

## **An overview of Digital Payment System**

**Deepak G**

Assistant Professor of Commerce  
Smt & Sri Y.E.R. Government First Grade  
College, Pavagada – 561202  
Tumkur District Karnataka  
Mob. No – 9036155747  
E-mail: [gdeepak.8787@gmail.com](mailto:gdeepak.8787@gmail.com)

**Mahesh V.R.**

Assistant Professor, Department of  
Commerce,  
Smt & Sri Y.E.R Government First Grade  
College, Pavagada– 561202  
Mob: 9739171133  
E-mail ID: [maheshmahiyashu@gmail.com](mailto:maheshmahiyashu@gmail.com)

### **Introduction**

India is a developing economy with focus on achieving sustainable development. To achieve sustainable development, it is important that all sections of the society get equal opportunity and participate in nation building. Lack of awareness of digital financial literacy, especially among the rural population is a major challenge in the country, more so in light of the Government's demonetization and plans to make India a cashless economy. There is an urgent need to create awareness among the citizens, especially in rural and semi-urban areas regarding digital finance services and also enable/support in access to digital finance services options.

**Digital payments** are technically defined as any **payments** made using **digital** instruments. In **digital payment**, the payer and the payee, both use **electronic** modes to send and receive money. No hard cash is used.

Ministry of Electronics and Information Technology , Government of India envisages Paperless, Cashless and Faceless services across the country, especially in rural and remote parts of India. further envisages common e-Governance infrastructure that will offer end-to-end transactional experience for a citizen, businesses as well as internal government functions, which includes accessing various services and making payments and receipts through electronic modes.

**The digital payments system has the following phases:**

1. Registration
2. Invoicing
3. Payment selection
4. Payment confirmation

### **Objectives of the Study**

The general objective of the study is to know about the various types of digital payment transactions.

The following are the specific objectives,

1. To study the benefits of digital payments.
2. To study the online high value payments
3. To explore the various modes of digital payment transactions that is offered by various financial institutions
4. To gauge the extent of operations of digital payments while dealing with online transactions.
5. To offer suitable suggestions in handing digital payments as easy and convenient one.

### **Research Methodology**

The present study is based on descriptive in nature. The study has been carried out based on the collection of the available secondary data. Secondary data was collected from different sources such as articles published in different journals & newspapers, published books, periodicals, conference paper, working paper and websites, etc.

### **Review of Literature**

**Preeti Garg and Manvi Panchal (2016)** the article entitled “Study on Introduction of Cashless Economy in India 2016: Benefits and Challenge’s. The study was conducted in Delhi region. The article explains many people actually agree with the government on the usefulness of cashless economy as it helps to fight against terrorism, corruption, money laundering but one biggest problem in the working of cashless economy in India is cybercrime and illegal access to primary data. It also appears major challenges that can hinder the implementation of the policy are cyber fraud, high illiteracy rate, attitude of people, lack of transparency and efficiency in digital payment system. Therefore it’s important to strengthen Internet Security from protection against online fraud. The Government have to bring transparency and efficiency in e-payment system, strategies used by government and RBI to encourage cashless transactions by licensing payment banks, promoting mobile wallets and withdrawing service charge on cards and digital payments. A

financial literacy campaign should be conducted by government time to time to make population aware of benefits of electronic payments.

**Mamta, Prof. Hariom Tyagi and Dr. Abhishek Shukla (2016)** the article entitled “The Study of Electronic Payment Systems”. This study aimed to identify the issues and challenges of electronic payment systems and offer some solutions to improve the e-payment system quality. The successful implementations of electronic payment systems depends on how the security and privacy dimensions perceived by consumers as well as sellers are popularly managed, in turn would improve the market confidence in the system.

**Sheetal Thomas & G. Krishnamurthi (2017)** the article entitled “Cashless rural economy – A Dream Or Reality?”. The study is aimed at creating awareness about digital transactions and financial literacy among rural people by partnering with different educational organisations and NGO’s. It can also provide multi-lingual online payment platforms i.e. mobile apps in regional languages for ease of transactions. By using the schemes and policies implemented by Ministry of Rural Development to bring the population under electronic payment system, the government can make the cashless rural economy a reality from dream.

**Ghana shyam kafley and Dr. M. Chandrasekaran (2018)** the article entitled “Recent trends in Electronic payment systems in INDIA” The study shows that In Indian scenario e-payment system is still in growing stage it has not reached the entire part of the country. There are several challenges that need to be overcome in order to have a smooth growth of e-payment system. Although Reserve Bank of India along with the government are making several efforts to make Indian economy a cash less economy. They have launched several programmes in regards with online payment. All this efforts will work only when people have awareness regarding e-payment.

**Ashish Baghla (2018)** the article entitled, “A STUDY ON THE FUTURE OF DIGITAL PAYMENTS IN INDIA”. The study shows that the move towards cashless economy is definitely a good one but it will take much time to implement completely cashless economy. The efforts are going well by the government as well as the private sector companies having there e-wallets apps such as PayTM, PhonePe etc. The biggest challenge in front of government is the lack of knowledge and awareness among people and fear of loss of money by use of digital payment methods risk of hacking. The government needs to tackle these challenges to have cashless economy and to give a boost to digital payments to provide sustainable economic development to the country in the long run.

The Digital India programme is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. “Faceless, Paperless, Cashless” is one of professed role of Digital India.

### **VARIOUS MODES OF DIGITAL PAYMENTS**

#### **1. BANKING CARDS (DEBIT / CREDIT / CASH / TRAVEL / OTHERS)**

Banking cards offer consumers more security, convenience, and control than any other payment method. The wide variety of cards available – including credit, debit and prepaid – offers enormous flexibility, as well. These cards provide 2 factor authentication for secure payments e.g secure PIN and OTP. RuPay, Visa, MasterCard are some of the example of card payment systems. Payment cards give people the power to purchase items in stores, on the Internet, through mail-order catalogues and over the telephone. They save both customers and merchants’ time and money, and thus enable them for ease of transaction.

#### **2. UNSTRUCTURED SUPPLEMENTARY SERVICE DATA (USSD)**

The innovative payment service \*99# works on Unstructured Supplementary Service Data (USSD) channel. This service allows mobile banking transactions using basic feature mobile phone, there is no need to have mobile internet data facility for using USSD based mobile banking. It is envisioned to provide financial deepening and inclusion of under banked society in the mainstream banking services.

#### **3. AADHAAR ENABLED PAYMENT SYSTEM (AEPS)**

AEPS is a bank led model which allows online interoperable financial transaction at PoS (Point of Sale / Micro ATM) through the Business Correspondent (BC)/Bank Mitra of any bank using the Aadhaar authentication.

#### **4. UNIFIED PAYMENTS INTERFACE (UPI)**

Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood. It also caters to the “Peer to Peer” collect request which can be scheduled and paid as per requirement and convenience. Each Bank provides its own UPI App for Android, Windows and iOS mobile platform(s).

## **5. MOBILE WALLETS**

A mobile wallet is a way to carry cash in digital format. You can link your credit card or debit card information in mobile device to mobile wallet application or you can transfer money online to mobile wallet. Instead of using your physical plastic card to make purchases, you can pay with your Smartphone, tablet, or smart watch. An individual's account is required to be linked to the digital wallet to load money in it. Most banks have their e-wallets and some private companies. e.g. **Paytm, Freecharge, Mobikwik, Oxigen, mRuppee, Airtel Money, Jio Money, SBI Buddy, itz Cash, Citrus Pay, Vodafone M-Pesa, Axis Bank Lime, ICICI Pockets, SpeedPay** etc.

## **6. POINT OF SALE**

A point of sale (PoS) is the place where sales are made. On a macro level, a PoS may be a mall, a market or a city. On a micro level, retailers consider a PoS to be the area where a customer completes a transaction, such as a checkout counter. It is also known as a point of purchase.

## **7. INTERNET BANKING**

Internet banking, also known as online banking, e-banking or virtual banking, is an electronic payment system that enables customers of a bank or other financial institution to conduct a range of financial transactions through the financial institution's website.

Different types of online financial transactions

- a) **National Electronic Fund Transfer (NEFT):** National Electronic Funds Transfer (NEFT) is a nation-wide payment system facilitating one-to-one funds transfer. Under this Scheme, individuals, firms and corporates can electronically transfer funds from any bank branch to any individual, firm or corporate having an account with any other bank branch in the country participating in the Scheme.
- b) **Real Time Gross Settlement (RTGS):** RTGS is defined as the continuous (real-time) settlement of funds transfers individually on an order by order basis (without netting). 'Real Time' means the processing of instructions at the time they are received rather than at some later time; 'Gross Settlement' means the settlement of funds transfer instructions occurs individually (on an instruction by instruction basis).

c) **Electronic Clearing System (ECS):** ECS is an alternative method for effecting payment transactions in respect of the utility-bill-payments such as telephone bills, electricity bills, insurance premia, card payments and loan repayments, etc., which would obviate the need for issuing and handling paper instruments and thereby facilitate improved customer service by banks / companies / corporations / government departments, etc., collecting / receiving the payments

d) **Immediate Payment Service (IMPS):**

IMPS offers an instant, 24X7, interbank electronic fund transfer service through mobile phones. IMPS is an emphatic tool to transfer money instantly within banks across India through mobile, internet and ATM which is not only safe but also economical both in financial and non-financial perspectives.

## **8. MOBILE BANKING**

Mobile banking is a service provided by a bank or other financial institution that allows its customers to conduct different types of financial transactions remotely using a mobile device such as a mobile phone or tablet. It uses software, usually called an app, provided by the banks or financial institution for the purpose. Each Bank provides its own mobile banking App for Android, Windows and iOS mobile platform(s).

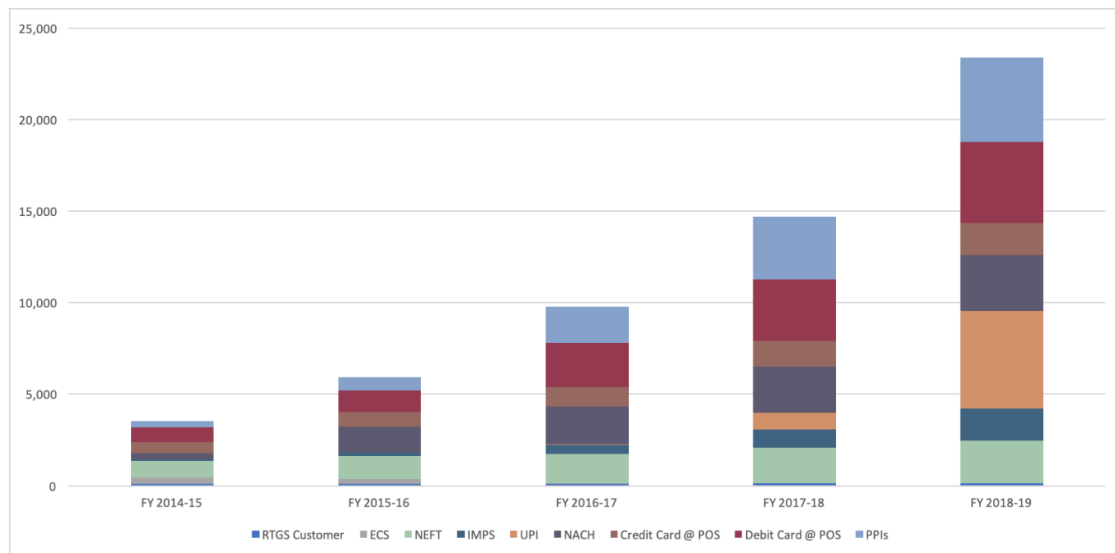
## **9. MICRO ATMS**

Micro ATM meant to be a device that is used by a million Business Correspondents (BC) to deliver basic banking services. The platform will enable Business Correspondents (who could be a local kirana shop owner and will act as 'micro ATM') to conduct instant transactions.

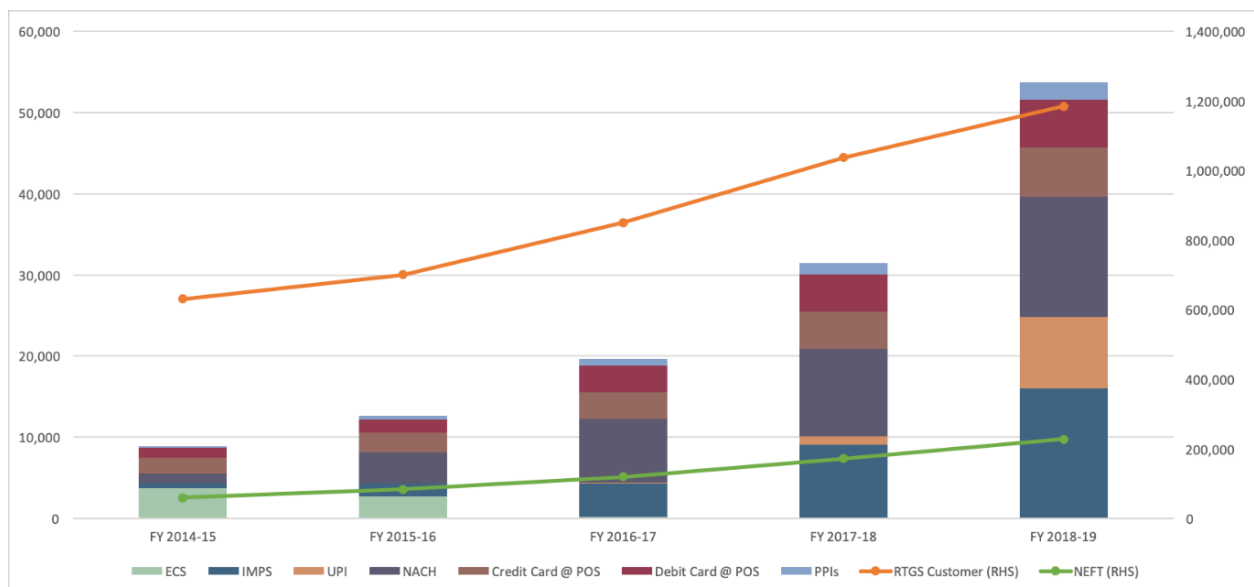
The micro platform will enable function through low cost devices (micro ATMs) that will be connected to banks across the country. This would enable a person to instantly deposit or withdraw funds regardless of the bank associated with a particular BC. This device will be based on a mobile phone connection and would be made available at every BC. Customers would just have to get their identity authenticated and withdraw or put money into their bank accounts. This money will come from the cash drawer of the BC. Essentially, BCs will act as bank for the customers and all they need to do is verify the authenticity of customer using customers' UID. The basic transaction types, to be supported by micro ATM, are Deposit, Withdrawal, Fund transfer and Balance enquiry.

## DIGITAL TRANSACTION VOLUMES AND VALUES

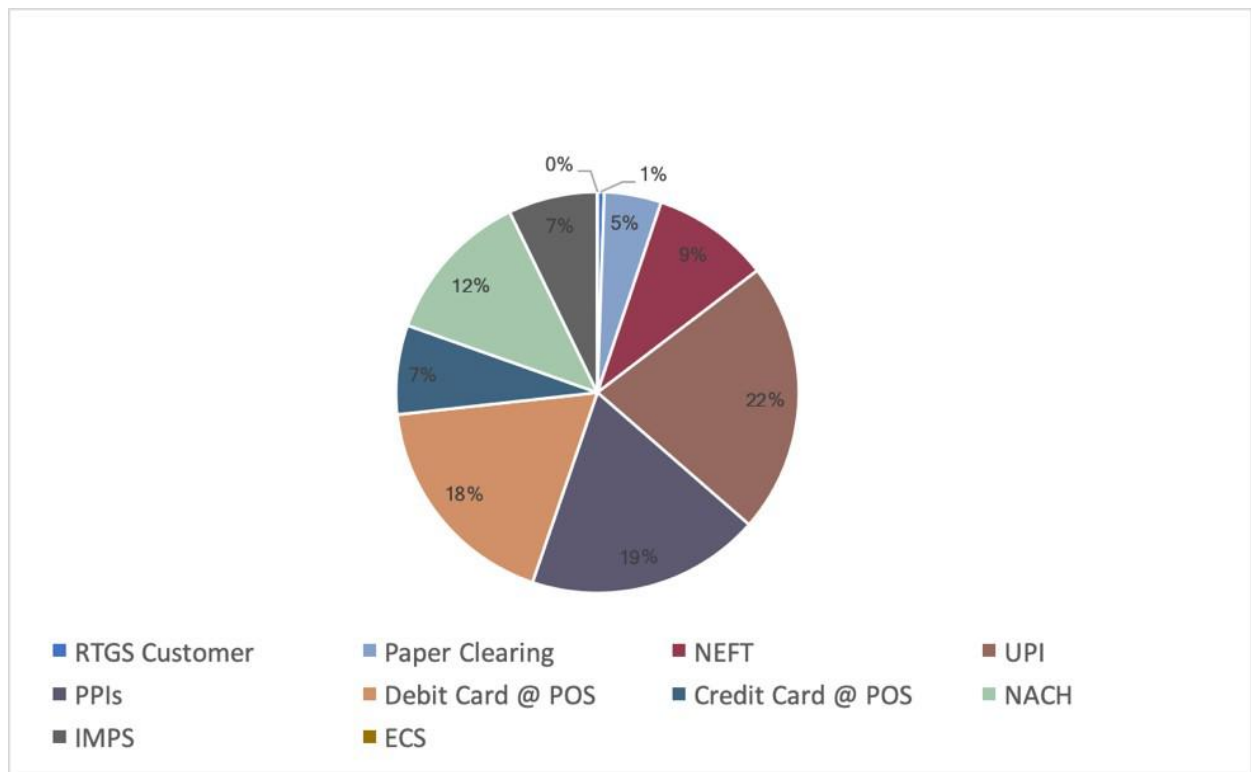
The following charts shows **digital transaction volumes, and values** on a yearly basis over last 5 years.



*Figure 1 Digital Payments By Volume*



*Figure 2 Digital Payments by Value*



*Payment Systems Share FY2018-19-Volume*

Sources: [rbidocs.rbi.org.in](http://rbidocs.rbi.org.in)

### **Benefits of Digital payments**

1. **Cost savings:** Digital payments benefited cost savings through increased efficiency and speed.
2. **Transparency and security:** Digital transactions brings transparency and security by increasing accountability and tracking, reducing corruption and theft as a result
3. **Financial inclusion:** Digital payments helps in financial inclusion by advancing access to a range of financial services, including savings accounts and insurance products
4. **Inclusive growth :** The inclusive growth through building the institutions that form the bedrock of an economy and the cumulative effect of cost savings, increased transparency, financial inclusion, and greater women's economic participation
5. **Convenience & accessibility:** Customers no longer need to carry cash or visit an ATM. In fact, they don't even need to be physically present to pay! Customers can pay anytime from any part of the world.



6. **Lower risk:** Digital transactions are much more secure than traditional transactions because they are processed by secure gateways which are hard to tamper with.
7. **Easily traceable:** Details of payments are stored in a merchant-specific databases. Both merchants and customers have easy access to payment information. This avoids ambiguity and confusion while tracking payments.
8. **Women's economic participation:** It brings Women's economic participation by giving women more control over their financial lives and improving economic opportunities
9. **Digital record:** Digital payments tracks and maintains digital record of every transactions.
10. **No fear of losing cash:** Digital payments helps customer not losing of cash or getting fake currency.
11. **Saves time:** No need to leave your home, office, car, parents' house or whatever you are doing to make a journey to hand cash over to someone. It also means no need to stand in a queue or wait for someone to get change for you either.

## **5 REASONS WHY CONSUMERS STILL DON'T USE DIGITAL PAYMENTS**

**Trust:** For many, there is still a lack of trust for digital payments. There are those that don't yet feel safe using this as they don't trust the Internet and the perceived security risks. The perception that someone else has access to your bank account is a deal breaker for many. People in this category may have limited experience with the online world through lack of exposure and understanding of how it works.

**Habit:** Their lives are centered around being paid in cash and conducting their own purchasing with cash only. It is the traditional way that business is done in many areas and domains. There is simply no need to change as far as those that always transact in cash are concerned. Dutifully they carry their cash and believe they are safe and in control at all times. Blissfully unaware of the digital payments evolution going on around them.

**Transparency:** In a country like India there is a perception that having every transaction be tracked could invite trouble via more scrutiny or higher taxes. Cash doesn't leave a digital footprint which is what some consumers prefer. This isn't to say that cash is the default for shady transactions or tax evasion. Some people prefer to live their financial lives off the grid. And with cash, they are able to do so quite simply.

**Pervasiveness:** Cash is accepted everywhere. Digital payments are not. Not yet anyway. It will become much harder for people to avoid it in the future with the economic goals set by the government.

**Friction:** Cash is an immediate transfer of value. Digital payments, despite recent developments, still involve more steps than exchange of cash. If you can count it in your hand - it's real - is the mindset of some consumers

### **FINDINGS OF THE STUDY**

1. The payment system initiatives taken by the Govt. and RBI have resulted in greater acceptance and deeper penetration of non-cash payment modes.
2. Ever-improving technology and telecommunication facilities have given fillip to alternative electronic payment system.
3. Cheque as a mode of payment has lost its relevance and will remain at least in the medium term.
4. Government's initiatives such as the introduction of GST, demonetization etc is likely to widen the tax net and enlarge the formal economy.
5. Despite of Government initiatives consumers are yet to warm up to digital payments in a big way.
6. Many Consumers still don't use digital payments because of lack of trust, friction etc of losing money.

### **Suggestions**

1. Government can ensure to the public that the operation of digital payment transaction is free from transactions cost which in turn helps the customers of various transaction to purchase via on line mode.
2. Government could give concession to the retailers, merchants and other suppliers who sell the products and services via digital mode and this in turn will encourage all the merchants to become e-merchants
3. Training Programmes could be organized by the government to train all the people to make use of the digital payments.

4. Government can give continuous media coverage through TV news/ shows, Radio or social networking or newspapers/magazines about the benefits of digital payments to the society and for the individual.
5. Customers must be able to comply with the terms and conditions of Digital payment methods, notify the issuer of the loss/theft of the Electronic Payment Instrument (EPI) immediately and keep track on the balance, especially after each transactions.

### **Conclusions**

The demonetization resulted in tremendous growth in digital payments. With the government initiative such as Digital India and increased use of mobile and internet are means to exponential growth in use of digital payment. This transformation towards digital payments benefits in more transparency in transactions which empowers the country's economy . In recent days many changes took place in the payment system like digital wallets, UPI and BHIM apps for smooth shift to digital payments.

Cashless economy will help in curbing black money, counterfeit's fake currency, fighting against terrorism, reduce cash related robbery, helps in improving economic growth of our country. Major challenges that can hinder the implementation of the policy are cyber fraud, high illiteracy rate, attitude of people, lack of transparency & efficiency in digital payment system. The study shows that the introduction of digital payments in India can be seen as a step in right direction. It helps in growth and development of economy in India. But there are many customers who still don't use digital payments because of lack of trust, friction etc. Some public feel they cash is accepted everywhere. Digital payments are not

### **References:**

1. E. Gordon and K. Natarajan "Banking Theory, Law and Practices" Himalaya Publishing House,
2. Preeti Garg and Manvi Panchal (2016) the article entitled "Study on Introduction of Cashless Economy in India : Benefits and Challenge"s IOSR Journal of Business and Management (IOSR-JBM), 2016.
3. Mamta, Prof. Hariom Tyagi and Dr. Abhishek Shukla the article entitled "The Study of Electronic Payment Systems" International Journal of Advanced Research in Computer Science and Software Engineering, 2016.

4. Sheetal Thomas & G. Krishnamurthi (2017) the article entitled “Cashless rural economy – A Dream Or Reality ?”. Jharkhand Journal of Development and Management Studies XISS
5. Ghana shyam kafley and Dr. M. Chandrasekaran (2018) the article entitled “Recent trends in Electronic payment systems in INDIA” A Blind Review & Refereed Quarterly International Journal
6. Ashish Baghla (2018) the article entitled, “A STUDY ON THE FUTURE OF DIGITAL PAYMENTS IN INDIA”. IJRAR-International Journal of Research and Analytical Reviews
7. <https://economictimes.indiatimes.com/wealth/spend>
8. [rbidocs.rbi.org.in](http://rbidocs.rbi.org.in)
9. <http://cashlessindia.gov.in/index.html>
10. <https://economictimes.indiatimes.com/wealth/personal-finance-news/mobile-banking->
11. <https://upipayments.co.in/digital-payment/>