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International Journal For Research in  
Applied Science and Engineering Technology



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# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

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**Volume: 9      Issue: X      Month of publication: October 2021**

**DOI: <https://doi.org/10.22214/ijraset.2021.38527>**

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# Evolution of Cryptocurrency: Changes in the Use and Consumer Demand for Digital Transactions

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**Abstract:** *The quick advancement of cryptographic forms of money has caused to notice this specific market, with financial backers attempting to comprehend its conduct and analysts attempting to clarify it. The development of digital currencies' costs showed a sort of air pocket and an accident toward the finish of 2017. In view of this occasion, and on the way that Bitcoin is the most perceived digital currency, we propose to assess the infection impact among Bitcoin and other significant cryptographic forms of money. Utilizing the Detrended Cross-Correlation Analysis connection coefficient and looking at the period after and before the accident, we discovered proof of an infection impact, with this specific market being more incorporated now than in the past something that ought to be considered by current and likely financial backers.*

*Cryptocurrency like Bitcoin have developed from being related only with geeks and revolutionaries to being considered by national banks as an innovation to carry out advanced cash. Digital forms of money exist just in computerized shape and can be moved totally between advanced addresses. This is both not normal for traditional electronic cash as perceived by laypersons which goes about as an obligation guarantee on a store with a confided in monetary foundation, for example, a private bank and dissimilar to ordinary bodily cash which might be truly moved by. This implies that any lawful rights related with holding digital forms of money should be diverse in spite of it being staying not entirely clear. In this , we take a gander at the different medicines of cash in the lawful detect and talk about the dangers related with each by drawing on genuine models. We presume that extortion through hacking might actually represent an issue to broad reception of cryptographic forms of money as the shortfall of plan of action against an outsider, for example, a bank amasses hazard in holders of digital currencies. Clients should hence practice alert and comprehend the dangers prior to putting resources into digital currencies. This admonition requires accentuation as many gatherings misunderstand the cryptography inside the innovation as shielding them from such misrepresentation when truth be told it does nothing of the sort.*

**Keywords:** *Cryptocurrency, Cryptography, Digital Currencies, Bitcoin, Blockchain.*

## I. INTRODUCTION

### A. The Beginning

The concept of online currency predates cryptocurrency and the release of bitcoin software by an individual (or group) using pseudonym Satoshi Nakamoto in 2009 was made to protect against inflation, provide security and give individuals control of the money.

This started the development of alternative currencies which were created to remedy bitcoin's perceived flaws or to achieve various objectives. In 2010, an early user opted to exchange 10,000 bitcoins for two pizzas, marking the beginning of Bitcoin's the token is expected to be worth roughly \$0.00001.

### B. Forming Of Alternative Cryptocurrencies

Users began to discover some of bitcoin's flaws as the currency expanded in popularity and acceptability. As a result, alternative cryptocurrencies ( also known as altcoins) were created to address issues including anonymity, transaction speed, DNS resolution, and proof of stake, among others.

Similarly Bitcoin Classic and Bitcoin Cash were established by modifying the bitcoin code to improve confirmation times, lower transactions costs, or address scalability difficulties.

The first altcoins to launch in 2011 were Namecoin, Litecoin, and Swiftcoin. Ethereum, Ripple, Zcash, Litecoin, Monero, and Dash are some of the most prominent alternative cryptocurrencies today.

### C. Surge Into The Mainstream Growing Acceptance

Cryptocurrencies are becoming increasingly popular. Countries such as China, Ecuador, Tunisia, Venezuela, Senegal, Sweden, Estonia, Singapore, and others have either produced or plan to launch their own national cryptocurrency.

Furthermore, bitcoin and other popular digital currencies look to be gaining traction as a rising number of member accept them. As positive attitudes continue to rise, the market value of digital currencies is likely to hit \$1trillion this year.

### D. Difficulties In Mass Adoption

Cryptocurrencies are a good means of trade, store of value, and accounting unit. These properties make them a trustworthy kind of money by any standard. However, significant barriers must be addressed before the general public embraces these online-based currencies in large numbers.

Volatility is one of the most significant impediments to widespread adoption of cryptocurrencies as cryptocurrencies price change so much, merchants are sometimes hesitant to accept them as payment. Other problems that broader acceptance of digital currencies include scalability issues, security concerns, and regulatory issues etc.

## II. REVIEW OF LITERATURE

### A. Shailak Jani(2018)

As of March 18 2018 there were 1564 Cryptocurrencies available & traded in about 9422 exchanges. The market capitalization of all the cryptocurrencies is \$275,797,435,861 i.e. \$275 Billions. & 24-hour volume was \$ 18,207,953,654 i.e.\$18 Billions. India with a population that's over 1 billion strong has been on something of an economic renaissance within the previous couple of years. Such has been the extent of the country's growth that the IMF has called it the fastest-growing emerging economy. over 40 percent of the country's population has access to telecoms and internet services. a rustic steeped in mystery, history, and culture, it's also not one to fall behind when it involves technological advancement. Bitcoin and other cryptocurrencies are operating within the country for a number of years now. this text looks at the state of the Indian cryptocurrency market. As early as 2012, smallscale Bitcoin transactions were already happening within the country. These were still time period within the development of Bitcoin when only crypto hobbyists were inquisitive about Bitcoin. By 2013, Bitcoin was commencing to gain level of recognition that was spreading across many countries. That year, some businesses began to simply accept Bitcoin payment. A vintage era pizza parlor called Kolonial within the Worli area of Mumbai became the primary restaurant service in India to simply accept Bitcoin payments. in an exceedingly short space of your time, cryptocurrency exchanges began to arise within the country. Pioneers like BtcxIndia, Unocoin, and Coinsecure began offering cryptocurrency exchange and trading services in India. Over time, others like Zebpay, Koinex, and Bitcoin-India were added to the list. With the proliferation of crypto trading and exchange platforms, the crypto market in India has grown from its modest level in 2013 to what it's today. except these online exchanges, there also are variety of over-the-counter (OTC) crypto shops within the country. boost this, numerous Bitcoin ATMs in major Indian cities and you've got the makings of a crypto economic hub.

### B. Dr. Arvind Kumar Singh, Karan Veer Singh(2018)

Observers expect that India's authorities will adjust Bitcoin in stages. India's Bitcoin enterprise welcomes those modifications understanding that authorities recognition will provide the cryptocurrency the backing it needs. In fact, India's Bitcoin industry has lengthy attempted to popularize Bitcoin with techniques that consist of engaging in protection checks, soliciting for identity from users, which includes authorities-tested deal with documents, Permanent Account Numbers (PAN) or Aadhaar IDs, and now and again even checking financial institution details. Private Bitcoin businesses have additionally released an association, known as the Digital Assets and Blockchain Foundation India (BFI), to train lay people on Bitcoin blessings and usage. Government intervention credit their efforts. In phrases of creation, Bitcoins are clearly certainly considered one among The best improvements of man. Most banks nowadays are looking to use the block chain generation and for the reason that authorities has now no longer legal Bitcoins, it has determined to introduce its personal cryptocurrency named "Lakshmi". This records became discovered with the aid of using RBI's govt chairman Sudarshan Sen who additionally noted that the committee that proposed this concept is in its procedure of research. On the alternative hand, specialists surprise whether or not a number of those supposed guidelines will damage Bitcoin in that authorities interference contradicts Bitcoin's allure, at the same time as different policies may also hamper the blockchain innovation and development.



*C. Dr. Vijeta Banwari(2017)*

Despite the ban and asserting cryptocurrency in India, India is a massive market for such transactions. Cryptocurrency sellers have employed legal advisers and chartered accountants to assist search for opportunity approaches of purchasing and promoting cryptocurrencies. The try to starve the marketplace of liquidity has reputedly didn't discourage cryptocurrency exchanges — the Blockchain Foundation of India (BFI), a foyer of forty five crypto sellers, claims that extra than 30 new exchanges have carried out for club in the beyond months. (The Print, 2018). Experts additionally declare that the ban can also additionally inspire unlawful sports which includes hawala — an unlawful gadget of remittance of finances used extensively in South Asia and elsewhere — thereby fuelling the generation of black money.

*D. Mukund Gupta, Dr. Teena Bagga (2017)*

we are able to actually see that cryptocurrency continues to be in an evolution section and it has now no longer received an awful lot of the consumer base in India. Also very much less populace of India elderly among 18-24 is aware of cryptocurrency or even if they're aware about cryptocurrency they infrequently use it. People stated the motive they're reluctant to apply cryptocurrency is that Exchange price may be very volatile, i.e. in April 2017 1BTC $\approx$  1200\$ however in November 2017 it has crossed \$6500. Cryptocurrency is a peer-peercurrency, hence doesn't require any intermediaries or dealer to finish the transaction which reduces the fee in step with transaction extensively and that changed into the important motive given with the aid of using respondents for the use of the cryptocurrency. Also, whilst requested from respondents approximately the elements which would possibly assist in destiny adoption of cryptocurrency, respondents stated recognition of cryptocurrency with the aid of using important banks and e-trade internet site may be very essential and additionally teaching human beings approximately cryptocurrency will extensively assist in adoption of cryptocurrency.

*E. Fanny Grace S, Dr. Florence John(2018)*

The Finance Minister of India Arun Jaitley has expressed that "The public authority doesn't perceive cryptographic money as lawful delicate or coin and will take all actions to wipe out the utilization of these cryptoassets in financing ill-conceived exercises or as a component of the installments framework". He has moreover expressed that "Administration of India and the Reserve bank of India doesn't perceives Bitcoin as a legitimate delicate of cash". The Government of India and RBI doesn't perceive Cryptocurrencies. This implies that an individual or an association can't acknowledge Bitcoin or other digital currencies in type of installments

*F. Shipra Saraswat, Vishal Singh Chauhan & Neetu Faujdar(2017)*

The growth of the industry is due solely to the interest and acceptance of users. Without the interest of Bitcoin itself cannot evolve. Yes, this industry is difficult to understand, so requires a lot of education. Those who invest in these industries without the proper knowledge and guidance can also get into trouble. The industry has shown tremendous growth in recent years, but this does not mean that it only relies on the returns of its 4,444 investors. But yes, it is rarely faced with this situation due to a large number of users and a large number of transactions . So this part represents all the positive and negative factors corresponding to public perception. Slowly, through news and individual pioneers defending its advantages, cryptocurrency gained influence in the global market. However, despite the recent increase in media reports, the general public is still basically unaware of cryptocurrencies.

*E. Varun Shukla and Atul Chaturvedi(2018)*

The very famous and inspiring entrepreneur Tim Draper predicted in his article that by 2022, the market for Bitcoin will reach \$2.5 million. Now you can imagine the importance and breadth of cryptocurrency. Other cryptocurrencies (except Bitcoin), such as Litecoin, Ripple and Mintchip, are also becoming more and more popular. Governments and local agencies have begun to monitor the value of cryptocurrencies. It can be seen that many shopping websites and payment systems now require to be paid in Bitcoin, and some will provide discounts if they are paid in Bitcoin. The reason why they know that the price will increase tomorrow, they will benefit . In India, RBI declared Bitcoin and its ariants to be illegal because it is a digital currency equipped with encryption and working independently beyond the financial sector India is an organization dealing with Bitcoin promotions in India. There are many startups like Coinsecure, Zebpay and Unocoin, etc. Is convenient for buying Bitcoin. cryptocurrency can be transferred abroad or converted into other currencies.

*F. DrAfzalur Rahman, Mr K. Mohamed Jasim, Dr Ayub Khan Dawood*

Cryptocurrency is not specifically mentioned as banknotes or banknotes or currency or legal tender in any Indian law, just like RBI is not specifically notified, so cryptocurrency will not be included in the definition of "another similar tool" As good, according to Section 2 (h) of the FEMA Act 1999. The highest *um facit cessare tacitum* means that if something is explicitly mentioned then it is only acceptable. If it meets certain standards, we cannot accept the implicit. Indian courts believe this sentence, including the Supreme Court and Anr in the "Union of India". To *Tulsiram Patel and `Shankara Rao Badam & Ors. VS Mysore and Anr`*. From the above discussion, although the cryptocurrency has many attributes of currency or legal currency, it is not a paper currency, so it is also an illegal currency in India.

*G. Prof. Blesson James, Prof. Manjari Parash(2018)*

Cryptocurrency is an invention that has become a global phenomenon. Previously, the Reserve Bank of India warned Indians not to use cryptocurrencies related to money laundering and terrorist financing. However, cryptocurrency is a modern technology and a tool that is to be expected. Although the government of India has not given a regulatory response, in recent years cryptocurrency investors are increasing rapidly. The Indian government should now take responsible steps to regulate this currency as its users in India are growing rapidly. The future of Indian cryptocurrency looks promising with hopes and a silver lining

*H. Vandana Rastogi, Priyanka Kushwaha (2019).*

As the income tax department issued tax notices to nearly 4,444 500,000 high-net-worth individuals who conduct bitcoin transactions, the issue of 4,444 taxation of cryptocurrencies has become increasingly important and urgent in India. According to reports, the center plans to include the cryptocurrency regulatory framework in the next alliance budget. This should clarify regarding the status of such digital currencies and how they will be taxed. In the meantime, here is a look at how to tax 4,444 cryptocurrency transactions under various circumstances. Cryptocurrency provides a new, effective and attractive payment method model that can increase the income of enterprises and operators. also provides an alternative payment method in addition to real currency, so that can easily carry out financial activities such as buying, selling, transferring and exchanging.

### III. RESEARCH METHODOLOGY

*A. Problem Statement*

The rise of cryptocurrency has caused numerous businesses to shift their mindset to a flexible payment system as a result of this many platforms have started implementing number of payment methods that a decade ago no one would have thought of the rise and evolution of cryptocurrency have made this change possible the consumer demand and use of cryptocurrency have risen drastically with that the risk of cybertheft, as it's a digital currently and volatile in nature, unpredictable and can become illiquid at any time and holds a high transactional risk therefore it's important to find out factor which made acceptance and use of digital transactions like cryptocurrency gain legitimacy in today's world.

*B. Research Objectives*

The objectives of this study are: -:

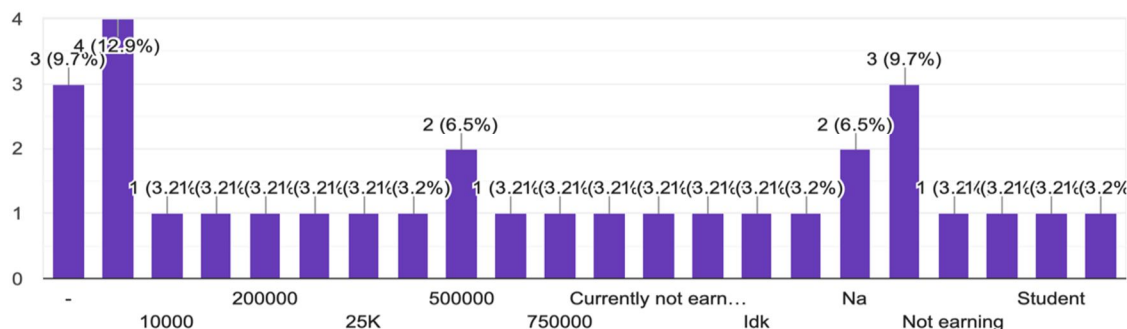
- 1) *To Find Transactional Risk in Cryptocurrency:* There are certain transactional risk in trading of cryptocurrency due to restricted supply and low ownership maybe vulnerable to market manipulation and it's necessary to find out these risks for the safety in transaction of users of cryptocurrency
- 2) *Public's Perception About Cryptocurrency:* People are still skeptical about the worth, use and will it ever attain currency status or it will remain a part of investment portfolio its important to find what are people's understanding of crypto and whether they will invest in this currency in near future
- 3) *Widespread Acceptance of Cryptocurrency:* It is has been a decade of it's existence and huge market presence all over the world but still many countries are not ready to give cryptocurrency a status of currency due to many factors which are making them no to accept this as a currency its important to look at this factor's too which in future will impact the valuation of these currencies
- 4) *Competition In Cryptocurrency Market:* As this currency trades on demand there are many cryptocurrencies in the market each country having their own and people are often confused to invest in which type of crypto so its important to look at the factors which buyers of this currencies look at before investing in them.

- a) *Data Collection:* For our research, we have used primary data collected by means of a questionnaire. The survey was conducted through various means online so that a wide population can be reached in a short span of time. We collected a total of 32 responses and care was taken to ensure we get as diverse a sample as possible so that we get a whole and accurate view about what are the factors influencing all kinds of people to buy an.
- b) *Sampling Plan:* The sampling plan used for this research is simple random sampling where we sent questionnaires to a random selection of people. We also ensured we chose randomly within groups of people like randomly sending questionnaire to equal number of men and women and to equal number of people in our target age groups. This was done to get a much more clear and accurate set of responses by including all kinds of individuals in our sample.
- c) *Survey Instrument:* The survey instrument used was a questionnaire consisting of 10 questions designed specifically to obtain information regarding what consumers felt about various aspects of cryptocurrency and what they felt the possible challenges could be.
- d) *Plan for Analysis:* We use pie charts to show the responses of individuals we surveyed. We have asked questions about specific known challenges regarding cryptocurrency to find out which ones were actually a concern for people and which ones were not perceived by people as a major challenge. We also asked how many were concerned with the currency being speculative in nature and how many would want to buy a cryptocurrency in future . The reason we asked these questions was to find out why people are skeptical to buy cryptocurrency and the factors influencing this behaviour among potential buyers.
- e) *Operational Definitions of Variables:* All variables in the research are measured in terms of Response percentages for the variables from the questionnaire
- f) *Variables Used:* The dependent variable is the demand and the independent variables are as follows:
  - Income of individuals
  - Awareness about cryptocurrency among individuals
  - Form of speculative asset
  - Constraint of cryptocurrency
  - Trust in Technology
  - Freedom among users of cryptocurrency
  - Future dominance of cryptocurrencies
  - Operating Fees of cryptocurrency

#### IV. ANALYSIS & INTERPRETATION

##### 2.What is your income level?

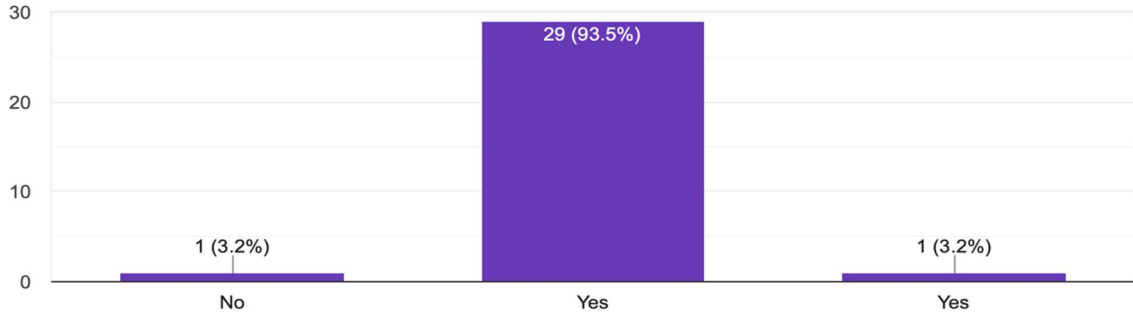
31 responses



According to the survey we have different individual with different income level we have data of students , businessman , salaried , persons and even of those who are not earning yet.unemployed.

3. Have you heard of Cryptocurrencies?

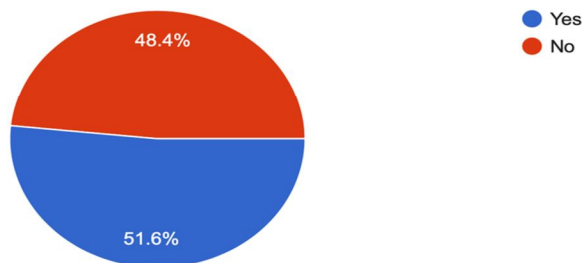
31 responses



- yes about 93.5% of people are aware and familiar with cryptocurrency and have heard about it earlier
- And only 3.2% of people did not hear about cryptocurrency earlier.

5. In case of Cryptocurrencies do you trust it's technology in long term?

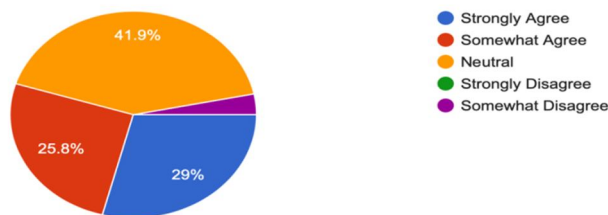
31 responses



- 51.6% of people trust cryptocurrencies technology on long term basis.
- Whereas 48.4% of people do not trust its technology on long term basis.

6. Do you think Cryptocurrencies will still be the dominant currency in 10 years?

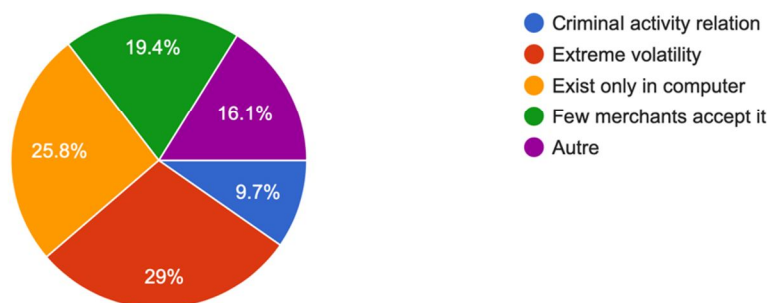
31 responses



- 41.9% people consider Cryptocurrency to be neutral.
- 29% people strongly agree Cryptocurrency to be the dominant currency in 10 years.
- 25.8% people somewhat agree that Cryptocurrency to be the dominant currency.

8. What is your opinion Cryptocurrencies main constraint as a mean if currency?

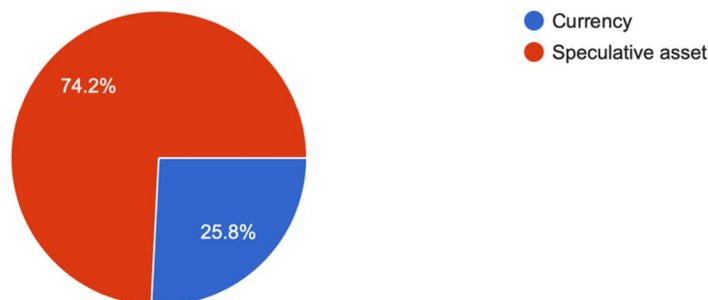
31 responses



- Over 9.7% of people consider cryptocurrencies main constraint as mean of currency as criminal activity relation
- 16.1% of people consider cryptocurrencies main constraint as mean if currency as autre
- 19.4% of people think that only few merchants accept it.
- Nearly 25.8% of people think that it only exists i computer.
- About 29% of people’s about cryptocurrencies main constraint as a mean of currency is that it is extreme volatility.

10. Finally, do you consider cryptocurrency more like a currency or a speculative asset?

31 responses



- 74.2% consider Cryptocurrency more like a currency or a speculative asset.
- 25.8% do not consider Cryptocurrency more like a currency or a speculative asset

V. CONCLUSION

Once again , the money is changing its actual measurement into another state however its legitimate measurement lingers behind in this transformative measure. Digital money is a characteristic advancement of cash in the web period. It is quick, effective and a protected mode of trade with enormous expense saving advantages. A money sponsored by a sovereign state with limited issuance will resolve the long-standing issue of expansion too. The current shortcomings of digital forms of money, including tax avoidance, tricks, laundering and in particular its unpredictability can be limited by making it a legitimate delicate/official cash. It is a thought whose opportunity has arrived and the reaction ought to be to accept the advancement as opposed to stifling it.<sup>29</sup> Hence, digital money as an authority cash, given by a sovereign state or a financial alliance, will boost its use benefits and will be a stage forward in its legitimate advancement .



Further, the industry has extended drastically in the quantity of coins as of now available for use. The industry has additionally shown its inventiveness in carrying out functional answers for lacks in the advancement of new coins. Bitcoin may not overwhelm the business over the long haul, however, the business owes its reality to the spearheading anarchic coin .

#### A. Findings of the Study

Digital money appears to have move past the early reception stage that new innovations experience. Indeed, even engine vehicles encountered this marvel. Bitcoin has started to cut itself a specialty market, which could assist with propelling cryptographic forms of money further into becoming standard; or be its primary driver fizzling. Digital currencies are as yet in their earliest stages, and it is hard to check whether they will at any point discover genuine standard presence in world business sectors . An industry has developed around Bitcoins in India-dealers, trades and shippers who acknowledge installments in Bitcoins. Bitcoins have effectively acquired wide acknowledgment all throughout the planet henceforth restricting them would not be an alternative in India. All things being equal, this industry would should be managed. The sooner this is finished, the better.

#### B. Scope of Bitcoin

Bitcoin is a tricky thing. It is completely decentralised. There is no central authority. It is highly volatile at the moment. Government cannot track the moment of money via Bitcoin. Apart from security concerns, Govt. has to take care of an individual's personal privacy and security. As an individual, people do not take their digital privacy and security seriously. Our emails are full of spam and phishing mails. Most of the mobile devices and computers would be infected with malwares. If any of these malware got aware of your involvement with Bitcoin, they can hack into your account and transfer Bitcoins.

Still GOI understands, its better to regulate a currency than let it develop an underground market. Bitcoin has its own set of features.

- 1) Bitcoin is permissionless.
- 2) It is fast and cheap to use.
- 3) It works 24\*7.
- 4) You can send money to anyone anywhere. No more any bank can deny you accounts, cards or transaction People have started to realised it. They are accepting payments in Bitcoins. People are recharging their mobile phones, paying their electricity bills via Bitcoins. Because you can do i

#### C. Summary

The current monetary framework, digital forms of money have some inside difficulties to survive. Endeavoring to change the whole world monetary framework over to the BITCOIN model, for instance, could cause such a monstrous development in blockchain size that the appropriated record model would become unfeasible. We think this is a new generation of money, which is already replacing paper money. At the beginning it was a joke for many people, but now there are many real examples of how crypto helps somebody in the regulators recessions and also to survive when there is a crisis. Crypto came for a reason, and it will prove it. Cryptocurrency guarantee a brilliant future with the right execution and administrative measures taken to guarantee individual and financial security.

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### QUESTIONNAIRE

- 1) Name
- 2) What is your income level?
- 3) Have you heard of Cryptocurrencies?
- 4) Cryptocurrency is Non government regulated which offers users more freedom. Would this increase your interest in using cryptocurrency?
  - Yes
  - No
  - Maybe
  - Most likely
- 5) In case of Cryptocurrencies do you trust it's technology in long term?
  - Yes
  - No
- 6) Do you think Cryptocurrencies will still be the dominant currency in 10 years?
  - Strongly Agree
  - Somewhat Agree
  - Neutral
  - Strongly Disagree
  - Somewhat Disagree
- 7) Unlike other currencies, Cryptocurrency requires much less fees to operate. Would this increase your interest in using cryptocurrency?
  - Yes
  - No
- 8) What is your opinion Cryptocurrencies main constraint as a mean if currency?
  - Criminal activity relation
  - Extreme volatility
  - Exist only in computer
  - Few merchants accept it
  - Autre
- 9) Cryptocurrency has no tangible form. Does that diminish the value that you perceive about the currency?
- 10) Finally, do you consider cryptocurrency more like a currency or a speculative asset?
  - Currency
  - Speculative asset



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