



Metamorphosing India's economy from cash economy to cash-less economy

Gurumurthy M¹, D Anjaneyulu²

¹ Research Scholar, Department of Commerce, Sri Krishnadevaraya University, Anantapuramu, Andhra Pradesh, India

² Professor and Head, Department of Commerce, Sri Krishnadevaraya University, Anantapuramu, Andhra Pradesh, India

Abstract

India is one of the developing countries and had large volume of currency circulation in the country comparing with the other countries like Brazil, China, Kenya, Sweden, South Korea, Thailand etc.,. In the globe a side of many developing and developed countries have been enjoying the benefits by creating highly technological infrastructure in their payment system, but other side India had been following traditional cash less methods like NACH, CTS and NETC etc., due to lack of low levels of initiations from the Governments till 2014. In the year 2015 Digital India Programme was launched by our Prime Minister Shri Narendra Modi with an intention of transforming India into Faceless, Paperless and Cashless. As a part of that, India is also inevitably updated their payment and settlement system from traditional system to new digital payment methods like AEPS, IMPS, UPI, BHIM, Mobile Wallets, and Banking Cards etc.,. The demonitisation decision inspite of providing various advantages like Curbing the Black money, Transparency and controlling, low cost of currency printing and convenient mode, but also gave considerable growth in digital payments were observed after demonitisation on 8th November 2016. Further Government of India, Reserve Bank of India and NPCI took several initiations and offers financial encouragement to consumers and merchants in order to promote digital transactions. Prime Minister Shri Narendra Modi as stated in the 'Mann ki Baat' 100 per cent cash less is not possible, our intention is make less circulation of money in the society. In this article an attempt is made to brief understand the evolution of cashless economy, need to adopt cashless system, present status of important payment indicators, and initiations taken by the Government, Reserve Bank of India and NPCI towards encouraging cashless economy.

Keywords: metamorphosing, digital payments, RTGS, NEFT, IMPS, UPI and mobile banking

Introduction

The revolution in Communication, Information and Financial Technology has led to revolutionary changes in e-commerce. The simultaneous developments in hardware, software and networking technologies touched the financial and banking sectors and paved the way for witnessing tremendous changes in payment industry. The number of notable and innovative methods for making payment, which are cheaper but also faster, easier and safer, were developed and penetrated conceptually and practically into the minds of stakeholders of modern digital payment systems. The economies of all modern countries are passing through the digital revolution and every country is striving hard to establish a more efficient, effective, smart and modern digital infrastructure for payment industry to meet every challenge of traditional economy. The modern economies compelling the nations and people to follow digital transactions at voluminous level by restricting or reducing the use of cash for all micro, medium and macro size of payments. Many developed countries Brazil, Denmark and Sweden and all advanced countries, have effectively shifted towards cash-less economy and became the trend model for other developing and under developing countries to follow them. The countries require much involvement and sophisticated infrastructure for possessing the status of digital economy.

Concept of Cash-less Economy

The cashless economy does not refer to a status of economic system where goods and services are exchanged for other goods and services (as is possible in barter system) rather it is an

economic setting which discourages use of currency and coins. It should promote and accept digital mode as an alternative but not the wide use of physical currency. The movement and use of currency is the core for traditional economy and usage of digital instruments are the essence of modern cashless economy. A cashless economy is one in which all transactions are made using credit/debit cards or other digital payment devices and products widely on the one side and the use of paper currency and coins is minimal on the other side.

The cashless economy offers innumerable benefits to the country as well as all the stakeholders of the corporate sector and the individuals. Basically it itself has higher potential to grow faster than traditional cash – based economy as the flow of money enhances. The larger chunk of money lies with the banks for longer time which in turn leads to a stronger liquidity base in monetary system and would lead to availability of funds at lesser interest rates. It reduces the instances of tax avoidance and curb emergence of black money as every transaction details are documented electronically. A more detailed record of all the transactions enhances transparency in business operations and reduces the money laundering cases. The details of digital transactions are easily traceable and make people accountable for every transaction and pin point the corruption sources. The entities do not require preparation of daily cash ledgers as receipts and payments are automated. The digital way is a cost effective approach than the traditional currency- based setting due to the

scope of carrying voluminous transactions in a short time. Since there is no need to carry currency note and coins, the risk of theft or burglary can be eliminated in cashless system. In the light of all these benefits, every citizen of this modern economic world wishes to have a stake holder in cashless economy. The digital transactions are the essence of digital economy. The RBI Ombudsman scheme for digital transactions defines a 'Digital Transaction' as "Digital Transaction' means a payment transaction in a seamless system effected without the need for cash at least in one of the two legs, if not in both. This includes transactions made through digital / electronic modes wherein both the originator and the beneficiary use digital / electronic medium to send or receive money."

Review of Literature

Many researchers in the past carried their research on the topics related to digital economy and modern payment systems. They studied on: electronic payment systems, online payments, digital banking, Core Banking Solutions and the quality of service, internet banking, mobile banking technologies, Universal Payment Interface, Electronic Fund Transfer, volume of payments through credit cards, chip card transactions, financial inclusion, digital marketing, customer satisfaction on online transactions, online Banking, e-commerce and electronic payments, retail payments and overall economic growth, new technologies in electronic money (e-money), framework for mobile payment systems in India, emergence of payment systems in the age of electronic commerce: the state of art, mobile payment systems and services, Electronic commerce and issues of policy and strategy for India, impact of mobile banking on economic development, customer perception towards internet banking, internet banking systems and security issues, technological management and mobile business services in India, the future of internet banking in India, digital transformation, the state of e-commerce laws in India, wireless ATM and technological framework to m-banking, e-banking in developing economy, customer perception of mobile banking, secure and efficient protocol for mobile payments, governance in the digital economy, mobile digital wallet, paying with plastic money and the digital revolution in buying and borrowing, a versatile mobile-to-mobile payment system, etc.. Most of these studies are carried either in the initial stages of digital payment systems or prior to the Digital India and Demonetization programmes. The present study gains the significance because it is a humble attempt to assess the status of digital payment systems during post demonetization and Digital India initiatives.

Present Study

The present study deals with the emergence, development and performance of digital payment methods/instruments that penetrated in Indian financial system. Digital payments are get effected through and with the infrastructure, networking and technological adoptions of banking sector. In every country, banking sector play a crucial role in its economy and financial system. It's role is increasing beyond the traditional functions of accepting deposits and giving loans and advances. The digital banking infrastructure and networking is facilitating the development and maintenance of an efficient and cost effective payment system to meet the requirements of business entities, government agencies/departments and general public. It is also

providing accessibility to and provision of so many financial services to the public. Even in the modern digital set up, the individuals and entities require an account in banks to carry the financial transactions. Any payment get effected by digital mode should be recorded in the customer account maintained by the bank. To meet the ever increasing requirements and expectations of the public, the banks are bound to provide the infrastructure and popularizing among the public to adopt it for better services. The Indian banking sector has been witnessing and passing through the dynamic technology environment as it is compelled to forgetting the manual recording process and move towards digitalisation of every transaction. The Internet, Information Technologies, and networking technologies have changed the way of functioning of banks and financial institutions. Though these technologies were introduced in the late eighties, the current phase of IT revolution is more intense and impactful in banking sector. The simultaneous developments in all these technologies, made the banking sector to bring so many changes in the operations management of banks and traditional payment process and instruments. From the concept of "banking in banks branches only" to the concept of "any time and everywhere banking", the technology made the banks and public to change their operations and modes. The modern digital payment systems have changed the payment process so easy, convenient, transparent and secure and encouraging the participants to experience them. This study is an attempt to examine the growth in the business of some popular payment systems in India.

Research Methodology

This study is based on using data or information from secondary sources. The secondary data are collected from the bulletin published by the Reserve Bank of India, reports published by NITI Aayog, relevant websites, newspapers, books and e-books, previous published articles, conference papers, case studies, magazines and various reports. This study covers a period of ten years starting from 2011-12 to 2021. The scope of study confined to RTGS, NEFT, IMPS and UPI payment systems which are popular in Indian payment industry.

Objectives

1. To study the Major Events in the Emergence of Digital payments in India,
2. To study the initiations taken by the Government of India and RBI towards development of digital payment systems in India, and
3. To study the growth in the business of selected popular payment systems and their trends

Major Events in the Emergence of Digital payments in India

In India, the payment system is witnessing so many changes and a silent revolution is going on since four decades. The Barter system was used to adopt for making payments and settlement before the emergence of money concept. In the next stage the economic transactions were settled in the form of irreplaceable things such as silver and gold coins, and later these coins were replaced by the silver coins issued by Government. Finally the coins and paper currency are being used as instruments for payment. With the evolving of banking system, the economic transactions settlement became fast and could transfer money easily by giving an instruction to the banks through the

instruments like cheques and demand drafts. Mean while with the technology has new heights globally; innovative payment modes were developed in payment system and it eventuates in India too. The Reserve Bank of India inaugurated in the year 1935, since then it took many initiatives for the development of payment systems. It appointed various committees of experts time to time on the matters relating to payment instruments, development of infrastructure, regulatory mechanism, and adoption of technology. In addition to these, the emergence of Core Banking Solutions technologies paved the way for witnessing many changes in banking and payment industries. As a result, the First Credit Card was issued in 1981 by Andhra Bank, India's First ATM by HSBC in 1987, introduction of Magnetic Ink Character Recognition(MICR) technology for standard cheque processing in late 1980s,introduction of uniform regulations for clearing houses, establishing the BANKNET, Electronic Clearing Services (ECS) and Electronic Fund Transfer (EFT) in 1990s, inauguration of Indian Financial Network(INFINET) in 1999, setting up of Institute for Development in Research in Banking Technology(IDRBT), establishment of Clearing Corporation of India Ltd.(CCIL) in 2001, introduction of National Electronic Fund Transfer (NEFT) in November 2005, Real Time Gross Settlement (RTGS) services in March 2004, establishment of National Payment Corporation in 2008, granted permission to non-bank entities to start their own ATMs christened as White Label ATMs in 2012, permitting non-bank finance companies to setup payment banks in 2014, etc., were the major initiatives made by the RBI.

Government and RBI Initiatives towards development of Digital Payment Systems

It is inevitable to every country to setup an embedded integrated electronic payment infrastructure to fulfil many requirements of the modern economy and India is no exception to this. The functioning of digital payments and infrastructure is to be strengthened from time to time. The infrastructure, instruments, products and services are to be penetrated speedily and deeply into the society to attain the implied objectives of digital economy. The present status of digital economy can be attributed to many initiatives of the Government, RBI and other stakeholders of financial system in India. Over the years, many committees were appointed by the Government of India, RBI, NITI Aayog and Ministry of Finance to look into the matters of digital payments system and cashless economy. These committees worked on various issues like: computerization in banks, communication network for banks, proposing needed legislations on EFT, technology upgradation in banking sector, medium-term path on financial inclusion, Fin Tech and digital banking, digital payment systems in advanced countries, setting up of monitoring mechanism, secure electronic records,

acceptance of digital signatures, legislations for curbing computer crime and data protection, deepening digital payment systems, etc.,. The Government made important enactments like Foreign Exchange Management Act in 1999, the Information Technology Act in 2000, the Payment and Settlement Systems Act in 2007, the Payment and Settlement Systems Regulations in 2008, and made amendments to Indian Evidence Act of 1891, the Bankers' Books Evidence Act of 1891, and the Reserve Bank of India Act of 1934 at appropriate times. The government was instrumental in setting up of various institutions like setup the Institute for Development and Research in Banking Technology (IDRBT) (established by RBI) in 1999, National Payment Corporation of India (NPCI) in 2009, the Clearing Corporation of India Limited (setup by banks and financial institutions) in 2001,etc.,.

Data Analysis on Major payment Modes and their trends:

The present study covers some selected major payment systems like RTGS, NEFT, IMPS and UPI. The Real Time Gross Settlements (RTGS) is a payment software package which provides online settlement of payments between financial institutions. It is a large value funds transfer system whereby financial intermediaries can settle interbank transfers for their own account as well as for their customers. It enables quick processing of cheques and instantaneous clearing. The National Electronic Funds Transfer (NEFT) is a more secure system introduced in 2005 for facilitating one-to-one funds transfer requirements of individuals/corporate. It provides batch settlements at hourly intervals, thus enabling near real-time transfer of funds. It has some unique features viz. accepting cash for originating transactions, initiating transfer requests without any amount ceilings, facilitating one-way transfers to the neighboring country of Nepal, receiving confirmation of the date/time of credit to the account of beneficiaries, etc., are available in this system. The Immediate Payment Service (IMPS) was launched by NPCI in 2010 to facilitate instant and robust inter-bank fund transfer. By using this, funds can be transferred with the help of Mobile Money Identifier (MMID), mobile number or bank account number and IFSC across the country, which is not only economical but also safe, and services are available in 24x7, throughout the year including bank holidays. Unified Payment Interface (UPI), is a system which facilitates multiple bank accounts into a single mobile application. It is a mobile-based instant real-time payment system for transferring funds between bank accounts in 24x7 and 365 days. It enable bank account holders from different banks to send and receive money using only their Aadhar unique identification number, mobile phone number or Virtual Payment Address (VPA), without possessing bank account details.

Table 1: Select Payment Systems and Annual Turnover (in value and volume)

Year	RTGS		NEFT		IMPS		UPI	
	Value of Transactions (Rs. in billion)	Volume of Transactions (in million)	Value of Transactions (Rs. in billion)	Volume of Transactions (in million)	Value of Transactions (Rs. in billion)	Volume of Transactions (in million)	Value of Transactions (Rs. in billion)	Volume of Transactions (in million)
2011-12	539308.00	55.00	17904.00	226.10	0.40	0.10	--	--
2012-13	676841.00	68.50	29022.00	394.10	4.30	1.20	--	--
2013-14	734252.00	81.10	43786.00	661.00	96.00	15.40	--	--
2014-15	754032.00	92.80	59804.00	927.60	582.00	78.40	--	--
2015-16	824578.00	98.30	83273.00	1252.90	1622.00	220.80	--	--

2016-17	981904.00	107.86	120040.00	1622.10	4116.00	506.70	69.50	17.90
2017-18	1167125.00	124.46	172229.00	1946.40	8925.00	1009.80	1098.32	915.20
2018-19	1356882.00	136.63	227936.00	2318.90	15902.60	1759.90	8769.71	5391.50
2019-20	1311565.00	150.70	229456.00	2744.50	23375.40	2579.20	21317.30	12518.60
2020-21	1055998.00	159.20	251309.00	3092.80	29415.00	3278.30	41036.60	22330.70

Source: Reserve Bank of India Bulletin.

Table-I present the details of select Payment Systems and their Annual Turnover (both in value and volume of transactions) during the period 2011-12 to 2020-21. The table conveys that the turnover of RTGS has increased from Rs.539308.00 billions to Rs.1055998.00 billions in value during the study period. The volume of transactions increased from 55.00 million to 159.20 millions, witnessing a high increase in the years 2015-16, 2016-17 and 2017-18 and an exorbitant increase in the year 2018-19. Though the same trend is observed in both, relatively a high rate of increase observed in Value of transactions. The Volume of NEFT transactions increased from 226.10 million in 2011-12 to 3092.80 million transactions in 2020-21. The value of NEFT transactions increased from Rs. 17904.00 billions in 2011-12 to Rs. 251309.00 billions in 2020-21. Both in Value and Volume, the turnover figures shows robust increase from 2015-16 onwards. Comparatively the IMPS turnover is low in Value and Volume. It is depicted as next to RTGS and NEFT systems and shown a considerable increase in both Value and Volume. The UPI system's turnover stands least amongst all these. A significant observation is that all the payment systems recorded a phenomenal increase in Value and Volume figures from 2015-16 and continued up to 2020-21. The reasons that can be attributed to this trend are demonetization of high value currency notes in November, 2016 and the Digital India Programme initiatives of Indian Government in July, 2015. Due to COVID pandemic, there is a decrease in the turnover of RTGS in the terminal years.

Conclusion

The Government of India, Reserve Bank of India and National Payment Corporation of India have collectively taken many initiations to fulfil the dream of cashless economy make into reality, as a result enormous growth in digital payments was occurred. Even though Digital Payments in India have been hiking progressively, certain obstacles are exists in transforming India into Cashless economy. The considerable obstacles are: India is cash based economy, ATMs are mainly using for cash Withdrawal purpose not for online settlement, lack of infrastructure facilities, awareness among the people about digital and financial technology, many business people and public reluctant to use digital payment as it is not safe and secure, and low quality internet infrastructure and services in rural areas and even metropolitan cities. The Government of India and some Public Sector Undertakings announced special incentives to encourage digital payments on making transactions for provision of services through public networks and digital infrastructure: Government petroleum companies offered discount at 0.75% on payment for petrol and Diesel, Indian Railways announced a discount up to 5.0% on their services, Insurance companies offered discount (up to 10% in case of GIC and 8% in case of LIC) to the public who are making cashless transactions, Public Sector Banks charged a low or no charges on Card-less payments, and the Income Tax Department imposed a lower rate of tax on digital turnover up to 2 Crores. As Shri Narendra Modi, The Prime Minister of India, address in his 'Mann ki baat' on 27th November

2016 'Our dream is that there should be a cashless society'. Though 100 per cent cashless society is never possible, but we can make a start with a less-cash society, and then cashless society will not be a far-off destination. Towards attainment of betterment in present status, there is a need for: upgrading the infrastructure, adopting the technology and international standards, innovation of easy and secure products to be handled by digital illiterates, enhancing access to banks, developing efficient grievance system, provision for opening bank accounts online, tax concessions on smart phones, reduction in charges on transactions of high value payment systems, compelling the public in cities to make digital payments for public utility services, and endeavors to inculcate digital payment practices among young students. Every initiative has to be looked upon for building up of cashless economy and all the stakeholders have to play their due role.

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