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Digital Currency Transition In India And Its Present And Future Implications With A Global Outlook

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Abstract:

Like many other countries, India is exploring the possibility of adopting digital currency as a part of its monetary system. Modi government brought a revolutionary movement towards the era of digital transaction in India by demonetization of currency in 2016. Though it was swift decision for the country like India where more than 90% transactions are in cash mode, people are accustomed with it but within the short period of time, they introduced the digital mode of payment. The adaptation of digital methods for payments is facilitated by phenomenal increase the use of smart phones and for digital payments PAYTM, BHIM UPI, PHONE PAY, Google Pay etc. digital modes of payments are popularly used.

The paper will try to explore the global outlook on digital currencies in selected countries and will attempt to examine India's digital currency transition and it's present as well as future implications.

Keywords: - *Demonetization, Global Outlook, Digital payment, Present and future implications.*

Introduction:

Digital currency refers to currency that exists only in digital or electronic form, and not as physical paper currency. This means it is not minted, circulated or held in tangible form. All over the world, many countries are in practice of digital payments. Kenya's mobile phone system, M-PESA, launched in 2007 by Safaricom is used by 17 million Kenyans representing two-third of adult population. Tunisia pioneered the field of digital currency with introduction of e-Dinar in 2015 based on the concept of block chain. La Poste is an authorised financial institution licensed its national bank to issue e-currency pegged to the national currency. In Senegal by the end of 2016, the regional bank for francophone west issued a digital currency named as e-CFA. The central bank of Sweden in 2018 aims to develop electronic currency named as e- krona which will constitute a prepaid value without interest and transaction will be traceable. Estonia in the Baltic states is extremely blockchain friendly, using the technology in several levels of government services. China, in order to enhance control over its financial system, People bank of China is planning to introduce its own digital currency. Till August 2018, bank had 44 blockchain related patents (IPR Daily China Trade Publication). The introduction of the digital currency in China will be gradually which will be used initially for making and receiving payments only.

The demonetization of currency in 2016, by Modi government revolutionized the movement towards digital payment in India. The decision of demonetization of bank notes of Rs. 500 and Rs.1000 aimed at lowering cash circulation in the country which is directly related to black money and corruption and an attempt to eliminate fake currency and to reduce terrorism funding. Though it was strenuous decision for the country like India where 90% of the transactions are in cash mode, people adopted digital mode of payments in short span of time. The adaptation of digital methods for payment is facilitated by phenomenal increase in use of smart phones and presence of user-friendly payment modes like PAYTM and BHIM UPI etc.Though initially people in India were reluctant to use digital system, but it has come to stay largely due to its prevalence in many developed countries of the world. In India, over the years effort has been made to developed national payment infrastructure and technological platforms through immediate Payment Service (IMPS), Unified Payment Interface (UPI), Bharat Interface of money (BHIM). As a result, there is substantial increase in retail electronic payments which in turn, led to decline in currency in the circulation as a percentage of GDP. India spent nearly 90 million dollars to print currency notes in 2018(RBI Report). Due to transition from physical currency to digital mode, the concept of currency becomes inevitable. The rapidly changing landscape of digital payments and rising banknote bill is reinforcing the authorities to digitalize and think on the possibility of introducing fiat digital currency. The issue of volatility associated with crypto currencies like bitcoin can be handled by digital currency as it is backed by an asset like gold or fiat. The introduction of digital currency will not only help in reducing the cost of printing currency but it also can provide transparency in monetary transactions.

Review of Literature

It has been observed that many countries of the world are experimenting with their own digital currencies. Most of the countries are moving towards CBDC (Central Bank Digital Currency) because of its convenience, cost efficiency and a promising characteristic of financial inclusivity and sovereignty. Most recently, India has also become a part of this transformation, as it formally announced its own CBDC.

Jani, S. (2018) the rapid advancement of information and communication technology has led to increased versatility and efficiency in many aspects of our daily lives. The growth of internet users has given rise to new economic phenomena, such as crypto currencies which are used for various monetary transactions like buying, selling and trading. Intangible yet valuable assets, crypto currencies are employed in peer- to peer networks, virtual worlds, online social networks.

Sapovadia, V. (2018) Even with our World becoming more connected, over a third of the population still lacks access to formal financial services. Research increasingly indicates that providing easy access to dependable financial services benefits every including consumers and businesses. Many factors contribute to economic and social marginalization. Shortcomings in the traditional banking system often result in people being unable to afford essentials such as food, housing and medical care. Growing adaption of digital money and mobile banking provide an opportunity for greater financial inclusion in marginalized populations. Studies indicates that utilizing a conventional financial system for small value transaction is prohibitively expensive. Utilizing mobile apps and digital currencies can simplify and make small transactions more affordable and accessible.

Yanagawa, N. & Yamaoka, H. (2019) The report examines the growing interest in Central Bank Digital Currencies (CBDC) and their impact on payment systems and data usage in Japan. It emphasises the need to find a balance between security and progress in payment infrastructure to maximise economic well- being. The document emphasizes the importance of exploring how CBDCs can improve the efficiency of payment methods and facilitate the efficient use of data. The importance of incorporating new digital technologies to improve payment efficiency and uphold data security and privacy is highlighted in the document. It points out the necessity of carefully assessing the potential risks linked to CBDCs, such as displacing private payment methods and impacting financial intermediation. Additionally, it discusses the difficulties of maintaining the safety of payment methods while utilizing data effectively, especially in the global shift towards digitalized payments.

Objectives of the Study:

In this paper following objectives are taken into consideration-

1. To examine the implications of digital currencies in India.
2. To focus on major advantages, disadvantages, with an outlook on selected countries.
3. To explore the future of digital currencies in India.

Methodology of Study:

This research paper is a descriptive and analytical one and dependant on secondary data sources. Data are collected from literature survey of academic journals, websites, periodicals, policy documents, academic reports, news items and report released by various organizations and agencies.

Blockchain Technology of Digital Currencies

The blockchain is the future of finance industry which will revolutionize the financial dealings in the times to come. A blockchain is digitized, decentralized, public ledger of all cryptocurrency transactions. Blockchain Technology is also named "**The Trust Machine**" as it allows people having no confidence in each other to collaborate without intervention of central neutral authority (The Economist 2015). Through this technology, market participants can keep track of digital transactions without central recordkeeping which can be downloaded automatically by each computer connected to the network. Digital currency will do for financial transactions what an email does for communication. As a result, it is expected that it will bypass the centralized financial infrastructure in its entirety. It is expected that block chain technology can reduce costs in cross border transactions and in securities trading. Blockchain technology can function at two levels- i) Private blockchain, where banks become the custodian of cryptographic keys, and ii) Public blockchain, where each participating user acts independently.

The Global Outlook

The attitude of countries regarding adoption of digital currencies is different irrespective of conditions. Although there is greater interest manifested in digital currencies, many countries still refrain to implement it due to limitations like security, availability of technology, adaptability, legal issues and role central bank etc. Considering the future acceptance of digital currency in different nations, it is natural to focus on the global powerhouse- United States**.**

United States (USA) has consistently been a frontrunner in numerous areas and serves as a model for future. Therefore, it's reasonable to assume that the nation will also take the lead in establishing clear and sustainable guidelines for cryptocurrency trading. The country has acknowledged the growing interest of its investors in digital currency and its potential as the future of the increasingly digital world. Various regulatory bodies have started formulating rules and regulations for digital currency. However, the intricate characteristics of digital currency made it challenging for Wall Street to establish a comprehensive regulatory framework for digital currency. The United States' intricate legal and tax system has made it difficult for regulatory authorities to clearly define or provide legal status to digital currency. Although the USA does not have its own CBDC, it allows various other decentralised digital currencies with many regulations and restrictions. Hence it becomes very challenging to regulate the usage and circulation of any decentralised currency. Therefore, India should mark its steps before the complete implementation. There have been 5 major regulating bodies.

1. Commodity Future Trading Commission
2. Financial Crimes Enforcement Network
3. Department of Justice
4. Security Exchange Commission
5. Internal Revenue Service

1. The Commodities Futures Trading Commission (CFTC) section focuses on how actively it enforces laws about Bitcoin exchanges that provide trading instruments based on Bitcoin. The involvement of the CFTC underlines the significance of regulatory supervision in the cryptocurrency sphere to safeguard consumers and uphold market integrity. It discusses the difficulties presented by future contracts on Bitcoin and leveraged trading, highlighting the possibility that US retail investors utilizing these platforms are breaking CFTC laws (Commodity Futures Trading Commission. (2015). It is made clear by the CFTC that American individual investors are only permitted to participate in off-exchange derivative products through designated channels, such as a regulated bank or a Retail Foreign Exchange Dealer (RFED) that is registered with the National Futures Association (NFA). The CFTC's regulatory approach to virtual currencies and Bitcoin is further demonstrated by its designation of these assets as commodities rather than foreign currency.Decentralised cryptocurrencies do not have a central issue in the sense that regulations apply to electronic money (the centralized one). The Electronic Fund Transfer Act (EFTA) regulates electronic money as per Article 4A of the Uniform Commercial Code. The responsibilities of the electronic money issuer and the consumer when using electronic money are specified in Regulation E of this act. The government has mandated that basic system information has to be publicly available to boost consumer trust in electronic money systems. Issuers of electronic money are required by state law, 12 U.S.C. 1831t, and the EFTA to provide certain information. 1831t. 2. A section in the Financial Crimes Enforcement Network, also known as FinCEN, emphasizes how actively the federal government regulates virtual currencies. Administrative rulings related to virtual currencies available online have been issued by FinCEN, emphasizing the requirement for businesses facilitating Bitcoin transactions to obtain money transmitter licenses. It says that customers and companies involved in the cryptocurrency ecosystem are subject to the Bank Secrecy Act (BSA), which mandates registration with FinCEN as a Money Service Business (MSB) and adherence to Know-Your-Customer (KYC) and anti-money laundering (AML) laws

Japan is a global leader in innovation because of its long history of inventing cutting-edge technology, including robotics and pocket calculators. The nation's desire for advancement also extended to cryptocurrencies, of which it is now the second-largest user base behind the United States. Japan, a country of about 127 million people, has a notable adoption rate of 11% of its population actively engaging in digital currency transactions. In spite of obstacles such as the Mt. Gox hack, which resulted in the theft of Bitcoins valued at millions of dollars, Japan adopted a proactive stance towards the regulation of virtual currencies. Rather than outlawing it, the nation decided to codify cryptocurrency investments and enact user protection regulations. Through the legalization of digital currency, Japan made it possible for its people to transact with cryptocurrencies in a safe and legal manner. A committee was formed in 2014 with the goal of making recommendations for improving the security and effectiveness of cryptocurrency operations in Japan. The government's commitment to creating a secure environment for transactions involving digital currency was demonstrated by this initiative. In order to protect users and stop fraudulent activity in the digital currency market, Japan imposed restrictions, such as outlawing private digital currencies in 2018. [24] (Yanagawa, N., & Yamaoka, H. (2019)) The Bank of Japan's working paper series titled as "Digital Innovation, data revolution and Central Bank Digital Currency", discusses the implications of Central Bank Digital Currencies (CBDCs) on the financial landscape. It draws attention to the possible dangers of CBDCs displacing other payment methods, impeding innovation, and changing how data is used. In order to optimize the advantages of digital technologies for economic welfare, the paper highlights the significance of striking a balance between fostering innovation and ensuring the security of payment infrastructure. In order to optimize payment infrastructure design, it proposes investigating a variety of technologies and service providers. The paper further explores the changing relationship that exists between money and data, highlighting the growing role that information plays in economic transactions. It talks about how businesses are using payment instruments to gather consumer data and how this data-driven strategy will affect money and payment instruments in the future, including CBDCs. The document also discusses the factors to be taken into account when putting CBDCs into practice, including how they will affect commercial banks, the balance sheets of central banks, and the competition from digital payment instruments issued by banks. Ultimately, the study emphasizes that in order to successfully navigate the challenges of CBDC implementation in the digital age, meticulous analysis and strategic planning are essential. Other countries navigating the changing cryptocurrency landscape can learn from Japan's approach to regulating digital currencies. Japan established itself as a leader in the blockchain era by finding a balance between innovation and regulation. The nation's proactive approach to regulating digital currencies not only serves as a model for other countries, but it also emphasizes how crucial it is to put strong regulatory frameworks in place in order to promote a secure and dependable environment for these kinds of transactions.

China

China, which at first arose as one of the biggest cryptocurrency trading platforms, has been a major player in the market for digital currencies. In a 2013 circular, the government defined cryptocurrency as virtual currency and cautioned investors about the inherent risks while allowing unrestricted market participation. But in 2017, the Chinese government declared an outright ban on trading digital currencies, citing risks to the financial system and a lack of laws protecting investors. The global cryptocurrency market was severely impacted by the ban, with 40% of transactions coming from China. Large operators were shut down, and it was declared unlawful to use digital currencies for fundraising. The market's operations were essentially shut down when the government suspended the operations and licenses of exchanges involved in cryptocurrency transactions. China has launched its own digital currency, backed by strict guidelines established by the People's Bank of China (PBOC), despite the country's ban on trading cryptocurrencies. China is positioned as a leader in the blockchain era if this digital currency had legal validity similar to that of the Chinese Yuan. China's position on digital currencies, however, is unclear because it seems to be both in favour of and against their use. China is committed to upholding control over financial markets and safeguarding investor rights, as evidenced by its regulatory approach to digital currencies. The nation's stringent regulations are designed to guarantee adherence to central bank directives and reduce the financial risks connected with cryptocurrencies. China hopes to become a market leader in digital currencies while keeping regulatory control and by issuing its own digital currency. China's ban on the trading of digital currencies had a profound effect on the world economy, causing a sharp decline in the value of Bitcoin in Chinese Yuan. China's cautious approach towards emerging financial technologies and its emphasis on investor protection were underscored by the ban. The China's e-CNY is an account and token based non-interest-bearing instrument that is currently in circulation in China. It is a hybrid ecosystem as there is a central ledger which is compatible with all DLT frameworks that intermediaries might choose to use. Secondly, it facilitates software and hardware wallet depending on the carrier. Software wallet provides services through APIs, software development kits and hardware that uses security chip. Digital certificate, signature and encrypted storage is provided in order to avoid any misuse.

The e-CNY support financial inclusion and need for digital cash. Its reduction in friction among other payment platforms. Apart from this, it counters the popularity and risks posed by cryptocurrencies. To sum up, China has implemented a variety of regulatory measures pertaining to digital currencies, including warnings, bans, and the possible issuance of a state-backed digital currency.

Nigeria

Nigeria is among one of the other nations that has its own centrally backed currency called e-Naira. It is the first African country to issue a central bank digital currency (CBDC) or fiat digital currency. Nigeria has benefited from the CBDC in a number of ways, including better financial policy transmission, more effective payments, and greater financial inclusion. Conversely, a number of dangers have been noted, including growing levels of digital illiteracy, increased susceptibility to cyberattacks, data piracy, and a vague stance of banks in a fully evolved CBDC economy. Even with all of these potential consequences, CBDC fixes more issues than it creates. The Central Bank of Nigeria is able to learn from the risks as it presents and enhances its CBDC protection capabilities, making it more effective and better suited for the Nigerian economy. The e-Naira is the account based non-interest-bearing instrument, with the same DLT technology as some of the crypto currencies, so that they can be stored in digital wallets. The currency is a Hyperledger fabric variant of DLT for enterprise users with robust security architecture. It gives stringent access rights controls to the central banks. The minting and issuance are with central bank. Intermediaries only ensure the distribution through digital wallet platform which has a certain transaction limit depending on the risk factor. The transaction information, if required is only shared with the governmental authorities. The major objective of the government is to enable households and businesses in order to accelerate payments through reliable, resilient and innovative means.

The Advantages of Digital Currency

Following are the major advantages of introducing digital currency

Faster Mode of Payment

Digital currency can make your payments much faster than current means like automated clearing houses or wire transfers that take days for financial institutions to confirm a transaction.

Cheaper Global Transfers

At times global transactions can get very expensive. Individuals are charged high fees to move funds from one nation to another, especially when it includes currency conversions. Digital assets could interrupt this market by making the transaction cost effective and quick.

Availability

Digital currency transactions work at the same speed i.e. 24 hours a day and seven days a week. On the other hand, existing money transfers frequently take more time during weekends and outside normal working hours because banks are shut and cannot confirm transactions.

No Manufacturing Required

Physical currencies have many requirements such as the establishment of physical manufacturing facilities. Whereas, in digital currencies, no such expense is involved. Also, digital currencies are immune to soiling or physical defects that are present in physical currency.

Well-organized Government Payments

If the government developed a central bank of digital currency, it could send payments like child benefits and food stamps, and tax refunds to people instantly, rather than trying to figure out prepaid debit cards or mail them a check.

The Disadvantages of Digital Currency

Options According to the head of Sidley's FinTech and Blockchain group Lilya Tessler, across different blockchains, there are several digital currencies being created with their own limitations. It will take a certain amount of time to decide which digital currencies in certain cases might be appropriate to use. It also includes whether a few are designed to scale for mass adoption.

Costly Transaction

Crypto uses blockchain technology where computers must resolve complex equations to validate and record transactions. This in turn takes a significant amount of electricity, the more the transaction the more the expense.

Issues of Cyber security

The digital currency has made people constantly worry about cybersecurity and facing many threats due to less secure methods to store this money. Cyberattacks are probably increasing and can also threaten digital currency users with virtual theft.

Requirement of Digital Currency in India

The most important reason for launching a digital currency by the RBI is to push India forward in the virtual currency race. The following growing requirements of digital currency are found in India, they are-

• With block chain technology, the digital rupee will increase efficiency and transparency.
• Block chain will also enable real-time tracking and ledger maintenance.
• The payment system will be available to wholesale and retail customers 24/7
. • Indian buyers can pay without a middle man.
• Lower transaction cost.
• Real-time account settlements.
• We don't have to open a bank account to transact with a digital rupee.
• Fast cross-border transactions.
. No risk of volatility, as the RBI, will back it.
• Compared to currency notes, the digital rupee will be mobile forever.
• But with a behemoth payment system like UPI around, can CBDCs up the game?

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