



PUBLIC PERCEPTION ON TRANSITION TO DIGITAL CURRENCY (CBDC) IN THE DIGITAL INDIA FRAMEWORK

Dr. P. S. CHANDNI¹, LIYA RAJ²

M.Com., M.Phil., Ph.D., Associate Professor and Dean, Department of Commerce,

Sri Krishna Adithya College of Arts and Science, Coimbatore¹

B.Com Final year, Sri Krishna Adithya College of Arts and Science, Coimbatore²

Abstract: This study examines public perception and adoption of Central Bank Digital Currency (CBDC) within the Digital India framework, focusing on India's transition from a cash-based to a digital economy. It analyses awareness, usage patterns, benefits, and challenges associated with digital payment systems, including UPI and the Digital Rupee. The research is based on primary data collected from 123 respondents using a structured questionnaire and supported by secondary sources. Findings reveal high awareness but low actual usage of CBDC, with convenience and government-backed security as key drivers. However, challenges such as lack of awareness, technical complexity, and privacy concerns hinder widespread adoption. The study concludes that a hybrid model combining cash, UPI, and CBDC is preferred for a sustainable financial ecosystem.

Keywords: Central Bank Digital Currency (CBDC), Digital India, UPI, Financial Inclusion, Electronic transaction, UPI Integration, Demonetization, Digital Literacy, Cultural Reliance, Adjustment costs, Digital Rupee, Cashless Economy, Financial Technology (FinTech)

INTRODUCTION

India is transitioning from a cash-based to a digital economy under the Digital India initiative. Digital payments like UPI have increased efficiency and reduced cash dependence. Central Bank Digital Currency (CBDC), or the Digital Rupee, is a digital form of official currency issued by the Reserve Bank of India, combining the features of cash with digital convenience. Despite its benefits, adoption remains uneven due to lack of awareness, infrastructure issues, and security concerns. This study examines public perception, awareness, and challenges of CBDC in India.

STATEMENT OF PROBLEM

India's transition to a digital economy under the Digital India initiative aims to improve efficiency, transparency, and financial inclusion. However, despite the availability of digital payment systems and the introduction of Central Bank Digital Currency (CBDC), adoption remains uneven. Factors such as lack of awareness, limited digital literacy, poor infrastructure, and security concerns hinder widespread usage. Therefore, it is necessary to study public perception, awareness, and challenges to ensure effective and inclusive adoption of digital currency in India.

OBJECTIVES OF THE STUDY

1. To analyse people's awareness, usage, growth, and adoption of Digital currency (CBDC) in India under the Digital India initiative.
2. To examine the security, privacy, and fraud concerns associated with digital transactions in India and assess the impact of CBDC on existing digital payment ecosystems.
3. To analyse the coexistence of CBDC and UPI

REVIEW OF LITERATURE

Ananya Bhardwaj and Manas Roy (2026) examined the concept and relevance of Central Bank Digital Currency (CBDC) in India. Their study highlights the advantages, challenges, and future opportunities of CBDC, along with a SWOT analysis, emphasizing its role in transforming the Indian financial system.



Dr. E. Shyamaladevi and Jawahar P (2025) focused on the concept of India’s Digital Rupee (₹) and its impact on the payment system. The study explains that CBDC, issued by the Reserve Bank of India, acts as a secure digital form of currency and complements the existing monetary system while improving transaction efficiency.

RESEARCH METHODOLOGY

Research Design: The study adopts a descriptive research design to analyse the awareness, usage, and perception of digital payment systems and Central Bank Digital Currency (CBDC).

Sources of Data: Both primary and secondary data were used. Primary data was collected through a structured questionnaire from 123 respondents using convenience sampling. Secondary data was gathered from journals, reports, and official publications.

Tools Used for Analysis: The collected data was analysed using percentage analysis, rank analysis and chi-square techniques. Tables and charts were also used for clear presentation and interpretation of data.

SCOPE OF THE STUDY

The study focuses on India’s transition from a cash-based economy to a paperless system under the Digital India initiative. It examines awareness, acceptance, and usage of digital payment methods such as UPI, mobile wallets, internet banking, card transactions, and Central Bank Digital Currency (CBDC). The study also analyses public perception, benefits, and challenges, including security and digital literacy issues. It is confined to India and aims to understand the factors influencing adoption and the role of digital currency in building a sustainable digital payment system.

LIMITATIONS OF THE STUDY

- The study is based on 123 sample respondent’s opinion from Coimbatore city, which may not represent the entire population of India.
- The data has been collected online using Google form from functional population.

ANALYSIS AND INTERPRETATION

SIMPLE PERCENTAGE ANALYSIS

A simple percentage analysis was conducted to examine the socio-economic status of the respondents, with the following breakdown based on their age and gender:

TABLE 1

CLASSIFICATION OF RESPONDENTS BASED ON AGE AND GENDER

	AGE	NO. OF RESPONSES	PERCENTAGE (%)
AGE	Below 25 years	69	56
	25-35 years	14	11
	36-45 years	28	23
	46-60 years	11	9
	Above 60	1	1
	TOTAL	123	100
		GENDER	NO. OF RESPONSES
GENDER	MALE	58	47
	FEMALE	65	53
	TOTAL	123	100

NOTE: The above two demographic variables are used for chi-square analysis.

INTERPRETATION

Most respondents are below 25 years (56%), showing a strong youth representation, while older age groups have much lower participation. Gender distribution is nearly equal, with a slight majority of females (53%) over males (47%).

OBJECTIVE 1: To analyse people's awareness, usage, growth, and adoption of Digital currency (CBDC) in India under the Digital India initiative.

[The above objective is analysed using simple percentage analysis and the distribution of the respondents are shown in the table]

TABLE 1.1
CBDC AWARENESS AND DIGITAL PAYMENT USAGE

	RESPONSE	NO. OF RESPONSES	PERCENTAGE (%)
AWARENESS OF CBDC	Yes	87	71
	Moderately aware	36	29
	TOTAL	123	100
USAGE EXPERIENCE OF CBDC AMONG RESPONDENTS	RESPONSE	NO. OF RESPONSES	PERCENTAGE (%)
	Yes	24	19
	No	99	81
TOTAL	123	100	
SOURCE OF KNOWLEDGE ABOUT CBDC	SOURCE	NO. OF RESPONSES	PERCENTAGE (%)
	News/Media	50	41
	Government Announcements	14	11
	Banks	4	3
	Social media	14	11
	Friends or family	41	34
	TOTAL	123	100
KNOWN ADVANTAGES OF CBDC FROM THE RESPONDENTS	ADVANTAGE	NO. OF RESPONSES	PERCENTAGE (%)
	Government backed security	53	43
	Faster transactions	21	17
	Reduced dependence on banks	14	11
	Better control on money	35	29
TOTAL	123	100	
	USAGE FREQUENCY	NO. OF RESPONSES	PERCENTAGE (%)
	Daily	90	73
	Weekly	18	15

USAGE OF DIGITAL PAYMENT METHODS	Occasionally	13	10
	Rarely	2	2
	TOTAL	123	100
PRIMARY REASON FOR ADOPTING DIGITAL PAYMENTS	REASON	NO. OF RESPONSES	PERCENTAGE (%)
	Convenience	75	61
	Government Promotion	3	2
	Lack of cash availability	25	20
	Discounts/cashback	13	11
	Peer influence	6	5
	Others	1	1
	TOTAL	123	100

INTERPRETATION

Awareness of CBDC is high (71%), but actual usage is low (19%). Most learn about it through media and peers, and its key perceived benefit is government-backed security. While Digital payments are highly adopted, with 73% using them daily, mainly due to convenience (61%).

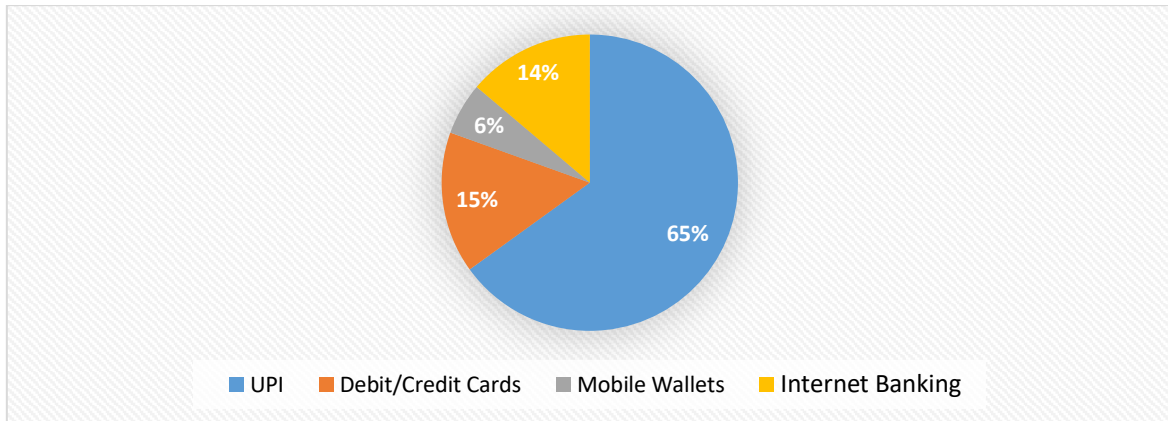
OBJECTIVE 2: To examine the security, privacy, and fraud concerns associated with digital transactions in India and assess the impact of CBDC on existing digital payment ecosystems.

[The above objective is analysed using simple percentage analysis and the distribution of the respondents are shown in the table]

TABLE 1.2

DIGITAL PAYMENT METHODS AND IMPACT OF CBDC ON FINANCIAL INCLUSION AND REDUCTION OF BLACK MONEY

	METHOD USED	NO. OF RESPONSES	PERCENTAGE (%)
DIGITAL PAYMENT METHODS USED BY THE RESPONDENTS	UPI	80	65
	Debit/Credit Cards	19	15
	Mobile Wallets	7	6
	Internet Banking	17	14
	TOTAL	123	100



RESPONSE	FINANCIAL INCLUSION OF CBDC IN RURAL AND UNBANKED POPULATIONS		CBDC'S ROLE IN ENHANCING TRANSPARENCY AND REDUCTION IN BLACK MONEY	
	NO. OF RESPONSES	PERCENTAGE (%)	NO. OF RESPONSES	PERCENTAGE (%)
Strongly Agree	47	38	53	43
Agree	40	33	41	33
Neutral	32	26	26	21
Disagree	3	2	2	2
Strongly Disagree	1	1	1	1
TOTAL	123	100	123	100

INTERPRETATION

The data shows that UPI (65%) is the most widely used digital payment method, while mobile wallets (6%) are least used. Most respondents have a positive view of CBDC, with 71% believing it improves financial inclusion and 76% agreeing it enhances transparency and reduces black money, indicating strong overall support.

OBJECTIVE 3: To analyse the coexistence of CBDC and UPI

[The above objective is analysed using simple percentage analysis and the distribution of the respondents are shown in the table]

TABLE 1.3

ANALYSIS OF RESPONDENTS' VIEWS ON CBDC AND UPI COEXISTENCE

VIEW ON COEXISTENCE OF CBDC AND UPI FROM THE RESPONDENTS	RESPONSE	NO. OF RESPONSES	PERCENTAGE (%)
	Very Positive	24	19
	Positive	39	32
	Neutral	59	48
	Very Negative	1	1

	TOTAL	123	100
SYSTEM WHICH THE RESPONDENTS TRUST MORE	SYSTEM MODEL	NO. OF RESPONSES	PERCENTAGE (%)
	UPI	76	62
	CBDC	4	3
	Both equally	40	33
	Neither	3	2
	TOTAL	123	100
MOST SUITABLE FUTURE MODEL FOR INDIA	MODEL	NO. OF RESPONSES	PERCENTAGE (%)
	Cash-dominant	5	4
	UPI-dominant	21	17
	Hybrid (Cash + UPI + CBDC)	97	79
	TOTAL	123	100

INTERPRETATION

The data shows that regarding coexistence, responses are largely neutral to positive, with 51% expressing a positive view, indicating general acceptance of CBDC and UPI functioning together, despite some uncertainty (48% neutral). In terms of trust, UPI (62%) is the most trusted system, whereas CBDC alone has very low trust (3%), though 33% trust both equally. A hybrid model (79%) combining cash, UPI, and CBDC is considered the most suitable future system for India, while very few prefer a purely cash-based system (4%).

CHI-SQUARE ANALYSIS

H₀: There is *no significant association* between age and usage of digital payment methods.

TABLE 2.1

AGE AND USAGE OF DIGITAL PAYMENT METHODS OF THE RESPONDENTS

S.NO.	AGE	DAILY	WEEKLY	OCCASIONALLY	RARELY	TOTAL
1.	Below 25	49	10	8	2	69
2.	25-35	13	-	1	-	14
3.	36-45	19	7	2	-	28
4.	46-60	8	1	2	-	11
5.	Above 60	1	-	-	-	1
TOTAL		90	18	13	2	123

DEGREE OF FREEDOM = 12

TABLE VALUE = 21.026

LEVEL OF SIGNIFICANCE = 5% OR 0.05

CHI SQUARE VALUE = 12.55

HYPOTHESIS

Null Hypothesis (H₀): There is *no significant association* between age and usage of digital payment methods.

INTERPRETATION

In the above analysis the calculated value (12.55) < table value (21.026) at the level 5% significance. Hence null hypothesis accepted thus there is no significant association between age and usage of digital payment methods of the respondents.

H1: There is a **significant association** between Gender and Primary reason for adopting Digital payments.

TABLE 2.2

THE GENDER AND PRIMARY REASON FOR ADOPTING DIGITAL PAYMENTS

S.NO.	FACTOR	MALE	FEMALE	TOTAL
1.	Convenience	32	40	72
2.	Discount / Cash back	13	2	15
3.	Lack of cash availability	10	10	20
4.	Peer influence	3	3	6
5.	Government promotion	2	8	10
TOTAL		60	63	123

DEGREE OF FREEDOM = 4

TABLE VALUE = 9.488

LEVEL OF SIGNIFICANCE = 5% OR 0.05

CHI SQUARE VALUE = 12.49

HYPOTHESIS

Alternative Hypothesis (H1): There is a **significant association** between Gender and Primary reason for adopting Digital payments.

INTERPRETATION

In the above analysis the calculated value (12.49) > table value (9.488) at the level 5% significance. Hence null hypothesis rejected; therefore, it is inferred that there exists a significant association between Gender and Primary reason for adopting Digital payments.

RANK ANALYSIS

TABLE 3.1

SATISFACTION TOWARDS THE PERCEPTION ON TRANSITION TO DIGITAL CURRENCY (CBDC)

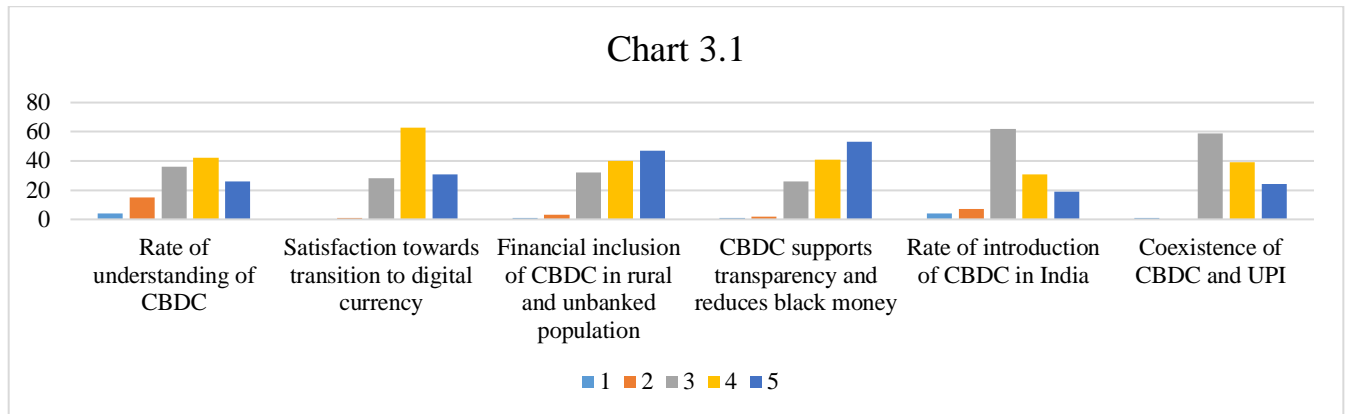
S. No.	Category	1	2	3	4	5	Weighted score	Rank
1.	Rate of understanding of CBDC	4	15	36	42	26	440	5
2.	Satisfaction towards transition to digital currency	0	1	28	63	31	493	3
3.	Financial inclusion of CBDC in rural and unbanked population	1	3	32	40	47	498	2
4.	CBDC supports transparency and reduces black money	1	2	26	41	53	512	1
5.	Rate of introduction of CBDC in India	4	7	62	31	19	423	6
6.	Coexistence of CBDC and UPI	1	0	59	39	24	454	4

Total respondents = 123

NOTE:

1 – Least important

5 – Most important



INTERPRETATION

Respondents prioritize CBDC's role in increasing transparency and reducing black money, followed by its impact on financial inclusion and the digital transition. While the coexistence of CBDC and UPI is valued moderately, knowledge levels remain average, and the speed of its introduction is viewed as the least significant factor.

FINDINGS

The study finds that the respondent base is primarily composed of well-educated individuals under the age of 25 living in urban areas, with a nearly equal gender distribution. While digital payments—specifically UPI—are used daily for convenience and retail shopping, actual usage of the Digital Rupee (CBDC) remains low despite general awareness. Many users rely on media for information rather than banks and often struggle to distinguish CBDC from existing systems like UPI. Despite this, there is a positive outlook toward adoption, as respondents view CBDC as a secure, government-backed tool that could enhance financial inclusion and transparency.

Statistical analysis reveals that while age does not significantly impact digital payment usage, there is a significant association between gender and the primary reasons for adopting these technologies. However, full adoption faces notable hurdles, including a widespread lack of awareness, frequent transaction failures, and concerns regarding privacy and technical infrastructure. Ultimately, the findings suggest that the public prefers a hybrid ecosystem where CBDC coexists with cash and UPI rather than replacing them entirely.

SUGGESTIONS

To improve the adoption of digital currency, the study suggests that government authorities and banks should launch extensive awareness campaigns and digital literacy programs to clarify the differences between CBDC and UPI. Strengthening digital infrastructure by improving internet connectivity in rural and semi-urban areas is essential to ensure reliable access for all populations. To foster public confidence, it is essential for stakeholders to establish strong cybersecurity frameworks and transparent user protection protocols, alongside active efforts from banks to offer hands-on guidance and live demonstrations for customers.

Furthermore, the study recommends promoting financial inclusion through multilingual platforms and simplified applications designed for the unbanked. Technical reliability should be prioritized by improving system performance and support to reduce transaction failures. Finally, CBDC should be integrated into the existing digital payment ecosystem rather than replacing it, allowing for a hybrid system where it coexists with familiar tools like UPI and cash.

CONCLUSIONS

The study concludes that while India's digital payment ecosystem is thriving—led by a young, urban, and educated demographic—the transition to the Digital Rupee (CBDC) is still in its early stages. Although UPI is currently the preferred method due to its familiarity and ease of use, there is a clear, positive willingness among the public to adopt CBDC as a secure, government-backed alternative.



The research identifies that for CBDC to succeed, it must overcome barriers such as low public awareness, technical glitches, and privacy concerns through better infrastructure and digital literacy. Ultimately, the findings suggest that CBDC should not be viewed as a replacement for existing systems, but rather as a complementary tool that coexists with UPI and cash to drive greater financial inclusion and transparency across the nation.

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