

Digital Currency and its Evolution

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Abstract

The demonetization of currency in the year 2016 by Modi government has revolutionized the digital payment methods usage in India. For a country like India this decision was strenuous where majority of the transactions are in cash, people have adopted digital mode of payments in short span of time. The paper tries to understand digital currency – incorporation in India, its usage, variations present among BHIL UPI and Digital currency, its advantages and disadvantages of digital currency in India.

Key terms: Demonetization, Revolution, digital payment, digital currency, Crypto Currency, e-Rupee, UPI.

Introduction : Digital Currency

The Reserve Bank of India (RBI) has issued the Digital Rupee (e₹), also known as eINR or E-Rupee, which is a tokenized digital version of the Indian Rupee and a central bank digital currency (CBDC). The Digital Rupee was first proposed in January 2017 and was launched during the 2022-23 financial year.

Finance Minister, Nirmala Sitharaman announced the release of this currency in the parliament budget proposal, stating that it would enhance the digital economy and improve the efficiency of the currency management system while reducing costs.

Objectives of the study

1. To understand about the evolution of e-Rupee.
2. To identify the differences between the UPI payments and Digital Currency.
3. To compare Digital Currency and cryptocurrency.
4. To elucidate the advantages of Digital Currency.

Digital Currency (e-Rupee) introduced in India.

RBI has launched the first pilot project for retail e-Rupee on December 1, 2022. Before that the RBI had launched the first pilot project of the digital rupee for the wholesale segment on November 1, 2022. IDFC First Bank, HSBC, HDFC Bank, ICICI Bank, Kotak Mahindra bank, Bank of Baroda, Yes Bank, Union Bank of India and the State Bank of India have participated in RBI's Digital currency wholesale pilot project.

Initially it seems that the adoption and success of the e₹ (e-Rupee) may take some more time, since several banks reported that UPI and net banking are the main challenges for e-Rupee, as both are already present, and users are satisfied with them.

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Features of Digital currency

- Digital currency is a dominion currency that the central banks issue with respect to their monetary policy.
- It will be accepted as a ledger tender, a medium of payment and a safe 'store of value' (an asset that maintains its value, rather than depreciating) for government agencies, businesses and citizens.
- It is an interchangeable legal tender for which individuals will not need a bank account to store.

How Digital Currency (e-Rupee) is different from BHIM UPI?

1. The Digital Currency (e-Rupee) is legal tender whereas UPI, BHIM are the medium of payments. One of the major variations among the Central Bank Digital Currency and UPI, BHIM is that Digital Currency is a currency in digital form and legal tender that enables digital transactions, whereas UPI, BHIM are only the platform through which transactions happen digitally.
2. E-Rupee transactions do not require banks to act as intermediaries, unlike digital transactions through UPI or net banking methods such as NEFT or RTGS, which must go through a bank. In a press conference held in December 2022, RBI Governor Das clarified the distinction between digital rupee and UPI, stating that any UPI transaction involves a bank as an intermediary, whereas with a Central Bank Digital Currency (CBDC) - similar to paper currency - individuals can draw digital currency from a bank, store it in their

mobile phone wallet, and use it to make payments directly to other individuals or at shops without involving banks as intermediaries.

3. In addition to functioning as a currency, the e-Rupee also serves as a store of value, meaning it is an asset that retains its value rather than depreciating. On the other hand, UPI functions more as an overlay infrastructure on top of various forms of store value such as bank accounts, prepaid instruments, credit cards, and the like.
4. The e-Rupee transactions provide greater anonymity. As stated by RBI Deputy Governor T Rabi Shankar, while these transactions are recorded in a central Ledger, the wallet owner remains unknown to the government and other intermediaries in the ecosystem. In contrast transactions through UPI, NEFT or RTGS involve transfers between two bank accounts which can be easily traced.
5. Currently, PAN card needs to be submitted by a person who makes a transaction above the threshold value. The same rule applies to e-Rupee. At the same time, when UPI transactions are concerned, there isn't any requirement to present or input PAN details above a particular threshold amount.

Digital Currency and Cryptocurrency

1. Overview: DC is sanctioned currency in electronic form that can be used in contactless payments. Whereas Cryptocurrency is a store value that is present on a blockchain.

2. Regulation: DC is a form of currency under the regulation of RBI of India, where Cryptocurrency is unregulated, no financial institution can regulate it and it is completely decentralized.
 3. Volatility and acceptability: DCs are stable and acceptable worldwide. Cryptocurrencies are highly volatile in nature and are not accepted globally.
 4. Availability of transaction data: The transactions through DCs are only available with sender, bank and receiver. Whereas Most cryptocurrencies have a decentralized ledger system that is all the payments are publicly viewable.
 5. Encryption: An individual needs a strong password, authentication, biometric etc. to securely store DCs. Whereas cryptocurrencies are blockchain based, they are secured by a high level of encryption.
- It is digital in nature; therefore, there is no way to burn, tear or damage it physically and no chance of losing them.
 - They have a longer lifespan when compared to physical form of currency.
 - CBDCs will simplify the tax collection process, as they are paired with smart contracts.
 - Without the need for any intermediaries, they will allow hassle-free international transactions.
 - It will also negate the need for interbank settlement.
 - RBI reduce its expenditure on issuing money and transactions with the help of DCs.
 - As CBDC is under the authority of Central Government, it is less prone to volatility as compared to cryptocurrencies like Bitcoin, Ethereum, etc.

Pre-requisites for to use digital currency.

The users should possess the basic knowledge on the following:

- how to open a digital wallet.
- how to properly store digital asset securely.
- how many types of digital currencies exist.
- how to invest in digital currency.
- in which digital currency to invest.

Advantages of Digital Currency

Digital currency or e-Rupee has a considerable number of benefits over its physical counterpart.

Disadvantages of Digital currency

Beside the advantages there are disadvantages of digital currency.

- According to Tessler, it will take time to determine which digital currencies may be appropriate for certain use cases, since there are **too many digital currencies** being created across different blockchains that all have their own limitations.
- To use the digital currencies, the user must **learn** how to perform **fundamental tasks**. The system needs to get simpler for digital currencies to be more widely adopts.



Conclusion

To make the country more digital, CBDC was introduced by the Central Government with the features like accessible as cash, less expense (since central bank would likely control it and complex consensus processes are not needed) and less volatility in the market. Despite of various advantages of digital currency, further need to be checked for its contribution to the economic development of the country.

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