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Effect of Cryptocurrency on Indian Economy - An Overview of Current Status and Future Prospects

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Abstract

Cryptocurrency is an innovative concept of virtual and decentralised currency which has become the new investment option like gold in India. Since there is a lack of a regulatory framework or law about cryptocurrency transactions and trading in India, the buying and selling of Bitcoin, Bitcoin, Ethereum, and other cryptocurrencies are restricted by the government. There are several restrictions on the existence of cryptocurrencies in India. This study is based on understanding cryptocurrency and its effect on the economy. The study is also based on existing scenarios and future prospects.

With the rapid growth of information and communication technologies, a lot of daily activities have been digitised and become more time-saving and flexible. A lot of online users have switched to the virtual world and cryptocurrency has created a new business phenomenon to promote buying, trading, and selling digital assets. Cryptocurrency represents intangible and valuable objects used online in various networks and applications like online games, social networks, P2P networks, and virtual worlds. Virtual currency has been used widely in different systems over the years.

Keywords: Cryptocurrency, Indian economy, digital assets, P2P networks, bitcoin, cryptocurrency in India.

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1.Introduction

Looking a few decades back, no one imagined the way the internet would control the world. For example, Amazon was merely an online book store in 1994. Today, it is one of the largest online retailers in the world. Even its first customers have never expected it to expand tremendously in various categories like streaming services, electronics, clothing, groceries, and whatnot. These days, cryptocurrencies are in the same position, with lack of awareness of its potential to redefine the financial and economic landscape and make a positive effect across the world.

Cryptocurrencies were invented to redefine the way people store, transfer, and create value. However, they can add financial inclusion and serve a higher purpose by providing the options for transaction and investment to all the users, despite ethnicity, nationality, gender, race, or socioeconomic status. Cryptocurrencies are available widely and touch on all important digital currencies. They are real-time and autonomous assets for settlement. They have recently gained an immense reputation as digital currency. It is basically real money which is formed by digital tokens for the masses. It is possible to track digital currency with electronic ledgers or "blockchains".

1.1.Background

When it comes to the unbanked population, there are around 190 million people in India and 1.7 billion across the world, and the online population leads India to rank second across the world. According to an ICUBE report published by IAMAI and Kantar (2021), there will be around 622 million active online users in 2020, i.e. a number which is supposed to grow by 45% by 2025, i.e. around 900 million. Combined with the subcontinent's financial inclusion and digitization programs, the emerging base of internet users has been helpful for consumers to be more aware of cryptocurrencies and warm up to digital exchanges.

Increased adoption of cryptocurrency is leading to a significant improvement in financial inclusion. Many Indians are underserved by traditional investment options and financial institutions. There is also a lack of awareness about crypto finance. But it can make transactions easier, cheaper, and without judgement. In addition, cryptocurrencies have provided consumers with new asset classes to expand their wealth in terms of investment.

The rising use of the internet in India and digital landscape has expanded the popularity of cryptocurrencies expanding across the masses. As reported by a blockchain service provider, Chainanalysis (2021), India stands at the second spot in adoption of cryptocurrency. Over 15 million Indians have investments in digital assets till date (Kumar, 2021). According to a survey, cryptocurrency is owned by every 6 urban residents out of 10 in India (Verma, 2021). There is a seven-fold rise in crypto investments in India, i.e. from $923 million to around $6.6 billion during April 2020 to May 2021 (Lau, 2021). With the rise in internet penetration in rural India, there is a significant rise in these developments to improve financial access in India. According to a recent report by PWC, there are high chances that Indian currency will be a blend of decentralised, tokenbased, account-based, and centralised models in future (Kayrouz, 2021). It would be in the form of stablecoins, “Central Bank Digital Currencies” and cryptocurrencies which exist together with physical and digital currencies. Cryptocurrencies won’t just promote the goal of financial inclusion in India, but also reduce the transaction costs. There would be less dependence on cash across the world and money would be more mobile and accessible. India has constantly been one of the leaders in receiving remittances for over a decade in a row. International fund transfers are subject to waiting for 2-3 business days and high transaction fees. The way remittances operate across the world is a major implication for India and other developing economies. This way, cryptocurrency has a great potential to emerge as a viable solution to make international money transfers faster, reliable and cheaper.

India is known to be very friendly to the crypto economy because it has a huge population of Gen Z and millennials who are tech savvy and full of tech talents, ready to work with blockchain. It has led to the growth of blockchain start-ups and introduction of emerging digital currencies with the RBI expecting to pilot its initial digital currency. Cryptocurrency is also preferred by Indian youths aged 18 to 35 years old, as compared to gold because of simple processing, according to a recent "World Gold Council" report (Das, 2021). When India is still facing the aftereffects of COVID-19 in different parts, financial inclusion must be the priority of the government to boost the economy and businesses. India may have a much more accessible and democratised financial system in a few decades to come.

2. Literature Reviews

Huckle et al (2017) proposed an application to transfer fiat currency using blockchain technology into Ether, a cryptocurrency. This technology has the potential to be part of a large system. It enables a user to exchange the foreign currency left after travelling into their local currency. Demonetization scheme is one of the best use cases by converting fiat currency into any cryptocurrency. They discussed when this measure was not used by the Indian government and also the reason why they may have decided to adopt their own cryptocurrency. Even though this technology can be adopted by the Indian public, it is highly unlikely. In the end, they show that this application is technically feasible but the Indian government may not consider it because of financial sovereignty issues.

There is a lack of research on bitcoin and other cryptocurrencies as mode of payment and their relation with financial and economic variables in Nigeria. Hence, Jimoh & Oluwasegun (2020) determined the nexus between two important financial and economic variables, i.e. stock market and exchange rate, and Ethereum and Bitcoin, most traded cryptocurrencies in Nigeria.

They used "Autoregressive Conditional Heteroscedasticity (GARCH 1,1)", "Granger causality" and "Exponential Generalised Autoregressive Conditional Heteroscedasticity (EGARCH1,1)" techniques using monthly data from August 2015 to December 2019 to test the reaction of volatility of stock market and exchange rates to crypto prices. It is found that instability of crypto prices influences stock market prices more than the exchange rate in the country. In addition, they found "one-way causality" from Ethereum and Bitcoin to all indexes of the share market. Hence, stock investors should look at the crypto prices closely in Nigeria. In order to expand the horizon of cryptocurrencies like Bitcoin, the RBI is looking for various opportunities and ways to establish a central authority-based cryptocurrency. Rao & Dashora (2017) aims to analyse this concept and its impact on money supply "M0 and M1" because of unpredictability in money multipliers. They recommended certain ways for the government and central banks to make it an ideal venture. They also analysed observations across the world to reach conclusions.

Mallick & Mallick (2021) determined the relation between the official "Indian Currencies foreign exchange rates or ICX (GBP, USD, YEN, EURO, etc.)" and cryptocurrencies like "Binance Coin", "Litecoin", Ethereum and Bitcoin with daily analysis during December 17, 2019 to June, 17, 2021. There is a "significant positive relationship" between "Binance Coin and Ethereum" with Bitcoin, "Binance Coin and Bitcoin" with Ethereum, "Binance Coin" with Litecoin, and Litecoin with "Binance Coin". There is a negative relation between Litecoin and USD. Hence, Litecoin can be useful for diversification and hedging. There is also minimal impact on crypto markets from foreign exchange markets in India, maybe because of the lack of a legal framework for recognition by the government. It also causes lack of public acceptability.

Brenig & Müller (2015) conducted an economic analysis of "money laundering" with cryptocurrencies which are decentralised and convertible digital currencies relying on

cryptography. According to them, the rising popularity of cryptocurrencies is seeking the attention of scholars and practitioners, especially due to increasing concerns on money laundering incidents.

They explained the process of money laundering and existing anti-money laundering measures. It helps in analysing transactional and contextual factors about the influence on benefits of using it for money laundering by cyber criminals.

2.1.Research Gap

Considering the above studies, there is still a lack of understanding of the benefits and potential of cryptocurrency and its future prospects in the Indian economy. Hence, this study is aimed to fill this gap.

Research Question

- What is the current status of adoption of cryptocurrency in the Indian market?
- What are the future prospects of cryptocurrency in the Indian economy?

Research Objectives

- To evaluate the current status and future prospects of cryptocurrency on Indian economy

3. Research Methodology

To fulfil the above research objectives, this study is based on secondary data collected from various reliable online sources, like high impact journals, research papers, news articles, and other trusted platforms.

4. Analysis of Study

The Finance Minister of India, Arun Jaitley announced that Bitcoin is no longer a legal tender in January 2018. Cryptocurrency is neither deemed to be coin nor currency without any physical attributes and as a "virtual currency (VC)". Hence, VC cannot be used as a mode of exchange without being officially authorised by the RBI. The strict currency control of the country would be ineffectual due to the very nature of virtual currency (Anand, 2018). The capital growth would be considered as capital gains from the asset class in India. The "Ministry of Finance",

"Securities and Exchange Board of India (SEBI)" and the I-T Department have sought information from various crypto-exchanges regarding their transactions (Jain & Kumar, 2018). The use of cryptocurrency has been banned as an asset class by both financial institutions and businesses. The government has also banned converting INR into cryptocurrency within Indian borders. However, one can convert cryptocurrency across various ICOs (Cumming et al, 2019).

People suffered a huge number of financial losses and government policies somehow failed to protect the investors because of COVID-19 pandemic. Hence, people always attempt to invest where they can get higher returns like bitcoin as compared to the interest from banks. Loan waivers, lower rate of interest, and bailing out by public sector banks with public's money raises a concern on their overall process. On the other hand, crypto banks have less rate of interest for loans.

4.1.What is the current status of adoption of cryptocurrency in the Indian market?

Crypto is now known as digital gold. But stakes are always high in crypto investment. The price of one bitcoin was only $123 in October 2013. As of Jan 2021, its price has crossed a whopping US$ 34,000. Gold is also a valuable asset in India. Currently, the price of 10g of 24k gold has crossed Rs. 50,000. A person might have doubled the investment by investing in gold, while bitcoin has given 340 times more return over the years. This is known as "Digital gold" for a reason. There are so many crypto banks in India that have started operating here like Vault, Kasa, and Easyfi Network. According to Vault's CEO, they have provided around $25 billion as loan.

A physical crypto bank has also been established "Unicas" with the merger of "Cashaa" and "United", a multi-state cooperative society in Jaipur. Unicas also has branches in Delhi, Gujarat and Rajasthan. If someone has Ripple, Bitcoin, or any cryptocurrency, they can get up to 50% loan of the existing market price of crypto by giving cryptocurrency as security. It is due to the fact that cryptocurrency is highly volatile and subject to fluctuation. There is no set timeline for returning the loan, though the borrower needs to pay interest.

Banks usually charge up to 24% of interest, while crypto banks charge up to 15% of interest on cryptocurrency with up to 5% of processing fee. This is why cryptocurrency stands out. In addition, the loan process is also very simple in cryptocurrency and there is no bar on CRISIL scores and creditworthiness. There is 4% interest on keeping crypto in the banks. The "Cryptocurrency Bill 2021" is yet to reach the public domain. But there are high chances that the ban on cryptocurrency and introduction of RBI's digital currency will raise a lot of concerns to the investors (Chandra, 2022).

Like in other countries, cryptocurrencies have become popular also in India due to the highest volume of INR being traded in crypto after demonetization. The Indian Rupee-dominated crypto has generated the third largest volume followed by USD and Yen. The demonetization in 2016 may have implemented cryptocurrencies amongst a huge population but realities started coming out quickly with subdued growth in the Indian market. India has only 2% of contribution to the global market capitalization of cryptocurrency, despite being ranked second in population after China (James & Parashar, 2018). There are few limitations of cryptocurrencies in India, such as –

- **Security and Trust** – Being the digital mode of transaction, cryptocurrency has been widely used for money laundering, drugs smuggling, terror funding, hacking, and various illegal activities. So, there is a lack of trust and security among the common public regarding cryptocurrency investment.

- **Market Risks** – The cryptocurrency market is very speculative and there are different cryptocurrencies available. All of them don't result in good returns for investors. Their price also relies on demand and supply. Speculation is the major factor in fluctuations of cryptocurrency pricing. So, there is a huge financial risk involved.

- **Taxability issues** – There is still a lack of clarity in income tax rules on taxability of gains from cryptocurrency. There is still no possibility of taxing the crypto gains ruled out by the income tax authorities. Cryptocurrency's capital gains in India are subject to tax liability as short term or long-term capital gains as per the period of holding it.

- **No Regulations –** Though other countries have already taken some actions regarding the fair use of cryptocurrency, the Indian government is still waiting and watching. India is yet to assign a regulatory framework to track cryptocurrency transactions. There is always a high threat to investor protection and risks of fraud on the movement of money in the

economy. Apart from other central banks, RBI was unable to track cryptocurrency activities.

- **KYC Rules and Volatility of prices –** Cryptocurrency is highly volatile by nature as its pricing relies on supplies and demand and it completely runs on speculations. Hence, an investor should undergo KYC rules for cryptocurrency transactions and it may take a while to be approved by the wallets. This approval may take several days, depending upon the wallet. Till the time an investor gets approved, he may lose the odds of profit as cryptocurrency value fluctuates drastically.

4.2.What are the future prospects of cryptocurrency in the Indian economy?

Cryptocurrencies are mutating significantly into actual money to give tough competition to various currencies issued by governments across the world. The existing price hike of Bitcoin could mean a great future ahead. It is also known as digital money in a payment system like points in random stores are known as digital money as it can be used for payment rather than physical money. Cryptocurrency is genuinely decentralised. It will have a great scope to grow in future.

However, all the systems of control and power won't have much benefits of this new form of digital currency. It is not easy to tell what would be done to manage cryptocurrency and the challenges should be overcome to make it common in daily life.

It can be the global currency in future and keeping specific currency for every country would no longer be needed. Anyone can use this decentralised currency and avoid the exchange rates across the world, though it is not easy to regulate. It works on the "one world, one currency" concept. Centralised banks are eventually concluding that cryptocurrencies will stay for a long

time. According to several economists and research, digital currencies' values are determined as per the market. Still a lot of research must be done about the impact of cryptocurrency in future.

Some of the common examples of cryptocurrencies are Bitcoin (BTC), Litecoin (LTC), and Ether (ETH). Ether stands second in market cap among the cryptocurrencies. The block time for Litecoin is around 2.5 minutes, while it is 10 minutes for Bitcoin. So, the exchange rate is faster in Litecoin among the users.

Bitcoins have been available in India since 2012. Currently, there are over 1 million Bitcoin users and 11 trading platforms in India. Bitcoin transactions in India have been regulated by RBI in India. Cryptocurrencies cannot be used for buying services and goods in India. As of 2018, the Indian government announced that cryptocurrencies are no longer legal tender during the union budget (Singh & Singh, 2018). People trading or using them or even dealing in them have no protection here. When asked by the media, Finance Minister Arun Jaitley said that government knew that cryptocurrency is widely used for terrorism, money laundering, and other illegal activities.

The Indian government has also warned the people using such currencies to take extreme caution as there is no legal protection for investors. Government cannot provide any help in case of any fraud that takes place. An expert committee is also formed by the government to determine the risk in it. It will determine the cryptocurrencies' activities and release the report. Cryptocurrencies are accepted in some countries while some countries still haven't taken any decision.

5. Results

Experts worldwide have concluded that cryptocurrencies have a great future. Issuing real money is the only way to add value to cryptocurrency. They also discussed the risk of trading with cryptocurrencies as there is still a lack of regulatory bodies to control the fraud in such types of currencies and also criminal activities are a major problem here. According to several studies, one can easily imitate cryptocurrency and conduct false transactions. So, trading is still not safe here. It also needs a lot of analysis on this and a healthy result is still needed to get a brief idea on the use of cryptocurrency and its consequences.

There are different financial exchanges where bitcoins are traded and they have enjoyed significant rise in value over the past few years. A lot of exchanges require some KYC information but loopholes are still present. For example, several wallets can be owned by the same person where coins are stored. Trades may be layered to make it impossible to track what is sold by whom and when. In addition, the cause of the trade is still not known. One thing is certain that there is a movement of the coin across the wallets.

Conclusion

The government of India should take a stand in the world of cryptocurrency as it has huge potential to bring technological revolution to the country. The tax on cryptocurrency gains also adds up to a huge sum of direct taxes which goes to the I-T Department which can further push the overall growth of the economy. The Indian government should look forward to regulating it instead of announcing the blanket ban. There is a need to make it transparent, safer and more reliable. Citizens should be more aware of the overall functioning of cryptocurrency to invest more on it, especially in India which stands second in terms of population. Cryptocurrency holds a bright future which is encouraging about e-investments, e-business, and e-payments.

Laws must be made about cryptocurrencies, considering several legal, financial aspects towards a more consumerfriendly and secure system.

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