

The Growing Influence Of Cryptocurrency On The Indian Economy

Lakshmi ^{1*}, Dr. A. Gopinath²

^{1*}Research Scholar, Annamalai University, Chidambaram. Email: lakshmee333@gmail.com

²Assistant Professor, Department of Business Administration, Annamalai University, Chidambaram, Email: lashugopi@gmail.com

Abstract: This paper examines the impact of cryptocurrencies on the Indian economy, focusing on their current role and potential future influence. Currently, cryptocurrencies are popular investment assets in India, also used for remittances and accepted by some businesses for payments. The underlying blockchain technology drives innovation across various sectors. Regulatory developments play a crucial role in shaping cryptocurrency adoption in India. Looking forward, cryptocurrencies have the potential to enhance financial inclusion, streamline financial transactions, and stimulate economic growth. This study provides insights for stakeholders to leverage cryptocurrency benefits while managing associated risks.

Keywords: Cryptocurrency, CBDCs, blockchain.

INTRODUCTION

Cryptocurrencies, digital currencies utilizing cryptographic techniques for security, have rapidly gained prominence across the globe, including in India. This paper explores the multifaceted influence of cryptocurrencies on the Indian economy, analyzing their current impact and potential future roles.

Currently, cryptocurrencies in India are primarily seen as investment assets, attracting a growing number of retail investors seeking high returns. They are also used for remittances, offering a cost-effective and efficient alternative to traditional banking channels. Additionally, some businesses have started accepting cryptocurrencies for payments, albeit on a limited scale. The technology underlying cryptocurrencies, blockchain, is being explored for various applications beyond finance, driving innovation in sectors such as supply chain management and digital identity verification.

The regulatory landscape for cryptocurrencies in India is evolving, with the government seeking to balance the benefits of technological innovation with concerns over financial stability, fraud, and money laundering. This dynamic regulatory environment significantly influences the adoption and integration of cryptocurrencies in the Indian economy.

Looking ahead, cryptocurrencies have the potential to play a significant role in mainstream financial transactions, enhance financial inclusion by providing services to the unbanked population, and drive economic growth through technological innovation and job creation. The introduction of a central bank digital currency (CBDC) by the Reserve Bank of India could further integrate the benefits of cryptocurrencies with the stability of a national currency.

This paper provides a comprehensive analysis of the current and potential future impact of cryptocurrencies on the Indian economy, offering insights into how they could reshape financial landscapes and contribute to economic dynamics. By understanding these influences, stakeholders can make informed decisions to leverage the benefits of cryptocurrencies while addressing associated risks.

THE CRYPTO STORY IN INDIA

Early Stages (2013-2016)

- **2013:** Cryptocurrencies emerged in India during their nascent stages globally. Only a few exchanges, such as Unocoin and ZebPay, began operations, introducing Bitcoin and other cryptocurrencies to Indian investors.
- **2014:** The momentum started building with the opening of more exchanges—13 large and 20 small—facilitating increased trading activities and public awareness about cryptocurrencies.

Growth and Challenges (2017-2018)

- **July 2017:** Concerns over the misuse of cryptocurrencies for illegal activities prompted the Indian government to draft recommendations aimed at curbing their use in Ponzi schemes, scams, and terrorism financing.
- **December 2017:** The cryptocurrency market witnessed a significant boom, with Bitcoin reaching an all-time high of \$20,000. This surge in value drew widespread attention and increased participation from Indian investors.
- **February 2018:** Then Finance Minister Arun Jaitley declared that cryptocurrencies were not recognized as legal tender in India, emphasizing the government's cautious stance.
- **April 2018:** The Reserve Bank of India (RBI) imposed a banking ban, prohibiting banks from facilitating cryptocurrency transactions. This move created significant obstacles for exchanges and investors, pushing the industry towards peer-to-peer trading networks.
- **July 2018:** In response to the RBI ban, exchanges started to rely on private peer-to-peer networks for enabling cryptocurrency transactions, maintaining the flow of crypto activities despite regulatory restrictions.

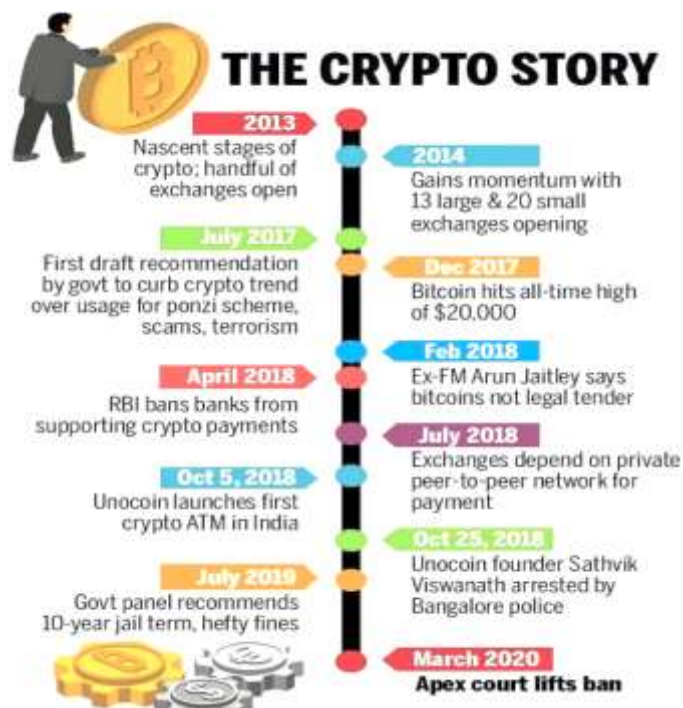


Fig1: Crypto Story in India[3]

Innovations and Legal Battles (2018-2019)

- October 5, 2018: Unocoin launched the first cryptocurrency ATM in India, a notable innovation aimed at providing easier access to cryptocurrencies. However, this development faced regulatory scrutiny.
- October 25, 2018: Sathvik Vishwanath, co-founder of Unocoin, was arrested by Bangalore police, highlighting the legal and regulatory challenges faced by cryptocurrency entrepreneurs in India.
- July 2019: A government panel recommended stringent measures against cryptocurrency-related activities, proposing a 10-year jail term and hefty fines for those involved in crypto transactions, further intensifying the regulatory environment.

Turning Point and Future Prospects (2020-Present)

- March 2020: In a landmark judgment, the Supreme Court of India lifted the RBI's banking ban on cryptocurrency transactions. This decision marked a significant victory for the industry, paving the way for renewed growth and innovation.
- Post-2020: Following the Supreme Court's decision, the Indian cryptocurrency market has experienced resurgence. Increased investor interest, the rise of new exchanges, and the introduction of various blockchain-based projects have characterized this period.

The journey of cryptocurrencies in India has been marked by significant highs and lows, from early adoption and rapid growth to regulatory challenges and legal battles. The lifting of the RBI ban by the Supreme Court in 2020 has reignited interest and activity in the sector. As the industry evolves, the role of cryptocurrencies in the Indian economy is likely to expand, driven by innovation, regulatory clarity, and increasing mainstream adoption. Understanding this dynamic landscape is crucial for stakeholders to navigate the opportunities and challenges presented by cryptocurrencies in India.

LITERATURE REVIEW

Brenig and Muller conducted an economic analysis of the practice of "money laundering" utilizing cryptocurrencies, which are decentralized and fungible digital currencies founded on encryption. Academics and professionals are showing a rising interest in the expanding use of cryptocurrencies, especially because of growing worries over money laundering. They explained the process of money laundering and current anti-money laundering methods. It helps evaluate transactional and contextual factors that influence the advantages of using it for money laundering by cyber criminals.

Wonglimpiyarat points out that legal barriers are hindering Bitcoin's acceptance, and suggests that government legislation should be enhanced to make this new currency more permissible. Bitcoin (BTC) could revolutionize finance in developing nations, but it faces challenges in replacing cash-based economies.

Kurihara and Fukushima clarified that digital cash is not the prevailing form of currency worldwide. Bitcoin cannot be inflated like a government-issued currency since its supply is fixed and cannot be altered.

From December 17, 2019, to June 17, 2021, Mallick & Mallick analysed the correlation between international exchange rates for official Indian currencies (GBP, USD, YEN, EURO, etc.) and cryptocurrencies including Binance Coin, Litecoin, Ethereum, and Bitcoin. A significant positive correlation can be observed between Binance Coin and Ethereum in comparison to Bitcoin, as well as Binance Coin and Bitcoin in comparison to Ethereum. A correlation exists not only between Litecoin and Binance Coin, but also between the two cryptocurrencies. A negative correlation exists between Litecoin and USD. Thus, Litecoin may provide diversification and hedging benefits. The minimal influence of foreign exchange markets on cryptocurrency markets in India is likely attributable to the absence of a legal framework governing government recognition. Moreover, it leads to a dearth of public endorsement.

Kucoin, a crypto exchange, published a study on the cryptocurrency market in India. The paper details results from a survey conducted from October 2021 to June 2022, emphasizing the expansion of the blockchain industry and cryptocurrency sector in India. The study involved 2,042 Indian individuals between the ages of 18 and 60. Out of the total, 1,541 individuals identified themselves as crypto investors, while 501 were consumers inquisitive about investing in Bitcoin in the next six months.

Kurihara and Fukushima clarified that digital cash is not the prevailing form of currency worldwide. Bitcoin has a fixed supply limit, unlike traditional currencies that can be inflated by central banks and governments [4].

RESEARCH METHODOLOGY

This analysis is based on secondary data obtained from reputable internet sources including high-impact journals, research papers, news items, and other trusted platforms [3].

Current Influence of Cryptocurrency on the Indian Economy

Cryptocurrencies, especially Bitcoin and Ethereum, have begun to make a noticeable impact on the Indian economy. This influence can be seen in several key areas:

1. Investment

Retail Investment: Cryptocurrencies have become a popular investment asset among Indian retail investors. Platforms like WazirX, CoinDCX, and ZebPay have seen substantial growth in user numbers. The allure of high returns has attracted a diverse group of investors, including millennials, tech-savvy individuals, and even traditional investors looking to diversify their portfolios.

Market Capitalization: The growing market capitalization of cryptocurrencies has led to increased liquidity and trading volume in the Indian market, contributing to economic activity and financial market dynamism.

2. Remittances

- **Cost-Effective Transfers:** Cryptocurrencies offer a cheaper and faster alternative for cross-border remittances. With a large diaspora, India benefits significantly from remittances. Cryptocurrencies reduce the transaction costs and time associated with traditional banking channels, making it an attractive option for international money transfers.

- **Increased Efficiency:** The use of cryptocurrencies for remittances can bypass intermediaries, leading to quicker and more efficient transactions. This efficiency helps in maximizing the value received by recipients, particularly in rural areas where banking infrastructure may be lacking.

3. Payments and Transactions

- **Merchant Adoption:** A growing number of businesses, both online and offline, have started accepting cryptocurrencies as a form of payment. While still limited, this trend is gradually increasing, with merchants leveraging the benefits of lower transaction fees and faster settlement times.

- **Decentralized Finance (DeFi):** The emergence of DeFi platforms offers innovative financial services such as lending, borrowing, and earning interest on crypto assets, broadening financial inclusion and offering new avenues for economic participation.

4. Technological Innovation

- **Blockchain Technology:** The technology underpinning cryptocurrencies, blockchain, is being explored and adopted for various applications beyond finance. Blockchain's potential for enhancing transparency, security, and efficiency is being harnessed in sectors such as supply chain management, healthcare, and digital identity verification.

- **Start-up Ecosystem:** India's start-up ecosystem has seen the emergence of numerous blockchain and cryptocurrency-related ventures. These start-ups are innovating with new products and services, attracting investment, and creating job opportunities in the tech and finance sectors.

5. Regulatory Developments

- **Evolving Policies:** The regulatory landscape for cryptocurrencies in India is still evolving. While the Supreme Court lifted the RBI's ban on crypto transactions in March 2020, the government continues to deliberate on a comprehensive regulatory framework. This ongoing development influences market sentiment and investor confidence.

- **Government Initiatives:** The potential introduction of a central bank digital currency (CBDC) by the Reserve Bank of India could further integrate cryptocurrencies into the financial system, providing a state-backed alternative to private cryptocurrencies.

6. Public Awareness and Education

- **Increased Awareness:** Public awareness and understanding of cryptocurrencies have significantly increased. Educational initiatives, media coverage, and community engagement have played a role in demystifying cryptocurrencies and their potential benefits and risks.

7. Financial Inclusion

- **Banking the Unbanked:** Cryptocurrencies can help bring financial services to the unbanked and under banked populations in India. By providing a decentralized and accessible financial system, cryptocurrencies can empower individuals without traditional banking access to participate in the economy..

The current influence of cryptocurrencies on the Indian economy is multifaceted, spanning investment, remittances, payments, technological innovation, and regulatory developments. While still in its early stages, the growing adoption and integration of cryptocurrencies present both opportunities and challenges for India's economic landscape. As the regulatory framework becomes clearer, the role of cryptocurrencies in the Indian economy is likely to expand, driving further innovation and financial inclusion.

PRESENT STATUS OF CRYPTOCURRENCIES IN INDIA

Cryptocurrency is widely recognized as the digital equivalent of gold. However, the risks are consistently significant with cryptocurrency investments. In October 2013, the price of one bitcoin was \$123. In January 2024, its price exceeded US\$ 46,000. Gold holds significant value in India as well. The price of 10 grams of 24-karat gold has exceeded Rs. 50,000. Investing in gold could have doubled the money, however, bitcoin has yielded a return 374 times greater over the years. It is referred to as "Digital gold" for a specific purpose. Several cryptocurrency banks have commenced operations in India, such as Vault, Kasa, and Easyfi Network. Vault's CEO stated that they had loaned approximately \$25 billion.

A cryptocurrency is a decentralized virtual asset based on a network of computers that operates independently from the central government or authorities.

During the last ten years, retail investors and institutions have gradually become more aware of the advantages of cryptocurrencies and are beginning to investigate how to utilize its benefits.

Global Crypto Adoption Index in India

India ranks highly across several categories, indicating a strong presence and adoption of cryptocurrency and decentralized finance (DeFi) in the country:

- **Overall Index Ranking (1st):** India holds the top spot in the overall index ranking, reflecting its comprehensive performance across various factors related to cryptocurrency and DeFi adoption.
- **Centralized Service Value Received Ranking (1st):** India ranks first in terms of the value received by users from centralized cryptocurrency services, such as exchanges and wallet providers. This indicates a robust ecosystem of centralized cryptocurrency services in the country.
- **Retail Centralized Service Value Received Ranking (1st):** India also leads in the value received by retail users from centralized cryptocurrency services, underscoring the popularity and accessibility of these services among individual investors.
- **P2P Exchange Trade Volume Ranking (5th):** India ranks fifth in terms of peer-to-peer (P2P) cryptocurrency trade volume, highlighting significant trading activity and adoption of cryptocurrencies among users in the country.
- **DeFi Value Received Ranking (1st):** India tops the ranking in terms of the value received by users from decentralized finance (DeFi) platforms and services, indicating a strong presence and adoption of DeFi technology in the country.

Table 1: Global Crypto Adoption Index 2023

Country	Overall index ranking	Centralized service value received ranking	Retail centralized service value received ranking	P2P exchange trade volume ranking	DeFi value received ranking	Retail DeFi value received ranking
India	1	1	1	5	1	1
Nigeria	2	3	2	1	4	4
Vietnam	3	4	4	2	3	3
United States	4	2	8	12	2	2
Ukraine	5	5	3	11	10	10
Philippines	6	6	6	19	7	7
Indonesia	7	13	13	14	5	5
Pakistan	8	7	7	9	20	20
Brazil	9	9	11	15	11	11
Thailand	10	8	15	44	6	6

- Retail DeFi Value Received Ranking (1st):** Similarly, India leads in the value received by retail users from DeFi platforms and services, highlighting the popularity and accessibility of DeFi products among individual users. Overall, India's high rankings across these categories signify a vibrant and rapidly growing cryptocurrency and DeFi ecosystem in the country, with significant adoption and usage among both retail and institutional users.

1. Percentage of Population that Owns Crypto 2023

The United Arab Emirates ranks first in terms of cryptocurrency ownership as a percentage of its population, with 27.67% of its population owning crypto. India follows closely behind, with 11.5% of its population owning crypto as of 2023.

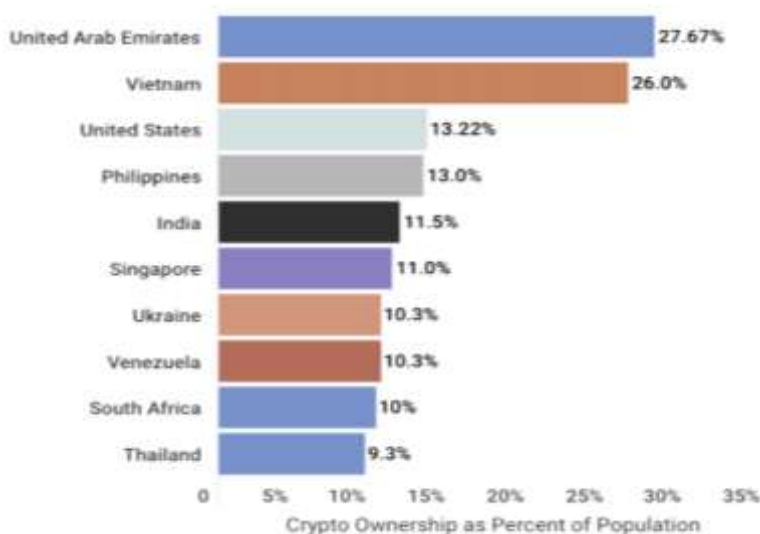


Fig 2: Percentage of population that owns crypto 2023[4]

India has the highest number of cryptocurrency owners, totalling 157.6 billion as of 2023.

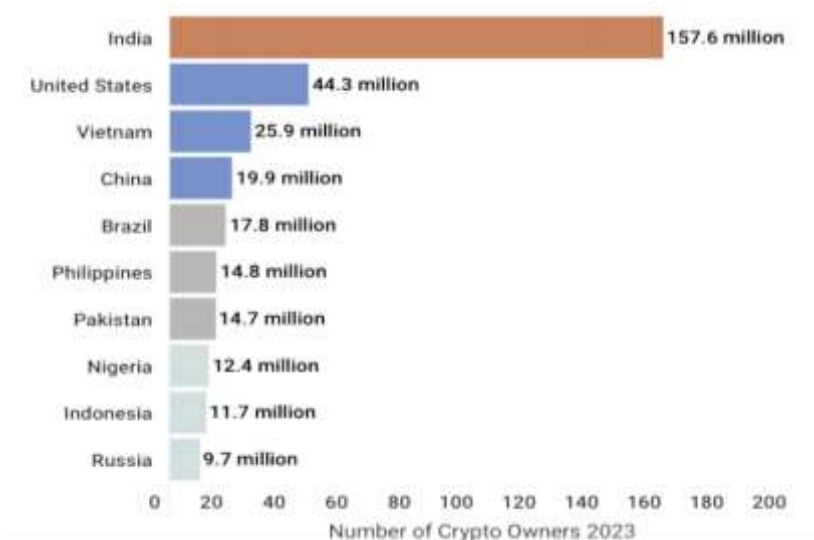


Fig 3: Number of crypto owners by country 2023[16]

POTENTIAL FUTURE INFLUENCE OF CRYPTOCURRENCY ON THE INDIAN ECONOMY

Consider the potential future influence of cryptocurrency on the Indian economy, here are a few key areas to watch:

- 1. Regulatory Framework:** The development of a clear and comprehensive regulatory framework will be crucial. Positive regulation could foster innovation and attract investment, while stringent regulations might stifle growth. The Indian government's stance on cryptocurrencies, including potential policies on taxation and legal status, will be pivotal.
- 2. Financial Inclusion:** Cryptocurrencies could significantly enhance financial inclusion by providing access to financial services for individuals who are unbanked or underbanked. With India's large population and varying levels of access to traditional banking, cryptocurrencies might offer a new avenue for financial participation.
- 3. Investment Opportunities:** As cryptocurrencies become more mainstream, they could become a significant asset class for investors in India. This could lead to increased investment in blockchain technology and related sectors, potentially driving economic growth and innovation.
- 4. Remittances:** Cryptocurrencies might streamline and reduce the cost of remittances, which are a significant source of income for many families in India. This could benefit the economy by improving the efficiency of cross-border transactions.
- 5. Economic Diversification:** The rise of blockchain technology and related industries could contribute to economic diversification. India could become a hub for blockchain startups and tech innovation, fostering new industries and job opportunities.
- 6. Currency Stabilization and Monetary Policy:** The introduction of a central bank digital currency (CBDC) could complement or compete with traditional monetary policy tools. The impact on traditional financial systems and economic stability would be an important consideration.
- 7. Cyber security and Financial Stability:** As cryptocurrency adoption grows, so will the need for robust cyber security measures. Ensuring the stability of financial systems in the face of potential risks associated with cryptocurrencies will be essential.

Overall, while there are potential benefits, there are also risks and challenges that need to be addressed through effective regulation and infrastructure development. The future influence of cryptocurrency on the Indian economy will largely depend on how these factors evolve.

CONCLUSION

Cryptocurrency has begun to exert a notable influence on the Indian economy, characterized by both emerging opportunities and significant challenges. Currently, the sector is marked by increased investment and efforts to enhance financial inclusion, yet it faces obstacles due to regulatory uncertainty. In the future, cryptocurrencies hold substantial potential to reshape the Indian economic landscape. They could advance financial inclusion by providing banking alternatives to underserved populations, streamline remittances through lower costs and faster transactions, and drive economic diversification by fostering innovation in blockchain technology. However, the extent of these impacts will depend on the development of a clear regulatory framework, the adoption of central bank digital currencies (CBDCs), and effective management of associated risks. Overall, while the current influence of cryptocurrencies is growing, their

future impact will be shaped by regulatory and technological developments that either bolster or constrain their role in the Indian economy.

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