



The Rise and Growth of Digital Payments in India

C.H. Padmaja, P. V. Durga Rao

Abstract: India stepped into digital India. The digital India program taken up by the Government of India is mainly to transform India into a digitally empowered society. Faceless, paperless and cashless is one of the professed roles of Digital India. According to the Government of India, the digital payments will increase the employment, minimize risk related to cash like robbery, corruption and storage of huge amounts by way of cash and promotes transparency in operations and attains governance. This paper focuses how the transformation has taken place in the payment industry from coins to paper, to plastic money and now to e-wallets.

Keywords: Digital Payments, e-wallets, initiatives, challenges and opportunities

I. INTRODUCTION:

The payment industry has been experiencing advancement, growth and innovation at a steady rate. From metal coins to paper, from bank accounts to ATM and now to e-Wallets, money has been taken various spaces, size and forms. Over the last few years payment industry has recorded a robust growth with new providers, new platforms and new payment tools.

The term digital payments refer to payments made by using digital instruments. In digital payments, the payee and the payer, both use electronic modes to send and receive money. Increasing use of internet, government initiatives and mobile penetration led to the growth of digital payments in India. There are various types and modes of digital payments. Some of these include the use of debit/credit cards, internet banking, mobile wallets, digital payment apps, Unified Payments interface (UPI) service, unstructured supplementary Service Data (USSD). Bank prepaid cards, mobile banking etc.

1. OBJECTIVES OF THE STUDY

1. To understand the various modes of digital payments
2. To study the opportunities and challenges of digital payments in India
3. To study the initiatives taken by Government in promoting digital payments

II. RESEARCH METHODOLOGY

The study is based on secondary data. The data is collected from sources like research journals, periodicals, government organization website, magazines, newspaper articles and authenticated websites.

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* Correspondence Author

Dr.P.Venkata Durga Rao*, Assistant Professor in K L Business School, K L (Deemed to be University) K L E F, Vaddeswaram

C.H. Padmaja, Assistant Professor in St. Joseph Degree & PG College has 19 years of teaching experience.

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III. MODES OF PAYMENT

India has developed a broad network of payment systems. Some of them are:

- Use of debit and credit cards:

Table 1: Card payment includes payment made by debit cards and credit cards.

Year	Credit Cards		Debit Cards	
	ATM	POS	ATM	POS
2011	963	70553	1061653	37055
2012	1078	81965	1209838	43892
2013	1174	101036	1390666	61125
2014	1400	126930	1575785	74350
2015	1956	154545	1668064	81639
2016	2699	206383	2140999	129610
2017	1909	287042	1928381	358433
2018	3216	376597	2474871	370366
2019	3700	484886	2594307	455089

Source: RBI website

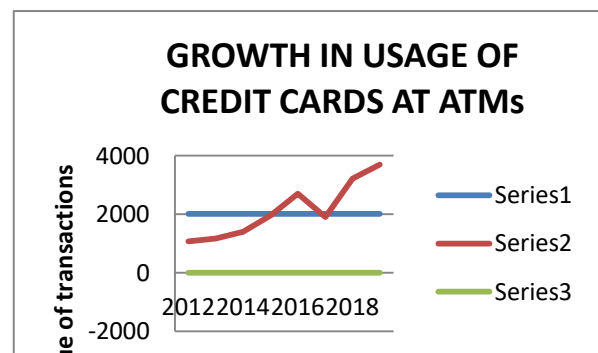
Table 2: Usage of Credit cards at ATMs

USAGE OF CREDIT CARDS AT ATM		
Year	ATM	% growth
2012	1078	10.67%
2013	1174	8.90%
2014	1400	19%
2015	1956	40%
2016	2699	38%
2017	1909	-29%
2018	3216	68%
2019	3700	15%

Source: RBI website

The above table shows how the growth rate increased from 10.67% to 15%. In the year 2017, post demonetization confusion led to decrease but later showed a steady increase in the usage of credit cards.

Graph1: Growth in usage of credit cards at ATMs



Source: Author compilation

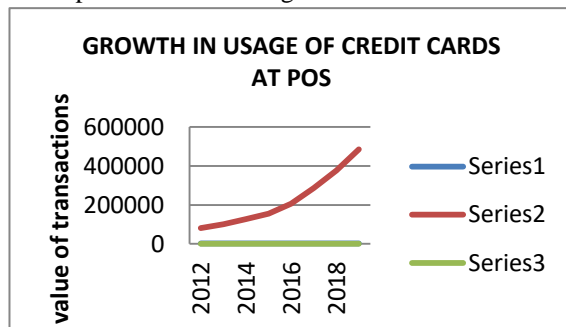


Table3: Growth rate in usage of credit cards at POS:

Year	Value of transactions	% growth
2012	81965	16%
2013	101036	23%
2014	126930	26%
2015	154545	22%
2016	206383	34%
2017	287042	39%
2018	376597	31%
2019	484886	29%

Sources: RBI website

Graph2: Growth in usage of credit cards at POS



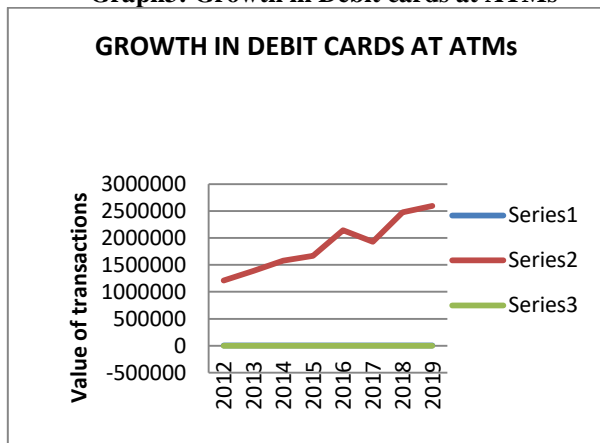
Source: Author compilation

The graph clearly depicts a steady increase in the usage of credit cards which has gone up from 16% in 2012 to 29% in the year 2019.

Table 4: Growth Rate in usage of debit cards at ATMs

Year	ATM	%Growth
2012	1209838	14%
2013	1390666	15%
2014	1575785	13%
2015	1668064	6%
2016	2140999	28%
2017	1928381	-9%
2018	2474871	28%
2019	2594307	4.80%

Graph3: Growth in Debit cards at ATMs



Source: Author compilation

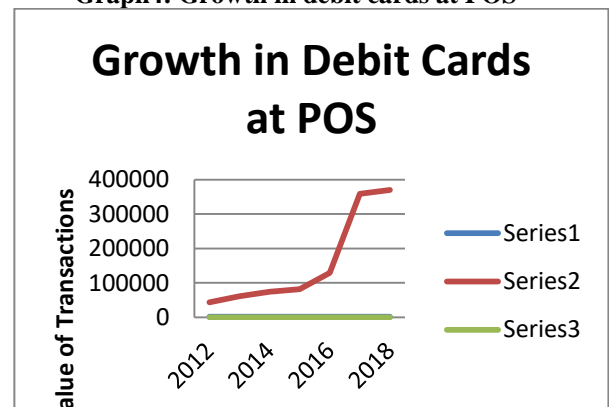
There was a fluctuation in the usage of debit cards at ATM especially during demonetization period as the government wanted to move towards cashless transactions, restrictions were levied on withdrawals. Before demonetization, the growth in usage of debit cards was more than double. Later people preferred to use debit cards at POS rather than using for withdrawals at ATM. In the year 2019, the usage of debit cards has almost comedown to 4.8% which clearly shows the preference of people towards cashless economy. The sudden change in payment industry can be viewed in this era.

Table5: Growth Rate in usage of Debit Cards at POS

Year	POS	%Growth
2012	43892	16%
2013	61125	39%
2014	74350	22%
2015	81639	10%
2016	129610	58%
2017	358433	2%
2018	370366	3%
2019	455089	23%

Source: RBI website

Graph4: Growth in debit cards at POS



Source: Author compilation

The above table shows that the usage of debit cards increased drastically over a period of ten years which clearly states that India is moving towards cashless economy. Debit cards remain the best preference which is used mainly for daily purchase at super markets or gas stations.

USSD: Unstructured Supplementary Service Data channel allows mobile banking transactions using basic feature of mobile phone, there is no need to have mobile internet data facility for using USSD based mobile banking. To use USSD mobile banking, users will have to simply dial *99# and use the interactive menu. Presently, this service is offered by 51 leading banks and can be accessed by 12 languages. The main advantages of USSD platform are:

1. It works on all GSM phones irrespective of make, model or service provider.
2. It does not require any application or software
3. It is interactive in nature
4. It is a session based communication
5. It is safer and much faster than traditional SMS based transactions

6. It can support multiple languages

The number of digital transactions made through UPI and USSD mode has grown exponentially by 3,574% and 10,60% respectively till January 2018 as per the report given by union minister of state for law and justice. As on Jan 2019, over 3.8 lakh customers and 21,000 merchants have been rewarded under Lucky Grahak Yojana and DIGIDhan Vyapar Yojana which clearly depicts the growing cashless and digital economy.

Aadhaar Enabled Payment System (AEPS): the AEPS services have given a strong boost in expanding access to financial services for millions of unbanked and under banked customers. With the launch of AEPS services, India Post Payment Bank (IPPB) has now become the single largest platform in the country for providing interoperable banking services to customers of 'Any Bank' by leveraging the last mile unprecedented reach of the postal network.

According to NPCI, the transaction count of AEPS stood at 220.18 million with transaction value Rs. 9,685.35 crore and stated that it is a remarkable achievement.

UPI: Unified Payment Interface (UPI) is a system that powers multiple bank accounts to a single mobile application, merging several banking features, seamless fund routing and merchant payments into one hood. Each bank provides its own UPI App for Android, windows and IOS mobile platforms. Around 30 banks are providing UPI services. BHIM is a mobile payment app developed by the National Payments Corporation of India (NPCI), based on the Unified Payments Interface. It is intended to facilitate e-payments directly through banks as part of the 2016 Indian banknote demonetization and drive towards cashless transactions. In terms of transaction value, UPI recorded Rs. 1,42,034.39 crore in April, 2019

Mobile Wallets: A mobile wallet refers to a virtual wallet that stores payment card information on a mobile device. These are convenient way for a user to make in store payments and can be used at merchants listed with mobile wallet service provider. the value of transactions made through mobile wallets touched a record Rs. 14,632 crore in 2018 as per RBI report.

POS: It is the point of sale at which a customer makes a payment to the merchant in exchange for goods or service. Once the payment is received, the merchant can issue a receipt for the transaction and also be sent electronically. POS software may include additional features like inventory management, CRM, financials or warehousing. Businesses today are increasingly adopting POS system.

Bank Prepaid cards: these are almost like a combination of credit cards which are issued by bank holding company and a branded by major credit card companies such as Visa, Master card, American Express etc. A prepaid card cannot be used as credit card as it has to be preloaded with money and only the amount loaded will be spent.

Internet Banking: The convenient way to do banking from the one's comfort zone is internet banking. It is an electronic payment system that provides the facility to the customer to conduct the financial and non financial transactions from his bet banking account. He can conduct a range of financial transactions through the financial institution's website.

NEFT: National Electronic Fund Transfer: it is a nationwide payment system which facilitates one to one

funds transfer. Ta maximum of Rs. 50,000 per transaction can be made through NEFT.

RTGS: Real Time Gross Settlement: real time refers to the processing of instructions at the time they are received rather than at some later time. Gross settlement refers to the settlement of funds transfer instructions occur individually. RTGS is defined as the continuous settlement of funds transfers individually on an order by order basis without netting. It is usually meant for large value transactions.

IV. OPPORTUNITIES AND CHALLENGES OF DIGITAL PAYMENTS IN INDIA.

The turning point of digital payment preferences in India relates to the fact that mobile phones are rapidly becoming personal electronic devices performing an increasing range of services including those relating to payments. Fall in smart phone prices, cheaper data plans also added to tremendous increase in the digital payments in India. The main reasons for such an increase can be related to the following factors:

1. Easy and very convenient
2. Time saving
3. Acts as a record
4. Minimizes risk of robbery or theft
5. Discounts from taxes
6. Very less commission to be paid on digital transfers.
7. Helps keep black money under control
8. Waivers and cash backs
9. Economical and less transaction fees

Challenges of digital payments

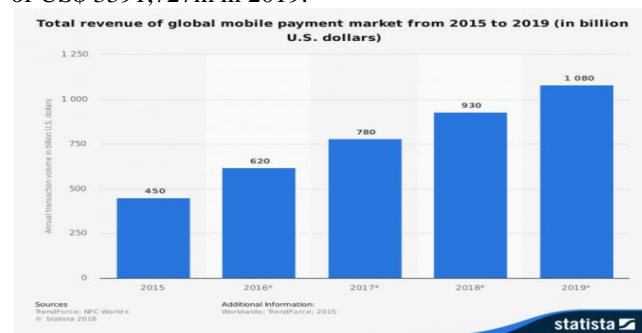
1. Difficult to be operated by non technical person
2. Risk of cyber theft of data
3. Possibility of overspending
4. Intermediaries in the payment sector

But still India is experiencing remarkable growth in the digital payments. Not just India, reflections can be seen worldwide.

V. WORLDWIDE PROGRESS IN THE DIGITAL PAYMENTS:

The total transaction value in the digital payments segment amounts to US\$4,137,523 m in 2019.

Total transaction value is expected to show an annual growth rate (CAGR 2019-2023) of 12.8% resulting in the total amount of US\$6,699,201m by 2023. Market's largest segment is Digital Commerce with a total transaction value of US\$ 3391,727m in 2019.



Source: Internet website

Government Initiatives towards digital payments:

VI. GOVERNMENT INITIATIVES:

Demonetization of big currency notes gave a push to the payment industry. It compelled the people to look for other alternatives of making payments. To have a cashless economy, all the transactions are carried out using different types of payment methods and this does not involve the physical use of money for the purchase of various goods and services

Initiatives taken by government to promote digital payments:

- TDS deduction at source: in order to discourage the practice of making business payment in cash, 2% tax deducted at source(TDS) will be levied on cash withdrawals exceeding Rs. 1 crore in a year from a bank account
- Use of low cost digital modes: any business entity with annual turnover more than 50 crore shall offer low cost digital modes of payments to their customers and no charges shall be imposed on customers as well as merchants. BHIM UPI, Aadhaar Pay, NEFT and RTGS can be used to promote less cash economy
- DigiVaarta: DigiVaarta is launched to spread the awareness of an DIGIDhan and also on the usage of BHIM app
- DIGIshala is launched on DD channel to promote digital payments
- DigiDhan Abhiyan campaign is organized to promote cashless transactions
- Vittiya Saksarta Abhiyan is an initiative by MHRD to engage youth to use a digitally enabled cashless economy
- Lucky Grahak Yojana and DigiDhan VyaparYojana offer cash awards to consumers and merchants who utilize payment instruments for personal consumption expenditures.
- Transparency and Security: Government officials made social security pension payments through digital smart cards which led to reduction bribe.
- Go Digital and get discounts on Insurance, petrol and Diesel: 0.75% discount on petrol and diesel purchase if digital payment is made e-wallets or debit cards or credit cards
- Rail tickets: people travelling by train by purchasing monthly tickets will enjoy a discount of 0.5% if tickets are purchased digitally.
- INR 10 lakhs of insurance: people travelling long distances using Indian Railways will get travel insurance of 10 lakhs on unforeseen happening if tickets are purchased digitally.
- 5% rebate on railway facilities like retiring rooms, catering services etc., if those services are purchased using digital payment modes.
- Rupay Card from NABARD: those people who have kisan credit card can get Rupay cards from NABARD
- 10% discounts for highway tolls when payments are made using digital payments mode.

VII. CONCLUSION:

It can be clearly stated that there is lot of change in the payments industry. Payments transformed into digital and this sector witnessed tremendous growth, innovations and

regulatory support over last few years. Digital payments started to pickup pace with the growth of e-commerce companies followed by emergence of digital wallet companies. Offline point of sale transactions also helped for the growth which is mainly used in shopping malls, restaurants and petrol stations. These POS transactions are expected to become a majority contributor to the digital payment platforms in the coming years. Clearly, digital wallets are playing a unique role in drawing the growth of digital payment sector. The steps taken up by the government of India in promoting digital payments leads to transparency of cash in the country and directly control the black money in India by transparent cash flow of every individual. However, for smooth implementation of less cash system in the payment system, the following recommendations can be considered:

1. Build digital financial literacy which brings awareness regarding the application of digital apps for digital payments.
2. Government, RBI and other financial bodies should give incentives on the use of non cash instruments
3. Non cash instruments should be more simplified and user friendly, acceptable and adaptable by everyone irrespective of region, religion and language
4. A strong framework for internet security and transparency
5. A strong framework for grievance redressed.

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AUTHORS PROFILE:



Dr.P.Venkata Durga Rao working as an Assistant Professor in K L Business School, K L (Deemed to be University) K L E F, Vaddeswaram had 15 years of teaching experience in India and Ethiopia (Foreign) and 2 years experience in Industry. He qualified NET (National Eligibility Test) and awarded UGC-JRF in the year 2011. He awarded M.Phil. in the year 2008 and Ph.D. in the year 2014.

He published more than 16 articles in International and National journals. His area of interest is Accounting and Finance. He presented and participated in various national and international conferences, workshops and guest lectures.



C.H. Padmaja working as Assistant Professor in St. Joseph Degree & PG College has 19 years of teaching experience. She has done her post graduation in commerce from Sri Krishnadevaraya University and was awarded gold medal in the year 1997 and also holds master's degree in MBA from Osmania University. Presently doing Ph.D. in Management from K L Business School, K.L.

(deemed to be) University, K L E F Vaddeswaram. Her areas of interest are accounting and finance. She has organized several workshops and conferences and participated in national and international conferences.