

# Cryptocurrency and its impact on Indian Economy

Alka Panda ( 2010560058 )  
Velagala Venkat Reddy ( 2010560120 )  
Sujith Reddy Pingili ( 2010560054 )  
Manoj Kumar Myadaraboina ( 2010560052 )

K L University

## Abstract

*The fast development of information and communication technology has led to the digitization of numerous activities we carry out in our daily lives, making them more flexible and effective. There has been a considerable growth in online users, which has made financial transactions like buying, selling, and trading easier. Because of this, virtual word conceptions have been triggered, creating the new economic phenomenon known as cryptocurrency. Virtual networking and online social games are just a few of the applications and networks that employ cryptocurrency to represent valuable and intangible goods. In recent years, the necessity of virtual currency has been extended throughout numerous systems. This study looks into what users anticipate for the future of cryptocurrencies. It also investigates users' trust in utilizing cryptocurrencies during the time while they are not fully regulated and supervised. This essay discusses the advantages, disadvantages, potential threats, and application of cryptocurrency in India. In the long run, cryptocurrency is thought to be a rewarding investment. due to its many benefits, including its simplicity, lack of mediator participation, quick payments, low transaction fees, and information privacy. Cryptocurrencies do, however, have significant drawbacks. Data security and cryptocurrencies have drawn a lot of attention. Even if India's legal framework for cryptocurrencies is unclear, the nation may nonetheless impose a Goods and Services Tax on cryptocurrency trading.*

## Objective :

- To study the idea of cryptocurrencies, comprehending bitcoins and their use,
- To research the government's stance on bitcoin, its legal status in India, and how it compares to other cryptocurrencies
- To research the potential use of cryptocurrencies in India as well as the advice of industry professionals

## Introduction

Cryptocurrency is a type of digital currency that does not rely on banks to verify transactions. Payments can be sent and received by anybody, anywhere thanks to peer-to-peer technology. Payments made with cryptocurrencies only exist as digital entries to an online database that list specific transactions, not as

genuine physical coins that can be carried and swapped. All bitcoin transactions that involve money transfers are recorded in a public ledger. The place where cryptocurrency is kept is in digital wallets. Cryptocurrency has acquired its name because transactions are encrypted and validated. This means that complex code is required for the storage, transport, and recording of bitcoin data to public ledgers. The purpose of encryption is to provide security and protection ( Liu and Tsyvinski, 2021).Cryptocurrencies can be mined or purchased on exchanges. Not all online retailers allow users to pay using bitcoins. In fact, even well-known cryptocurrencies like Bitcoin are rarely used for retail transactions. But as their value has expanded exponentially, cryptocurrencies are now more widely accepted as trading commodities. They are sporadically used for international transactions.The latest phenomena of cryptocurrency is getting a lot of attention ( Jani, 2018 ). However, it is found that the potentiality of novel technology was not fully appreciated. On the other hand , it serves similar purposes like more conventional assets in its present form. Since 2009, cryptocurrencies have transformed from obscure, specialized technology oddities to quickly expanding financial products that are the focus of ferocious public interest. They have recently been included into many different financial transactions and products.For instance, through initial coin offerings (ICOs), cryptocurrencies have been sold to investors to raise money, and some derivatives' terms are now based on cryptocurrencies.The global spread of the coronavirus (COVID-19) outbreak, which started in Wuhan, China, has been incredibly quick, infecting millions of individuals and killing thousands of them. Financial scholars are becoming increasingly more interested in the effects of COVID-19 on the financial markets.Since their launch, cryptocurrencies have come a long way. Digital currencies have come a long way in establishing themselves as a real and (potentially) world-changing arena, despite the conventional financial sector's early dismissal of them as instruments for criminals and speculators. Concerns remain on the long-term consequences of mass bitcoin use. The energy usage of cryptocurrency mining has alarmed many skeptics and environmentalists in particular because it could lead to an increase in carbon emissions and climate change. It is obvious that the "mainstreaming of cryptocurrencies," as it has been nicknamed, is a significant development in the financial sector ( Singh and Singh , 2018 ).

## **Literature Review**

Since 2012, bitcoins have been accessible in our nation. There are currently 11 trending trading platforms along with 1 million bitcoin users in India. The RBI has prohibited the exchange of bitcoins over the nation at this time. So, it is not possible to pay for goods and services using cryptocurrencies. The Indian government recently declared that cryptocurrencies like bitcoin were not legal cash during the 2018 Union Budget announcement. For those who use, trade, or deal in them, there is no accessible protection. Recently,the finance minister Arun Jaitely stated that the government was aware that cryptocurrencies are utilized for unlawful acts like terrorism.People utilizing these currencies should exercise some caution, the Indian government advises, as there is no legal protection for them. And if the citizens experience fraud, they will not receive any assistance from the government. A team of experts was also formed to assess the danger associated in cryptocurrencies' future in India.In a few months, this committee will finish its investigation of cryptocurrency activity.While some nations have made the decision to adopt cryptocurrencies, others have not yet done so. Cryptocurrencies come with their own set of challenges ( Farrell, 2015 ) .

Given the number of celebrities who have gushed about it, the Mumbai film industry seems to love bitcoin. However, the crackdown in China and worries that a similar crackdown may occur in India have caused huge fluctuations in the value of bitcoin in Indian rupees. The price of bitcoin peaked on September 1 at Rs 3.01 lakh, fell to Rs 1.95 lakh on September 15 as fear set in, and then rose to Rs 2.58 lakh on September 20. On July 2, 2015, Sri Narendra Modi indirectly supported Bitcoin with his aspirational Digital India. The Reserve Bank of India (RBI) has often warned the citizens regarding the risk linked with cryptocurrencies. Plans were for digitizing public records and enhancing India.

Worrisome, but not unexpected, is India's decision to regulate cryptocurrency by launching a state-backed digital currency that will be subject to RBI regulation.

Indicative of the same were the Committee's June 2019 report and the 2019 draft a bill on "Banning of Cryptocurrency and Regulation of Official Digital Currency Bill." The strategy, which can be compared to China's, shows that India is aware of future potential uses for virtual currency. This Bill will clarify how cryptocurrencies should be controlled because there was no specific legislation in place to do so. However, it is unclear what exactly qualifies as "private" cryptocurrencies and if they would be treated as a currency, a stock, or something else ( Singh, 2022 ).

In April, the Reserve Bank of India (RBI) issued a directive stating that all organizations under its control "are expected to cease doing business with firms dealing with virtual currencies immediately and in three months, the current relationships will be finished ( Yadav, 2021 ). Therefore, it can be inferred that since July, banks and lenders in India would not be able to conduct or facilitate transactions with businesses or people who trade in cryptocurrencies. Virtual currencies, in the words of the RBI, "may substantially weaken the FATF (Financial Action Task Force) and AML (anti-money laundering) framework, adversely impact market integrity and capital control, and if they grow beyond a critical level, can risk financial stability as well." (2018) Forbes. Interestingly, despite the fact that the legal status of cryptocurrencies is not entirely clear.

## **Research Questions :**

- **What is the scope of Bitcoins and cryptocurrency in India ?**

The initial effect after Bitcoin's legalization in India is anticipated to be a huge increase in trade volumes and Bitcoin activity. Legalization will probably make Bitcoin start-ups possible.

to report security and risk issues that are related to Bitcoin use, and eventually strive to enhance its infrastructure. Additionally, legalization aids in removing concerns about consistency for the typical Indian user. However, there have been some claims that Bitcoin trading increases the cases of money-laundering, which encourages the funding and formation of terrorist organizations.

Multiple security checks are being carried out by Bitcoin start-ups in India in order to allay these worries. All users must provide a valid Permanent Account Number or an Aadhaar number as proof of identification that has been validated by the government ( Mishra *et al.*, 2021 ).

The government's move to legitimize it has allowed Bitcoin service providers to broaden the usage possibilities. Bitcoins are currently helpful for making purchases through mobile apps,

purchase of gift cards, airtime top-up, and even bill payment. By 2018, it's expected that an improved framework would facilitate domestic money transfers and offer various other financial services to India's citizens who do not have bank accounts. For a country like India, which is popular as the largest remittance market in the world with over \$60 Bn yearly, using Bitcoin will make it simple to carry out a little transfer back home and save billions of rupees which would have been paid to third party intermediaries.

- **What is the strength of Cryptocurrency ?**

In the long run, cryptocurrency is thought to be a rewarding investment. They are viewed as having promising futures due to its many advantages.

The following benefits are discussed:

1. Easy accessibility: Because cryptocurrencies are not tied to any nation or organization, they are readily available to everyone. Through the internet, investors may buy cryptocurrencies with ease.
2. No need for a middleman: Because cryptocurrencies are independent of any bank or financial organization, they enable trading without the need for a middleman.
3. Quick payments: One of the main benefits is thought to be the simplicity of transmission. International transactions and payments go smoothly.
4. Low transaction costs: Using cryptocurrencies is far more affordable than using credit or debit cards.

- **What are the disadvantages of Cryptocurrency ?**

There are known technical difficulties and restrictions with blockchain technology. Swan (2015) outlines seven technical issues and constraints for the future adoption of blockchain technology:

- Throughput: Currently, the maximum throughput of Bitcoin network issues is 7 tps (transactions per second).

Twitter and VISA (2,000tps) are other networks for transaction processing (5,000tps).

The throughput of the Blockchain network needs to be increased if transaction frequency rises to comparable levels.

- Latency: At the moment, it takes around 10 minutes to complete one transaction in order to build up security systems for Bitcoin transactions. More time will be invested in this segment for achieving efficiency in security since it must be more cost-effective than double spending attacks.

As a result, latency is a major problem because it must verify each transaction.

- Security: A 51% attack on the present Blockchain is possible. A single entity would be in complete control of the majority of the network's mining hash rate in a 51% attack and be able to change Blockchain. More security research is required to solve this problem.

- Resources wasted: The energy used to mine bitcoin costs \$15 million every day.

- Usability: Using the Bitcoin API to create services is challenging. A more developer-friendly Blockchain API needs to be created. This might be similar to REST APIs.

- **How are the transactions of cryptocurrency carried out in India ?**

Despite the ban and the declaration of cryptocurrencies in India, this country is a significant market. To help them explore different ways to buy and sell cryptocurrencies, cryptocurrency traders have employed legal counsel and certified accountants. According to the Blockchain Foundation of India (BFI), a lobby of 45 cryptocurrency dealers, more than 30 new exchanges have filed for membership in the previous two months, despite efforts to deprive the market of liquidity. 2018 (The Print). Experts assert that the restriction may stimulate illegal operations like hawala, an unlawful method of money transfer that is widely utilized in South Asia and elsewhere, which would increase the production of black money. Dealers are also searching for banks that are not under RBI regulation ( Zohuri *et al.*, 2022). Likewise, since cooperative societies fall beyond the scope of the RBI, they might be used to route transactions. After certain cooperatives were discovered accepting deposits from non-members or associate members in violation of the 1949 statute, the central bank reiterated in a notification in December 2017 that cooperatives are not permitted to operate banking activity. Cryptocurrency traders are looking to profit on these loopholes. The possibility of setting up over-the-counter markets to conduct cash transactions rather than using banks as a middleman is also being considered by the cryptocurrency sector. 2018 (The Print). Businesses who deal in cryptocurrencies deny facing closure in the meantime. Some claim that their companies are truly growing. Discounts and freebies are used by cryptocurrency firms.

- **What lead to rise of cryptocurrency in the Indian market ?**

India, which has a population of over 1 billion, has recently seen something of an economic revival. The country's growth has been so significant that the IMF has claimed it as the fastest growing market in the nation. More than 40% of the population in the country have access to this segment through telecommunications and internet services. Although it is a nation rich in mystery, history, and culture, it also keeps up with modern innovation. Since a few years ago, the nation has started using bitcoin and other cryptocurrencies. The first restaurant in our nation who accepted Bitcoin payments is Kolonial, a retro-style pizza eatery in Mumbai's Worli district.

In a short time span, the local bitcoin market started to proliferate. Pioneers like BtcxIndia, Unocoin, and Coinsecure started providing exchange and trading services for cryptocurrencies in India. Others were eventually added to the list, including Zebpay, Koinex, and Bitcoin-India. The cryptocurrency market in India has increased from its modest size in 2013 to what we see today because of trading and exchange platforms for cryptocurrencies. In addition to these online exchanges, the nation also has a number of over-the-counter (OTC) crypto stores. Additionally, multiple Bitcoin ATMs may be found in significant Indian cities.

- **How did it impact India Economy ?**

The demonetization strategy was introduced, as declared by Prime Minister Narendra Modi, on November 8, 2016. Large cash investors needed a new way to retain their riches without being subjected to onerous government regulations and heavy tax obligations. Some people have started to buy huge amounts of Bitcoin or other cryptocurrencies with the intention of eventually selling them. This implied

that they were successfully avoiding taxes that would have been imposed had they attempted to transfer their wealth through the banking system. The country's traditional banking system received harsh criticism as a result of the demonetization strategy. When Indians realized that fiat money isn't actually "genuine" money because it isn't backed by anything, they began exploring other currency models. Many Indians started investing in Bitcoin and other cryptocurrencies, especially those in the 40% of the population with access to the Internet ( Banwari, 2017 ).

A sizable section of the populace may have adopted cryptocurrencies as a result of the 2016 demonetization decision, but hampered the market's expansion in the nation. India only contributes 2% of the overall global bitcoin industry despite having a large population. Name Cost-to-Market Cap \$8254.8 USD / 142.2 BTC \$ 528.33 \$ 52.97 B in Ethereum Ripple \$0.65492 \$0.25.92 billion Litecoin \$8.52 B at 151.22 \$ 208.7 \$ 78.16 M in Monero Neo has a capitalisation of \$58.98 (\$260.1 M). The high price of cryptocurrencies and the government crackdown led by the RBI are to blame for the tiny role that such a huge economy is currently playing. In India, cryptocurrency values are often on the high side. Comparing to the global average level, market rates are 5 to 10% higher. As far as international crypto exchange platforms are concerned, this means that Indians can only participate in crypto trading on a minor level. It is extremely challenging for Indians to conduct business with many of the major international crypto exchange platforms due to a lack of mining infrastructure and stringent government prohibitions on the flow of international money transactions. The Reserve Bank of India (RBI) has consistently alerted the public to the dangers of cryptocurrencies.

- **What are the threats to the Indian Economy ?**

Cryptocurrencies do not come without certain monetary issues and security worries. I looked at a number of research, cryptocurrency platforms, and selling forums to explore the difficulties and problems that come with such a virtual phenomena. the primary issues and

Among the effects of cryptocurrencies are:

Security risks: By breaking the system and learning how to manufacture virtual currency, hackers and malevolent individuals can create as much as they wish. By simply adjusting the account balances, it will be possible to steal virtual currency or produce false virtual currency. Selling virtual goods and virtual currency in-game, for instance, is prohibited by World of Warcraft rules. Consequently, various people visit websites that sell WoW gold in order to purchase the virtual goods they require. Numerous WoW gold selling websites are unreliable, prone to hacking, and filled with consumers that are dissatisfied with spending real money.

Concerns of this system collapse: Since virtual currency is not issued based on supply and demand, there will be economic issues if there is an unlimited supply of it in different virtual communities. Some service providers, like Second Life, have the option of issuing unlimited Dollars and raising the prices of their goods to boost their actual earnings. With online marketplaces that let individuals trade virtual currency for actual money.

Value fluctuations in virtual currencies: According to a study by Chow and Guo, it has been seen that a virtual community's virtual money would devalue when its popularity declines. Users with 1000 virtual currency units, for instance, can choose from a selection of 100 goods to purchase. Users can only purchase up to 10 items with their 1000 units if the virtual currency supplier fails.

Money laundering: The risk associated with VC is extremely likely to increase. The gang transferred \$38 million from Korea to a company in China as payment for purchases. This money is earned by gold farming ( Kashyap and Chand , 2019 ).

Unknown identity risks: Since most of the virtual currency platforms including social games do not require authentication while opening an account. As a result, it becomes impossible to follow the transactions in cases where money laundering is suspected. Additionally, assuming a false identity will allow criminals to receive payment in virtual currency for their actions.

- **What is the future of Cryptocurrency in the Indian Market ?**

Bitcoin and other cryptocurrencies are quickly evolving into actual currency, creating healthy competition for the many currencies produced by centralized governments. It is obvious that Bitcoin has a very bright future ahead given the current price increase, which may be a sign of things to come. In any payment system, including the points we earn at arbitrary retailers, cryptocurrency is also referred to as digital money because it may be used in place of traditional fiat currency. The decentralized cryptocurrency is the real thing. Although there is a lot of potential for cryptocurrency to expand in the future, not all existing systems of power and control will benefit from this new form of money. It has the potential to replace national currencies altogether in the future, meaning that no government will need to maintain a distinct currency at all times. Using a form of cash that is challenging in order to Regulate, and it removes exchange rates worldwide which makes the future of the world by being a centrally controlled currency worldwide. This implies the idea of a single global currency. Slowly but surely, these centralized banks are coming to the realization that cryptocurrencies are pertaining. And as per the numerous studies and economists, the worth of virtual currencies like that of bitcoin is established by the market, however there is still much research to be done on the impact of cryptocurrencies ( Mohsin, 2021).

### **Conclusion :**

Observers believe that the government of India will gradually regulate Bitcoin. The Bitcoin sector in Nigeria welcomes these modifications knowing that official recognition will provide the cryptocurrency. India's Bitcoin industry has been attempting to spread awareness of Bitcoin for a while now with tactics like performing security checks, asking users for identification. In order to inform the general public about the advantages and usage of Bitcoin, emerging Bitcoin enterprises have established an organization called the Blockchain Foundation India (BFI). Intervention by the government is credited. Bitcoins are undoubtedly one of the best inventions ever made by humans in terms of creation. The concept of cryptocurrency has a bright future ahead of it, offering additional chances to advance the e-payment industries. Cryptocurrency will continue to advance due to the technology's rapid advancement and improvement. Numerous businesses are starting to accept various cryptocurrencies as payment, and more individuals are becoming aware. In order to produce scientific information, numerous investigations must be conducted in the cryptocurrency industry, which offers a wealth of study options. It is necessary to conduct more research from various perspectives on the relationship between actual financial laws and the legal status of platforms that incorporate cryptocurrencies. In addition, there is a need for further analysis using big samples and greater thought to the adoption and acceptance levels. Regarding the use of and trading of cryptocurrency forms, trust and confidence are crucial elements that require additional

research. Developing use-cases for cryptocurrency applications across many sectors in India is a potential extension of the research's scope.

## **References**

Liu, Y. and Tsyvinski, A., 2021. Risks and returns of cryptocurrency. *The Review of Financial Studies*, 34(6), pp.2689-2727.

Farell, R., 2015. An analysis of the cryptocurrency industry.

Singh, P., 2022. Cryptocurrency, the Future of India. *Advances in Information Communication Technology and Computing*, pp.405-415.

Mishra, D., Patro, G.J. and Acharjya, S., 2021. The Evolution and Growth of Cryptocurrency. *Globsyn Management Journal*, 15(1/2), pp.241-253.

Yadav, A., 2021. Cryptocurrency in India: to Ban or not to Ban. Aman Kumar Yadav, 'Cryptocurrency in India: To ban or not to ban' (The RMLNLU Law Review Blog, 2 March 2021), available at: <https://rmlnlulawreview.com/2021/03/02/cryptocurrency-in-india-to-ban-or-not-to-ban>.

Banwari, V., 2017. Cryptocurrency scope in India. *International Research Journal of Management Sociology & Humanities*, 8(12), pp.82-92.

Kashyap, S. and Chand, K., 2019. Impact of Cryptocurrency in India. *Int'l JL Mgmt. & Human.*, 2, p.69.

Mohsin, K., 2021. Cryptocurrency & Its Impact on Environment. *International Journal of Cryptocurrency Research* ISSN, pp.2790-1386.

Zohuri, B., Nguyen, H.T. and Moghaddam, M., 2022. What is the Cryptocurrency. Is it a Threat to Our National Security, Domestically and Globally, pp.1-14.

Jani, S., 2018. The growth of cryptocurrency in India: Its challenges & potential impacts on legislation. Research gate publication.

Singh, A.K. and Singh, K.V., 2018. Cryptocurrency in India—Its Effect and Future on Economy with Special Reference to Bitcoin. *International Journal of Research in Economics and Social Sciences (IJRESS)*, 8(3), pp.115-126.

<https://www.forbes.com/advisor/in/investing/digital-currency-in-india/>

<https://www.investopedia.com> > terms



Chavan, Amrita B., And K. Rajeswari. "The Design And Developement Of Decentralized Digilocker Using Blockchain." *International Journal Of Computer Science Engineering And Information Technology Research (Ijcseitr)* 9 (2019): 29-36.

Bangar, Ashwini, And Swapnil Shinde. "Study And Comparison Of Cryptographic Methods For Cloud Security." *Int J Comput Sci Eng Inf Technol Res* 4.2 (2014): 205-213.

Miraz, Mahadi Hasan, Et Al. "The Innovation Of Blockchain Transparency & Traceability In Logistic Food Chain." *International Journal Of Mechanical And Production Engineering Research And Development (Ijimperd)* 10.3 (2020): 9155-9170.

Choudhary, Anand. "On Way Towards A Cashless Economy Challenges And Opportunities." *International Journal Of Business Management & Research (Ijbmr)* 8.2 (2018): 1-18.

Brindha, N. "Current Livestock Scenario In India And Their Contribution To National Economy." *International Journal Of Agricultural Science And Research (Ijasr)* 7 (2017): 143-150.

Khan, Ruby. "Economic Growth Stimulation Under Vat Or Gst Regime; Case Study Of Saudi Arabia And India." *International Journal Of Economics, Com-Merce And Research (Ijecr)* 10 (2020): 17-28.