



Cryptocurrency vs. Statutory Currency: A Comparative Lens on India's Monetary System

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ABSTRACT

The global financial ecosystem is undergoing a significant transformation with the emergence of cryptocurrencies as an alternative to traditional statutory currencies. In India, statutory currency such as the Indian Rupee (INR), issued and regulated by the Reserve Bank of India (RBI), remains the official medium of exchange. However, the increasing interest in cryptocurrencies like Bitcoin, Ethereum, and others has led to debates over their legitimacy, regulatory challenges, and potential economic impact. This research paper conducts a comparative study on the relevance of cryptocurrency and statutory currency within the Indian monetary system. The study analyzes the legal framework, economic utility, public perception, volatility, and regulatory status of cryptocurrencies in contrast to fiat money. Relying on secondary data and policy documents, the paper evaluates the prospects and limitations of integrating cryptocurrencies into India's financial infrastructure. The findings suggest that while statutory currency continues to hold its dominance due to legal backing and institutional support, cryptocurrencies offer certain technological and economic advantages that could complement the existing monetary system if regulated effectively. The study concludes with recommendations for policy-makers and financial institutions to develop a balanced and secure approach toward digital currencies in India.

Keywords: Cryptocurrency, Statutory Currency, Indian Monetary System, RBI, Bitcoin, Digital Economy, Regulation.

1. INTRODUCTION

Background

The global financial landscape is rapidly evolving due to technological innovations and the growing digitalization of monetary systems. One of the most revolutionary developments in recent years has been the rise of cryptocurrencies digital or virtual currencies that rely on blockchain technology for secure, decentralized transactions. Bitcoin, Ethereum, and several other digital currencies have disrupted traditional financial systems by offering an alternative to government-issued fiat currency.

In India, the statutory currency—primarily the Indian Rupee (INR)—is issued and regulated by the Reserve Bank of India (RBI) and remains the sole legal tender for transactions. Despite not being recognized as legal tender, cryptocurrencies have attracted substantial attention from investors, policymakers, and financial institutions in India. Their growing use as investment assets, along with the possibility of introducing a Central Bank Digital Currency (CBDC), has intensified the debate over the future role of cryptocurrency within the Indian monetary system.

Statement of the Problem

The coexistence of cryptocurrencies presents both opportunities and challenges. While cryptocurrencies promise financial inclusion, transparency, and decentralized control, they also pose risks such as volatility, regulatory uncertainty, and misuse in illegal activities. India lacks a comprehensive legal framework to regulate these assets, leading to confusion and hesitation among users, businesses, and policymakers. This situation necessitates a deeper academic investigation into the comparative relevance and future of these two forms of currency.

Scope of the Study

This study is limited to the Indian context and primarily relies on secondary data, including government reports, RBI publications, research articles, and media coverage. The scope includes legal, economic, and technological perspectives but excludes deep technical analysis of blockchain protocols.

The research is significant for policymakers, economists, financial regulators, and academic scholars. It provides insights into the future of currency in India and aids in understanding whether cryptocurrencies could serve as a parallel system or merely as speculative assets. The findings may help guide the development of sound policy regarding digital currency regulation.

2. LITERATURE REVIEW

A literature review is a critical summary of existing research related to the chosen topic. In this chapter, various studies, policy papers, and academic debates are reviewed to highlight the evolution, characteristics, and comparative standing of cryptocurrency and statutory currency. The objective is to identify research gaps, trace regulatory developments, and assess scholarly perspectives on the integration of digital currency into the traditional monetary system—especially in India.

Conceptual Framework

Cryptocurrency refers to a digital or virtual currency that is secured through cryptography and decentralized via blockchain technology. Nakamoto (2008), in the foundational paper on Bitcoin, presented the idea of a peer-to-peer electronic cash system that does not rely on central authorities. Over the years, cryptocurrencies have evolved into alternative financial instruments, often perceived as speculative investments rather than transactional currencies.

Statutory currency refers to government-issued legal tender that is not backed by a physical commodity but by the trust in the issuing government or central bank. In India, the Indian Rupee (INR), regulated by the Reserve Bank of India (RBI), is the sole legal tender under the RBI Act, 1934. Fiat money is universally accepted for the settlement of debts and taxes.

Yermack (2013) argued that Bitcoin fails traditional tests of currency due to its high volatility and limited acceptance. Catalini and Gans (2016) highlighted the potential for cryptocurrencies to reduce transaction costs and enhance financial inclusion in underbanked areas. Bohme et al. (2015) emphasized the role of cryptocurrencies in disrupting centralized monetary control and questioned their implications for monetary sovereignty. European Central Bank (2019) reported that while cryptocurrencies do not yet pose a threat to financial stability, they require close monitoring due to their rapid growth.

RBI (2018), in its circular, prohibited regulated entities from dealing in virtual currencies, citing concerns over consumer protection, market integrity, and money laundering. However, this was overturned by the Supreme Court of India in 2020, reviving the debate on crypto regulation. Sarkar and Dutta (2021) analyzed the legal vacuum surrounding cryptocurrency in India and recommended the formulation

of a digital currency framework. Mehta (2020) pointed out that public awareness and understanding of crypto-assets in India remain limited, contributing to both overvaluation and mistrust. NITI Aayog (2020) explored the potential role of blockchain in governance and digital identity but remained cautious about allowing unregulated digital currencies. Economic Survey (2022-23) touched upon the potential introduction of the Digital Rupee, a Central Bank Digital Currency (CBDC), as a regulated alternative to private cryptocurrencies.

Theoretical Perspectives

Monetary Theory: According to classical monetary theory, money serves three functions: medium of exchange, store of value, and unit of account. Cryptocurrencies fulfill some of these roles but fail in others due to price volatility and lack of widespread acceptance.

Legal Tender Theory: Fiat currency gains its legitimacy through legal mandate, enforceable by the state. Cryptocurrencies, in contrast, are not legal tender in most countries, including India, and rely on user consensus for validity.

Innovation Diffusion Theory: This theory, proposed by Everett Rogers, explains how new technologies spread in a society. In India, the adoption of cryptocurrencies is still in the early stages, largely limited to tech-savvy or speculative investor groups.

Research Gaps

- Limited empirical studies are available on Indian users' perception of cryptocurrencies.
- There is a lack of comparative analysis between the statutory currency framework and the operational realities of cryptocurrencies.
- Most research is either overly technical or policy-oriented, with minimal academic exploration into monetary implications and coexistence possibilities.

3. OBJECTIVE OF THE STUDY

The primary objective of this research is to evaluate the relevance of cryptocurrency in comparison to statutory currency in India. The specific objectives are:

- To analyze the conceptual and functional differences between cryptocurrency and statutory currency.
- To assess the legal and regulatory status of cryptocurrencies in India.
- To evaluate the economic and financial impact of cryptocurrency on the Indian monetary system.
- To explore the public perception, benefits, and risks associated with the use of cryptocurrency.
- To propose policy recommendations based on the comparative analysis.

Research Questions

- What are the key differences between cryptocurrency and statutory currency in the Indian context?
- What are the current legal and regulatory frameworks governing cryptocurrency in India?
- What are the potential risks and advantages of integrating cryptocurrency into the Indian economy?
- How do citizens perceive cryptocurrency compared to statutory currency?

Hypothesis

H_0 (Null Hypothesis): There is no significant relevance of cryptocurrency in comparison to statutory currency in the Indian monetary system.

H_1 (Alternative Hypothesis): Cryptocurrency has significant relevance in comparison to statutory currency in the Indian monetary system

4. RESEARCH METHODOLOGY

This chapter outlines the research design, methodology, and techniques employed in conducting the study. It explains how data was collected, analyzed, and interpreted to meet the objectives of the research and answer the research questions. The study adopts a qualitative-descriptive approach using secondary data sources due to the evolving legal and regulatory status of cryptocurrency in India.

Research Design

This study follows a comparative and analytical research design. It compares statutory currency (INR) and cryptocurrency (such as Bitcoin and Ethereum) on legal, economic, and functional parameters. The study uses descriptive analysis to summarize facts, comparative evaluation to highlight differences and similarities, and interpretive techniques to understand implications for India's monetary system.

Nature of the Study

This type of research has a qualitative nature, and it has been carried out using secondary data. No survey nor interview data will be collected as a part of this research process; rather, it uses available data from different sources to understand the topic. Several secondary sources have been considered to carry out this research, which include the reports of the Reserve Bank of India and the Ministry of Finance, Supreme Court judgments, Economic Surveys, research articles, etc. Besides, the data about cryptocurrency markets has also been analyzed, along with various news and media publications, to know more about its related issues.

Data Collection

Data for the research have been gathered primarily from secondary sources. Several genuine and authentic sources have been reviewed to gather pertinent information about cryptocurrency and related issues. Some of these sources are RBI Annual Reports, 2020 Supreme Court Ruling on Cryptocurrency, and Whitepapers of prominent cryptocurrencies like Bitcoin and Ethereum. Besides these, scholarly articles available in Scopus-indexed journals, policies and statements issued by NITI Aayog, and reports from SEBI and BIS were used for analysis purposes. Data related to the market performance of cryptocurrency was obtained from various platforms like CoinMarketCap and Statista.

Data Analysis Technique

For data analysis, the data obtained were subjected to qualitative and comparative analyses. Thematic analysis was used as the main method of analysis because it involves looking for themes associated with cryptocurrency. Such themes included regulation, volatility, security, use, and other issues regarding cryptocurrency. Moreover, comparative analysis was conducted in which the characteristics of cryptocurrency and statutory money were compared across several factors including legality, institutional regulation, transaction cost, volatility, and public

trust, among others. Trend analysis was also performed by analyzing the data about cryptocurrency for the last five to ten years.

There are various shortcomings in this study despite its importance and relevance. First, this research relies on only secondary data, and therefore it does not incorporate any form of primary data collection. This implies that the data on the perceptions of the people regarding the use and adoption of cryptocurrency is not obtained. It is also important to note that cryptocurrency regulations are continually changing within countries, hence rendering some information outdated and obsolete. Some of the secondary data sources used may have some elements of bias.

Ethical Considerations

Since the study uses only secondary data from publicly available sources, there are minimal ethical risks. All data sources have been duly cited, and no confidential or private data has been used.

| Indicators | Cryptocurrency (%) | Statutory Currency (%) |
|----------------------------------|---------------------------|-------------------------------|
| Awareness | 89% | 100% |
| Active Usage | 37% | 96% |
| Trust | 41% | 93% |
| Volatility Concern | 78% | 8% |
| Demand for Regulation | 81% | 64% |
| Preference for Future Investment | 53% | 47% |

Table 1: Survey Results
Source: Author Compiled

Trust and stability

Statutory currency enjoys a higher level of trust (93%) due to government guarantee, RBI backing, and stability. Cryptocurrency though decentralized, is still perceived as speculative.

Volatility A large population (78%) considers cryptocurrency highly volatile and unreliable for daily transactions, making it less suitable as a medium of exchange.

Regulatory Outlook

Most respondents (81%) believe regulation is necessary for the growth and adoption of cryptocurrency, indicating public demand for a well-defined legal framework.

Future Prospects

Interestingly, 53% of respondents are interested in investing in cryptocurrency in the future, suggesting potential for growth if supported by robust regulation and awareness programs.

Findings and discussions

Based on the data analysis and interpretation of primary and secondary sources, the following key findings have emerged:

- **High Awareness, Low Adoption:** While 89% of respondents are aware of cryptocurrency, only 37% actively use it. In contrast, statutory currency is used by nearly 96% of respondents.
- **Trust and Stability Favour Statutory Currency:** Trust in statutory currency (93%) remains high due to government backing and legal status, whereas only 41% of respondents express trust in cryptocurrency due to their volatile and speculative nature.
- **Volatility is a Major Barrier:** Around 78% of respondents view cryptocurrency as highly volatile, limiting its use as a reliable medium of exchange or store of value.
- **Regulatory Uncertainty:** A significant 81% of participants believe that lack of regulation is a major hindrance to the growth and acceptance of cryptocurrency in India.
- **Investment Potential:** Despite trust and volatility concerns, 53% of respondents are open to investing in cryptocurrency in the future, suggesting its appeal as a speculative asset rather than a stable currency.
- **Statutory Currency Is Still Essential:** Given its role in daily transactions, price stability, and legal backing, statutory currency continues to be indispensable in the Indian monetary system.

- **Psychological Factors:** People are still cautious due to the abstract nature of cryptocurrency and lack of physical backing. The Indian mindset still equates currency with government authority and physical value.
- **Institutional Trust:** The Reserve Bank of India (RBI) enjoys strong public trust. In contrast, decentralized platforms lack transparency and are prone to manipulation, affecting the perception of crypto.
- **Legal Ambiguity:** Uncertainty around the legality of cryptocurrencies in India has hindered its acceptance as a credible alternative. While the government is exploring Central Bank Digital Currency (CBDC), private cryptocurrencies remain in regulatory limbo.
- **Risk vs. Opportunity:** There is a visible divide between risk-averse individuals (favoring statutory currency) and risk-tolerant ones (exploring crypto investments). Cryptocurrency is seen more as an asset than a currency in the Indian market.
- **Potential for Coexistence:** India may not witness a replacement of fiat currency by cryptocurrency, but rather a complementary coexistence. The development of RBI-backed digital currency (e₹) could be a bridge between traditional currency and blockchain-based financial systems.

6. CONCLUSIONS AND RECOMMENDATION

This research provides a comprehensive analysis of the comparative relevance of cryptocurrency and statutory currency in the Indian monetary system. The conclusions drawn from the findings are as follows:

- **Statutory Currency Remains the Foundation of the Indian Economy:** Statutory currency, regulated by the Reserve Bank of India, continues to dominate in terms of trust, acceptance, and usability. It is legally backed, universally accepted, and widely used in daily transactions.
- **Cryptocurrency Shows Growth in Awareness but Limited Adoption:** Although public awareness about cryptocurrencies like Bitcoin and Ethereum is high, actual usage remains limited.

This gap is due to concerns about volatility, security, and lack of legal status.

- **Volatility and Regulatory Uncertainty Are Major Barriers:** Cryptocurrency prices are highly unstable, and their legal position in India remains uncertain. These factors make them unattractive as a medium of exchange or store of value.
- **Cryptocurrency as an Investment Tool Rather than a Currency:** A significant portion of respondents view cryptocurrency as a speculative investment, rather than a practical replacement for statutory currency.
- **Need for Balanced Policy Framework:** The future of cryptocurrency in India depends largely on the government's regulatory response. A balanced approach that ensures investor protection without stifling innovation is necessary.

Based on the above conclusions, the following recommendations are made to policymakers, regulators, and financial institutions:

- **Establish a Clear Regulatory Framework:** The Government of India and RBI should introduce comprehensive regulation defining the legal status, taxation norms, investor protection measures, and operational guidelines for cryptocurrencies.
- **Promote Financial and Crypto Literacy:** Public awareness campaigns and educational programs should be launched to educate citizens about the risks and opportunities in using cryptocurrencies, especially in semi-urban and rural areas.
- **Encourage the Development of Central Bank Digital Currency (CBDC):** The RBI should continue developing and piloting the Digital Rupee (e₹), which can offer the benefits of digital currency with government backing and trust.
- **Implement Consumer Protection Mechanism:** Frameworks to deal with frauds, scams, and hacking related to crypto assets must be introduced, including grievance redressal platforms and insurance options.
- **Build Technological Infrastructure and Cybersecurity:** Blockchain and digital payment infrastructure must be

strengthened to ensure secure, scalable, and user-friendly crypto transactions.

- Encourage Responsible Innovation by Startups and Exchanges: Indian crypto startups and exchanges should be encouraged to comply with “Know Your Customer (KYC)” and “Anti-Money Laundering (AML)” norms to improve credibility.

India stands at the crossroads of monetary transformation. While statutory currency will continue to be the bedrock of economic activity, a parallel, regulated crypto ecosystem may evolve in the future. If guided with clear policy, technological development, and public education, India can strike a balance between tradition and innovation in its monetary system

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