

# CRYPTOCURRENCY: ACCEPTANCE AS A MODE OF PAYMENT IN INDIA

**Atul Kumar Sharma,**

Research Scholar,  
Institute of Banking Economics and Finance,  
Bundelkhand University,  
Jhansi (U.P)

**Dr.Vinit Kumar,**

Assistant Professor,  
Department of Economics,  
Constituent Government Degree College  
(GDC),Richha, Bareilly (U.P.)

## ABSTRACT

Cryptocurrency is a new innovation in field of virtual currency. This Study aims at look public acceptance of cryptocurrency in Jhansi and the influencing factors using the statistics. The design of this research study is casual and descriptive with an sample size of 150 people who have used cryptocurrency for any purpose that may be as a mode of payment or investment. Snowball sampling technique is used for data collection. Data is collected via questionnaires. The result showed that Price Stability, Financial Awareness, Technological knowhow, Cyber security, and Regulatory Framework has significant influence on intention to use .The research concluded that to increase public acceptance of cryptocurrency would require attention on following factors.

**Keywords:** Price Stability, Financial Awareness, Technological knowhow, Cyber security, and Regulatory Framework

## INTRODUCTION

With the dawn of the era of the modernization India has made world feel it's aroma of digitization. Today every sector from primary education to large-scale international project all are playing on the axis of digitization. Whole world is changing on the verse of digitization and making every aspect of life digitized at ought most level. Banking system has also been affected by it in large scale and among all the services provided by government payment system has changed the most today we don't have to go to the bank for everyday needs we can use our mobile or PC for doing the same without any wastage of time in going bank and waiting in queue. With all of achievements we have came through the most innovative and possibly the most revolutionizing form of digitization is cryptocurrency. Cryptocurrency is used for both investment as well

as payment purpose first cryptocurrency released in open source software in 2009 [1]. Till today toward of such crypto coins are released the latest is Curie Dao, Multiplier [2] etc. But due to some issue is it has become a subject of doubt for being a trustworthy as the mode of exchange.

In this research we will go through the replicability of fiatcurrencies by crypto currencies as a mode of payment in India. This study will be based upon the regulatory possibilities, volatility and public acceptance. The data collection and analysis will help in drawing a relevant conclusion.

## LITERATURE REVIEW

Cryptocurrency is an impressive technical advancement in field of digitization. It has a wide scope of applicability and very less in their hands by any third party. But due to non governance

attributes, its resulting aspect is under wale making it a very unpredictable form of currency

- 1) According to Greenwood Peter Evan, cryptocurrency is a currency operating in virtual world where operational research is highly connected because of absence of any physical presence and established governance. it is like a unfortified castle with gems inside it which could be attacked openly from dark corners of the internet [3].
- 2) Madeline Gartz and Linderbrandt said that a tradition to cryptocurrency is associated with both advantages and disadvantages. The infrastructure behind Bitcoins creates a possibility to process certain payment more time and cost effectively and simultaneously provide open and decentralized participation as well as increased their integrity it also has disadvantages as it is in vulnerable to cyber attack next line cryptocurrency has recently demonstrated impressive growth dynamics but this is due to the rapidly growing public interest in cryptocurrency, which provokes demand in market while limiting supplies. The peak of the excess demand has probably already been achieved or will be achieved shortly. Next, we should accept stabilization of dynamics. Therefore after inevitable decrease in exchange rate come there volatility corporate will fall [4].
- 3) Jaysing Bhosle and Susil Mavale stated that with advent of blockchain and cryptocurrency being a new and renewable energy as it is predicting the file 5 year projected value of cryptocurrency numerous factor to be considered cryptocurrency is an impressive technical advancement in field of digitization. It has a wide scope of applicability and very less in their hands by any third party. But due to non governance attributes, its resulting aspect is under wale making it a veryunpredictable form of currency[5]

- 4) Jaysing Bhosle and Susil Mavale cryptocurrency is a digital or virtual currency that uses cryptography for security. Deposit recent issue in cryptocurrency is common between success and its growing visibility since its launch has resulted in a number of companies on winning alternative to two currencies.[6]
- 5) Eldorado and Jeri britto have tried to present a new perspective of weaving various aspects and about political economic and governance cryptocurrency according to him cryptocurrency is an impressive technical achievement[7]

## NEED OF STUDY

As the whole world is changing rapidly technology is also changing its look. There for technical Outlook must be changed with the passage of the time .Our world has came through a new form of currency which is fully based upon the modern technology such that digitization. In recent days digitization of payment system was got a breakthrough various apps are used for transaction where there is no need of going to bank and one can transit at home only by some clicks The main advantage of such modernization is security and ease of use we came through a new form of digitization in form of Cryptocurrency these are fully digital currency which does not have any physical form making it a very high positive form of currency ask Cryptocurrency is making its way forward toward modernization it is facing elevation of being an illegal form of currency because of non presence of any base behind it many countries are hasting in accepting Cryptocurrency as a form of payment .India is one of them, so proposed study will attempt to fulfill all the application and need of an integrated study and address the issue with the broad and widespread Framework here we will try to find out the regulatory aspects of the Cryptocurrency affecting its acceptability it will try to address fact about acceptability of Cryptocurrency .

## AIM OF RESEARCH

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Various studies have been done about acceptancy of Cryptocurrency as a mode of payment but since India is a developing country which could not afford any hurdle in its growth. There is need of a research which could explain the acceptance of Cryptocurrency in India because it is economically, and culturally a very diverse country. The research should aim to advancing the same question by various possible approaches research aimed toward studying Cryptocurrency to aspects such as regulatory, volatility and public acceptance. This research would aim toward finding out that weather people of India could accept Cryptocurrency or not. Here we would try to find out regulatory applicability of it in India .Since India is a middle class majority country so here we will find out wheatear it will be financially sound to use a virtual currency which does not have any base under it.

## RESEARCH OBJECTIVE

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The study focuses on study acceptability of Cryptocurrency in India this is accomplished through following objectives

- 1) Studying whether non presence of rules and regulation is affecting rise of cryptocurrency
- 2) Comparing volatility of Cryptocurrency with other form of investment
- 3) Public acceptance factor analysis
- 4) Analyzing various factors to conclude acceptance for India
- 5) Whether Cryptocurrency could be more efficiently replace fiat currency

## SIGNIFICANCE OF STUDY

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Current scenario of acceptance of Cryptocurrency in India is showing that legislature and Judiciary have diverse opinion about Cryptocurrency but since neither of them can be questioned about their ethics behind their decision which is definitely Nationalism, this is clear that many countries have also tried to expel Cryptocurrency but due to lack of control they

had to afterwards start thinking of regulating it so by this study we could understand about various hurdles in path of Cryptocurrency in grassroots level.

## SCOPES OF STUDY

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The study will focus on detecting possibility of replacing fiat currency by Cryptocurrency with the help of three aspect i.e. regulations related to Cryptocurrency pricing of Cryptocurrency public acceptance of new mode of payment this will help us understand the problems arise in field of regulations economy at Grass root level its shows how various factors like financial, technical and legislature influence new mode of payment and try to formulate a model of accepting Cryptocurrency. The research was conducted in a very wide scope because people dealing in cryptocurrency is very less. Some cities like Allahabad, Jhansi, Orai and Kanpur are surveyed, considering that these cities are the center of economic activity which are also centre of banking activities in in uttar Pradesh region. This type of research is explanatory research were conducted to examine the effect of the variables were hypothesized before and using the structural equation model that aims to test the measurement model and structural models by using a questionnaire and the data are cross-sectional data.

## RESEARCH METHODOLOGY

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This research is exploratory and descriptive in nature. This research is divided among three phases which are as follows:-

- 1) Regulatory Model
- 2) Price stability Model
- 3) Public acceptance Model

## REGULATORY MODEL

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This model will focus on regulatory aspects of Cryptocurrency it will concentrates on ability of Crypto currency to be regulated for this move

people will with intellect enough to understand regulatory aspects of fiat currency or investment mode will be taken into consideration Data Collection is done through people of such background to understand and give suggestions about regulations about the Cryptocurrency such as teachers from commerce, management and economics background, personnel at significant positions in bank and students of Commerce ,Management and economics .They were asked to answer some questionnaires and result was concluded. This model is further divided into two factors which are as follows:-

## REGULATORY FRAMEWORK

Although technical standards and self-regulation by the financial intermediaries are important, the law is an essential regulatory mechanism that is largely missing. Regulations are used as a mechanism to set and compel compliance with technical and industry standards, thus building trust, catering to public interest concerns and legitimising the regulatory process. Using innovation like cryptocurrency has a wide issue of not having a regulatory framework. However it has been argued that cryptocurrency is a secure technology which is secured by blockchain technology. This paper would try to estimate the effect of regulatory framework for acceptance of cryptocurrency.

## CYBER SECURITY

Cyber security is protecting computers, servers, electronic devices, networks, and data from harmful attacks. It's also known as information technology security or electronic information security. The term applies in a variety of contexts, from business to mobile computing, and can be divided into a few common categories. This issue of protecting internet based devices from hacking and different viruses has arisen in various countries due to rapid increase use of internet in everyday life. This attack has cost millions of rupees and secret data rendering an insecure electronic environment. Cyber security Therefore plays a very important role in acceptance of a

innovation .Acceptance of crypto currency is a new innovation and involve money along with it so a question will always be asked about its security because it fully works upon internet

## PRICE STABILITY MODEL

In this model we will try to concentrate on price fluctuation of Crypto currency. Here we will study the magnitude of the change in price of the Crypto currency and also compare that magnitude with that of other form of currency as mode of the exchange such as gold dollar rupees etc. we will use secondary data from the website to collect the data and calculate range of acceptable level of fluctuation for any currency and apply it to reliability of Crypto currency

The closing price of major Crypto currency and other traditional currencies are to be taken and compared for a definite time period .The secondary data collected for analysis purpose was selected from Coin desk website. This model is further divided into two factors which are as follows:-

## PRICE STABILITY

Price stability is a state when there is very minor or no change in the price of a given subject item over sometime. Since India is highly saturated with middle class people therefore using cryptocurrency will be effected. People will tangle their hard earned income in those assets which are more or less stable so as to secure their savings. Price plays a major role in the world of currency. Currency value determines the purchasing power of the holder. Therefore the price of a mode of exchange such as currency value must be less fluctuating. If a something has very fluctuating value then it cannot be used as a mode of payment. In this research, we would try to study the effect of price stability on intention to use crypto currency as a mode of payment.

## ACCEPTABILITY

Intention to use a cryptocurrency largely depends upon the above discussed factor. There are many

researches are already been conducted for acceptability of cryptocurrency which have already given various factors which are important for acceptability of cryptocurrency. But when we talk about India the conditions are different. In this research we have considered many such type of factor considering the ground condition of India. In case of India price stability will be a important factor for acceptability of cryptocurrency.

## PUBLIC ACCEPTANCE MODEL

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To find out acceptability of constituency by mass of India the question is that can Cryptocurrency takes place take place of regular currency to get into deep in this research model named as T.A.M technology acceptance model is applied which was formed by Davis 1989 [8] theoretical assumptions in T.A.M Framework is that the variable behavioral intention to adopt new information technology is determined by two main factor perceived usefulness and perceived ease of use present study examines the relationship between perceived usefulness is of use and their influence on intention of adapting Cryptocurrency

Here various attributes to accept Cryptocurrency as a mode of payment are to be taken from various studies already have been done and than those attributes will be tested for research population

## FINANCIAL AWARENESS

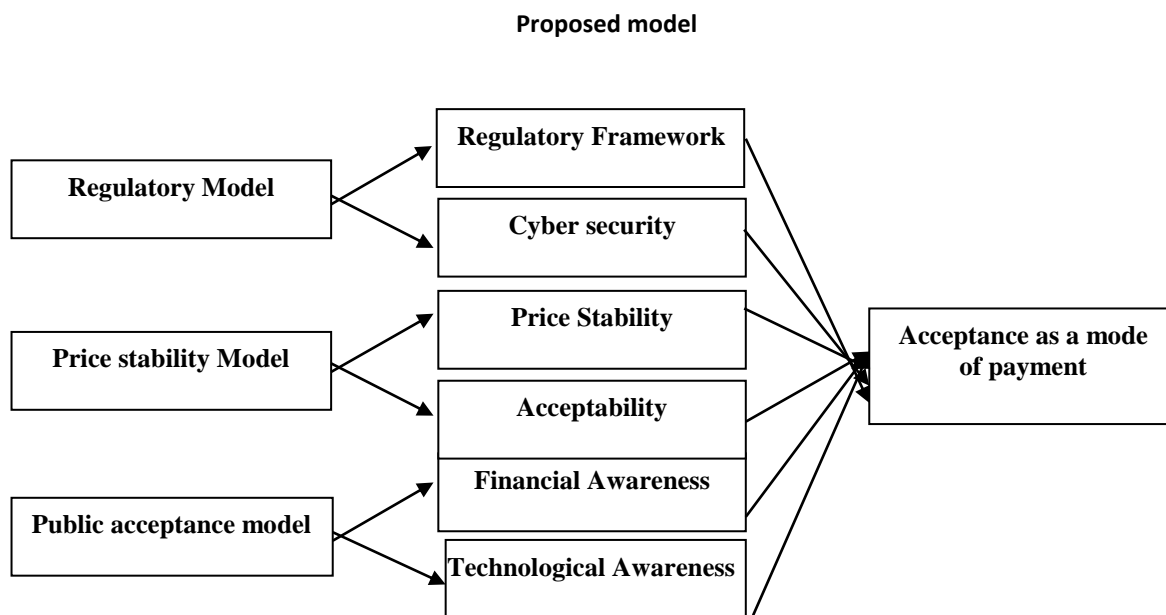
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Financial literacy indicates the ability to understand and be able to apply different financial skills effectively, including personal financial management and saving .Useing a new money-related service is widely depends upon the financial awareness of the public to use it. Cryptocurrency is very known to be a very speculative and mistic form of currency that is why a person having sufficient basic knowledge about the financial system could use it more securely. In Indian point of view financial awareness will be a more deciding factor for it.

## TECHNOLOGICAL AWARENESS

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It consists of one's ability to recognize and understand the usefulness of any such technology for successful use. We can take the example of Paytm, which is very user-friendly but those who do not know to use are unable to take its advantages. In the same way, a cryptocurrency is a form of currency that can be used only with the help of a Smartphone and the internet. There for intention to use cryptocurrency would widely depend upon the technological know-how of subjected people. Technological factor play a major role in acceptance of every new technology. In India people are enough developed to be technological aware but since a significant portion of population is still illiterate according to censuses it will be a more stagnant condition.



## DATA TYPE

This research will require primary as well as secondary data from various sources.. To know various aspect crucial for accepting the Cryptocurrency as new form currency of payment for this following data collection techniques were used:-

1. Primary
  - a) interview
  - b) Questionnaire
  - c) Data Collection tabulation analysis
2. Secondary
  - a) Journals
  - b) Websites
  - c) Books
  - d) Social Media

## SAMPLE SIZE

The research is conducted among 150 respondents who have maximum of knowledge about digital

banking, cryptocurrency. It has been found that the number of people having knowledge about crypto currency is quite low there for survey is conducted among elite class of the people who are working in bank, Share market. Those people are also included in this survey who has invested their money in crypto currency.

## HYPOTHESIS

H<sub>0</sub>: β=0: Acceptance factors will not have any affect use of crypto currency as a mode of payment in India.

H<sub>1</sub>: β≠0: Acceptance factors will have affect use of crypto currency as a mode of payment in India.

## DATA ANALYSIS

150 respondents are reached and data is collected primarily with the help of questionnaire and following data is found.

Table 1 Socio-demographic data of the Respondent

Categories	Number	Percentage
Gender		
Male	111	74
Female	39	26
Age		
20-30	57	38
30-40	69	46
40-50	18	12
50-60	6	4
Education		
Masters and above	96	64
Graduate	48	32
Intermediate	6	4
High School	0	0
Occupation		
Government job	81	54
Private Job	15	10
Business	36	24
Labor	0	0
House wife	18	12

*Source: Primary Data*

Table 2: Showing responses of the respondent

S/N	Questions	Frequency			Percentage		
		Yes	No	Maybe	Yes	No	Maybe
1	Does price change of cryptocurrecny would allow public of India to accept cryptocurrecny as a mode of payment.	98	22	30	65.33	14.67	20
2	Does financial awareness in India would allow the acceptance of cryptocurrecny as a mode of payment?	81	34	35	54	22.67	23.33
3	Does technological awareness in India would hamper the use of cryptocurrecny as a mode of payment in India.	104	14	32	69.33	8.67	22
4	Does Cyber security in India would be the major setback for the use of cryptocurrecny as a mode of payment in India.	107	12	31	71.33	8	20.67
5	Does Regulatory Framework in India is ready for the use of cryptocurrecny as a mode of payment in India?	64	68	18	42.67	45.33	12
6	Can a large population accept cryptocurrency a as mode of payment	98	18	34	65.33	12	22.67

Source: Primary Data



Table 3: Contingency Table

Frequency				Total
S/N	Yes	No	Maybe	
1	98(92)	22(28)	30(30)	150
2	81(92)	34(28)	35(30)	150
3	104(92)	14(28)	32(30)	150
4	107(92)	12(28)	31(30)	150
5	64(92)	68(28)	18(30)	150
6	98(92)	18(28)	34(30)	150
Total	552	168	180(30)	900

Table 4: Calculation of Chi square test

Row and Column	<i>Fe</i>	<i>Fo</i>	<i>Fo - Fe</i>	$(Fo - Fe)^2$	$\frac{(Fo - Fe)^2}{Fe}$
RIC1	92	98	6	36	0.39130435
R1C2	28	22	-6	36	1.28571429
R1C3	30	30	0	0	0
R2C1	92	81	-11	121	1.31521739
R2C2	28	34	6	36	1.28571429
R2C3	30	35	5	25	0.83333333
R3C1	92	104	12	144	1.5652739
R3C2	28	14	-14	196	7
R3C3	30	32	2	4	0.13333333
R4C1	92	107	15	225	2.44565217
R4C2	28	12	-16	256	9.14285714
R4C3	30	31	1	1	0.03333333
R5C1	92	64	-28	784	8.52173913
R5C2	28	68	40	1600	57.1428571
R5C3	30	18	-12	144	4.8
R6C1	92	98	6	36	0.39130435
R6C2	28	18	-10	100	3.57142857
R6C3	30	34	4	16	0.53333333
	900	900	0	0	100.39234

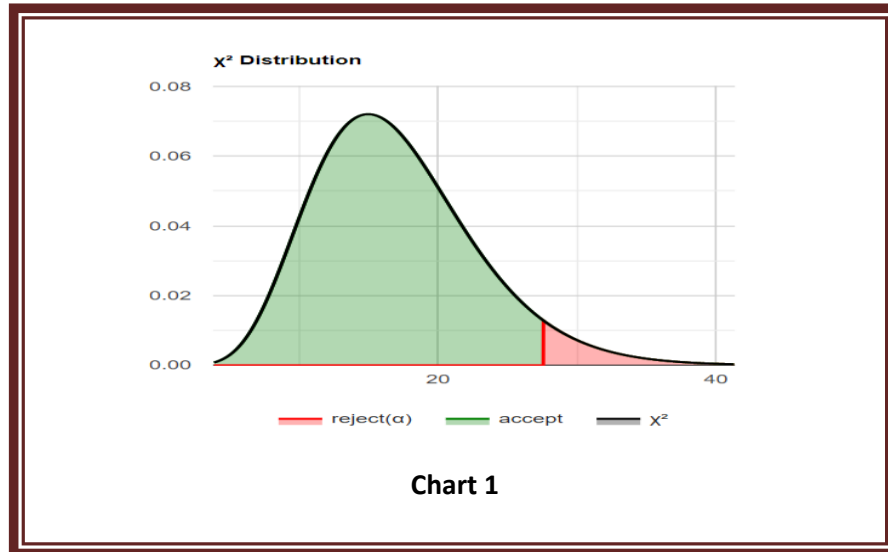
Since  $p\text{-value} < \alpha$ ,  $H_0$  is rejected. The statistical model does not fit the observations. The  $p\text{-value}$  equals  $9.505e-13$ , ( $p(x \leq \chi^2) = 1$ ). It means that the

chance of type I error (rejecting a correct  $H_0$ ) is small:  $9.505e-13$  ( $9.5e-11\%$ ). The smaller the  $p\text{-value}$  the more it supports  $H_1$ . The test statistic  $\chi^2$  equals

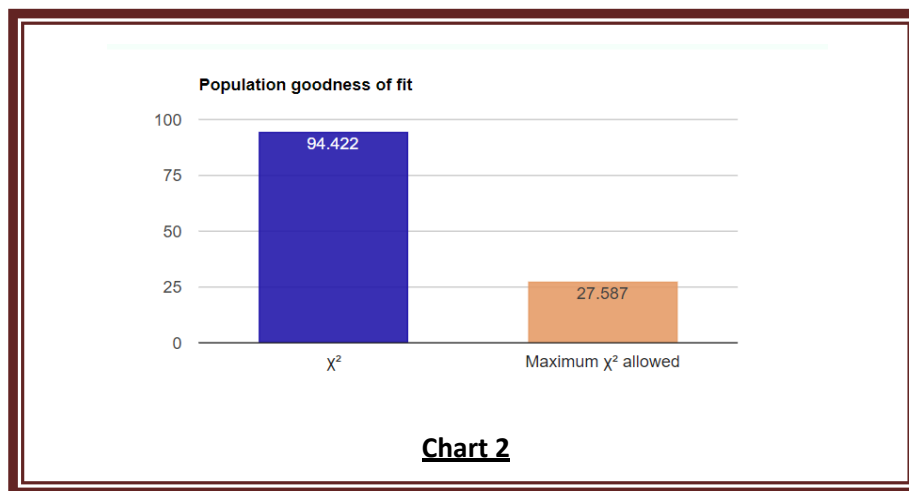
94.4216, which is not in the 95% region of acceptance:  $[-\infty; 27.5871]$ . The requested test was

calculated, it is likely you chose the right test. The test priori power is strong that is 1.

**Chart 1: Showing graph of Chi square distribution of given test.**



**Chart 2: Showing result of the test in a histogram**



## CONCLUSION

The results of this study concluded that the characteristics of customer acceptance or intention to use cryptocurrency in India are influenced by the characteristics of the Price, Security and adaptability. Therefore, to increase the acceptance or the intention to use Cryptocurrency as a mode of

payment in India, the government should provide an easy and simple interface and useful to enrich customers' intentions to use and leads to actual usage behavior. Besides the government should educate customers about the use of cryptocurrency and continuously communicate about easy-to-use cryptocurrency services. The institutions should also increase the perception of the usefulness by provide

free training on the use cryptocurrency as mode of payment, communicating the benefits or drawbacks of cryptocurrency, provides cryptocurrency banking manual on the detail and both available online and offline.

Some of the research limitations are as follow: (a) the research objects is limited to the observation that was conducted within the cross section time range for one single time.(b) The measurement of the research variables uses respondents' perception.

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