

THE DIGITAL RUPEE IN INDIA: A STUDY ON ITS ECONOMIC IMPACT, CHALLENGES AND FUTURE PROSPECTS WITH REFERENCE TO COIMBATORE CITY

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ABSTRACT

Money has always been at the heart of human civilization, constantly evolving to meet the changing needs of trade, economic growth, and technology. It all began with the barter system in ancient Mesopotamia, where people traded goods directly, but this system had its flaws, like the difficulty of finding someone who wanted exactly what you had. To solve this, commodities like grain and cattle became standardized forms of money. As societies grew, metal coins took over as the go-to currency, eventually being replaced by paper money backed by gold. The rise of banks brought about fiat money—currency issued by governments and not tied to any physical commodity—along with innovations like checks, credit cards, and electronic transactions, which made managing money easier and more efficient. Fast forward to the 21st century, and digital currencies like Bitcoin, along with mobile banking and e-wallets, have dramatically changed how we handle money. In response, governments have introduced Central Bank Digital Currencies (CBDCs), such as India's Digital Rupee, combining the best of digital convenience with the stability of state-backed money. These shifts show how money continues to adapt to our ever-changing world, balancing innovation with stability.

Keywords: Banking, Digital Currency, Bitcoin, Mobile Banking, E-Wallets, Digital Rupee, Economic Growth, Technological Innovation

INTRODUCTION

Money has been an essential element in shaping human civilization, continuously evolving to meet the ever-changing demands of trade, economic development, and technological progress. From its origins in the barter system of ancient Mesopotamia, where goods were exchanged directly but often lacked a common measure of value, the need for more efficient forms of exchange led to the creation of commodity money. This

shift to items like gold, silver, and other valuable materials laid the groundwork for the modern monetary system. Over time, innovations such as metal coins, paper money, and the establishment of banking systems further transformed the role of money in society, allowing for greater convenience and security in transactions. With the rise of digital technology in the 21st century, money has once again adapted, with the advent of cryptocurrencies, mobile banking, and Central Bank Digital Currencies (CBDCs), like India's Digital Rupee, offering a new frontier in the way money is used and exchanged. Each stage of this evolution reflects the ever-growing need to balance economic stability, technological advancement, and the complexities of global commerce.

STATEMENT OF THE PROBLEM

The introduction of the Digital Rupee in India marks a significant step toward modernizing the country's financial system. However, despite its potential to enhance transaction efficiency, promote financial inclusion, and reduce reliance on physical cash, the adoption of the Digital Rupee faces several challenges. These include issues related to cybersecurity, digital literacy, regulatory frameworks, and integration with existing financial infrastructure. Moreover, the impact of the Digital Rupee on businesses, consumers, and the broader economy remains unclear. This study seeks to examine the economic implications, challenges, and future prospects of the Digital Rupee, focusing on its adoption and effectiveness in transforming India's financial landscape.

OBJECTIVES

- To understand the awareness and readiness to adopt digital rupees
- To explore the benefits of the Digital Rupee in enhancing transaction efficiency, reducing cash usage, and promoting financial inclusion
- To identify key challenges such as security risks, technical issues, and regulatory concerns affecting the adoption of the Digital Rupee
- To analyze the impact of the Digital Rupee on financial transactions, banking systems, and economic activities

METHODOLOGY

This study is based on descriptive research methodology to better understand and explain the subject at hand. This approach allowed me to observe, analyze, and describe the key characteristics of the topic without making any changes to the environment or variables involved. The aim was to provide a clear, accurate picture of the current situation by drawing on both qualitative and quantitative data, when relevant, to offer meaningful insights into the research question. Essentially, this methodology helped me capture the essence of the topic in its natural state, providing a solid foundation for further exploration.

REVIEW OF LITERATURE

Ratre and Devashish Sarkar (2024), A study on "The Impact of Digital Currencies on Traditional Monetary System", this paper presented that their research synthesizes existing literature on digital currencies and highlighting their potential to disrupt traditional banking and monetary systems. The authors discuss about the potential benefits of the digital currencies, including increased efficiency and reduction of transaction costs. However, the authors also note the challenges and risks associated with the digital currencies, such as ambiguous regulations and volatility. The research aims to understand the implications of the digital currencies on traditional monetary systems

Umesh Kumar Bhavsar (2024), a study on "The Rise of Digital Rupee: India's Leap into the Future of Currency", this paper presented that research explores the rise of the Digital Rupee, a significant milestone in India's transition to digital currency. The study synthesizes existing literature on digital currencies, focusing on their potential effects on India's economy and financial infrastructure. The research also explores the challenges

and regulatory environments surrounding digital currencies in India. The study seeks to enhance understanding of the Digital Rupee's potential in transforming of India's currency ecosystem.

DATA ANALYSIS AND INTERPRETATION

TABLE 4.1

USING DIGITAL RUPEE INSTEAD OF CASH

S.NO	ACCEPTANCE LEVEL	NO OF RESPONDENTS	PERCENTAGE
1	STRONGLE AGREE	23	21.90
2	AGREE	38	36.19
3	NEUTRAL	31	29.5
4	DISAGREE	7	6.66
5	STRONGLY DISAGREE	6	5.71
		105	100

INTERPRETATION

The above table shows out of 105 respondents, 23 respondents are strongly agreed to use digital rupee instead of cash in future, 38 of the respondents are agreed to use digital rupee instead of cash, 31 of the respondents gave neutral option, 7 of the respondents are disagreed and 6 of the respondent are strongly disagreed.

The majority of the respondents are agreed to use digital rupee instead of cash

TABLE 4.2

NEED OF DIGITAL RUPEE

NEEDS	NO OF RESPONSES					SCORE	RANK
FASTER TRANSACTION	40	10	14	25	15	104	2
ACCURANCY	11	38	24	19	13	105	1
MORE TRANSPARENT	19	18	33	23	9	102	4
GLOBAL ACCEPTANCE	18	21	19	26	19	103	3

INTERPRETATION

From the above table, it can be noticed that out of 105 respondent, 40 of them rank faster transaction as their second concern, while 38 of them rank accuracy as their first concern, 33 of them rank more transparent as their third concern and 26 of them rank global acceptance as their fourth concern.

The majority of the respondent need digital rupee for the purpose of accuracy

The chi - square test has been calculated based on the perception level of the respondent's awareness about digital currency

The level of perception has been classified into high, low, medium satisfied for the actual score for the chi - square calculated value

AGE AND THE WILLINGNESS TO USE THE DIGITAL RUPEE FOR FUTURE TRANSACTIONS

To find age and the willingness to use digital rupee for future transaction of the respondent's chi-square test is used and the result is given below

Age and the willingness to use digital rupee for future transaction of the respondents was tested with the help of following hypothesis

- **H₀ (Null Hypothesis):** Age and the willingness to use the digital rupee for future transactions are independent.
- **H₁ (Alternative Hypothesis):** Age and the willingness to use the digital rupee for future transactions are dependent.

FACTORS	CALCULATED VALUE	TABLE VALUE	DEGREE OF FREEDOM	SIGNIFICANTS
AGE AND THE WILLINGNESS TO USE THE DIGITAL RUPEE FOR FUTURE TRANSACTIONS	0.694	7.81	3	5%

Since the calculated Chi-Square value (0.694) is less than the table value (7.815) and p-value (0.875) > 0.05, we fail to reject H₀. This confirms that age group and willingness to use the digital rupee for future transactions are independent (not related)

Age and the willingness to use the digital rupee for future transaction of the respondents are independent

GENDER WITH DIGITAL RUPEE WILL POSITIVELY IMPACT THE ECONOMY BY REDUCING RELIANCE ON PHYSICAL CASH

To find the gender with digital rupee will positively impact the economy by reducing reliance on physical cash of the respondent's chi-square test is used and the result is given below

The gender with digital rupee will positively impact the economy by reducing reliance on physical cash of the respondents was tested with the help of following hypothesis

- **H₀ (Null Hypothesis):** the gender with digital rupee will positively impacts the economy by reducing reliance on physical cash are independent.

- **H₁ (Alternative Hypothesis):** the gender with digital rupee will positively impacts the economy by reducing reliance on physical cash are dependent.

FACTORS	CALCULATED VALUE	TABLE VALUE	DEGREE OF FREEDOM	SIGNIFICANTS
GENDER WITH DIGITAL RUPEE WILL HAVE POSIVELY IMPACT THE ECONOMY BY REDUCING RELIANCE OF PHYSICAL CASH	19.27	9.488	4	5%

Since the calculated Chi-Square value (19.27) is greater than the table value (9.488) and p-value (< 0.05), we reject H₀. This confirms that gender and the belief that the digital rupee will have a positive impact are dependent (related).

The gender with digital rupee will positively impacts the economy by reducing reliance on physical cash are dependent

FINDINGS OF THE STUDY

- The majority of the respondents are aware about the digital rupee
- The majority of the respondents are agreed to use digital rupee instead of cash
- The majority of the respondent need digital rupee for the purpose of accuracy
- The majority of the respondents are agree and in neutral stage about the digital rupee as a risk free medium of exchange

SUGGESTIONS

- **Promote Awareness and Education on Digital Rupee:** Launch campaigns to educate Coimbatore's residents and businesses on the benefits and usage of the Digital Rupee, ensuring better adoption and understanding of digital currency and its advantages for daily transactions
- **Focus on Addressing Security and Privacy Concerns:** Implement robust cybersecurity measures to protect users and businesses from fraud and data breaches. Promote security awareness to build trust in the Digital Rupee among the people of Coimbatore

CONCLUSION

The introduction of the Digital Rupee in India holds significant promise for transforming Coimbatore's economy, particularly by enhancing financial inclusion and improving the efficiency of digital transactions. As a cashless payment system, the Digital Rupee can streamline daily financial operations, reduce transaction costs, and facilitate smoother business operations, especially for small and medium-sized enterprises (SMEs) in Coimbatore. Its integration into the local economy could encourage greater participation in the digital economy, reducing reliance on traditional banking systems and creating new avenues for economic growth.

However, the successful implementation of the Digital Rupee in Coimbatore faces several challenges. Infrastructure limitations, such as inconsistent internet connectivity and low digital literacy in certain areas, may hinder widespread adoption, especially in rural or semi-urban parts of the city. Additionally, there are concerns regarding cybersecurity, privacy, and the protection of users' data. Addressing these issues through targeted

government interventions and public awareness campaigns will be crucial to fostering trust and encouraging local residents to embrace digital currency

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