the (Report of the Committee to propose specific actions to be taken in relation to Virtual Currencies, 2019) contains ‘Banning of Cryptocurrency & Regulation of Official Digital Currency Bill, 2019’ submitted by the Inter-Ministerial Committee. This draft bill is aimed to predominantly ban the operations of cryptocurrencies in India.

In the (Fifth Bi-Monthly Monetary Policy Press Conference, 2019), the Governor of the RBI said ‘RBI is very clearly against any kind of private digital currency’. He elucidated that currency issuance is a sovereign function and thus, it has to be done by the sovereign itself. ‘A private currency cannot overwrite what is in the sovereign domain’, he added.

On March 4th, 2020, the Circular dated 06-04-2018 was set aside on the grounds of

‘proportionality’. (Writ Petition (Civil) No.528 of 2018)

The advocates of virtual currencies may have won a battle but there is still a war ahead. These crypto-assets are yet to gain a legal status. There are debates about whether the technology would be identified as a good, service or a currency. On the basis of this identification, the entire legal framework for the usage of this technology will be formed. It is surely a prolonged process. A common presumption is that a ban will be imposed on virtual currencies due to the tiresome and lengthy procedure of its adaptability.

V. LITERATURE REVIEW

Various news articles have been used to conduct a historical review to observe the chronology of cryptocurrency in India.

The reason being, media has great influence over the opinions and thought process of the public. These articles also provide a brief insight on what some of the traders, investors, CEO’s of crypto based startups endured, and how a simple circular issued by RBI impacted their livelihoods.

Journal	Author	Title	Methodology Used	Findings
Forbes	(Kashyap, 2016)	India's Demonetization Is Causing Bitcoin To Surge Inside The Country	Secondary data collected through industry experts.	Trade volume of Bitcoin substantially increased after demonetisation, government suspects money laundering.
Economic Times	(Variyar, 2017)	Digital startups get together to engage better with policymakers	Secondary qualitative data collected through CEO’s of cryptocurrency startups.	Digital startups uniting to ensure policymakers hear them and to counter pushback from established incumbents.
Forbes	(Balaji, 2017)	On Bitcoin, India's Government And Tech Companies Find Common Ground	Secondary qualitative data collected through interviews of industry experts.	Steps are being taken to keep Bitcoin platform secure and address concerns over risks.
Economic Times	(Dave, 2018)	Bitcoin Exchanges seeking clarity over levy of GST	Secondary qualitative data collected through India’s top 7 Bitcoin exchanges.	Tax rate levied on Bitcoin depends on its classification as either a currency, good or service.
Economic Times	(Dave & Shukla, 2018)	Cryptocurrency exchanges look to shift base abroad	Secondary data collected through CEO’s of cryptocurrency exchanges.	Exchanges strategize to sustain business after RBI’s ban on services related to cryptocurrency.

The Hindu Business Line	(Pani, 2019)	RBI shelves plan to launch digital currency	Observation used as a primary source of data.	Overestimation of resources and feasibility by RBI to launch own cryptocurrency.
Economic Times	(Krishnan & Chandrashekar, 2019)	Facebook may abort Libra launch in India	Secondary data collected through interview of a Facebook representative.	Facebook has not filed an application with RBI to launch its cryptocurrency.
Economic Times	(Abraham, 2019)	The toss of a Bitcoin: How crypto ban will hurt 5 mn Indians, 20K Blockchain developers	Secondary data collected through industry experts.	Impact of 'Banning of Cryptocurrency and Regulation of Official Digital Currency Bill 2019' draft
Economic Times	(Purohit, 2020)	Coronavirus: Impact on Bitcoin and its future	Secondary data collected through interview with Sankalp Shangari.	High correlation between Bitcoin and equities market since coronavirus outbreak
Facebook	(David Marcus, 2020)	Welcome to Novi	Primary source of data – Organisational Record.	Facebook renamed its digital wallet from Calibra to 'Novi'.
Economic Times	(Sikarwar, 2020)	With a law, India plans lasting ban on cryptos	Secondary data sources such as government websites were used.	The ban on cryptocurrencies may be re-imposed by government.
Livemint	(Baruah, 2020)	Cryptocurrency startups continue to expand in India despite uncertain future	Secondary qualitative data collected through CEO's of cryptocurrency startups,	CEO's of various startups gave their insights on future of cryptocurrencies.
The Hindu	(Surabhi, 2020)	Amidst Covid Lockdown, Cryptocurrency Trading sees a boom	Secondary quantitative data collected through cryptocurrency exchanges.	Robust trading volumes of cryptocurrency were observed amidst lockdown.

VI. RESEARCH GAP

There is a big methodological gap in the reviewed literature. Most studies have focused on the existing views of Reserve Bank of India and the Finance Ministry, and it is clear that there views lie against the use of cryptocurrencies in India. However, little work has been done on the future of cryptocurrency in India and the public's knowledge about the various threats it consists of. As a result, no clear model has been laid out to combine these aspect and thus address the specific needs of the government to come up with laws that govern the use of cryptocurrency and to further educate the public about its security in a proper insightful way.

VII. RESEARCH METHODOLOGY

To perform descriptive research, a survey has been used as a research instrument as a means to gather primary data. The survey in form of an online questionnaire helped in analysing the consumer knowledge of cryptocurrencies. The

research was conducted by a qualitative survey in the form of a multiple-choice questionnaire to collect data from the appropriately selected sample. The questionnaire consists of a well-defined set of questions. Most of these questions were polar questions.

Responses are recorded from the survey to draw required interpretation and concluding the results to achieve the research objective. The target audience was selected conveniently, irrespective of age and gender. Survey was conducted by taking responses from 220 people. Exponential Non-Discriminative Snowballing technique of sampling has been used to gather enough number of subjects for the sample. The qualitative data gathered by the subjects has then been converted into quantitative data for further analysis. This step was essential as it is a prerequisite for descriptive research.

VIII. DATA ANALYSIS AND INTERPRETATION

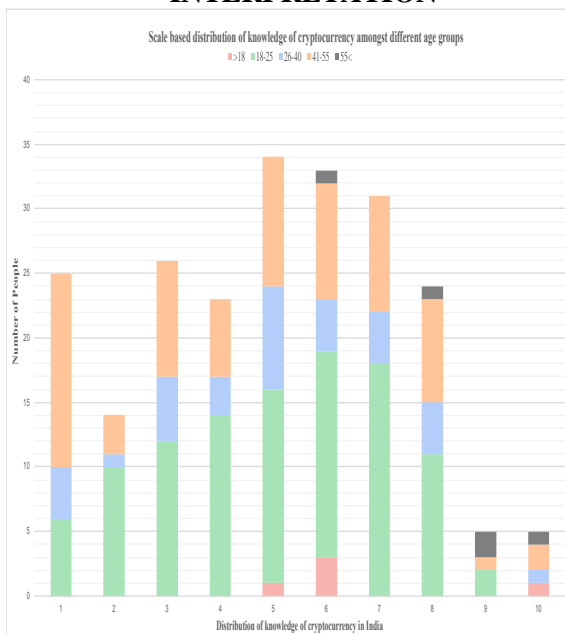


Figure 8.1: Bar Representation of Knowledge of Cryptocurrency

The respondents were asked to rate their knowledge of cryptocurrency on a numerical scale of 1 to 10, 1 indicating 'I've never heard of the topic' and 10 indicating 'I'm an expert at the topic'. The average (mean) answer was approximately 5.

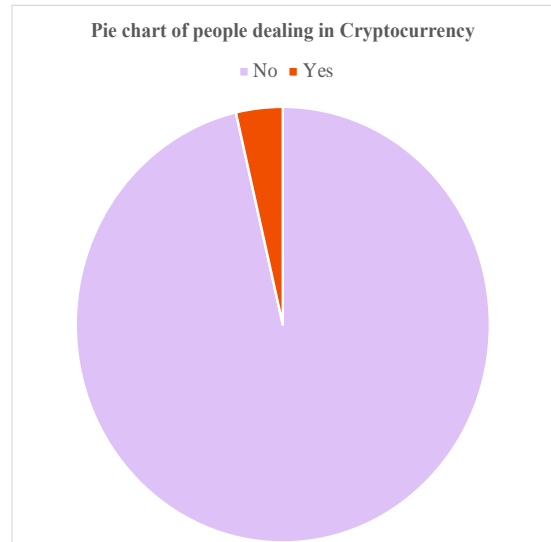


Figure 8.2: Pie Representation of People dealing in Cryptocurrency

The pie chart is the representation of the responses on the fourth question 'Do you deal in cryptocurrencies?'. From the chart, it was observed that only 3.64% of the people, i.e. 8 respondents actually dealt in cryptocurrencies.

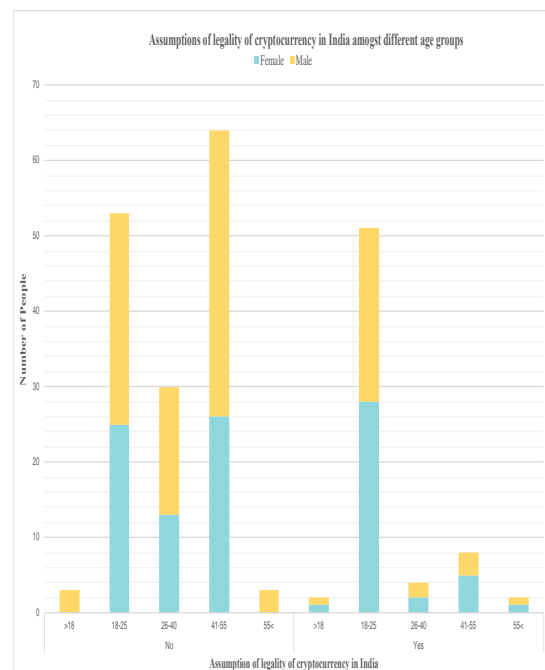


Figure 8.3: Bar Representation of Assumption of Legality of Cryptocurrency in India

These are responses to the fifth question 'Do you think cryptocurrency is legal in India?'. Out of 220 respondents, 153 answered 'No' and 67 answered 'Yes'.

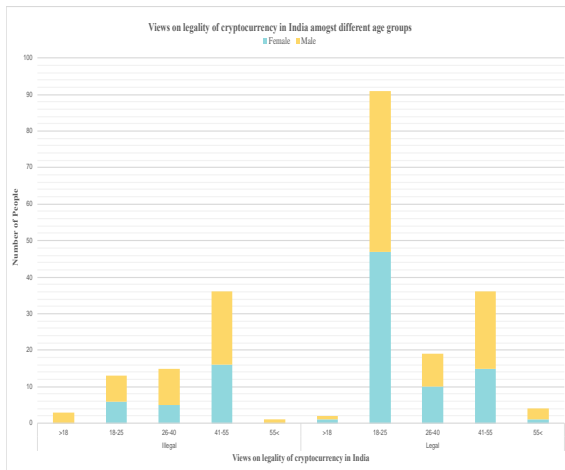


Figure 8.4: Bar Representation of Views on Legality of Cryptocurrency

The graph represents the answers to the sixth question ‘According to you, should cryptocurrencies be legal or illegal in India?’. Out of 220, 68 people answered that cryptocurrency should be ‘Illegal’ and the remaining 152 answered ‘Legal’.

Table 8.1: Comparison of Estimated Knowledge with Actual Knowledge

Age Group	No. of Respondents	Average answer to Q1	No. of correct responses to Q5	Percentage of correct answers to Q5
Below 18	5	6.6	2	40
18-25	104	5.0096154	51	49.0384615
26-40	34	4.9117647	4	11.7647059
41-55	72	4.6111111	8	11.1111111
Above 55	5	8.4	2	40

The table shows how the estimated amount of knowledge as per the subjects in the first question differs greatly from their actual knowledge about cryptocurrency. The third column is the average estimation of knowledge as per the respondents. The fifth row depicts actual knowledge of subjects, based on the correct responses to the fifth question.

IX. DISCUSSION AND FINDINGS

- i. There is moderate awareness about cryptocurrency amongst the residents of India. On a scale of 1 to 10, the average answer is ‘5’, indicating that there is awareness about cryptocurrency, but not as much as there should be.
- ii. A huge part of the public is not certain of the legality of cryptocurrency in India. This is comprehensible due to the circular previously issued by RBI and recently set aside by the Supreme Court of India.
- iii. A majority of the sample opines that cryptocurrency should be legal in India. It is observed that all of the people that responded ‘Yes’ and more than half of the people who responded ‘No’ for the legality of cryptocurrency in India shared the view that it should be legal.

- iv. About 3.64% of the sample deals in cryptocurrency. This shows that many people, despite having the required knowledge, choose not to trade in virtual currency. This may be due to the uncertainty of its legality in India.
- v. The age group of ‘Above 55’ highly overestimate their knowledge about cryptocurrency. The most awareness of the same was observed in the age group of 18-25.
- vi. There is a Population Gap in the analyzed data as most of the responses were received by the age group 18-25. Most of the age groups are under-researched.

X. CONCLUSION

Cryptocurrency is an evolving technology. It may pose various risks but it also provides a number of opportunities. India being one of the fastest developing economies of the world should not ignore, but keep pace with such advancements. There is a need for a tactful solution for the presence of progressive technologies such as virtual currencies in the country. The regulators need to develop a consistent approach to address the challenges it poses.

The literature review displays a tabular timeline of cryptocurrency in India. It shows that despite the warnings regarding the security and unacceptance of digital currencies such as Bitcoin,

there was a observable rise in its trade volume, especially after demonetisation. Even after RBI's attempt to put a 'ban' on cryptocurrency related services provided by its regulated entities, many traders simply turned to overseas platforms to continue participating in crypto transactions. One may argue that there are indications of virtual currencies being used for illicit activities. I believe that's more of a reason for the government to devise an appropriate legal framework for the same, else its illicit activities will proliferate.

It has clearly been observed that the public does not have enough knowledge and awareness about cryptocurrency. As the process of forming and implementing new laws is lengthy and prolonged, it is highly important that in the meantime, regulatory bodies should take an initiative to spread awareness and educate the public about cryptocurrency.

India may benefit greatly by tapping into the potential of this technology. Such an opportunity should not be allowed to pass by.

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APPENDIX

The following questions were given in the questionnaire from which the sample has been obtained:

- 1) On a scale of 1-10, how much do you know about cryptocurrencies?
- 2) What age group are you a part of?
- 3) What is your gender?
- 4) Do you deal in cryptocurrencies?
- 5) Do you think Cryptocurrencies are legal in India?
- 6) According to you, should cryptocurrencies be legal or illegal in India?
- 7) If you wish to elaborate on the previous question:
(Optional-Paragraph form)
- 8) According to you, what are the security threats that cryptocurrencies face?
(Optional-Paragraph form)



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