

# India and Cryptocurrency: What do Indians think about Cryptocurrency?

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**ABSTRACT:** Cryptocurrency is one of the most emerging and fascinating technologies in the world. It is said to be the future of purchasing. Some people, like Elon Musk (CEO of Tesla) and Bill gates (Co-founder of Microsoft Corporation), think that cryptocurrency is a boon to the world economy, while others, like Warren Buffet (CEO of Berkshire Hathaway) and Ajay Banga( CEO of Mastercard) think that it is a bane to the world's economy. The study aims to analyze both pros and cons of cryptocurrency, to know the perception of Indians about cryptocurrency, and analyze whether India is ready to embrace cryptocurrency as a new medium of exchange. The study sample comprised 108 Indians; aged 18 - 65. All these people belonged to different corners of India. After analyzing their responses and using the percentage method, I can say that people had a general idea of cryptocurrency. They are ready to accept cryptocurrency in their day-to-day life. The main reason why people of India are embracing cryptocurrency is that it is not taxable, i.e. if anybody doesn't sell cryptocurrency and gain profit from it, and low cost of a transaction. Even after that, it is hard to predict the future of cryptocurrency in India. One of the main reasons for that is the high amount of energy needed to perform crypto transactions which India most probably won't be able to produce.

*Key words: Cryptocurrency, Behaviors of people, Government, Environment impact*

## INTRODUCTION:

### What is Cryptocurrency? Why was there a need for it?

Performing transactions has always been an important segment of a civilized society. The first method of transaction was the barter system in which we had the problem of no “Double Coincidence of Wants”. Then we tried to remove that problem with the help of Currency. Though the system of currency might sound good on paper, because of various geopolitical reasons countries have started misusing the power that their institution has over currency. According to Reiners (2020), this has led to many economic crashes like the great depression (1929 – 1939), the stock market crash in 2008, etc. Even internally many policies and acts like demonetization in India were disasters and poorly implemented. All this led to the rise of Cryptocurrency. Cryptocurrency simply put is a completely electronic currency. It doesn't require any government institution to function properly. It is a completely decentralized currency.

### Cryptocurrency and day-to-day transactions:

The first cryptocurrency “Bitcoin” was introduced in 2009 by Satoshi Nakamoto. Bitcoin was completely decentralized in nature. There is no central authority that regulates bitcoin transactions. All the bitcoin transactions are registered in a spreadsheet called ledger, which uses blockchain technology for maintaining security. According to Kasahara & Kawahara (2016), from an IoT point of view Bitcoin is fast, secure, and has lower fees than the existing payment schemes. Consumers and retailers, both are benefited from these features. As bitcoin has low fees for transactions, it is expected to accelerate payment at the micro level. Every transaction in bitcoin is needed to be stored in a block which is created by a volunteer node, called miner, and the block is then added to the tail of the ledger. These miners charge a fee for their work. Though this fee is very less for small micro transactions, when it comes to macro transactions, these miners tend to prioritize those transactions which have a higher fee.

Even after many advantages, governments don't give legal transactions to crypto transactions. Many countries, like Bangladesh in 2017, had even made a decision to ban cryptocurrency. The main reason for this is the highly volatile nature of cryptocurrency. But if Bitcoin is becoming more stable in the future, then it can be easily accepted as a mode of payment as stable currencies are always preferred over unstable currencies (Sahoo, 2017).

### Merits of Cryptocurrency:

There are many advantages of cryptocurrency as stated above. Another big advantage of cryptocurrency is that it seems to be safer than other forms of payment as it is based on block chain technology. It means that every exchange which happens in cryptocurrency is recorded in a ledger that is publicly available and unalterable. Therefore, there are very less chances of things going wrong. Blockchain technology is also used in many other fields like education, healthcare, etc.

Though Bitcoin may seem a very quick form of payment, NPCI (National Payment Corporation of India) has developed a technology known as UPI (Unified Payment Interface) which is a technology through which we can make payments instantly. In addition, unlike Bitcoin Technology, there are no restrictions on the use of cryptocurrency and the use of UPI is completely free. According to Aggarwal (2020), one of the big advantages of Cryptocurrency, especially Bitcoin, is that its supply is limited. Unlike currencies like the Dollar, Pound, Indian rupee, etc which can be printed as much as the Central Bank of the country wants, there are only 21 million bitcoin out of which 18 million have already been mined. This significantly lowers the chances of inflation in it.

### The infrastructure required to use cryptocurrency:

Though all the advantages of cryptocurrency may make it sound revolutionary, we can't ignore the fact that using cryptocurrency for making payments is a highly energy consuming process. The annual usage of Bitcoin and Ethereum, two of the most important cryptocurrencies, is 69MtCO<sub>2</sub> and Bitcoin mining can push global warming above 2-degree Celsius by targeted international actors as the global commitment for mitigating the impacts of anthropogenic global warming. The major reason for this is the use of the PoW system. Cryptocurrencies like SolarCoin (SLR), Bit green (BITG), etc. can help to solve this problem. SolarCoin is based on a very interesting approach, creating one SLR for every Megawatt of energy generated. Bit Green is like a more eco-friendly version of Bitcoin, unlike bitcoin it uses a PoS system which is much more efficient and sustainable.

### Government on Cryptocurrencies:

The main reason for the existence of cryptocurrency was to remove the intervention of the government in financial matters. Different governments responded differently to cryptocurrencies. We can broadly classify these approaches into 3 categories: Regulated, Liberal, and Prohibited (Agarwal, 2020).

Under the "Prohibition" approach countries would put a complete ban on cryptocurrencies. China has employed this approach and is also planning to mine bitcoin which according to them would reduce their carbon footprint. This approach is not suited for India because Indian youth is excited about cryptocurrencies and having a complete ban on cryptocurrencies hampers the growth of the country.

Under the "Liberal" approach countries allow the free use of cryptocurrencies and put no restriction on mining. Japan has adopted this approach. Due to the high rate of crime and terrorist activities in India, this approach is also not suited. If there is no restriction on cryptocurrencies it might encourage these activities.

Under "Regulated" in which the government puts certain restrictions on currencies and their uses but doesn't put a complete ban on cryptocurrencies. This approach is most suited for India. This neither completely hampers the growth of the nation and by putting restrictions on cryptocurrency we could ensure that it is not used for any criminal activities.

### PROCEDURE:

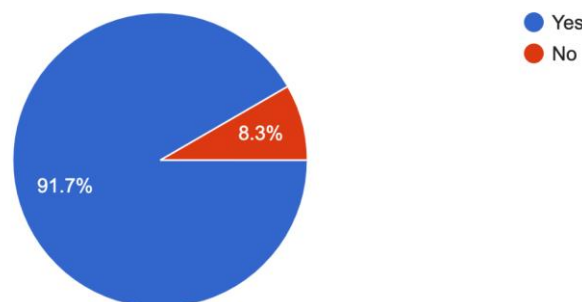
The study aimed to know the current mindset of people regarding cryptocurrency. I conducted a survey of 108 people to learn about this. My sample consisted of adults from all age groups, from teenagers to senior citizens. All of them belonged to different parts of India. The majority of my sample consisted of government officers, economics teachers, professors, and students. We employed the policy of quantitative method of research to know the mindset of the entire sample about cryptocurrency and then compare our results with the results of the research conducted by other researchers. Through the survey and the analysis, we wanted to know whether people are aware of cryptocurrency and its pros and cons. We also wanted to know whether these people are happy with the current function of government in the economic sector and whether they would like to remove the government's role in making transactions. In the end, we also wanted to know whether the sample was aware of the environmental impact of mining cryptocurrency.

### RESULTS:

The main aim of my research was to know whether people are ready to employ cryptocurrency as a part of their day-to-day life and whether are they happy with the current government functioning in the financial sector. I surveyed 108 people from different parts of India. The sample included adults of all ages. Majority of the people I surveyed were government employees, businessmen, economics professors, teachers, and students. The results of the survey are given below

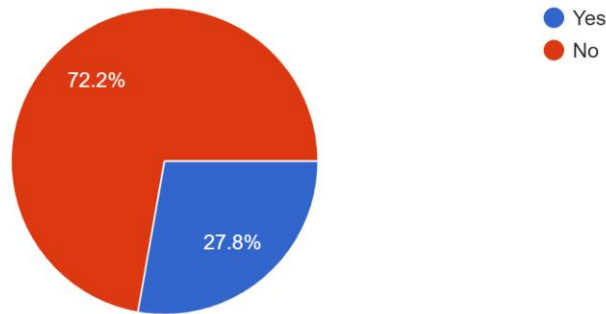
#### Do you know about cryptocurrency

108 responses



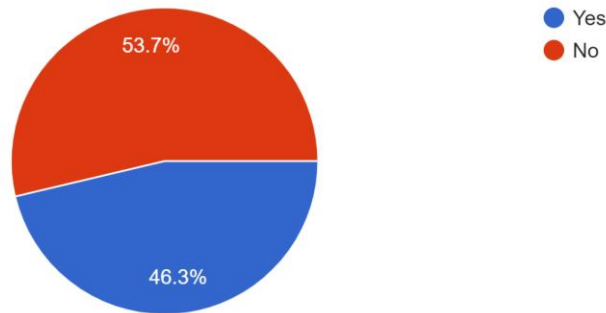
Do you think the Government has fair tax brackets?

108 responses



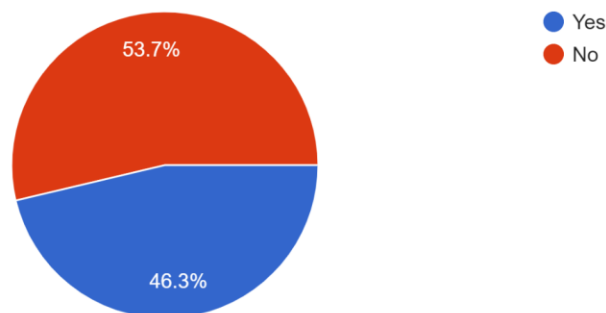
Are you happy with the current control that government has over money?

108 responses



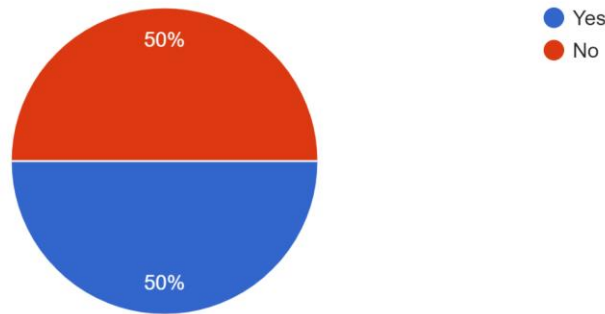
Cryptocurrency relies heavily on the internet- do you think India would be ready for such a change?

108 responses



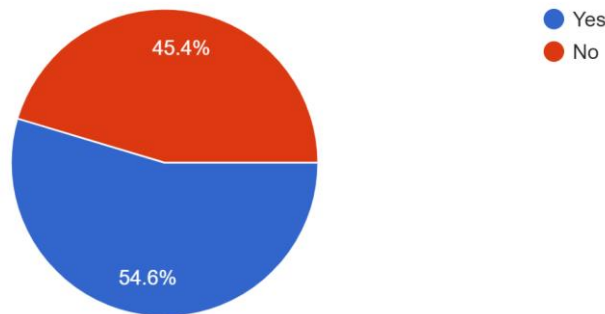
If you were taught how to use cryptocurrency- would you like to use it in day-to-day life?

108 responses



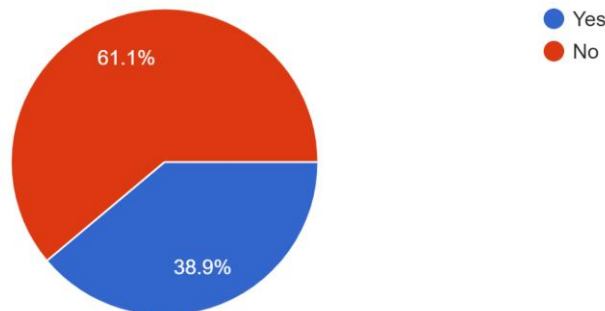
Would you prefer cash over cryptocurrency ?

108 responses



Do you think cryptocurrency is the future and can it be used to run the economy?

108 responses



**DISCUSSION:**

The main aim of the study was to analyze the perception of people regarding cryptocurrency and also to know whether they are happy with the current function of government in the financial sector and do they know about the environmental impact of bitcoin technology. I surveyed 108 Indians for the research and gave them a questionnaire containing 8 questions. My sample included people of all ages. It majorly consisted of government employees, businessmen, economists, and their students. The analysis of each question is given below:

***Do you know about cryptocurrency?***

91.7% of people have a fair knowledge of cryptocurrency, and 8.3% do not know what cryptocurrency is. Das & Guharay(2022) found in their research that 55% of their respondents had general knowledge about cryptocurrency but only 2% of their respondents

had a high amount of knowledge about investment in cryptocurrency, which shows there is an insufficient spread of education and awareness regarding crypto-currency.

***Do you think that the government has fair tax brackets?***

72.2% of people are happy with government tax brackets, and 27.8% of people think that the government doesn't have fair tax brackets. Luttmer and Singhal(2014) identified reciprocity as one of the five mechanisms through which tax morale may affect compliance decisions. They define reciprocity as "situations in which willingness to pay taxes depends on the individual's relationship with the state other than direct tax-benefit linkages where a tax payment directly causes benefits to the individual to increase". The aspect of trust is crucial in a country like India. If people trust that the government is able to take care of their welfare, they are more likely to pay taxes. But the current data shows that people's tax morale is down and they are not willing to pay taxes. Even in the article by Moneylife India(2022), they wrote that 65% of people are unhappy with the current tax practices in India. Though cryptocurrency is also taxed in India, as it comes under the category of virtual assets, people could still use it as a way of reducing their savings on taxes by investing in cryptocurrency as a means of exchange and not selling them.

***Are you happy with the current control that the government has over money?***

53.3% of people were not satisfied with the control of the government over money, while 46.7% of people are satisfied. Though these numbers are very close, the majority of the people are actually not happy with the implementation of government policies in India. One of the best examples of such policy is Demonetization(2016). According to Shirley(2017), the Government took the action of demonetizing Rs.500 and Rs.1000 notes hurriedly without even doing a cost-benefit analysis and considering other options for extracting black money from the rich. Therefore the policy was completely flawed and resulted in a terrible setback for the international standing of the Indian economy.

***Cryptocurrency relies heavily on the internet- do you think India would be ready for such a change?***

Cryptocurrency relies heavily on the internet. 53.7% of people believe that India is ready for such a change and 46.3% believe that India is not ready for such a change. According to Schinckus, Christophe (2020), Cryptocurrency has a significant positive effect on energy consumption both in the short run and in the long run meaning that cryptocurrency trading causes a higher energy consumption globally. But the effect, in the long run, is much more than the effects in the short run. India's annual power consumption is growing at the rate of 6.5% during 2022-2024 but its average power production growth rate between 2019 - 2022 was 3.83%. Therefore it is fair to assume that India is not completely ready for the heavy energy consumption caused by cryptocurrency mining.

***Do you think cryptocurrency will use fewer resources (employees, environment, etc) when we compare it to current banks and other networks?***

63.9% of people believe that cryptocurrency uses fewer resources when we compare it to current banks and other networks and 36.1% of people believe that cryptocurrency uses more resources. In August 2018, a Princeton University associate professor expert in cryptocurrency testified at a hearing of the U.S. Senate Committee on Energy and Natural Resources. The testimony said that bitcoin mining accounts for nearly 5 gigawatts—or about 1% of the world's energy use. According to Mohsin(2021), no matter whether anybody opposes cryptocurrency or supports it, he or she can't deny that cryptocurrency and its proof of work blockchain technology uses a vast amount of energy, much of it comes from coal and other conventional sources of energy. For example, China is one of the major players in cryptocurrency mining, and coal accounts for 60% of the energy used in China. Though it is unclear whether the traditional banking and finance sector uses more resources than this. The majority of bitcoin supporters also support the need for renewable energy.

***If you were taught how to use cryptocurrency- would you like to use it in day-to-day life?***

Half of the people I surveyed said that they would like to use cryptocurrency in their day-to-day life if they are taught how to use it and the remaining half didn't. According to Jani(2017), 55% of the people he surveyed were open to using cryptocurrency in the future, and the rest 45% weren't. The major reason for people not liking the use of cryptocurrency is its high exchange risk and the fact that it is not governed by a central authority. Plus they also think that only experts can use cryptocurrency. The major reason for people saying yes was that it is not governed by a central authority, it is not taxable and the cost of transaction is very low.

***Would you prefer cash over cryptocurrency?***

45.4% of people said that they would prefer cash and 54.6% of people said that they would prefer cryptocurrency. According to Busse et al. (2020), cultural norms affect whether people would prefer cryptocurrency or not. For example, according to their study conducted in Germany, German consumers are concerned about privacy and like to be in control of their own credentials. This encourages the use of cryptocurrency in Germany.

In India, UPI payment technology has become a part of Indians and their lifestyle. 65% of transactions in India happen through UPI. This is a major obstacle for cryptocurrency in India as UPI is much faster and cost-free when we compare it to UPI for small transactions. But if in the future cryptocurrency also becomes as efficient as UPI, Indians would find it really easy to shift to cryptocurrency as they have already been exposed to digital transitions and their merits.

***Do you think cryptocurrency is the future and can it be used to run the economy?***

61.1% of people think that cryptocurrency in the future cannot be used to run an economy and 38.9% of people think that cryptocurrency is the future. According to Singh & Singh(2018), the majority of economists believe that cryptocurrency is here to stay. The experts say the only way to bring value to cryptocurrency is by issuing real money instead. They also believe that crypto

trading is very risky as there is no law on the fraud done in these types of digital currencies and also cybercrime is one of the biggest problems with cryptocurrency. There is still tons of analysis to be done on this and a healthy result would come out from it which would give us a more detailed idea about cryptocurrency's pros and cons, its alternatives, and why it could snap physical money in the market.

### CONCLUSION:

Cryptocurrency is a technology about which the majority of the people know about but they don't have enough or complete knowledge about this topic, not enough to invest or trade at least. Majority of people see cryptocurrency as an investment but the original idea behind the rise of cryptocurrency was to remove the role of government in making economic decisions, as a major chunk of their decision has led to economic disaster, the best example being the policy of demonetization in 2016 in India. The government is known for taking decisions hurriedly without doing proper analysis and considering alternatives, the majority of them take decisions keeping in mind their own benefits. People also think that governments don't have fair tax brackets and tax rich less than they tax poor. To remove the role of government in the economy we need to incorporate cryptocurrency in our day to day life. Though Cryptocurrency is a very fast way of making transactions and has small transaction cost, competition with other technology like UPI might be a problem for it to be a part of day to day life of people. Cryptocurrency also has a large number of issues which need to be fixed. First majority of the biggest cryptocurrency today work on PoW networks which use a lot of energy, and are also bad for the environment. So cryptocurrency which use PoS networks need to be encouraged. In the end cryptocurrency can be the future way of payments and more research and analysis need to be done so that we get a clearer picture of its pro and cons and its potential alternatives.

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