# Cryptocurrencies: challenges and opportunities in India

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Abstract: Cryptocurrency helps to cut down the cost of transactions and helps to save money on each transaction. Therefore, cryptocurrency transactions significantly enhance digital payments, cutting down the cost of each transaction and time. Now, cryptocurrencies offer us certainty, rendering them a desirable investment opportunity in the future. Here, this study gives an attempt to review Cryptocurrency. The digital currency of the 21st Century moves in the form of cryptographic codes between people or institutions connected to peer-to-peer networks (P2P). Blockchain Technology plays a vital role in the flow of cryptographic codes among various nodes in the P2P networks to convert into Cryptocurrency in the decentralized ledger environment. This paper investigates the working of Cryptocurrency and its challenges and opportunities to the Indian Economy. We used secondary data to get the desired results in the present research work. The impact of cryptocurrencies on the Economy, although the transaction volumes and market values of cryptocurrencies are increasing, making it easier for people in different countries to pay each other, negating financial borders currently controlled by banks and governments.

## Keywords: Cryptocurrency, Digital assets, Digital currency.

#### Introduction:

Cryptocurrency emerged in India for the first time around 2009 as bitcoin. The first commercial transaction occurred in 2010, followed by the first cryptocurrency exchange in 2013. It has garnered a significant following & interest in India over the past few years. Industry estimates that there are 15 to 20 million crypto investors in India, with total crypto holdings of around 41 thousand crore rupees. This growing popularity has been attributed to several factors, including India leading the world in growth in adoption of the Internet, the country's burgeoning tech industry, and tech-savvy millennials providing the right consumer segment for cryptocurrencies. Several blockchain-based games have emerged in recent years. These games offer gamers from tier 2 and 3 cities to earn lakhs of rupees every month by just playing those games & unlocking rare items in these games. Another contributor to the increase in Cryptocurrency is huge transaction volumes on peer-to-peer platforms. They can also be transferred across borders without going through any third-party institutions.

In other words, Cryptocurrency is a medium of exchange, such as the rupee or the US dollar, but is digital in format and uses encryption techniques to control the creation of monetary units & to verify the exchange of money. According to market capitalization, Bitcoin is considered the world's best-known Cryptocurrency and the largest in the world, followed by Ethereum.

In traditional financial deals, where two parties use fiat money, a third-party organization – usually a central Bank – assures that the money is genuine and the transaction is recorded. With cryptocurrencies, a chain of private computers – a network- is constantly working towards authenticating the transactions by solving complex cryptographic puzzles.

A cryptocurrency is a digital asset designed to work as a medium of exchange like any other ordinary currency; they are created using cryptography to secure the transactions, control the creation of additional units, & verify the transfer of assets. Cryptocurrencies are digital tokens used to transfer money between individuals' computers & their peer-to-peer structures enable unanimous transfers. Cryptocurrencies can also be defined as a subset of digital currencies & are also classified as a subset of alternative currencies & virtual currencies.

In Cryptocurrency, the application cryptography is used to secure the transactions & control the creation of new coins. Most cryptocurrencies are designed to gradually decrease currency production, placing the ultimate cap on the total amount of currency that will ever be in circulation. Compared with any other currencies held by financial institutions or either kept as cash in hand, cryptocurrencies can be more challenging to seize by enforcing the law. The traceless nature of cryptocurrencies is one of many concerns that governments seek to address through increased regulations.

It is like centralized banking, where the country's Government has complete control over the currency's value. Still, in the case of cryptocurrency government has no control over it as they are fully decentralized. The first decentralized Cryptocurrency was created in the year 2009 and named Bitcoin. Since then, numerous cryptocurrencies have been designed, frequently called altcoins. When a user spends a crypto coin, a transaction is added to an electronic public ledger called a 'blockchain,' similar to a bank record. Cryptocurrencies are controlled by a community of unrelated parties known as miners. In India, it is still unclear whether Cryptocurrency is legal or illegal as no law says it is unlawful. So, neither is it legal nor illegal.

#### India's role in the crypto market:

India has been particularly active in the cryptocurrency market. In fact, according to several research analyses, India is home to the highest number of crypto owners & second in terms of adoption rate. More than 60% of states in India are emerging as crypto Tech adopters, with over 15 million retail investors. Additionally, there is a strong institutional presence in the country, with nearly 230 start-ups in this space, presenting plenty of growth potential and opportunities. The Indian tech ecosystem is buzzing with hungry entrepreneurs and a top-tier talent pool, even from a global standpoint. If the ecosystem continues to grow in the same direction as in the past few years, India will be a global leader in this space. For cryptocurrencies to gain ground & acceptance, a concerted effort on the part of the institutions and regulators alike is needed to educate the public regarding the opportunities it offers to our country.

#### Future of Cryptocurrency:

Cryptocurrency is the future of finance around the Globe. Some of the limitations that cryptocurrencies face today, such as the digital fortune of currency can be erased by a computer crash or that a hacker may ransack a virtual vault - may be overcome in time through technological advances.

Relative complexity compared to conventional currencies will likely deter.

There will be much more competition in the future as a payment method because some banks could issue their Cryptocurrency. Decentralized and hybrid apps will take over the market in the coming years.

Bitcoin will not necessarily be used as a method of payment, but primarily it will be used as a store of value. This revolutionary technology is going to have a very great future in India.

Some of the real-world applications of technology related to Cryptocurrency.

- Use in voting: people can vote for the deserving leader while being anonymous to their identity.
- Using in funds distribution- A massive fund is distributed to the leaders of the states, but because of corrupt minds, the money vanishes & remains to pieces. Cryptocurrency will help the country to get rid of it.

## Challenges:

The appointed Inter-Ministerial Committee (IMC) lists the following threats due to private cryptocurrencies in the Indian Economy 1) with wide entrance and narrow exit, these private cryptocurrency investments are causing collateral damage to individuals or organizations to rush to get out.

2) Volatility in the prices of these currencies may create many speculative losses for the investors.

3) These currencies are Intangible, illiquidity-natured invested assets; we can't convert them into fiat cash for emergency funds requirements, which hampers convertibility and insurability.

4) All these cryptocurrencies are created by private players, not by the sovereigns or Government regulating agencies. Hence, we cannot catch these invisible players to prosecute or summon if anything goes wrong.

5) No proper intrinsic value is considered for these private currencies while introduced into the market.

6) Human errors, like remembering passwords, loss of memory, and wrong typing of a single letter in the password, may cause the permanent loss of this invisible asset.

7) There is no fixed face value or nominal value for these private cryptocurrencies; they cannot set their prices as main releasing store value or medium of exchange price and no pricing policy.

8) Almost all these private cryptocurrencies have been showing frequent fluctuations in their price values since inception. These fluctuations are creating unrest and fear in investors.

9) These private cryptocurrencies are not serving the primary purpose of currency. Mostly, these currencies are inconsistent with essential currency functions, and we cannot immediately replace or convert or exchange fiat currency with these private cryptocurrencies.

10) There is no legal jurisdiction around the Globe for these private cryptocurrencies, and we can tender these currencies legally.

11) Mostly, those who wish to convert their black money, illegal earnings, or reserves into white, also to do money laundering practices are approaching and investing in these currencies. Finally, these private currencies are arranging an alternative and most accessible platform for criminally minded individuals and organizations to hide their illegal earnings in the form of cryptocurrency assets and to transfer quickly out of the political boundaries of the nation.

12) Cyber risks on all sides are also one of the threats to this currency. Since this currency is in the form of software and mathematical formula or codes in the systems, tracing the lost data and currency is very difficult if anything happens to the computer systems due to viruses and hacking.

13) Lack of regularities on this asset at regulating bodies, tax agencies, and controlling bodies from the Government side. Estimating this invisible asset, depreciation loss is also difficult to show to the tax authorities while classifying under asset.

#### Future Opportunities and New Possibilities for Cryptocurrency:

Cryptocurrencies are slowly but surely gaining ground in India. Millennials from tier- 2 & tier -3 cities are jumping onto the crypto bandwagon. Although men have ruled this space, women's participation in crypto trading has grown by over 100 % in recent years. 66% of all users are still below 35 years of age, showing the country's youth the higher adoption rate of crypto.

Gen Z & millennials are significant investors in this space & will continue to be due to the skepticism towards banks & financial institutions, the thrill of volatility, & the availability of digital technology and digital sources of information. P2P platforms have

contributed to the substantial adoption of Cryptocurrency by the tech-savvy generation. Growing mainstream acceptance of Cryptocurrency will also fuel future penetration into more niche segments of the population. Although there is still uncertainty about regulations, the Government has shown signs of recognizing the potential of cryptocurrencies. Crypto seems to be the future. But is it safe to trust this technology to power billions of dollars'' worth of transactions?

1) **Global Financial System**: The first introduced Cryptocurrency in the world has transformed the entire global financial system with its capitalization value of 64 \$billion. The total market value of all cryptocurrencies has crossed its total crypto assets value of 824 \$ billion [Dante D (2018].

2) **Cost and Time of Transactions:** Since there are no intermediaries, banks, or any other regulating bodies on these currencies to generate and transfer, also since managing by all the network participants (P2P), at a cheaper cost and in less time, we can perform the financial transaction efficiently using its Blockchain Technology. For example, a financial transaction worth approx. Three hundred million dollars was performed just for a 4 cents cost (\$0.04) on dated 27th July 2018 [**Anonymous (2019**]].

3) **Erase or Manipulations are not possible**: Since this Blockchain Technology is a decentralized ledger technology, the transaction that happened is visible across the nodes across the networks. There is no possibility of erasing or changing the figures or words of the transaction.

4) **International Acceptance**: Some of the countries stated accepting these currencies. They were recognized by their governments, encouraging cryptocurrency holders to pay their tax liabilities and other Gov payments with Cryptocurrency.

5) **Payments through social media**: With the help of the "Kik" messenger app, one can make payments without having a regular bank account. No hassles of currency exchange, payment formalities need to follow, when we are making payments to the abroad clients or individuals and no cost also.

6) Lending: Kiva is a lending company offering Bitcoin cryptocurrency as loans to some companies. Bit bonds are also doing the same [Chalmers B (2017)].

7) **Retirement Benefits Services**: Bitcoin IRA is a company is providing retired individuals with these services. The invested amount in IRA will be converted into Bitcoins, and benefits and tax exemptions are provided to the accounting holders.

8) **Job Opportunities**: There are endless job opportunities through Startup companies in the cryptocurrency era. Plenty of job offers are there for content writers and marketers in this field.

9) Initial Coin Offerings (ICO): Some young entrepreneurs are interested in launching ICOs through their startups. Hence, there is a lot of scope for the establishment of startups and enterprises [Aashish S (2018), Chakravaram V, Rao GVS, Srinivas J, Ratnakaram S (2019).

# Discussion:

Though this Cryptocurrency has many drawbacks or threats, this could completely transform the current economic situation in Indian and abroad countries. Mainly we can use these cryptocurrencies in cross-border transfers of financials at low cost with less time without depending on intermediaries like banks and financial institutions. Also, we can use this to remit the wages and salaries to our human forces if we wish to introduce this Cryptocurrency in our A-to-Z business operations. However, we can use this technology, i.e., in other ecosystems globally. In addition to the possibilities of the cross-chain unification of blockchains, it provides the integration of all financial operations with different cryptocurrencies simultaneously.

# Conclusion:

Cryptocurrencies have created an image in the world markets basis on their Blockchain technology; we can reduce the cost of international transactions. Also, making these cryptocurrency transactions accessible and these cryptocurrencies are facilitating cross-boarded economies integration. Similarly, these cryptocurrencies-based technologies provide several other benefits, challenges, and opportunities.

## Way forward:

In India, the Government has taken a cautious yet determined approach to regulating Cryptocurrency. The Reserve Bank of India (RBI) has issued warnings against the risks associated with virtual currencies and has urged people to exercise caution before investing in them. However, the Government also recognizes the potential benefits that cryptocurrencies could have for the country economy. The finance minister has also introduced a 'Digital Rupee' based on blockchain technology to reduce the country's dependency on the traditional cash system. While announcing their plans to launch a digital currency, the Government also imposed taxes on virtual assets at 30 %, which, although high, paves a path towards recognition of cryptocurrencies as an asset class.

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