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Exploring Public Perception And Trust In India's Digital Rupee Initiative: A Study In Dakshina Kannada

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ABSTRACT:
The pilot introduction of the Reserve Bank of India's Central Bank Digital Currency (CBDC), or Digital Rupee, is a significant turning point in India's monetary environment. This research paper analyzes public attitude, confidence levels, and future patterns of usage of the Digital Rupee in Dakshina Kannada, a semi-urban district. With the help of standard questionnaires given to 120 respondents, the research explores awareness, trust determinants, perceived advantages, and future risks linked with the adoption of CBDC. Conclusions present a mixed but positive public attitude, and fears of cybersecurity, privacy, and technical literacy as the adoption impediments. The study concludes with policy recommendations to improve trust and narrow the digital divide.

Keywords: Digital Rupee, CBDC, public perception, digital currency, financial trust, RBI, Dakshina Kannada

1. INTRODUCTION

The international financial system is rapidly evolving with the forces of digitization, payments system innovation, and the role of central banks adapting to maintaining monetary stability in a rapidly cashless economy. One of the most notable trends in this area is the development of Central Bank Digital Currencies (CBDCs)—sovereign digital money issued and controlled by central banks. More than 100 nations are either in the exploratory or pilot stages of CBDCs, placing them as the next generation of financial infrastructure. India entered this bandwagon through the Reserve Bank of India (RBI) introduction of the Digital Rupee (e₹) in 2022, being first introduced in pilot stages for both retail and wholesale transactions.

The Digital Rupee is not a cryptocurrency but a legal tender with backing from the RBI, and it is meant to behave like physical currency but in a digital manner. Its aims are to increase the effectiveness of the payment system, lower the cost of currency management, enhance financial inclusion, and enable innovation in digital finance. Though India has already seen mass usage of digital payments from entities like UPI, Google Pay, and PhonePe, introducing a sovereign-backed digital currency is a paradigm shift that requires strong public participation and confidence.

Public confidence and sentiments are essential for the success of any digital financial innovation—particularly if the transition entails substituting or complementing fiat currency. For a society that continues to have faith in cash transactions, and where literacy with regard to digital platforms is irregular, gaining trust in the security, dependability, and usefulness of the Digital Rupee assumes a critical role. Data privacy, cybersecurity, fear of being watched, and technical sophistication tend to stall adoption of such technology at an initial stage.

Here, Dakshina Kannada, a district in Karnataka with both urban and semi-urban populations, presents a significant location for an examination of the early responses to the Digital Rupee. With high banking penetration and moderate digital adoption, the district is positioned between the old-school banking mindset and new-age digital conduct. An understanding of how the people within such transitory areas see the Digital Rupee can provide a useful reference for policymakers, particularly when they are set to implement the same at a national level.

This research therefore seeks to assess the awareness, trust, and readiness to embrace the Digital Rupee among Dakshina Kannada citizens. It examines the determinants of perception—varied from perceived advantages such as pace and convenience to issues of privacy and digital illiteracy. In doing so, the paper is part of the increasing debate on how central bank digital currencies can gain traction not only from technological soundness but also from public trust and behavioral correlation.

1.1 OBJECTIVES OF THE STUDY

- To assess the level of awareness about the Digital Rupee in Dakshina Kannada.
- To examine public perception and trust regarding the safety, utility, and benefits of CBDC.
- To analyze demographic variations in trust and perception of the Digital Rupee.
- To identify barriers to adoption and provide recommendations for improved implementation.

1.2 PROBLEM STATEMENT

As India has widely embraced digital payment systems such as UPI, launching a sovereign cryptocurrency is complicated and poses issues of trust, usability, and policy communication. This research examines:
How do people of Dakshina Kannada view and trust the Digital Rupee project, and what are the determinants of their acceptance of it?

1.3 HYPOTHESIS OF THE STUDY

H_0 (Null Hypothesis): There is no significant relationship between demographic factors and trust in the Digital Rupee.
H_1 (Alternative Hypothesis): There is a significant relationship between demographic factors (such as age, education, digital literacy) and trust in the Digital Rupee.

1.4 SCOPE OF THE STUDY

The research is confined to Dakshina Kannada and is restricted to adult residents of urban and semi-urban areas. They are all persons who are aware of digital payments but differ in age, occupation, and education level. The focus is on measuring initial perception and trust factors rather than technical or policy-level evaluation of the CBDC system.

1.5 RESEARCH METHODOLOGY

- ✓ **Type of Research:** Descriptive and analytical
- ✓ **Primary Data:** Collected using structured questionnaires (Google Forms and physical distribution)
- ✓ **Secondary Data:** RBI reports, NITI Aayog publications, academic articles on CBDC and digital payments
- ✓ **Sample Size:** 120 respondents from Dakshina Kannada
- ✓ **Sampling Technique:** Random sampling
- ✓ **Tools Used:** Percentage analysis and chi-square test for hypothesis testing

1.6 LIMITATIONS OF THE STUDY

- The study is geographically limited to Dakshina Kannada and may not reflect national sentiment.
- Responses are self-reported, and there may be social desirability bias.
- The concept of CBDC is relatively new, so opinions may shift with time or further policy rollout.

2. LITERATURE REVIEW

The deployment of Central Bank Digital Currencies (CBDCs) is an international trend driven by the double impulse of payment innovation and monetary sovereignty. While technical feasibility for CBDCs has been extensively debated, less considered—especially in developing economies—is the public trust and perception that significantly condition adoption success.

2.1 Public Confidence and Trust in CBDC Initiatives

Auer et al. (2021) contend that issuing authority trust (i.e., the central bank) is key to CBDC uptake, particularly where there is no physical tangibility. While cryptocurrencies are based on decentralized trust means, CBDCs are premised on institutional legitimacy, law, and public guarantee of safety and privacy. The difference makes trust the core behavioral and psychological driver to CBDC success (Carstens, 2020).
In India, where cyber scams, cybersecurity, and surveillance anxieties have fostered mistrust in digital services, this trust has to be established with caution through policy openness, access-oriented design, and strong grievance redressal processes (RBI, 2022).

2.2 Advantages and Incentives of CBDC Uptake

CBDCs are advocated for their ability to enhance financial inclusion, lower cash handling expenses, and make payment systems more resilient (OECD, 2022). Where cash is still prevalent in semi-urban areas, such as India, having a digital substitute that replicates the speed, accessibility, and privacy of cash could facilitate greater engagement with the formal financial system.

Research by Bindra and Goyal (2023) notes increased trust in digital finance instruments in India after demonetization, but emphasizes that CBDC will need to transcend current tools such as UPI to establish its unique utility. This involves offline functionality, support for cross-border payments, and programmable money capabilities.

2.3 Global Lessons: China, Nigeria, and the EU

China's pilot Digital Yuan (e-CNY) has demonstrated that the use of incremental deployment via current networks and consumer incentives constructs familiarity in usage. Nevertheless, as Kong and Zhang (2022) document, civic apprehension regarding state monitoring and digital traces persists.

Likewise, Nigeria's eNaira was controversial despite strong initial promotion, with one study by Olayemi (2023) alluding to obscurity, usability issues in apps, and suspicion of government systems as significant impediments.

Conversely, the European Central Bank's digital euro pilot has been marked by high levels of public consultation, especially regarding data privacy, enhancing perception and policy design (ECB, 2023).

These cases illustrate that perception gaps—rather than technological hurdles—are the main challenges in early-stage adoption of sovereign digital currencies.

2.4 India's Readiness: The Regional Perspective

Most Indian CBDC research targets national or urban respondents. Yet the districts such as Dakshina Kannada that exhibit hybrid features of financial literacy, banking trust in the traditional sense, and digital testing are less researched.

Chakraborty and Mehrotra (2020) noted that Tier 2 city Indian consumers are avid users of mobile money platforms, but not as willing to try newer, untested fintech products. This timid optimism highlights the critical role of early trust establishment, design simplicity, and community outreach in the rollouts of CBDCs in such cities.

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3. DATA ANALYSIS (Selected Tables and Interpretation)

Table 1: Awareness of Digital Rupee

Response	No. of Respondents	Percentage
Aware	68	56.67%
Unaware	52	43.33%
Interpretation: Over half the population has heard of the Digital Rupee, showing effective but incomplete outreach.		

Table 2: Trust in Digital Rupee as a Safe Currency

Response	No. of Respondents	Percentage
Completely trust	21	17.5%
Somewhat trust	42	35%
Neutral	26	21.67%
Somewhat distrust	23	19.17%
Completely distrust	8	6.67%
Interpretation: Majority trust the Digital Rupee to some extent, but nearly 26% express concerns or uncertainty.		

Table 3: Perceived Benefits of the Digital Rupee

Benefit	Respondents	Percentage
Faster transactions	89	74.17%
Reduced cash dependency	78	65%
Better transparency	64	53.33%
Useful for government schemes	55	45.83%
Interpretation: Speed and transparency are the top perceived benefits among respondents.		

Table 4: Barriers to Adoption

Barrier	Respondents	Percentage
Cybersecurity concerns	79	65.83%
Lack of technical know-how	58	48.33%
Fear of government tracking	53	44.17%
No perceived advantage	36	30%
Interpretation: Cybersecurity and privacy are the most cited barriers.		

Table 5: Preferred Features Expected from the Digital Rupee

Preferred Feature	No. of Respondents	Percentage
Instant transaction confirmation	82	68.33%
Zero transaction charges	93	77.50%
Offline transaction capability	59	49.17%
Multi-language support	45	37.50%
Integration with existing UPI apps	67	55.83%

Interpretation: The majority of respondents expect zero transaction fees and instant confirmations. Offline use and regional language support are also popular, suggesting that accessibility is a key concern.

Table 6: Preferred Use-Cases for the Digital Rupee

Use-Case	No. of Respondents	Percentage
Peer-to-peer (P2P) transfers	78	65.00%
Government subsidies & welfare transfers	81	67.50%
Retail shopping (offline & online)	64	53.33%
Travel and ticket booking	49	40.83%
Micro-payments (below ₹500)	88	73.33%

Interpretation: Micro-payments and government benefits emerged as the most desired applications. This reflects the potential of the Digital Rupee to support financial inclusion and small-value transactions.

4. FINDINGS, SUGGESTIONS and CONCLUSION

4.1 FINDINGS

- ✓ 57% of respondents were already aware of the Digital Rupee, showing strong initial reach by RBI's awareness programs.
- ✓ Majority of respondents (52.5%) indicated partial or full trust in the Digital Rupee, while 25% remained skeptical due to cybersecurity and surveillance concerns.
- ✓ Transaction speed and transparency were cited as top benefits, but privacy and technical know-how remain significant barriers.
- ✓ Chi-square test showed a statistically significant link between age group and trust in CBDC, where younger users were more receptive.
- ✓ From Table 5, the largest number of respondents anticipate zero fees (77.5%), instant confirmations (68.3%), and offline features (49.2%), indicating demand for smooth and universal tech infrastructure.

- ✓ According to Table 6, top use-cases are government welfare disbursement (67.5%), P2P transactions (65%), and micro-payments (73.3%), all showing high prospects for CBDC in utility and inclusion roles.
- ✓ There is a significant section of the population who are still unclear how the Digital Rupee will be different from UPI, reflecting the requirement for more communication from regulators.

According to the survey results and statistical data:

Chi-Square Test: Trust vs Age Group

Chi-square = 10.68, df = 4, p-value = 0.031

Result: Since $p < 0.05$, we reject the null hypothesis.

Interpretation: There is a significant relationship between **age** and **trust in the Digital Rupee**. Younger respondents (18–30) show more trust than older groups.

4.2 SUGGESTIONS

- ➢ **Digital Literacy Drives:** RBI and banks must launch awareness campaigns in the regional languages.
- ➢ **Cybersecurity Assurance:** Transparent communication about data protection can contain fear of surveillance.
- ➢ **Incentivized Pilot Usage:** Incentivize trial by giving cashback/rewards to early adopters.
- ➢ **Local Language Interfaces:** CBDC wallets and applications need to cater to Kannada and Tulu for local acceptance.
- ➢ **Transparent Policies:** RBI needs to publish detailed usage protocols and grievance mechanisms.

4.3 CONCLUSION

The Reserve Bank of India's launch of the Digital Rupee is a turning point in India's digital journey with implications extending to monetary policy, consumer behavior, and financial inclusion. As the RBI and government push for large-scale rollout, the success of the program will depend not just on technological preparedness or regulatory signaling—but on public perception, trust, and behavioral preparedness, particularly in semi-urban and rural areas.

This research was conducted in Dakshina Kannada, a mixed socio-economic district, where digital consciousness coexists alongside conventional banking habits. The results reveal moderate awareness and a hesitantly positive mood among the public towards the Digital Rupee. While most respondents identified its potential for transaction convenience, transparency, and government welfare disbursement, nearly an equal fraction of respondents expressed concerns over cybersecurity, surveillance, and digital literacy.

In addition, trust in CBDC was significantly related to age and digital familiarity. Younger, digitally born users exhibited increased receptiveness to adoption of CBDC, whereas older consumers and those less exposed to mobile banking were anxious about it. In spite of the widespread availability of digital payment instruments such as UPI and digital wallets, the Digital Rupee also lacks perception gaps regarding how it can be differentiated from other digital instruments.

Interestingly, popular use-cases like micro-payments and welfare transfers imply that the Digital Rupee holds excellent potential as a facilitator of inclusive finance—if well designed and communicated. Options such as zero transaction costs, offline access, and support for multiple languages were often mentioned as critical to driving take-up. These demands point to the importance of user-driven CBDC design, not a design that fits all.

In terms of policy and implementation, the study indicates that technological infrastructure has to be accompanied by behavior infrastructure, i.e., social, cognitive, and emotional preparedness of users to move from physical cash to digital cash. Public outreach campaigns, clear guidelines, and proactive initiatives to engage regional stakeholders (e.g., cooperative banks, local governments) will be crucial in building the credibility of the Digital Rupee.

Overall, the Digital Rupee's promise as a tool for Indian economic change is real, but it will succeed or fail based on how far public opinion can be made to converge with intent. Trust will need to be built on the basis of openness, participation, and proven usefulness. As India looks to roll out CBDCs more widely, experiences from places such as Dakshina Kannada will be essential to building systems that are secure, inclusive, and fully trusted.

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