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I am delighted to learn that Ajintha Education Society's Sant Dnyaneshwar Mahavidyalaya, Soegaon affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad is going to organize One-Day National Multidisciplinary Seminar on "Digital Payment System and Rural India" through the Department of Commerce on 10<sup>th</sup> Feb, 2018. I appreciate the institute for organizing the said seminar in rural and hilly area to make awareness of digital payment system among people having agricultural background.

Digital Payment System promotes the cashless transaction and leads to create cashless society. Promotion of digital payment system motivates the people to learn about varied mobile apps or various modes available for online banking transaction. This motivation creates awareness about banking services and products, due to this people of India become literate to perform banking transaction through digital mode. Use of Hard Cash leads to corruption, but use of digital payment system helps to reduce corruption. However, promoting Digital Payment System in India requires long term process that is why to promote this system the Government of India should take initiatives by organizing various programmes and seminars in colleges on this topic. So, I am very happy that this institute is organizing the said seminar on this topic.

Once again I extend my best wishes towards the said seminar and the organizing committee of the institute and I wish the seminar a grand success.

*B.A. Chopade*

Professor B. A. Chopade  
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**Date:- 31/01/2018**



### **Message**

I take this opportunity to congratulate Ajintha Education Society's, Sant Dnyaneshwar Mahavidyalaya, Soegaon for organizing One-Day National Multidisciplinary Seminar on 'Digital Payment System and Rural India' on 10<sup>th</sup> Feb, 2018. I appreciate the institute for organizing the said seminar in hilly and rural area where most of people having agricultural background. This seminar will surely create awareness among these people about digital payment system.

This National Level Seminar will also provide an intellectual and friendly platform for all the participants who will come together from different part of the country. I am sure there will be quite healthy and educative interactions on the topic of digital payment system among the students, researchers, resource persons and all the participants.

Once again I extend my best wishes towards the said seminar and I wish the seminar a grand success.

**Professor W. K. Sarwade  
Officer on Special Duty  
I/C Dean & Director  
Faculty of Commerce & Management**



**MESSAGE**

I take this opportunity to congratulate Ajintha Education Society's Sant Dnyaneshwar Mahavidyalaya, Soegaon for organizing One Day National Multidisciplinary Seminar on 'Digital Payment System and Rural India' on 10 th Feb.,2018. Due to this seminar, people belonging to agricultural background will learn about digital payment system and will also contribute for cashless transactions.

I am sure that the all participants will be benefited from this seminar.

I wish all the best to the organizing committee for this academic and social event.

*R.S. Dhamnaskar*  
03.02.18  
(Dr. R.S. Dhamnaskar)

Joint Director, Higher, Education,  
Aurangabad Region, Aurangabad.

February 3 rd, 2018.

# Ajintha Education Society, Aurangabad

(Founder President : Late Baburaoji Kale)

**Rangnath Baburaoji Kale (B.E.)**  
President

**Prakash Baburaoji Kale**  
Secretary

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We are very much pleased that the Department of Commerce of our Sant Dnyaneshwar Mahavidyalaya, Soegaon is going to organize One Day National Multidisciplinary Seminar on "Digital Payment System and Rural India" on 10<sup>th</sup> Feb, 2018. The proposed seminar basically aims at bringing the scholars and students together for thorough discussion on the topic. We are quite sure that the participants will bring out the best through this opportunity to enlighten the research activity carried out by them and also enrich their knowledge in the area of "Digital Payment System".

In consonance with government of India's mission "Digital India" for promoting digitalization, the digital payment system has been introduced to promote cashless transaction to create a cashless society.

We heartily welcome all the delegates, research students, resource persons and academicians from various parts of our country. We congratulate the organizing committee and wish them a grand success of this seminar. We are sure that the said seminar will put more light on this topic. The participants will be benefited from this discussion so as to enhance the knowledge of the learners and ultimately the society as well.

We wish all the best to the organizing committee for the academic intellectual and social event.



Prakash Kale  
Secretary,  
Ajintha Education Society  
Aurangabad.



Rangnath Kale  
President,  
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# Ajintha Education Society's Sant Dnyaneshwar Mahavidyalaya, Soegaon

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## PREFACE

Ajintha Education Society's Sant Dnyaneshwar Mahavidyalaya, Soegaon is situated in the lap of Sahyadri ranges in the vicinity of the world heritage site of the Ajanta Caves. Late Baburaoji Kale founded this institution in the year A. D. 1971 to impart the Higher Education to the needy and deprived students in the rural and hilly area of this region.

The Department of Commerce organizes the National Multidisciplinary Seminar on "Digital Payment System & Rural India" dated 10<sup>th</sup> February, 2018. E-commerce is the buying and selling of goods and services. It is the transmitting of funds or data over an electronic network mostly the internet. The business transactions go on either as business-to-business, business-to-consumer, consumer-to-consumer or consumer-to-business. The terms e-commerce and e-business are generally used interchangeably. The term e-tail is used in reference to transactional processes for online shopping. Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities. It is the process of moving to a digital business.

The teaching and non-teaching staff of our college is dedicated, enthusiastic and hard-working. They are well-qualified and have national and international impressions in the field of research activities. Their active participation in various activities and positivity is remarkable.

Wishing all the best for the Seminar,

  
Kind regards,

**Dr. Ashok Naikwade**

Principal

Sant Dnyaneshwar Mahavidyalaya,  
Soegaon; Dist. Aurangabad





Ajitha Education Society's

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## CONVENER'S NOTE

I am pleased to express my views as a Convener's Note. The Department of Commerce organizes the National Multidisciplinary Seminar. This National Seminar is organized by Faculty of Commerce, Soegaon, Dist. Aurangabad on the topic "Digital Payment System & Rural India" dated 10<sup>th</sup> February, 2018. The Seminar is graced with guest speakers from different fields. Shri. Rangnath Kale, the President as the chairperson, Dr. Sanjeev Kumar Gupta as an executive director as the inaugurator, Prof W.K. Sarwade as the Chief Guest, Dr. Amandeep Singh as the Keynote address speaker, Dr. Mukaram Khan, Dr. Sunitha Bharatwal, Dr. Shivaji Madan, Dr. Rajendra Gaikwad as the Guests of Honour discuss about the opportunities and challenges prevailing for the Indian economy in the long and short run. In the Valedictory Function, Shri Prakash Kale, the Secretary as the chairperson, Dr. Kalyan B. Laghane, the Ex-Dean, MC Member & Principal as the Chief-Guest, Dr. Nandkumar Rathi, Dr. Arvind Choudhari, Mr. Jitendra S. Sonwane, Dr. Ulhas Shiurkar & Dr. HG Vidhate as the Guest of Honour, Dr. Ashok Naikwade, the Principal as the Organizer, Mr. Nilesh Gawade as the Co-convener, Dr. Shirish Pawar and Dr. RK Barote, the Vice-Principals preside over the dias.

The rationale of the seminar is to bring together scholars from a variety of states to promote discussion on cross-cutting issues of emerging trends of E-Commerce & Digitalization in Trading, Retailing, Marketing, Business and Technology. The parallel sessions are organized around common themes, to facilitate discussions and the emergence of new, revised integrated agendas for digitalization around the globe.

Wishing all the best for the Seminar...

Kind regards,

**Dr. L. C. Kurpatwar**

Convener

Sant Dnyaneshwar Mahavidyalaya,  
Soegaon; Dist. Aurangabad

# **KEY NOTE**

## **DIGITAL PAYMENT SYSTEM**

**Dr. Amandeep Singh**

Head, USBS, Punjabi University Campus, Talwandi Sabo, Batinda, Punjab.

Digital Payment System refers to the electronic consumer transactions that include payments of goods and services through online means. Earlier, almost all the business transactions were done through cash payments but with the time banks came into existence and the society underwent a financial revolution. All the modes of conventional payments and settlement process act as a bottleneck in the fast moving commerce environment, but now information technology has led to the development of new forms of payments through digital modes.

There are different methods to pay electronically like prepaid cards, NEFT, RTGS, mobile banking etc. Prepaid cards are the plastic cards with a unique identity number. The customer must have access to bank account if he wants to prevail the service of prepaid cards. NEFT (National Electronic Funds Transfer) is a nation-wide payment system for transferring funds in which transfer of money takes place from one bank to another on net basis. RTGS (Real Time Gross Settlement) is an online system for transferring funds in which transfer of money takes place from one bank to another. The RTGS system is suited for low-volume, high-value transactions. Mobile banking is a service provided by a bank or financial institution that allows its customers to perform banking transactions using an electronic device connected with internet such as a mobile phones or tablets. It uses a software which is known as application for conducting the transactions.

Electronic payment system has benefits for both buyers and sellers.

### **Benefits to the Buyers:**

- a) It provides a wide a range of payment options.
- b) It is safe and secure to be used.
- c) It allows the consumer to transfer the funds without handling physical cash.

### **Benefits to the Sellers**

- a) It protects the company from costly labour, materials and services.
- b) Digital payment system ensures faster processing of transactions.
- c) It reduces the visibility of information.

Now the question arises, Is India ready for Digital Payment System?

For digital payment system, the following conditions must be fulfilled:

Financial Stability

Education Level

Smart phones/ Laptops & Internet connections

Physical Infrastructure

**Financial Stability** - According to World Bank Report, 1 in 5 Indians is poor and 80 percent of India's poor population lives in rural areas and they spend more on food, fuel and light than on other items.

**Education Level** - There are a large number of people in India who cannot read or write. Literacy rate varies between states. India's literacy rate is 74.04 per cent.

**Smart phones/ Laptops & Internet connections** - In the year 2018, only 36% of the population have access to mobile phones. 82% of Indians does not have access to internet and only 12% of people in India own their personal computer. (data driven from different sources)

**Physical Infrastructure** - According to 2011 census of India, 68.8% of India's population lives in 640,867 different villages and on an average 3-5 small shops exist in one village. In total approximately 19,22,601 shops are owned in villages. So, is it feasible to have digital payment system in all these type of areas?

In the current scenario, 5% of all payments happen electronically. 0.2% of retail happens through e-commerce, 10% of bank account holders use net banking. According to Reserve Bank of India, cash still accounts for 90% of all monetary transactions in India. Now, it is up to you to decide whether India is ready for Digital Payment System or not?

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**1**

# Digital Payment System Challenges & Prospects

**Dr. Kalyan Bhausaheb Laghane**

Former Dean, Faculty of Commerce Dr. BAMU, Aurangabad and  
Principal, Dagdojirao Deshmukh Arts, Commerce & Science College, Aurangabad.

**Dr. Laxminarayn C. Kurpatwar**

Head, Department of Commerce, Sant Dnyaneshwar Mahavidyalaya, Soegaon.

## Abstract

Now a day's world changed to digital world. India tries to stepping towards e-payment system. Digital payment system is a payment system through an digital network. In other words e-payment is a method in which a person can make Online Payments for his purchase of goods and services without physical transfer of cash and cheques, irrespective of location and time. Today India is at a stage of demonetization so; in the present scenario this study is inevitable to makes digital payments at any time through the internet directly to manage the e-business environment. This study aimed to identify the issues and challenges of Digital payment systems and offer some solutions to improve the e-payment system. Epayment system not only provides more opportunities but many threats also.

**Keywords:** E-payment, Digital payment, Cashless system, Online payment.

## Introduction

Digital Payment Systems are systems whereby payment is made through digital mode i.e. both the payer and payee send and receive money digitally. It is also known as electronic payment as electronic devices connected to a network are used for performing such transactions. Digital payments do not involve any physical transfer of hard cash and are termed as a convenient and instant way to make payments as the transaction gets completed online.

Physical transfer of cash is a very long and time consuming process. It also costs more as the cash needs to be carried and allied activities have to be performed by the bank involved in the transaction. There is also lack of safety when it comes to physical cash. It is very difficult to transact physical cash in large volumes and also storage of such amounts is very insecure. Thus

due to all these underlying risks, digital payments are slowly being preferred over traditional mode of payment.

Digital payments can enable greater economic growth, growth in international e-commerce, and aid in social and financial inclusion. Presently, India represents one of the largest market opportunities for payments. The population is eager to participate in the rapid evolving advancement in technology. The growth of the India cashless payment space is expected to be driven by four trends:

- **Cash being expensive:** Though there are several perceived benefits of transacting in cash (such as instantaneous settlement, relative anonymity, and the notion of security associated with holding physical value), there are several latent and implicit costs associated with cash.
- **Advancement in technology:** Technology has been advancing at a rapid pace to deliver robust, secure and convenient payments solutions. This enables rapid delivery of payment services to large sections of the population.
- **Economical:** Digital payments allow for services to be delivered at lower costs, afford greater scalability and greater ease of access. This in turn, helps in fostering economic growth and financial inclusion.
- **Government initiatives:** Initiatives taken by the government have created a catalytic environment for the greater proliferation and growth of digital payments.

As and when we transition from nascent cashless economy to a mature one, we would witness a significant drop in cash/paperless based transactions. While the transition in its course would have its own share of pains for different stakeholders owing to overall structural changes that the system would encounter.

### **Objectives of the study**

- To know the different modes of digital payment system in India .
- To know the opportunities and challenges & prospects of digital payment system in India.
- To identify the future of digital payment system in India.

## Research Methodology

The study based on secondary information/data. Different journals, newspapers, books and relevant websites have been consulted in order to make the study an effective one. The present study is an attempt to examine the E- payment system in India.

## Financial infrastructure in India

For three decades financial inclusion and financial literacy have been important policy goals on the government's and RBI's agenda. Numerous steps have been taken by the government, RBI along with National Payments Corporation of India (NPCI) such as opening of no frills accounts, relaxation of KYC norms, Pradhan Mantri Jan Dhan Yojna, Aadhaar-enabled payment system, e-wallets and National Financial Switch (NFS) and now, payments banks to leverage technology and introduced newer avenues for banking with the overall objective of improving customer experience, security and ease of transactions. The evolution of India's financial infrastructure can be divided into three phases:

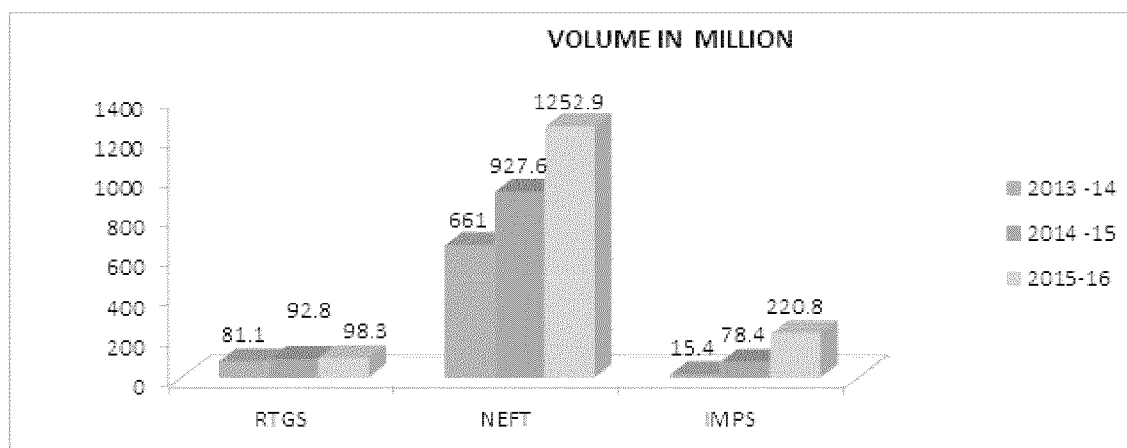
FIRST PHASE	SECOND PHASE	THIRD PHASE
<b>1984:</b> Introduction of Magnetic Ink Character Recognition (MICR) Technology	<b>2001:</b> Internet banking	<b>2010:</b> Immediate Payment Service (IMPS)
<b>1987:</b> First ATM installed in Kolkata	<b>2004:</b> National Financial Switch(NFS)	<b>2012:</b> Adoption of ISO 20022 messaging standard in the Next Generation RTGS (NG-RTGS) system
<b>1988:</b> Computerized settlement operations at clearing houses of RBI	<b>2004–2005:</b> Real Time Gross Settlement (RTGS), National Electronic Funds Transfer (NEFT)	<b>2014:</b> Jan Dhan Yojana, National Unified USSD Platform, RuPay Card, Bharat Bill Payment System (BBPS)
<b>1998–2000:</b> Core banking software	<b>2007 :</b> Mobile banking	<b>2016:</b> Unified Payment Interface (UPI), payment banks, mobile wallets,
	<b>2008:</b> Cheque truncation systems	<b>2017:</b> Bharat Interface for Money (BHIM) app

*\*Source: ASSOCHAM report 2017*

Thus, the journey to create a cashless economy remains an ongoing one; there have been several milestones along the way which is to be achieved by Government, RBI, Banks and the other players in the financial infrastructure system to achieve the goal of cashless economy.

### Indian Transaction System

With the evolution of the financial infrastructure ecosystem, the digital platforms available for payments have transformed. Financial inclusion has gained prominence as the banking system flourished and various platforms were adopted in India. The combination of regulatory innovation in the form of Payments Bank, institutional innovation in the form of National Payments Corporation of India (NPCI) and establishment of Aadhaar as a digital identity platform, along with the rapid adoption of mobile phones, have laid the foundation for rapid growth in digital payments in India. From the below mentioned graph it is evident that for the period 2014- 2016, there has been a significant shift in the volume in the electronic transfer with IMPS mode showing the steepest CAGR of around 279%, followed by NEFT and RTGS showing a healthy double digit growth of 38% and 10%, respectively.



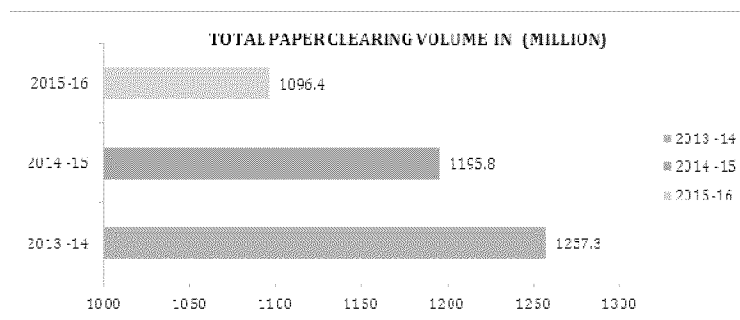
*\*Source: RBI annual report 2016*

The Reserve Bank continued its efforts towards building robust and secure payment and settlement systems for achieving a cashless society. It aims to facilitate provision of a payment system for the future that combines the much-valued attributes of safety, security and universal reach with technological solutions which enable faster processing, enhanced convenience, and the extraction and use of valuable information that accompanies payments. The vision document 2018 of RBI aims at building premier payment and settlement systems for a cashless India which will revolve around central theme of 5C's - coverage, convenience, confidence, convergence and cost, which in turn expected to result in

- Reduction in the share of paper-based clearing instruments,
- Consistent growth in individual segments of retail electronic payment systems viz., NEFT, IMPS, card transactions and mobile banking,

- Increase in the registered customer base for mobile banking,
- Significant growth in acceptance infrastructure and
- Accelerated use of Aadhaar in payment systems.

The payment system initiatives undertaken by the RBI have resulted in deeper acceptance and penetration of modern electronic payment systems in the country. The shares of electronic payments in noncash payments have shown an upward trend. The main focus is to provide a thrust to modern electronic payments that are safe, simple and low cost for use by all. From the graph below it is evident that there is a gradual decrease in the volume of total paper clearing during the period of 2014 – 2016, a CAGR of 6.62%.



*\*Source: RBI annual report 2016*

Thus, transitioning to digital payments is estimated to bring about a significant reduction in costs incurred on account of inefficiencies associated with cash and other paper based payments. The central government has taken numerous measures to provide incentives to boost digital payment systems across the nation. The incentives can be summed up as follows:

- Digitalization of India
- Conducive Regulatory Environment
- Emergence of Service Provider
- Incentivize Consumers

### **Digitalization of India**

The Government aims to transform India into a digitally empowered society and knowledge economy. Digitalization will play a catalyst role in transformation of Indian economy into less cash economy. It will bridge the stark differences between digital “haves” and digital “have-nots” to ensure that government services reach every household in order to create a long-lasting developmental impact. (DeitY, 2015).

- **Smartphone User:** With a mobile subscriber base network in the world. Of this, approximately 240 million consumer uses smartphone and this base is projected to increase to over 520 million by 2020. Hence, it will provide huge opportunity to the technology providers and app developers.
- **Internet Network:** A substantial increase in 3G and 4G connection both in rural and urban areas led to rapid expand of internet connectivity. The National Optical Fiber Network (NOFN) initiated by Digital India is set to provide broadband connectivity to cover 250,000 gram panchayats across rural India. Thus, the growth prospects of the m-commerce industry looks promising considering robust growth in infrastructural touch points such as smartphones and internet penetration.
- **Increase in digital transaction:** Over the years, digital transaction has shown a steady growth which has resulted in decrease in the paper based transaction and will facilitate in transforming the conventional methods of doing trade, business or commerce for goods and services.

### Challenges in Digital Adoption

The banking industry is going through exciting times and technology, digitisation, social media and mobility are changing rapidly altering the way in which we live, work and interact with each other. As the government presses ahead with cash to less cash to cashless economy, the success of the transition will depend on various factors such as:

□ **Slow Internet speeds:** India is plagued with very low internet speeds, which continue to inch up but are lower than global benchmarks. As per the Akamai reports Q4 2016 the average internet speed in India is 5.6mbps which is still behind when compared to other countries in Asia Pacific region. India's global rank is 97, a little behind China and Indonesia out of 149 qualifying countries.

□ **Risk of Piracy:** The digital media industry has not been able to fully monetize the content due to rampant piracy in India. Weak IP regulations and ineffective enforcement has discouraged players to produce original content and IP.

□ **Online Payments:** One of the primary forces impeding the growth of subscription and pay-per-view revenue models are the hassles that the consumer faces while making payments on digital platforms, even when they are willing to pay. This is on account of low



credit card penetration, fear of using net banking and credit cards online due to security threats and the lack of experience of transacting online.

□ **Risk of Cyber Fraud:** As the digital channel in financial services continues to evolve, cyber security has become a business risk, rather than simply a technical risk. Security breaches can damage reputations and destroy trust, thereby jeopardizing the investments made in digital solutions. A single hack can ensure millions of accounts being compromised, as it happened in October when 3.2 million card details were stolen in a malware related security breach. These cards from customers of State Bank of India, HDFC Bank, ICICI Bank, Axis Bank and others, were used at ATMs. The stolen debit cards were used in

China. The heist is still under investigation, but is almost forgotten in the scramble for a digital payments future.

### **Conclusion**

India is at the cusp of transformation as we embark upon the new phase of banking and financial inclusion. New technology in particular has both enabled and in turn been fuelled by a huge influx of new providers and products, all vying to enter the payments space. However, government impetus to digital transaction by demonetization of high value currency notes and providing various initiatives, still majority of transactions are cash based and cash is still king for Indian consumers, hence achieving a 100% cashless society will not be possible in near future, but one can always start from a less cash society and then move towards becoming mostly cashless. Thus, cash continue to play an important role for discrete transactions, especially in the most remote areas and informal sector

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## 2

## Digital Payments and it's Security

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The Digital India programme is a programme of government of India with a vision to transform India into a digitally Empires, Society & knowledge economy & digital payment is very important concept.

Digital payment is that type of payment made by consumer who consume any service & product from any merchant & paid him amount digitally it means digital payment is the method of payment which is made through digital modes. In digital payments payer & payee both use digital modes to send & receive money it is called digital payments.

### **Modes of digital payments.**

**1) Aadhar Enabled payment system (AEPS)** - It is a bank led model which allows online transaction using aadhar card.

**2) Point of sale (POS)** - It is a place where sales are made on a macro level point of sale may be a mall a market or ity.

**3) Mobile Wallets** - It 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. e.g. Paytm, Free charge, Oxigen, Speed pay, ICCIC1 pockets etc.

**4) Internet Banking** - It is a electronic payment system that enables customers of a bank to conduct a range of financial transaction through the financial institutitons website e.g. NEFT, RTGS, Imps, ECS etc.

**5) Mobile Banking** - It is a service provide by bank to its customers to conduct different type of financial transaction remotely using a mobile phone or labled.

**6) Bank Prepaid card** - It lead money to using branch or internet banking account.

**7) Micro ATMS** - It is a device that is used by million business correspondents to deliver basic banking service. It will be connected to bank across the country & enable a person to instantly deposit or withdraw funds regardless of bank associate to the particular business correspondents.

**8) Banking Cards** - Banking cards includes credit, debit & prepaid card, These cards provide 2 factor authentication for secure payments e.g. secure PIN & OTP, Rupay, Visa, Master Card are some of the example of card payment systems.

**9) Unstructured Supplementary Service Data (USSD)** - This service allows mobile banking transaction using basic feature mobile phone. There is no need to have mobile internet data facility.

**10) Unified Payments Interface (UPI)** - It is a system that powers multiple bank accounts into a single mobile application, merging several banking features, seamless fund routing & merchant payments into one one hold each bank provide its own UPI APP for mobile.

### **Security of digital Payments -**

The digital payments are safe & secure if people follow all the rules & guidelines. The people tend to ignore some small points mentioned in the guidelines which create space for branch of security for the digital payments. In India a lot of people are using the smart phones for the first time. These people tend to check everything on the phone & fall into the traps. The people should not update sensitive information on their social media sites which might become handy for the hacker. People should keep the access to their account information quite secret. Some times can found that a lot of banking apps in India have low hardware security, these apps operate on the Android version & thus the password are prone to the stolen. The hackers are every where and keep trying to breach the security function of the digital payment.

The R. B. I. has not issued any specific standards for controlling the digital payments through the online wallets which is risky for the general public.

Digital payment in India are secured & work has to be little attentive while doing digital transaction to keep hard earned money safe, but then digital payment are very useful in doing transaction where we save our energy and time it is very useful in our day to day life.

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**3**

## **Digital Payments:- Merits & Drawbacks**

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### **Introduction**

Digital payment is a way of payment which is made through digital modes. In digital payments, payer and payee both use digital modes to send and receive money. It is also called electronic payment. No hard cash is involved in the digital payments. All the transactions in digital payments are completed online. It is an instant and convenient way to make payments. If we talk about cash payments, you have to first withdraw cash from your account. Then you use this cash to pay at shops. Shopkeeper goes to the bank to deposit the cash which he got from you. This process is time-consuming for you and also for the shopkeeper. But in digital payments, the money transfers from your account to the shopkeeper's account immediately. This process is automatic and neither you nor the shopkeeper is required to visit the bank. Digital payments save you from long queues of ATMs and banks. Because, if you pay digitally, you won't need to withdraw cash from your account. It also lots of time and a little bit money as well.

### **Objectives of the study**

Following are the objectives of this research study

1. To study the working of digital payment system.
2. To study the objectives of digital payment system.
3. To know the advantages of digital payment system.
4. To study the disadvantages or drawbacks of digital payment.
5. To study various techniques used in digital payment system.

### **Objectives of digital Payment system**

1. To understand working of various Electronic Payment System based applications
2. To understand the concept of Electronic Payment System and its security services.

3. Online ticket booking ( Movie), Online order placing , Online bill payment , Online reservation
4. Electronic Cash Security Complex cryptographic algorithms prevent double spending – Anonymity is preserved unless double spending is attempted Serial numbers can allow tracing to prevent money laundering
5. E-Cash Processing
  - 3 4 2 1 5 Bank Consumer Merchant
  - 1.Consumer buys e-cash from Bank
  2. Bank sends e-cash bits to consumer (after charging that amount plus fee)
  3. Consumer sends e-cash to merchant
  4. Merchant checks with Bank that e-cash is valid (check for forgery or fraud)
  5. Bank verifies that e-cash is valid
  6. Parties complete transaction
6. Trust is the basis of the e-wallet as a form of electronic payment. The aim is to give shoppers a single, simple, and secure way of carrying currency electronically. The E-wallet is another payment scheme that operates like a carrier of e-cash and other information.
7. Payment gateway protects credit cards details encrypting sensitive information, such as credit card numbers, to ensure that information passes securely between the customer and the merchant and also between merchant and payment processor

### **Future of Digital Payments**

The future of digital payments is very bright. India is experiencing a remarkable growth in digital payments. In 2015-16, a total of Rs. 4018 billion transacted through mobile banking as compared to Rs. 60 billion in 2012-13. The percentage of the digital payments through other modes is also increasing in a significant speed.

There are many factors which are affecting the future of digital payments.

### **Advantages of Digital Payments**

**Easy and convenient:** Digital payments are easy and convenient . You do not need to take loads of cash with you. All you need is your mobile phone or Aadhaar number or a card to pay. UPI apps and E-Wallets made digital payments easier.

**Pay or send money from anywhere:** With digital payment modes, you can pay from anywhere anytime. Suppose your close friend's mother fell ill at night. He called you at



midnight and asked some money. Don't worry, you can send money to your friend using digital payment modes such as UPI apps, USSD or E-Wallets.

**Discounts from taxes:** Government has announced many discounts to encourage digital payments. If you use digital modes to make a payment up to Rs. 2000, you get full exemption from service tax. You also get 0.75% discounts on fuels and 10% discount on insurance premiums of government insurers.

**Written record:** You often forget to note down your cash spendings. Or even if you note, it takes a lot of time. But you do not need to note your spendings every time with digital payments. These are automatically recorded in your passbook or inside your E-Wallet app. This helps to maintain your record, track your spendings and budget planning.

**Less Risk:** Digital payments have less risk if you use them wisely. If you lose your mobile phone or debit/credit card or Aadhar card you don't have to worry a lot. No one can use your money without MPIN, PIN or your fingerprint in the case of Aadhar. But it is advised that you should get your card blocked if you lost it. Also call the helpline of your E-wallet to suspend the wallet account to prevent anyone from using your wallet money.

### **Drawbacks of Digital Payments**

Every coin has two sides so as the digital payments. Despite many advantages, digital payments have a few drawbacks also.

**Difficult for a non-technical person:** As most of the digital payment modes are based on mobile phone, the internet and cards. These modes are somewhat difficult for non-technical persons such as farmers, workers etc.

**The risk of data theft:** There is a big risk of data theft associated with the digital payment. Hackers can hack the servers of the bank or the E-Wallet you are using and easily get your personal information. They can use this information to steal money from your account.

**Overspending:** You keep limited cash in your physical wallet. Hence, you think twice before buying anything. But if you use digital payment modes, you have all your money with you always. This can result in overspending .

The cashless economy was seen to be a tramp hacking of the personal information over the internet such as credit and debit card numbers, PINs, passwords and any other sensitive information due to an increase in digital transactions. Basically, the chances of cyber crimes will increase if proper internet security is not taken.

The poor people of India who are in majority and is barely covered under standard banking system started suffering a lot, as they were entirely dependent on cash for their daily wages.

Real Estate, retail, restaurants, cement and other sectors where the huge transaction of cash are involved were terribly affected.

Insufficient internet penetration, low internet speeds, limited broadband and smartphone perforation, very less POS machines are the roadblocks towards achieving full digitalization that is here the main substitute for cash transactions.

The third party funds will always be in control such as government, banks, payment interfaces, etc. which lead to extreme uncertainty.

## **Conclusion**

### **of Cashless India**

However, the benefits of this have started flowing with more and more people and they started switching to the digital modes of making and receiving payments. India a center for cash gradually started changing from cash to cashless economy. Digital transactions are traceable, so easily taxable, leaving no scope for the black money. The whole country started accepting this modern online money transactions, with e-payments services gaining unprecedented momentum. A large number of businesses, even street vendors, these are now accepting cashless payments, prompting people to learn the digital internet ways at a faster pace than ever before.

Though the fact is clear this digital internet payment is much easier and faster than the keeping cash with the fact that there are some risks also. But still, there are some people who find this too difficult for poor people because of improper services. So, the government should take care of this and provide proper ATMs, banks, etc poor people.

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4

## Measuring Digital Payment System Post Demonetization

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### Abstract

Demonetization is most memorable economic decision of this generation. The impact of this decision is felt by each and every citizen of the nation. This decision affected many business sectors of the economy. A year ago, Prime Minister Narendra Modi came up with a sudden decision to wipe off Rs 500 and Rs 1,000 notes, a move touted as demonetization, which brought the nation to a standstill. With the passage of time, the Central government pushed for digital payments, compelling people to use various digital modes of payments. While experts have observed that the market for digital payments has become much more acceptable, there have been a number of challenges that needs attention. Demonetization affects economy and raised the use of digital payments through plastic money, mobile banking, net banking and use of various wallets.

**Key Words:** Digital Payment System, Demonetization

### Introduction

Demonetization refers to an economic policy where a certain currency unit ceases to be recognized or used as a form of legal tender. In other words, a currency unit still loses its legal tender status as a new one comes into circulation. The demonetization of the high denominated currency notes is part of one of the measure of government of India to address tax evasion, counterfeit currency and funding of illegal activities. The requirement to deposit the old currency notes in surplus of specified limits directly into bank accounts has resulted in the declaration of up till now unaccounted income, subject to higher tax and other penalties. India has one of the highest levels of currencies in circulation at over 12% of GDP and of this cash, 87% is in the form of Rs500 and Rs1,000 notes. After demonetization the scenario has changed and the cash was with the people have been deposited into the banks. At first look it was felt like the demonetization decision will surely curb the illegal activities but the impact on common

men faced was really worse. In one hand the common men were giving farewell to the demonetized notes while on the other they all are frustrated in the lines for exchanging their old notes with newer one with the restriction on withdrawals. This has turned the people to move towards cash-less transactions instead of standing in a longer queue to withdraw limited amount of cash. Simultaneously, govt. of India was taking measures under the Digital India initiatives. For making payments of any type now people are using digital payments system. Especially, with increasing adoption of electronic payments, particularly those driving e-commerce and m-commerce, there is a growing demand for faster payment services which, in turn, facilitate ease in doing financial transactions.

### **Objectives**

1. To study the impact of demonetization on Digital Payment System.
2. To study the issues in Digital Payment System in India.
3. To suggest suitable measures to improve the Digital Payment System.

### **Research Methodology**

The present research is exploratory and qualitative in nature. In order to achieve the objectives the researcher has collected secondary data from various sources like; journals, reports from -government, NABARD, & RBI, various websites etc. The researcher has selected few payment modes for the present study such as RTGS, Retail Electronic clearing (ECS, NEFT/EFT, IMPS, and NACH), Cards (Credit & Debit), PPI (M-Wallets, PPI Cards, Paper Vouchers) & Mobile Banking.

### **Findings**

#### **1. The impact of demonetization on Digital Payment System**

- a. Digital Payments Indicator:** Looking at the volume of transactions in the digital payments space, we can see that it increased from 1,271.16 million transactions in 2011-12 to 10,739.76 million transactions, growing at a yearly average of 53.8%. The numbers grew 69.5 % – from 6,336.66 million in FY 2015-16 to 10,739.76 million in volume in FY2016-17.
- b. Mobile Banking Trends:** Mobile Banking has shown tremendous rise post demonetization which has increased its use 150% in volume and 224% in Value of transactions from the financial year FY2015-16 to FY2016-17.

- c. Prepaid Payment Instruments:** Prepaid payment instruments such as M- Wallets, PPI Cards, and Paper Vouchers have also shown marvelous growth in terms of its use after demonetization. The rise in the popularity of M- Wallets is one of the major reasons. The volume of PPI transactions grew by 162.5% from FY2015-16 to FY 2016-17, with m-Wallets accounting for the bulk of transactions. During the same period, the growth in value of transactions was 71.8%.
- d. Unified Payments Interface (UPI):** Unified Payments Interface (UPI) is an innovative system that powers multiple bank accounts into a single mobile application. This application provides the ease to the users to use various bank accounts in single platform and eliminates the need of remembering various bank account details.

## **2. The Issues and Challenges of Digital Payment System in India**

- a. Digital Payment System was been introduced in India in the year 2007 but people were very rigid to accept the system very easily. There are many reasons of non-acceptance of digital payment system then but now because of demonetization this is a compulsion to use digi-payments rather than the choice.
- b. Digital Payment System needs large amount of information from users which makes the transaction more difficult with complex elaborated websites interfaces.
- c. As the transactions of online payment systems are been done on internet it is soft target for the thieves to steal money and personal information.
- d. Lack of Trust Electronic payments have a long history of fraud, misuse and low reliability as well as it is new system without established positive reputation.
- e. Lack of awareness in making online payment makes the task of digital payment system more difficult. Even the well educated people face many problems in making online payment.
- f. In India majority population stays in rural areas. Maximum population of rural areas a not able is illiterate and hence is not able to use digital payment system.
- g. Lack of internet connectivity in India is major problem and the situation is even worse in rural parts of the country. There are hardly any Wi-Fi zones in the cities to access the benefits of Digital India.
- h. The retail outlets in India especially all the unorganized sectors are mostly depend on cash for the payment purpose.

- i. Digital India is very important initiative taken by Government but still India is still not ready for all sort of digital transactions. For making Cash-less transactions in all the sectors and also to avoid online frauds, we need strong technological support.
- j. Despite of many measures taken by Govt. of India for financial inclusion, a large population is still away from banks.

### **3. The measures to improve the Digital Payment System**

There are both positive as well as negative impacts of demonetization on the economy. The positive impacts include eradication of fake currency, illegal activities, terrorist financing & corruption, encouraging digital payments to become cashless economy. Some of these are discussed hereunder:

- a. Internet connectivity: Indian government should facilitate internet connectivity of either free or at lower rates everywhere of adequate bandwidth.
- b. Considering the facts of online fraud the government should make strong cyber security framework.
- c. The legal framework should be quick enough to punish the culprits as well as proper IT mechanism should exist to avoid any frauds and to ensure the security.
- d. As mobile banking is very convenient source of digital payment system the government along with other telecom companies should provide proper mobile network facilities including rural as well as remote areas.
- e. As lack of awareness is measure reason behind less use of digital payment system, the government should take initiative to aware and educate people with financial and digital literacy program. With literacy program government should build the trust and confidence among the people for using cash-less transactions.

### **Conclusion**

The demonetization measure taken by the Indian government was a historic step to fight with black money, corruption, black marketing and financing insurgency. However the intentions behind the policy were good but the preparation and application part of the policy went terrible on common people. But we must say that because of this demonetization decision people have used digital payments in fullest way possible which is actually induce the habit in people & eventually fulfill the dream of cashless India. The impact of demonetization on digital

payment system is positive. Although the digital payment system was already exist but the usage is almost doubled after demonetization decision. Even for the small amount of purchase people are using digital payment mode as a result the value and volume of usage of digital payment system have been increased. There are many issues and challenges of digital payment system in India but with proper Digital India initiatives government can increase usage of digital payment system.

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**5**

## Digital Payment System: An Overview

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### Abstract

Digital Payment System is a way of payment which is made through digital modes. In digital payments, payer and payee both use digital modes to send and receive money. It is also called electronic payment. Digital Payment System provides the capability of buying and selling products, information and services on the Internet and other online environments. In digital payment environment, payments take the form of money exchange in an electronic form, and are therefore called digital Payment. Digital Payment System is secure there should be no threat to the user credit card number, smart card or other personal detail, payment can be carried out without involvement of third party, It makes digital payment at any time through the internet directly to the transfer settlement and form E-business environment. Studied have been carried out on Digital Payment System. Digital Payment System an integral part of electronic commerce. An efficient payments system reduces the cost of exchanging goods and services, and is indispensable to the functioning of the interbank, money, and capital markets. After analysis and comparison of various modes of electronic payment systems, it is revealed that it is quite difficult, if not impossible, to suggest that which payment system is best. Some systems are quite similar, and differ only in some minor details. Thus there are number of factors which affect the usage of digital payment systems. Among these entire user base is most important success of digital payment systems also depends on consumer preferences, ease of use, cost, industry agreement, authorization, security, authentication, non-refutability, accessibility and reliability and anonymity and public policy.

### Introduction

Digital payment is a way of payment which is made through digital modes. In digital payments, payer and payee both use digital modes to send and receive money. It is also called electronic payment. No hard cash is involved in the digital payments. All the transactions in



digital payments are completed online. It is an instant and convenient way to make payments. If we talk about cash payments, you have to first withdraw cash from your account. Then you use this cash to pay at shops. Shopkeeper goes to the bank to deposit the cash which he got from you. This process is time-consuming for you and also for the shopkeeper. But in digital payments, the money transfers from your account to the shopkeeper's account immediately. This process is automatic and neither you nor the shopkeeper is required to visit the bank. Digital payments save you from long queues of ATMs and banks.

### **Different Types of Digital Payments**

From commonly used cards to newly launched UPI, digital payments have many types of payment. Some modes meant for tech-savvies and some for less-technical persons. Below are the different modes of digital payments.

#### **UPI apps**

UPI or **unified payment interface** is a payment mode which is used to make fund transfers through the mobile app. You can transfer funds between two accounts using UPI apps. You will have to register for mobile banking to use UPI apps. Currently, this service is only available for android phone users. Hence you can use UPI only when you have an android phone. You need to download a UPI app and create a VPA or UPI ID. There are too many good UPI apps available such as BHIM, SBI UPI app, HDFC UPI app etc. It is not mandatory to use the UPI app from your bank to enjoy UPI service. You can download and use any UPI app. UPI apps are a faster solution to send money using VPA or even IFSC and account number. But they have some limitations also. If you do not have an android phone you cannot use UPI app, it is not for you. Lack of stable internet connection can also cause trouble for these apps.

#### **Aeps**

AEPS is an Aadhaar based digital payment mode. The term AEPS stands for **Aadhaar Enabled Payment Service**. Customer needs only his or her Aadhaar number to pay to any merchant. AEPS allows bank to bank transactions. It means the money you pay will be deducted from your account and credited to the payee's account directly. You need to link your Aadhaar number with your bank account to use AEPS. Unlike cards and USSD, AEPS does not have any charges on transactions. You can use AEPS with the help of PoS (Point of sale) machines. You can withdraw or deposit cash, send money to another Aadhaar linked account with it. The good thing about AEPS is that it doesn't need your signature, bank account details

or any password. It uses your fingerprint as a password. No one can forge your fingerprints, thus it is the most secure digital payment mode.

## **USSD**

USSD banking or \*99# Banking is a mobile banking based digital payment mode. You do not need to have a Smartphone or internet connection to use USSD banking. You can easily use it with any normal feature phone. USSD banking is as easy as checking your mobile balance. You can use this service for many financial and non-financial operations such as checking balance, sending money, changing MPIN and getting MMID.

**Credit cards** are issued by banks and some other entities authorized by RBI. These cards give you the ability to withdraw or use extra money. Credit cards are used for domestic as well as international payments.

**Debit cards** are issued by the bank where you have your account. You can use these cards for the money in your account. The payments you make with these cards debit from your account and credit immediately to the payee's account. You can use these cards to make payments to one bank account to another.

**Prepaid cards** are another type of cards which you use to pay digitally. You must have to recharge these cards before using just like prepaid SIM cards.

Cards are one of the best modes when you pay at portals or E-commerce sites. But if we talk about paying to merchants it is not the most suitable way. It charges 0.75% – 2.0% on transactions. Also, you cannot use cards to pay if the merchant does not have a PoS (swipe) machine.

## **E-Wallets**

E-wallet or mobile wallet is the digital version of your physical wallet with more functionality. You can keep your money in an E-wallet and use it when needed. Use the E-wallets to recharge your phone, pay at various places and send money to your friends. If you have a Smartphone and a stable internet connection, you can use E-wallets to make payments. These E-Wallets also give additional cash back offers. Some of the most used E-wallets are State bank buddy, ICICI Pockets, Free charge, Paytm etc.

## **Future of Digital Payments**

The future of digital payments is very bright. India is experiencing a remarkable growth in digital payments. In 2015-16, a total of Rs. 4018 billion transacted through mobile banking as

compared to Rs. 60 billion in 2012-13. The percentage of the digital payments through other modes is also increasing in a significant speed.

There are many factors which are affecting the future of digital payments.

### **Digital revolution**

Digital revolution has provided an easy way to go for digital payments. India has more than 100 crore active mobile connections and more than 22 crore smartphone users as of March 2016. This number is going to increase further with a faster internet speed. The reach of mobile network, Internet and electricity is also expanding digital payments to remote areas. This will surely increase the number of digital payments.

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6

# A Study of Financial Inclusion and Digital Payment System in Rural India

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## Abstract

Economy of each country depends on sound banking system of that country. Finance is very essential for every economic activity. Without finance no activity can be undertaken by anybody. Finance is also required by every section of the society. But from beginning of the civilisation, only the financial needs of upper section of the society were catered. Access to finance by the poor and weaker group is very difficult. This is due to the various reasons such as lack of banking facilities for the section, lack of regular or sustainable income, unawareness about the schemes available for them etc. It is not possible for banks to provide small loans and makes profit. Hence, the need for financial inclusion is felt by the government of India, the policy makers and Reserve bank of India. Researcher has studied about this in this research paper.

**Keywords:** Financial inclusion, Finance, Banking, Digital payment.

## Introduction

In the backdrop of the huge significance that financial inclusion has in the present day world and the level of financial exclusion in the country, it becomes pertinent to look into the initiatives undertaken to promote the objective of financial inclusion in the country. Moreover, the failure of the formal financial system network to include the underprivileged and weaker sections of the society into its fold also necessitates looking into some new forms of financial service providers who can assist the formal financial institutions in fulfilling the goal of financial inclusion. In this chapter an attempt has been made to outline the initiatives undertaken by the Government of India and the Reserve Bank since Independence. It also looks into some of the new forms of financial service providers and analyzes its role in the promotion of financial inclusion.

## **Objectives of The Study**

Following are the objectives of the study:

- 1) To study the meaning of financial inclusion.
- 2) To analyze benefits of financial inclusion
- 3) To study the digital payment system and cashless economy.

## **Research Methodology**

The present research paper is descriptive and analytical in nature and makes use of secondary sources of data. The internet sources also have been referred.

## **Objectives of Financial Inclusion**

- 1) Financial Inclusion can help the society and the economy. Financial Inclusion has the ability to generate positive externalities: it leads to increase in savings, investment and thereby, spurs the processes of economic growth.
- 2) It also provides a platform for inculcating the habit of saving money, especially amongst the lower income category that has been living under the constant shadow of financial duress, mainly because of absence of savings, which makes them a vulnerable lot.
- 3) Presence of banking services and products aims to provide a critical tool to inculcate the savings habit. It also creates avenues of formal credit to the unbanked population who are otherwise dependent on informal channels of credit like family, friends and moneylenders.
- 4) Availability of timely, adequate and transparent credit from formal banking channels will allow the entrepreneurial spirit of the masses to increase outputs and prosperity in the countryside. It will open the doors of formal remittance facilities to the low income and unbanked populace who, presently, are forced to use all kinds of informal and costly ways of sending money from one place to another.
- 5) Financial Inclusion has now been viewed as a remedy to plug gaps and leaks in distribution of government benefits and subsidies through direct benefit transfers to beneficiaries' bank accounts rather than through subsidizing products and making cash payments.

## Challenges To Financial Inclusion In India

1. **Lack of financial literacy:** In India there is a lack of financial literacy among the poor people. Due to which the financial inclusion programmes can't achieve their targets.

2. **Lack of Banking Facilities in Some Villages:** Even though there are many villages in the country without bank branches. Without adequate Banking facilities the success of financial inclusion is impossible.

3. **Lack of Advance Technology:** Advanced Technology is prerequisite for the grand success of the financial inclusion programme. But in India the Banking technology is not much advance as a result of this per transaction cost with the bank is increased.

4. **Lack of Adequate Infrastructure:** There is a lack of adequate infrastructure in India. Due to this the objective of financial inclusion cannot be achieved successfully.

### Digital Payment in Rural India

India has joined other countries in the digital payment revolution a very faster than the past where we often lagged behind in adopting technology. More than half a million volunteers helping job seekers in different rural schemes now have a new target ; to enrol people and shops in e- economy and train them in cashless transactions. And despite an incentive of Rs. 100 for making each village shop accept any form of digital payment, volunteers across India are facing a daunting task. So far, just 55,000 merchants have gone digital and 2.5 million rural Indians enrolled in cashless transactions after the government recalled Rs 1,000 and Rs 500 notes on November 8. The National Payment Corporation of India (NPCI), to ease formats of two payment systems USSD and UPI. In villages, people prefer fingerprints over other security features and it will help in higher rates of enrolment. But even the rural development ministry's own set-up for cashless economy needs major improvements.

Out of the 1.1 million active workers of the Centre's rural job scheme Mahatma Gandhi National Rural Employment Guarantee Scheme just 34% have an Aadhaar-linked bank account. This comes amid a strong push for cashless economy by Prime Minister Narendra Modi a decision criticised by the Opposition as anti-poor. Now, the rural ministry has set an ambitious target to get Aadhaar-linked bank account in another 35 million job accounts. But mere enrolment will not be enough, as opportunities to transact cashless is still limited. In a review meeting, the Kant panel found that out of 160,000 ration shops in the country, only 35% had

machines to identify biometrics of MGNREGA workers. But there is a massive interest among people, particularly the rural youth, to adopt new ways to go cashless.

For instance, the fig.1 depicted below indicates the kind of development that has taken place in the digital transactions in the recent trends. The impacting factors attributed to such transformation are increasing compliance requirements demonetization impact, incentives and initiatives from governments encouraging digital transactions.

## **Conclusion**

Importance of financial inclusion is increased, because the benefits of the financial services are not provided to all the people of the society. Financial inclusion is not a onetime effort; it is an ongoing process. It is a huge project which requires concerted and team efforts from all the stake holders – the Government, financial institutions, the regulators, the private sector and the community at large. From the sporadic attempts of today dispersed across the nation, it should gather momentum and grow in geometric proportions and develop into a focused and effective movement. If this is to be achieved, it requires the passionate involvement, dedication and commitment of all stake holders. It requires a major mindset change in the minds of every individual involved – banker, bureaucrat, regulator et al, and, therefore, creating awareness at all levels. At the same time, the role of technology in the whole scenario cannot be undermined either. It has to be admitted that today, more than even before, technology plays a vital role in bringing about integration in society of all social and economic classes. Accessibility, affordability, appropriateness and benefits determine how deep financial inclusion penetrates the social fabric of the village. Financial inclusion can empower even the poorest person and bring about a dramatic change in his fate. Technology systems, architecture and infrastructure are mature enough to enable the billion urban people in India to transact digitally. It is now a matter of increasing awareness transact to rural India.

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## Cashless Indian Economy? -A Reality ??

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### Introduction

The low literacy rates in rural India, along with the lack of infrastructure like internet access and power make things extremely difficult for people to adopt e-transaction route.

The financial technology industry would be unwise to ignore the rise of mobile transaction services, person-to-person networks and the whole range of digital disruption in the payments arena from the likes of Bitcoin, ApplePay and PayPal that undoubtedly is putting pressure on cash.

Cash is like water a basic necessity without which survival is a challenge. Nevertheless, cash use doesn't seem to be waning all that much, with around 85% of global payments still made using cash. One of the main reasons is that there is nothing to truly compete with the flexibility of notes and coins.

### Objectives

1. To know the reality of the cashless economy in India
2. To know the challenges of cashless economy

### Why Is Cash Required?

The magnificence of cash is that -- it just works; even in the isolated whereabouts of India, where the government might not be present physically with its paraphernalia, its injunction runs in the form of legal tender that public uses for business on an everyday basis. A large informal economy that supports a major part of Indian population and their livelihoods also runs in cash. This is why Cash is yet King.

The ground reality reveals, a majority of transactions in Kirana stores, the go-to shop for daily purchases in India are cash based transactions, because these are generally small ticket transactions. The customers, as well as Kirana store owners feel more comfortable in dealing with cash for small transactions, while these merchants also provide credit facility to customers.

## **The challenge to go digital**

A major obstacle for the quick adoption of alternate mode of payments is mobile internet penetration, which is crucial because point-of-sale (PoS) terminal works over mobile internet connections, while banks have been charging money on card-based transactions, which is seen as a hurdle. The low literacy rates in rural India, along with the lack of infrastructure like internet access and Power make things extremely difficult for people to adopt e-transaction route.

The financial safety over the digital payment channels is important for pushing the cashless economy idea. Imagine losing your credit cards or being the victim of digital hackers can lead to a whole host of issues like denied payment, identity theft, account takeover, fraudulent transactions and data breaches. According to the digital security company Gemalto, more than 1 billion personal records were compromised in 2014.

## **Cash is Here to Stay!**

Despite the numerous State endeavors, India has always been driven by cash; while electronic payments are seen restricted to a small size of the population, compared to the cash transactions. Considering the demographics of India, two-thirds of the population live in rural areas, where farmers and poor people are still struggling to get their hands on their own money. As per Data in July this year, 881 million transactions were made using debit cards at ATMs and PoS terminals. Out of these, 92 per cent were cash withdrawals from ATMs. The sole purpose for cards in Indian is to withdraw cash. Changing this mind set will be an uphill task. The last few days have clearly shown that the country is highly underpenetrated as far as ATMs per million people and it's the ATM which will help the government fulfill its ambition of financial inclusion as the ATM will play a key role in the last mile towards customer fulfillment which is self-service 24\*7 which even a Business Correspondent or Micro ATM cannot do.

## **Drawbacks of cashless economy**

There are many negative impacts of a cashless economy, especially in a developing country or a 3rd world country like India. Some of them are:

- a. Moving to a purely cashless economy is tough as cash transactions are huge in number. Changing deep-rooted habits take time.
- b. Promoting awareness among people is difficult as the awareness has to be at the grass-roots level through Panchayats and Municipalities.

- c. In many places, sellers deliberately charge more for cashless transactions as they cannot evade tax with this . There needs to be a complaint tribunal in place against such fraudulent practices. Also, this will lead to overall inflation in the short term.
- d. Creating services for cashless transactions which will work very easily with basic phones as well as high end phones is tough.
- e. Financial inclusion is difficult when the population is huge and diverse. Theft of phones, which is pretty frequent, becomes all the more dangerous if you have everything linked to your phone for easy transactions.

### **Cashless economy is actually focused in promotion of plastic money, the negative impact of this is**

- a. Less liquidity- when any individual is dealing only in plastic money there is tendency that they do not hold cash and in dire needs when there is immediate need of cash this plastic money does not come off as very helpful methodology.
- b. Cyber attacks- in the times when intrusion in personal space has gone up by heaps cashless economy can expose the citizens to cyber attacks from which they might not be aware of how to save themselves.
- c. Pay off small amounts- while paying a construction worker, paying via bank cheques is not a very feasible or a practical solution as the amounts involved here are generally very low.
- d. High shoe leather cost - one of the famous concept of economy talks about shoe leather cost wherein just to visit bank regularly an individual has to incur certain cost, one of them being shoe leather cost.
- e. Education- to have a successful cashless economy there is a need of having individuals who are literate enough to understand how to deal in electronic transactions which is not a very common sight in developing countries.

There are many benefits of cashless economy but there are negative impacts of cashless economy namely

### **Conclusions**

The path forward is clear: A nationwide financial literacy campaign accompanied by a medium-term strategy to improve access to, and awareness of, electronic payments.

India's current economic moment constitutes a crucial inflection point; if handled correctly, there is a real chance that the unbanked will adopt digital payments en masse. The RBI and finance ministry have made Financial Literacy Centres (FLCs) a cornerstone of the PMJDY. These centres provide tailored financial education programmes to introduce adults to banking products and setting financial goals.

The benefit of cashless transactions is not evident to even those who have credit cards.

Cash, on the other hand, is perceived to be the fastest way of transacting for 82% of credit card users. It is universally believed that having cash helps you negotiate better.

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**8****Digital Banking: A New Era In Indian****Dr. Vilas G. Dapke**

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**Introduction**

Indian government moves such as Digital India, Aadhaar, Paygov India, Bharat Bill Payment System and GST are vigorously developing entire digital ecosystem. India is in the middle of a digital revolution, with Internet users going further than just searching, Facebook , Whatsapp , etc. and moving towards more grown-up activities like online shopping and banking. The Indian Banking Sector has been emerging over the time and transiting from one stage to the other. Numbers of branches, number of customers in banking are increasing day by day. According to a report drafted by Facebook and The Boston Consulting Group (BCG) the number of users opting for online banking is expected to double to reach 150 million marks by 2020, from the current 45 million active urban online banking users in India.

Digital banking is faster, more suitable, and planned to meet various needs. Mobile and online banking offers the facility to deposit cheques, manage bank accounts, payment of bills and transfer money at anytime and from anywhere by just a clicks.

**Objective of the study**

- a) To study the concept of Digital Banking.
- b) To understand the Technology Development in Indian Banking Sector.
- c) To identify various benefits of Digital Banking.
- d) To study the obstacles in Digital Banking and their solutions.

**Data Collection**

The data is collected from different websites and the various reports published by government of India, banks, private bodies, newspapers and other related publications.

**Scope and Limitation of Study**

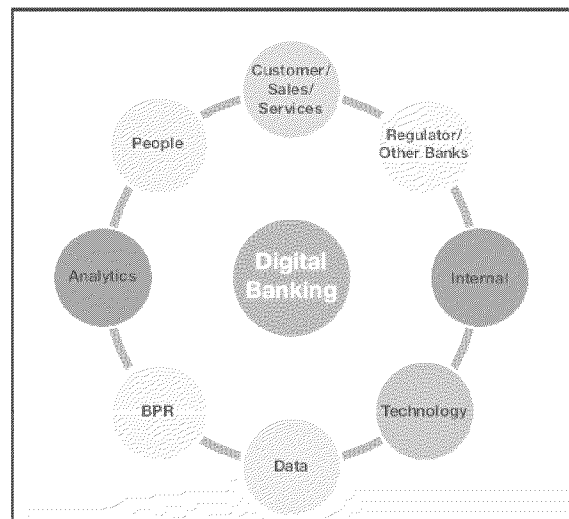
The research paper is based on present scenario of banking system. The research paper is based on the secondary data collected from websites and published data by different bodies. The scope of the paper is limited to digital banking only.

## 1. Concept Of Digital Banking

Indian banking sector has realised the necessitate of digital technologies and is rapidly moving to grip digital banking by the way of investment in creating digital infrastructure for offering solutions like mobile banking, e-wallets and virtual cards, etc. The new innovations in Digital banking are Digital-only/Virtual Banking, Biometric Technology, Artificial Intelligence, Blockchain Technology, Bitcoin and Robotics.

### Dimensions of Digital Banking

Following are the dimensions of Digital Banking.



**Fig 2.1 Dimensions of Digital Banking** (Source: Digital Banking Framework, IDRBT, Nov. 2016)

## 2. Technology Development In Indian Banking Sector

Indian Government is taking various initiatives to bring technological developments in banking system. Indian consumers have given great response to initiatives like debit cards, credit cards, NEFT, RTGS, ATMs, mobile banking, internet banking. Technological developments in banking sector can be explained as follows:

- **New Millennium:** The new millennium (year 2000) changed all facets of banking sector by adaptation of internet by banks. ECS, NEFT and RTGS facilities provided quick transfer of funds anywhere irrespective of the branch, bank, and location. Banking witnessed increase in 2000s due to initiatives taken by the government, RBI, falling internet costs and increased awareness. Cross branches and locations funds transfer which earlier took days to complete are now completed within hours, minutes or some in

seconds. Mobile Banking is introduced nowadays which will create revolutionary changes in banking sectors. Online banking has enhanced customer satisfaction by providing anywhere anytime banking and benefitted banks through cost savings and increased penetration. Technologies like Robotics to automate repetitive, rule based processes, Block chain technology (BCT) for operations as money transfer, record keeping and other back-end functions, Digital currencies like Bitcoin , exchange platforms like BTCX India, Coinsecure, Unocoin and Zebpay have been developed in India.

- **Upcoming technologies**

- 1) **Google Glass Technology:** This can be used to locate the nearest bank branch/ ATM, check account balances and use video conferencing for technical support.
- 2) **Augmented Reality (AR) app:** It gives digital information to the users about all dining destinations, property lists, and shopping centers, bank ATMs, branches etc with real life pictures along with distance and directions.
- 3) **Beacon Technology:** Bluetooth Beacons at bank branches will allow banks to integrate physical and mobile channels to provide effective communication.
- 4) **Open banking:** This is a connected ecosystem for financial and non-financial services with multiple underlying service providers.
- 5) **Cloud Computing:** Cloud computing technologies will be used by banks.
- 6) **Artificial Intelligence:** AI will transform both front office and back office operations with its self-improving programs.
- 7) **Mobile Banking:** Mobile banking allows carrying out various banking operations on your Smartphone.

### 3. Conclusion

Technological advances in digital banking have increased the competition for banking sector. Digital Banking benefits like Customer's convenience, Easier Banking, Efficient Rates, Environment Friendliness, Ease of use, Transparency, Time and Cost Saving, Reduced Tax Avoidance, Personal Hygiene has increased popularity among banking customers inspite of obstacles like Security Risks, Relationship difficulties, Transaction issues, Internet service and electricity shortage and digital illiteracy issues. Hence Digital Banking will be soon seen as future of Indian Banking Sector.

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# Impact of Digital Payment System on Rural Economy: An Overview Banking Sector

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## Abstract

In consonance with the Government of India's Mission "Digital India" for promoting digitalization, the Digital Payment System has been introduced to promote cashless transactions to create a cashless society, post-demonetization. The result being Government of India, RBI, Commercial Banks, NBFI and telecom companies have been actively engaged in motivating general public for this technological revolution. One fact cannot be ignored that India, which is Agro-based country, has many heterogeneous groups of people dwelling and transacting in many spheres. This fact makes us difficult to cope with Digital Payment and cashless living in the country. This study mainly focuses on implementation of digital payment system to promote cashless transaction to create cashless society and challenges faced by this system for effective implementation and also suggest remedial measures.

**Key words:** Cashless, Cashless Society, Digital payment, e-banking, online banking, etc.

## Introduction

In consonance with the Government of India's Mission "Digital India" for promoting digitalization, the Digital Payment System has been introduced to promote cashless transactions to create a cashless society, post-demonetization. The result being Government of India, RBI, Commercial Banks, NBFI and telecom companies have been actively engaged in motivating general public for this technological revolution. One fact cannot be ignored that India, which is Agro-based country, has many heterogeneous groups of people dwelling and transacting in many spheres. This fact makes us difficult to cope with Digital Payment and cashless living in the country. This study mainly focuses on implementation of digital payment system to promote

cashless transaction to create cashless society and challenges faced by this system for effective implementation and also suggest remedial measures.

### **Objectives**

- To know the concept of cashless or digital payment system
- To know the digital gadgets available for cashless transaction
- To study the cashless transaction in India
- To make study of opportunities available
- To know the challenges for cashless financial transaction
- To suggest remedial measures for digital payment system

### **Hypothesis**

#### **Null Hypothesis**

1. People of rural area not ready to use digital gadgets for financial transaction.

#### **Alternate Hypothesis**

1. Digital payment system overcomes on deficiency of cash.

### **Methodology**

#### **Research Methodology**

The data is classified into two types A) primary data and B) Secondary data.

#### **Primary Data:-**

Field Visits, Interview, Discussion, Questionnaire method and Observations.

#### **Secondary Data**

Data collected from Govt. authorities, Reference Books, Periodicals, Reports, News papers.

#### **Statistical Methods Used**

Collection and Classification of data, Tabulation of data, Graphic presentation of data, Use of percentages, averages etc.

### **Limitations**

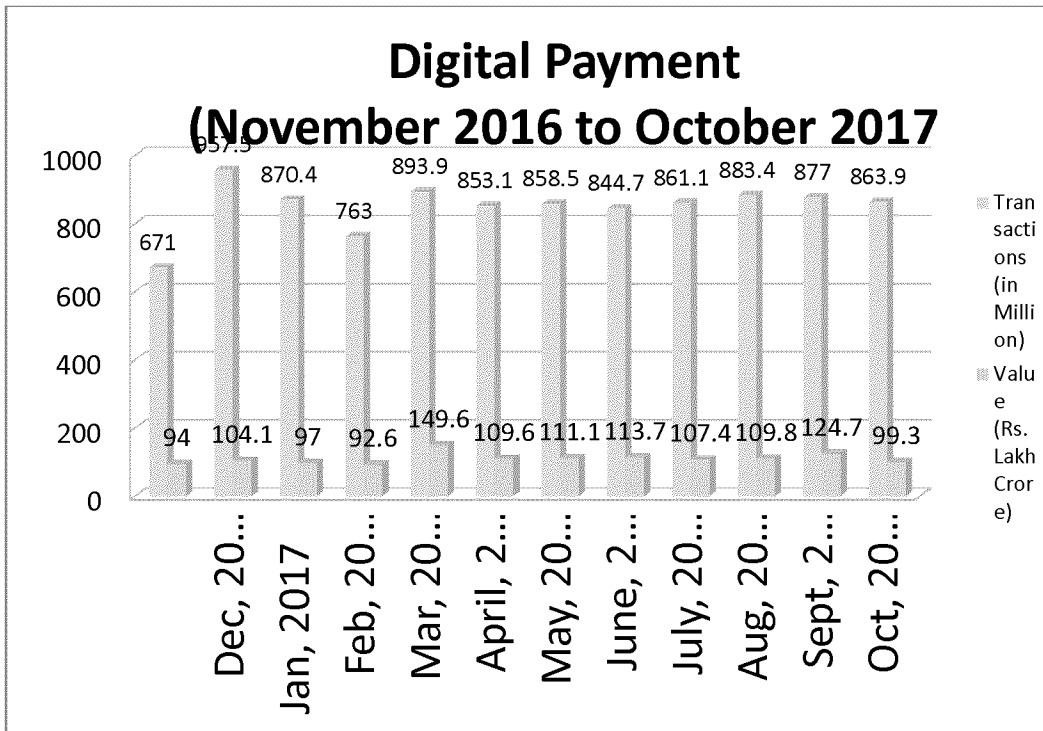
- The study only deals with **select performance criteria** and limited respondents i. e. households and students only.
- As the study requires data from households all over the Shendurni area, the **cost and time constraints** have put certain limitations including sample size. But every attempt is made to keep spirit of the objectives and research methodology.

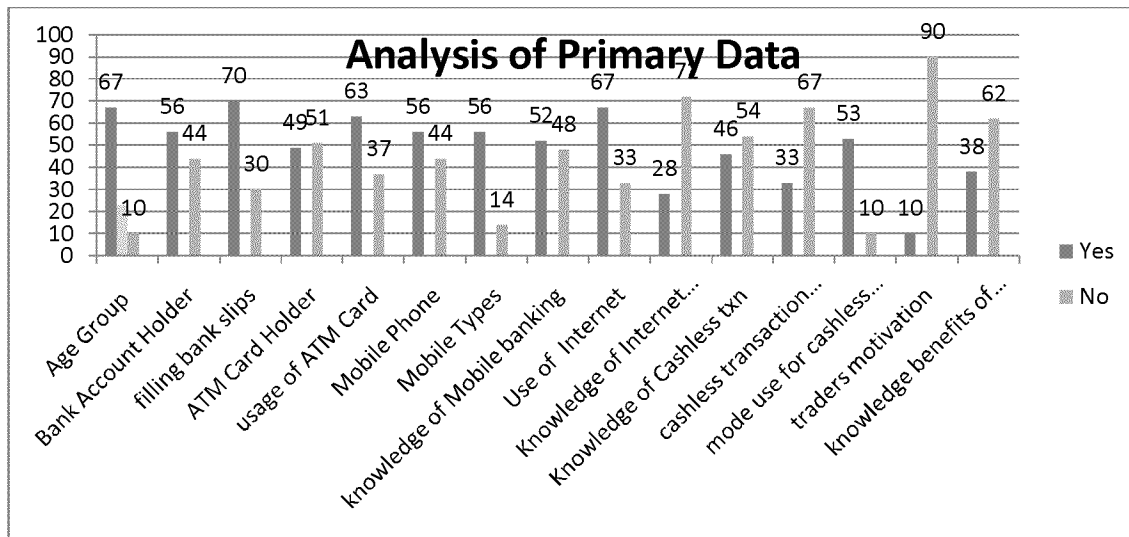
- The reliability of the study may depend on knowledge and authenticity of the data supplied by the respondents.

**Modes of Digital Payment**

- Banking Cards: ATM Cards, Debit Cards, Credit Cards, Cash Cards, Travel Cards, etc.
- USSD: Unstructured Supplementary Service Data
- AEPS: Aadhar Enabled Payment System
- UPI: Unified Payment Interface
- Mobile Wallets: Paytm, Mobikwik, Pockets, BHIM App, etc.
- Bank Prepaid Cards: Wallets or Mobile Wallets, etc
- PoS: Point of Sale (EFTPOS)
- Internet Banking, Online Banking, etc.
- Mobile Banking, SMS Banking, etc.
- Micro ATM’s: It is device used by millions of BC’s (Business Correspondents) to deliver basic banking services to customer.

**Data Analysis**





**Findings**

- 56% of respondents have their bank accounts
- 70% of respondents have basic knowledge of banking transactions
- 51% of account holder don't have ATM cum Debit Card
- 55 % respondents have mobile phone and 52% holder have knowledge of mobile banking
- 67% respondent having knowledge of internet but only 28% of respondent have knowledge of internet banking
- Only 45% respondent heard about cashless transactions
- Only 33% of respondents know one or two transactions on mobile. Mobile recharge is one of the activity done by respondent
- Only 10% traders are motivated to customer for cashless transaction.
- 62% or respondents don't know the benefits of cashless transaction.

**Future opportunities**

- Cashless Society will be come in existence after implementation of digital payment system.
- Financial Literacy will increase after strict implementation of cashless transactions
- Cost Reduction
- Reduction In Inflation Rate
- Stopping Corruption

- Stopping Black Money
- Tax Collection
- Revenue Generation
- Increase Employment

### **Conclusion**

India known for agro-based country, country of villages and country of poor people, in short heterogeneous group of people dwells in India. So, in this situation it is hard to push cashless transactions in India, in the way of this various types of hurdles are creating barriers in promotion of cashless society like rural area, poor infrastructure of banks, poor connectivity, illiteracy rate, financial illiteracy, fear of tax, burden of tax, fear of transaction failure and finally mentality of Indian people is the main obstacle in the way of cashless transaction. But promoting digital payment system in India it is the long term process and it requires time to settle this system in India.

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## A Study of Cashless Payment System: Challenges and Opportunities

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### **Abstract**

In the last year Government of India announced to making India digital country and introduced concept of “Digital India” after few days before PM Mr. Narendra Modi made announcement of demonetization and withdraw Mahatma Gandhi series big denomination currency notes of Rs. 500 and Rs. 1000 and introduced new currency notes of Rs. 500 and Rs. 2000, Mahatma Gandhi series. With this policy Government of India and Reserve Bank of India demonetized 15.44 lac crorevalue currency notes from Indian economy, but production of new currency note currently unable to fulfill the requirement of Indian economy. After the demonetization, Government of India and Reserve Bank of India introduced new policy of Digital Payment System for India i.e. Cashless India. It means people of India require to fulfilling their financial needs through digitally and it works. People of India try to learn and use digital gadgets to fulfill their financial needs. For that Government of India and Reserve Bank of India promote this scheme in urban as well as rural India with providing training of digital transaction through Customer Service Point (CSP). With the help of this programme Ministry of Electronics and Information Technology, Government of India provide training to more than 1 crore people of India as well as 3.5 lac shop owners and retailers in 2275 Blocks of 476 District of India and 60% people of rural India try to use digital, online or mobile cash transaction through using Debit Card, ATM Card, UPI, Paytm, etc. But the financial and economical background is that, India known as agro-based country as well as country of poor people and vulnerable group and 70% population dwells in rural area, more than 40% people of India, still illiterate, smart phones and internet connectivity not reached in rural India. Therefore these paper focuses on policy of introduced for cashless India and its challenges as well as opportunities for cashless India.

**Keywords:** Digital India, demonetization, digital payment, cashless transaction, etc.

## **Introduction**

After the decision of demonetization of currency notes of Rs. 500 and Rs. 1000, people of India suffering from cash problem, due to non-availability of cash they could not fulfill their basic needs, therefore this period known as period of cash crunch, to solve problem of cash crunch, Government of India and Reserve Bank of India issued new policy and introduced digital financial transaction with new concept “Cashless India”. For that Government of India and Reserve Bank of India promote this scheme in urban as well as rural India with providing training of digital transaction. With the help of this programme Ministry of Electronics and Information Technology, Government of India provide training to more than 1 crore people of India as well as 3.5 lac shop owners and retailers in 2275 Blocks of 476 District of India and 60% people of rural India try to use digital, online or mobile cash transaction through using Debit Card, ATM Card, UPI, Paytm, etc. But they are facing problems because India known as agro-based country as well as country of poor people and vulnerable group and 70% population dwells in rural area, more than 40% people of India, still illiterate, smart phones and internet connectivity not reached in rural India.

## **Objectives of the study**

- To know the concept of Digital Payment System
- To know the digital gadgets available for cashless transaction
- To study the cashless transaction in India
- To know the challenges for cashless financial transaction
- To study of an opportunities available

## **Importance of the Study**

After the demonetization, Government of India announced and introduced new mission “Cashless India”, to facing problem of scarcity of cash and Government of India, Ministry of Electronic & Information Technology, provide “Digital Transaction Training” though Common Service Centre. With the help of this programme Government of India provide training to more than 1 crore people of India as well as 3.5 lac shop owners and retailers in 2275 Blocks of 476 District of India and 60% people of rural India try to use digital, online or mobile cash transaction through using Debit Card, ATM Card, UPI, Paytm, etc. But they are facing various problems because India known as agro-based country as well as country of poor people and vulnerable group and 70% population dwells in rural area, more than 40% people of India, still

illiterate, land line phone, smart phones and internet connectivity not reached in rural India. Therefore it is necessary to study, what opportunities available and challenges facing by Indians after demonetization and cashless?

### **Digital Payment System**

Government of India declared “Digital India” mission two years back and try to promote digitalization in various sectors, few months back Prime Minister of India Mr. Narendra Modi announced banned on use of big currency notes of Rs. 500 and Rs. 1000. After announcement of demonetization Government of India and Reserve Bank of India suggested that, the citizens of India try to do financial transactions digitally and promote various modes of digital payment in India, like Paytm, UPI, BHIM App and other modes online transactions including Credit Card, Debit Card, PoS, etc. Before the demonetization Airtel, Vodafone, etc telecommunication companies also provide financial transaction digitally and i.e. Airtel Money, Vodafone MPesa, mobiwik, freecharge, rechargeitnow, etc. these are major source of digital payment. Now every nationalize as well as private Bank also trying to promote digital payment system set a target to every employee should train and motivate minimum 50 customers to use digital payment system.

### **Concept of Cashless**

India known for cash dependent economy, 97-98% adult population doing their financial transactions in form of cash, but after demonetization Government of India and Reserve Bank of India promote Digital Payment System and Cashless transaction to face scarcity of cash and non-availability of cash and promote cashless transactions. “Cashless transaction means doing financial transactions without using hard cash” doing receipt or payment of amount through using digital gadgets, internet, E-wallets, various banking apps, etc.

### **Modes of Digital Payment System**

- Banking Cards: ATM Cards, Debit Cards, Credit Cards, Cash Cards, Travel Cards, etc.
- USSD: Unstructured Supplementary Service Data
- AEPS: Aadhar Enabled Payment System
- UPI: Unified Payment Interface
- Mobile Wallets: Paytm, Mobikwik, Pockets, BHIM App, etc.
- Bank Prepaid Cards: Wallets or Mobile Wallets, etc



- PoS: Point of Sale (EFTPOS)
- Internet Banking, Online Banking, etc.
- Mobile Banking, SMS Banking, etc.
- Micro ATM's: It is device used by millions of BC's (Business Correspondents) to deliver basic banking services to customer.

### Statistics of Cashless Transaction

Households in India availing banking services: **246692667 and 58.7% (NITI Ayog)**

Sr. No.	Modes of Cashless Transaction	Up to 8 <sup>th</sup> Nov, 2016	8 <sup>th</sup> -26 <sup>th</sup> November, 2016
1	Rupay Card (in Lakh)	3.85	21.00
	Daily Transaction (Rs. In Crore)	39.17	282.00
2	E-Wallet (in Lakh)	22.00	75.00
	Daily Transaction (Rs. In Crore)	88.00	293.00
3	UPI (in Lakh)	3721.00	76681.00
	Daily Transaction (Rs. In Crore)	1.93	35.00
4	USSD	97.00	4796.00
	Daily Transaction (Rs. In Lakh)	1.00	57.00
5	PoS (in Lakh)	50.20	98.10
	Daily Transaction (Rs. In Crore)	1221.00	1751.30

(Source: Daily News paper “Lokmat” dated 1<sup>st</sup> January, 2017)

From the above statistics, it is found that only 58.70% of India's household availing banking services, so, it is clear that still more than 40% of India's household not availing banking services.

It is also found from the above table that, Indian banks already introduce digital payment system in India to initiate cashless transaction before demonetization and introduction of digital payment system to promote cashless transaction in India. Other non-banking companies like Airtel Money, Vodafone MPesa, Paytm, Mobikwik, rechargeitnow, freecharge, etc. also trying and working in this direction, but result of that in direction of cashless society it is very poor and creation of awareness in the society from Government of India and Banks not done properly or not initiated on large scale, which taken after demonetization and introduction of digital payment system.

After the demonetization and induction of digital payment system Government of India and Reserve Bank of India taken initiative with the help of banks trying to promote various modes of digital payment system in India to create cashless society in India and result of that number of digital transactions has been increased after demonetization.

## Conclusion

Government of India initially introduced Mission “Digital India” to promote digitalization in various sector of India and a step ahead after demonetization Government of India introduced “Digital Payment System” to promote cashless transaction as well as cashless society and result of that Government of India, Reserve Bank of India, Commercial Banks (Nationalized as well as Private Sector Banks), Non-Banking Financial Institutions and Mobile companies trying to motivate this scheme by introducing various motivational and incremental scheme to promote digital payment system in India. But India known for agro-based country, country of villages and country of poor people, in short heterogeneous group of people dwells in India. So, in this situation it is hard to push cashless transactions in India, in the way of this various types of hurdles which create barriers in the promotion of cashless society like rural area, poor infrastructure of banks, poor connectivity, illiteracy rate, financial illiteracy, fear of tax, burden of tax, fear of transaction failure and finally mentality of Indian people is the main obstacle in the way of cashless transaction. But promoting digital payment system in India it is the long term process and it requires time to settle this system in India for that purpose Government of India and Bank should take care of these hurdles and try to improve situation and should take proper action to overcome these challenges and try to convert cash dependent society to cashless society.

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## Modes of Online payment: An Overview

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### Abstract

This communication aims to demonstrate that service quality improvement is processed through online payment. The Payment and Settlement Systems Act, 2007 was a major step in this direction. It is highly important step taken by RBI and the government's move after demonetization. An online payment system is an Internet-based method of processing economic transactions. It allows a vendor to accept payments over the web or over other Internet connections, such as direct database connections between retail stores and their suppliers a common method of maintaining just-in-time inventories. Online payment systems greatly expand the reach of a business and its ability to make sales

**Keywords:** credit cards, Debit cards, IMPS, RTGS; E-Wallet, UPI

### Introduction

India has recently joined other countries through the online payment system mode it has been a drastic change than the past decades. It will be of great help for civilization. The government has implemented a drastic change in Indian economy environment by demonetizing the high value currency notes of Rupees of 500 and Rupees 1000 notes from 8<sup>th</sup> November 2016 and pushed to India towards a cashless transaction in the coming future. Perhaps the greatest advantage of e-payments is the convenience. Individuals pay their bills and make purchases at unconventional locations for 24 hours a day, 7 days a week, 365 days a year.

### Modes of Online payment

#### a) Real Time Gross Settlement System (RTGS)

A real time electronic money transfer system that allows you transfer fund from your account to beneficiaries within the bank business hours. Real Time Gross Settlement (RTGS) is an electronic form of funds transfer where the transmission takes place on a real time basis, Like

NEFTit also does not work on Sundays and national holidays. There are no upper cap limits of transfer but lower limits exist. Minimum amount that can be transferred is Rs. 2 lacs.

#### **b) IMPS (Interbank Mobile Payment Service)**

Under NEFT, the transactions are processed and settled in batches, hence are not real time. Also, the transactions can be done only during the working hours of the RTGS system. To overcome the above issue, National Payments Corporation of India (NPCI) has introduced a new online mode of fund transfer i.e. IMPS. Interbank Mobile Payment Service (IMPS) from 22<sup>nd</sup> November 2010 after carrying out a pilot study involved some selected banks. IMPS offer an instant, 24X7, interbank electronic fund transfer service through mobile phones.

#### **c) UPI (Unified Payment Interface)**

National Payments Corporation of India (NPCI) after successfully launching the IMPS online payments system has taken a step further in turning the Indian Economy into a “less-cash” and more “digital society”. The launch of a Unified Payments Interface (UPI) adds a feather to its cap. UPI is set to completely revolutionise the financial sector for good.

#### **d) E-Wallet**

It is an emerging payment gateway and lucrative cash back offers make it more admirable. Basically electronic wallets allow you add money to them from your bank accounts using your credit card or debit card etc and then you can use that amount to pay for your online shopping, bills, fuel charges, taxi charges, and tickets etc. It is highly recommended because many e-Wallet apps pay you interest as your bank pays on your bank account. You get interest if you have not used the amount that you have added into your electronic wallet. As of now digital wallet system is evolving very rapidly. Many financial institutions and e-commerce websites like SBI Bank Buddy-mobile wallet, Paytm wallet, PayPal, Freecharge wallet, and the like, offer digital wallet facilities.

Payment Platform	Transaction		Growth On Year in %
	Nov-2016	Oct-2017	
<b>Mobile Wallets</b>	59.0	96.2	63
<b>Mobile banking</b>	72.3	130.9	81
<b>Card Payment</b>	205.5	255.7	24
<b>IMPS</b>	36.2	88.1	143
<b>UPI</b>	0.3	76.8	25500
<b>USDD</b>	7.0	184.6	2537

**Figure:2**Data of Before Demonetisation and after Demonetisation<sup>12</sup>

This communication to make you aware of the positive aspects and potential advantages of electronic payment systems. Anyone considering using an electronic payment system for paying monthly bills should carefully consider how that organization’s electronic payment system works. Ask what lead time the system will require from them in order to make sure their payments are being made timely. Users should learn what protections are in place with respect to fees and penalties applied to improperly processed payments. Every need or obligation is different, and for some, the electronic payment services may be of great help.

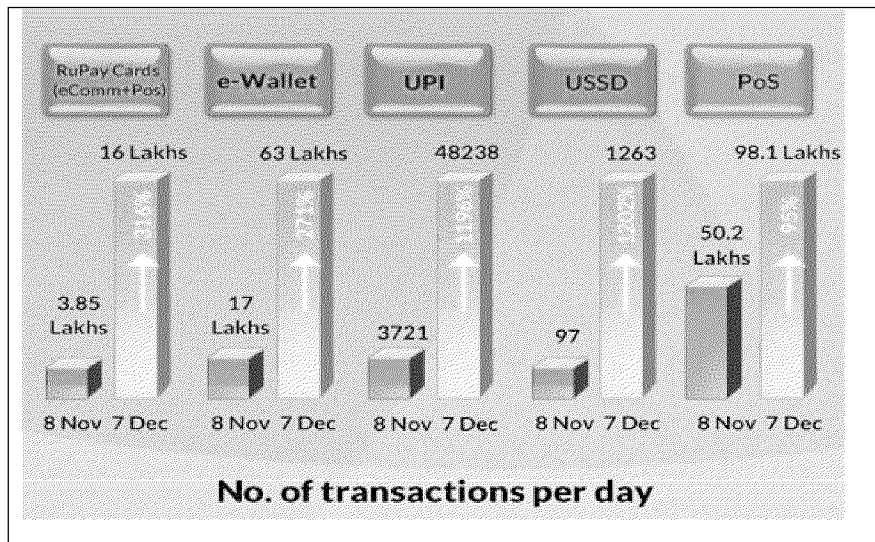


Figure 1: Growth of Digital Payment<sup>11</sup>

Finally, despite the belief of many to the contrary, e-payments are secure. They may even be more secure than the old fashion way of mailing in a check. According to most sources, most instances of identity theft occur by stealing mail out of a person’s mailbox or from discarded trash, not over the Internet. Encryption technology allows an individual’s personal financial data to be scrambled before it is sent electronically. It also lowers the risk of human error by reducing the number of people touching the payment once it leaves the payer.

**Conclusion**

The first and foremost benefit of online payment is that an individual does not need to carry cash with him or her everywhere which in turn reduces the chances of theft from wallet, reduces inconvenience due to carrying cash and paperless work is a big advantage of environment. Best benefit is that save thetime. Online payment system can work easily everywhere in every time is a big advantage. Another benefit of cashless economy is that it is

easier to track the black money and illegal transactions. Financial institutions it results in increase in tax revenue for the government as all cash transactions.

### **Acknowledgments**

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# Impact of Digital Payment System on Indian Economy Remonetising Economy through Digital Intelligence

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## Abstract

The demonetisation by the Indian government undertaken in November 2016 was partially aimed at increasing cashless transactions in the Indian economy and also contribute to increasing acceptance by the population to participate in use of digital payment systems on a large scale. The government is constantly trying to induce the use of various digital payment modes and systems for various purposes so as to transform India into a cashless economy over the course of time. The needs for such transformation has resulted from two factors, ‘the Cost of Cash’ and ‘the safety of digital payment systems over traditional cash’.

It has been established that digital payment systems will lead to large scale job creation in the economy. A recent study has also established a positive relationship between the value of electronic or digital payments with the Gross Domestic Product of the country.

**Key words:** Demonetization, Cashless transactions, Digital Payment Systems, Cost of Cash.

## Introduction

Digital Payment Systems are systems whereby payment is made through digital mode i.e. both the payer and payee send and receive money digitally. It is also known as electronic payment as electronic devices connected to a network are used for performing such transactions. Digital payments do not involve any physical transfer of hard cash and are termed as a convenient and instant way to make payments as the transaction gets completed online.

Physical transfer of cash is a very long and time consuming process. It also costs more as the cash needs to be carried and allied activities have to be performed by the bank involved in the transaction. There is also lack of safety when it comes to physical cash. It is very difficult to transact physical cash in large volumes and also storage of such amounts is very insecure. Thus

due to all these underlying risks, digital payments are slowly being preferred over traditional mode of payment.

### **Research Methodology**

The data used for this paper is secondary in nature. The data has been collected from numerous reputed magazines, journals, studies and surveys that have been undertaken in the last 3 years i.e. from 2015-2017. The data relates to past years from 2008-09 until 2015-16 and estimates are used until 2020.

The data has been analyzed in a comparative manner to showcase increase or decrease in use of digital payment systems in India and its effect on the economy of the country.

### **Objectives of the Study**

The objectives of this study are as below-

- To study the evolution of digital payments in India until 2016-17.
- To determine whether there has been growth in the use of digital payment systems in India in the last decade.
- In case growth is determined, to establish reasons of said growth.
- To study various modes of digital payments currently available to Indian consumers.
- To study, analyze and interpret effect and impact of using digital payment systems on Indian economy.

### **Scope of the Study**

The data used for the study ranges between the years 2011 and 2017. The comparison has been done by taking the most recent available data for each component of the study by comparing it with the base year that is taken as 2011 in all cases. Thus, it can be said that the scope of the study is largely limited to the past 7 years starting 2011.

### **Reasons for Growth of Digital Payments in India**

1. **DEMOGRAPHICS:** The population of India was estimated to be 1250 million in the year 2015 and is expected to reach 1350 million by 2020. Based on data available from the 2011 Census and Election Commission of India, around 31.3% of the population is between the ages 18 and 35. According to a recent survey conducted by American Express - Nielsen, 81% of the people aged 18-25 prefer to pay bills online and around 70% of the people aged 26-30 are likely to opt for online payment. Thus, the demographic factor strongly favours the growth of digital payments systems in India.



According to a report titled ‘Internet in India’, there were around 136 million internet users in 2016 in this demographic.

2. **NUMBER OF MOBILE PHONE AND SMARTPHONE USERS IN INDIA:** In 2011, the number of smartphone users in India was a mere 33.2 million which has grown by almost 800% to reportedly cross the 300 million mark in January 2017. Similarly, the number of tablet users has grown from 23 million in 2013 to 54 million in 2017. Thus it is ascertainable that the users of internet enabled devices in India is growing manifold since 2011. According to Morgan Stanley, people who have been using the internet for two years or less don't transact business on the internet. However, once a person has been online for five years or more, they're more likely to transact online. For now, that accounts to 30% of the 432 million internet users in India. In 2016, 77% of the urban people and 92% if the rural people who accessed the internet did so by using a smartphone whereas 6% of the urban people and 1% of the rural population used tablets for the same purpose.

The number of mobile phone users in India is expected to be 1200 million and the number of smartphone users is estimated to reach 520 million by the year 2020.

3. **INTERNET USERS IN INDIA:** As of January 2017, there are around 420 million Indians who use the internet which corresponds to approximately 33.6% of the population. The reported number of internet users in June 2012 was just 135 million which was 10.8% of the population. According to a World Bank Report, in 2011 just 10.1% of the Indian population were internet users. Thus, we can conclude that the number of Internet users grew by almost 233% in the last 6 years. Internet users in India are expected to be around 650 million by 2020 going up from 300 million in 2015. The penetration rate will also go up from 33.2% to 48.15% by the end of the decade.

### **Effects Of Digital Payments On The Indian Economy**

A study by Visa and Moody's has established that going cashless is the way to boost economic growth. Electronic payments are believed to be a major force in economic development and significantly affect spending behaviour and consumption. Thus, digital payment systems will surely stimulate economic growth and the following will justify the same with respect to the Indian economy.

1. **Digital payments add to GDP:** In the years between 2011-2015 \$6 billions were added to the Indian GDP just from digital payments. It has been said that digital payment sector

grew three times faster than expected because of demonetisation and India is thrice as advanced as compared to its overall growth when it comes to digital payments.

2. Increase in card usage leads to bigger contributions in growth: 1% increase in card usage led to 0.07% increase in the GDP of India during 2011-15. This is expected to be even more in the aftermath of demonetisation.
3. Increase in digital payments leads to almost the same percentage increase in Gross Domestic Product (GDP): In the data available for 2011-15, it was observed that for each percentage point increase in digital payments there was almost one percentage point increase in the GDP of India.
4. Increase in digital payments results in increased consumption of goods and services: In terms of consumption, each 1% increase in usage of electronic payments produces, on average, an annual increase of approximately \$104 billion in the consumption of goods and services, or a 0.02% increase in GDP, assuming all other factors remain the same.
5. Job creation: In the aftermath of demonetisation, the Indian economy has access to Rs. 7.9 crore new monthly digital transactions thereby ensuring prospects for formal job creation in the Indian economy for carrying out these increased digital payment activities. It is estimated to create 2.6 million jobs all over the world on an average annually. During 2011-15, approximately 3,36,930 jobs were created due to increased use of cards in India.

## **Conclusion**

As per a report by Mastercard in 2015, Indian economy was one of the least ready countries to transform into a cashless economy prior to the demonetisation implemented by the Government. However, lack of cash availability to the masses during the few months following the demonetisation has led to more and more people using digital payment systems to try and continue operations of their businesses in the cash-less economy.

Since then the masses have realized that cashless transactions are much easier and hassle free and make the transactions more seamless as compares to those involving physical transfer of cash. This has led to constant increase in the users of digital payment systems which keeps on multiplying every day.

Digital payment systems are not just beneficial for the users but they are also very helpful to the economy as well. They result in more jobs being created which leads to more income for the economy i.e. GDP and thereby results in economic development and economic

growth at faster rates. As GDP grows, the standard of living of the people grows which ensures that more goods and services are consumed in the economy and in turn this results in more production and services being offered for consumption which ultimately leads to more GDP for the nation. Using digital payment system ensures that more money is freely available to those who need it on credit and thus there are more options for investment in the economy.

The records of digital transactions are maintained by the service providers which allows the government to tax these transactions based on their nature. This leads to more money for the government which can be utilized in various activities for the development of the economy. Hence, there is less scope for tax evasion or black money in the economy.

Thus, it can be said that the growth of digital payment systems is a huge boost for the economy and the increase in the use of digital payment systems directly supports economic growth.

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## Impact of Digital Payment System on Indian Economy

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### Introduction

A cashless society describes an economic state whereby financial transaction are not conduct with money in it of physical banknotes or coins but rather through the transfer of digital information usually an electronic representatry of money between transacting parties.

“We want to have one mission and target: take the nation forward-Digital and economically”

-Shri. Narendra Modi

A cashless economy is an economy in which all types of transactions are carried out through digital means. It include e-banking (mobile banking through computer) debit and credit cards, card swipe digital wallet.

The RBI and the government are making several efforts to reduce the use of cash in the economy by promoting the digital payment devices including prepaid instrument and cards. RBI effort to encourage these new varities of payment and settlement facilities aims to achieve the goal of ‘cashless’ society with limited cash in hand and an indefinite crunch in sight, most people are rushing to cashless transactions. Digital transaction bring better transparency, scalabilities and accountability.

Cashless economic helps in curbing generation of black money. As a result in reduce real estate prices because the most of black money is invested in real estate which inflates the prices of real estate market. An increased use of digital payment instead of cash would enable a more details record of all the with place in the society allowing more transparency in business operations and money transfer which reduce tax avoidance and money policy in managing inflation and increase economic growth in our country. Another benefits of cashless economic is that it discarage cash related robberies and other cash related crimes. The Indian payment system is rapidly transiting to more and more it based systems. In the retail sector we have very

high volumes of money transactions. Other than cash one of growing payment method adopted by merchants in the sector is a payment cards.

- What is cashless transaction

“A cashless economy is one in which all the transaction are done using cards or digital means. The circulation of physical currency is minimal.

The government has implemented a major change in economic environment by demonetizing the high value currency notes of Rs. 500 & Rs. 1000 from 8<sup>th</sup> November 2016 & push India towards cashless future.

Save money and time, less cash decreased crime, production costs of coins and paper currency are reduce, more spending helps improved economic growth this is the advantage of cashless payment and cyber securities, network connectivity, internet cost, charges on cards, online transaction, smart phone affordability, net enough bank account, internet blockages.

### **Objectives of study**

1. To know what a cashless transaction means.
2. Impact and importance of cashless transaction system

### **Research and methodology**

To study is based on the secondary data different book, journals, newspaper, websites and research paper.

### **Importance of cashless transaction on Indian economy**

1. **Easier accounting**:- Direct payment to bank account. You do not need to go every to deposit cash to current account.
2. **Easier transaction**:- we can easily do any transaction with security.
3. **Tracking to expenses**:- it becomes easier to determine how much was spend were.
4. **Transparency and accountability**:- it a lot of easier to track the flow of money with every transaction being recorded wit buyer, seller as well as regulatory bodies making the system much more transparent and compliant.
5. **Taxation**:- with lesser availability of hard cash at homes and more in banks, there is lesser scope of hiding income and evading taxation and when there are more tax payers it ultimately leads to a lesser rate of taxation for the whole country.

6. **Less availability of cash for illegal activities:-** when people are engaged to cashless, there is lesser cash available with the people and there won't be a means to invest-investor activities to use the ideal cash.

### **Impact of cash transaction on Indian economy**

- The impact of cash less transaction on the business sector are following:-
  1. Wallet hold business gets an advantage
  2. Increase use of e-payment
  3. Proper audit not hidden excess liability
  4. Business are legally strong
- The impact of cashless transaction on economy growth in India:-

The medium term may be liquidity expansion in the banking system helping to lower lending rates and lift economic activity the world bank noted.
- Impact of information technology in cashless economy:-
  1. Making transaction very easy by using information technology
  2. New I.T. technology like biometric are help to do secure and transparent transaction
  3. Because of information technology the cost of bank will reduce that
  4. If link or server is slow or fail then they can't manage urgently
  5. Small shop does have transaction
  6. Really bad for poor

### **Negative impact of cashless economy**

1. Moving to a purely cashless economy is tough as cash transaction are huge in number changing deep rooted habits take time
2. Promoting awareness among people is difficult as the awareness has to be at the grass roots level through panchayat and municipalities
3. Creating services for cashless transaction which will work very easily with basic phones as well as high end phones is tough
4. Financial inclusion is difficult when the population is huge and diverse
5. The cashless economy will see a hike in the hacking of the personal information over the internet such as credit and debit cards numbers, pin, password and sensitive information due to an increase of digital transaction

## **Conclusion**

The whole country is under-going the process of modernization in money transaction, with e-payment services gaining unprecedented momentum. A large number of business even street vendors are now accepting electronic payment prompting people to learn to transact the cashless way at faster pace than ever before

There are many benefits of cashless economy like faster transaction, increase sales, convenience and lower risk transparency and accountability and reduce maintenance cost

There are no significant benefits of cashless economy to the general public the government need to take the necessary steps and make some policy consideration when they are preparing for cashless economy. The payment system have to be protected from the cyber attack which are the major threat for cashless transaction

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## Indian Automotive Tier 2 suppliers: Survival strategies

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### Abstract

Growth in Indian Automotive Market has benefitted OEMs & Tier 1 companies. But Tier 2 suppliers & other upstream companies are barely surviving. Tier 2 suppliers are largely home grown small size companies, mostly owned by individuals or entrepreneurs. High competition, squeezed margin, lack of resources to upgrade & other factors put the individual Tier 2 suppliers in a position of great risk. Initiatives from government & non-government organizations are under way to support small suppliers to improve capability & enhance competitiveness.

It is hoped this study will help Indian Tier 2 suppliers to re-strategies holistically in order to compete in the future market & survive. This article employs unique methodology wherein perspective of Indian Tier 2 suppliers is taken into consideration.

**Key words:** Indian Automotive Tier 2 suppliers, Tier 2 supplier Survival strategies

### I. Introduction

Indian auto market is growing continuously with all most all global manufacturers have established there plants here and competing for market share. At the same time, with aggressive outsourcing by OEMs & localization by multi-national companies, component market is also growing considerably. Main beneficiary of the growth are large Tier 1 companies. They have not only acquired new customers but also joined hands with global component manufacturers to improve their capability in terms of design & technology and exporting the components. However, Tier 2, Tier 3 suppliers are barely surviving. They are largely home grown small size companies, mostly owned by individuals or entrepreneurs. High competition, squeezed margin,



lack of resources to upgrade & other factors put the individual Tier 2 suppliers in a position of great risk.

**II. Objectives**

- a) To provide broader perspective on Indian Tier 2 suppliers.
- b) To present “add on strategies” for Indian Tier 2 suppliers to make them futureproof.

**III. Research Methodology**

Two main methods have been employed for research paper:

- a) Data collection & analysis by personal observations by multiple visits to six Tier 2 suppliers.
- b) Reviewing literature i.e. Books, Periodicals and other Published Materials on Auto Tier 2 suppliers

**IV. Literature Review**

**a) Indian Automotive Tier Structure**

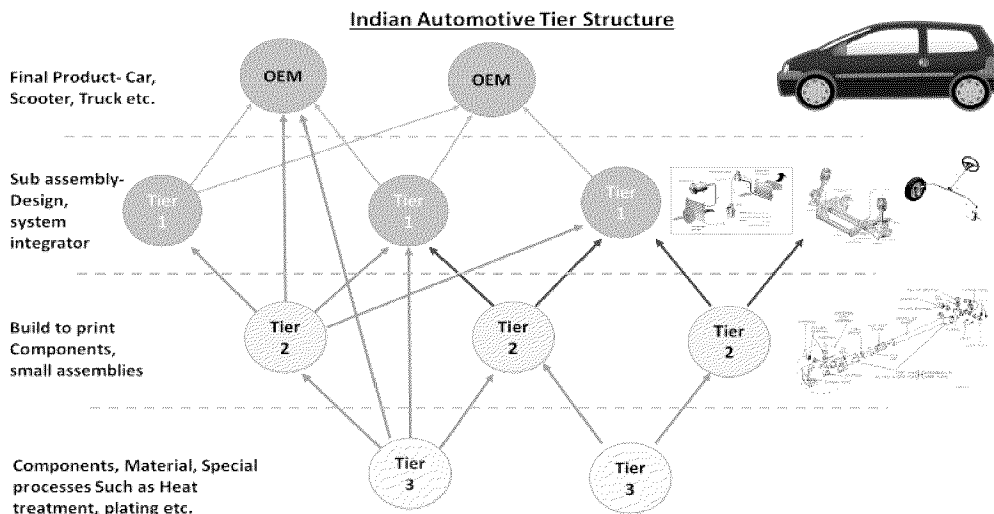


Figure 1, Title: Indian Auto Tier Structure

Source: Author’s adaptation

A typical supply chain in automotive include components or modules suppliers (Tier 1-3), OEMs (Vehicle Manufacturers), distributors, dealers and customers. Indian Auto Tier structure as shown in Fig. 1.

- 1) First tier suppliers (Tier 1)
  - 1) Second tier suppliers (Tier 2)

2) Third tier suppliers (Tier 3 )

**b) Lean Manufacturing & Agile Supply Chain**

Lean is a philosophy of manufacturing that incorporates a collection of principles, tools and techniques into the business processes to optimize time, human resources, assets, and productivity, while improving the quality level of products and services to their customers. “Agility” is recent phenomenon. Agile supply chain is built to be highly flexible for the purpose of being able to quickly adapt to changing situations, also termed as responsive chain.

Some of the changes observed at Indian Tier 2 suppliers in last few years:

- a) Tier 2 suppliers started investing in new facility to make processes more robust.
- b) Auto Giant, Maruti subsidiary, MACE has worked with 146 Tier II suppliers till date and the rejection amount has come down to 1,180 parts per million from 10,933.
- c) Author, himself visited number of Tier 2 suppliers in Pune region & found defect level hovering around 1000 PPM with delivery indicator close to 95%.
- d) Many of the Purchasing organizations are shifting from price negotiations to cost management and working with suppliers to achieve lean operations.
- e) From international literature, author presents relevant models for the benefit of Indian Tier 2 suppliers.

**c) Dawar and Frost model for Emerging-Market Companies**

Dawar & Frost suggested four different strategies based on asset transferability & pressure for globalization for emerging market companies. A company in that situation a *contender*. Plotted these four strategies on a matrix. (See Figure 3)

	<b>Competitive Asset Customized to home Market</b>	<b>Competitive Asset Transferable abroad</b>
<b>High Pressure to Globalize in the industry</b>	<p><b>Dodgers</b> Focuses on a locally oriented link in the value chain, enter a joint venture or sells out to a multinational</p>	<p><b>Contender</b> Focuses on upgrading capabilities and resources to match MNCs globally, often by keeping to niche market.</p>
<b>Low Pressure to Globalize in the industry</b>	<p><b>Defender</b> Focuses on leveraging local assets in market segment where MNCs are weak.</p>	<p><b>Extender</b> Focuses on expanding into markets similar to those of the home base, using competencies developed at home.</p>

Figure: 3, Title: Positioning Emerging Market

**Source:** Dawar, Frost (1999), ‘Competing Giants Survival Strategies for Local Companies in Emerging Markets’ HBR March-April 1999.p.122

Tier 2s are still “defenders” as global companies are yet to target that segment. But they have to move quickly to safeguard their future. As with any strategic framework, matrix is not intended to prescribe a course of action but to help managers think about the broad options available.

**d) Automotive Supplier Excellence Program by Malaysia Automotive Institute**

Malaysia Automotive Institute (MAI), is an agency under the Ministry of International Trade and Industry (MITI). Automotive Supplier Excellence Programme (ASEP) is one of the vendor improvement programmes under the National Automotive Policy 2014. The main objective of ASEP programme is to elevate the local automotive suppliers to world class levels of competitiveness & sustainability by provision of technical assistance & consultancy.

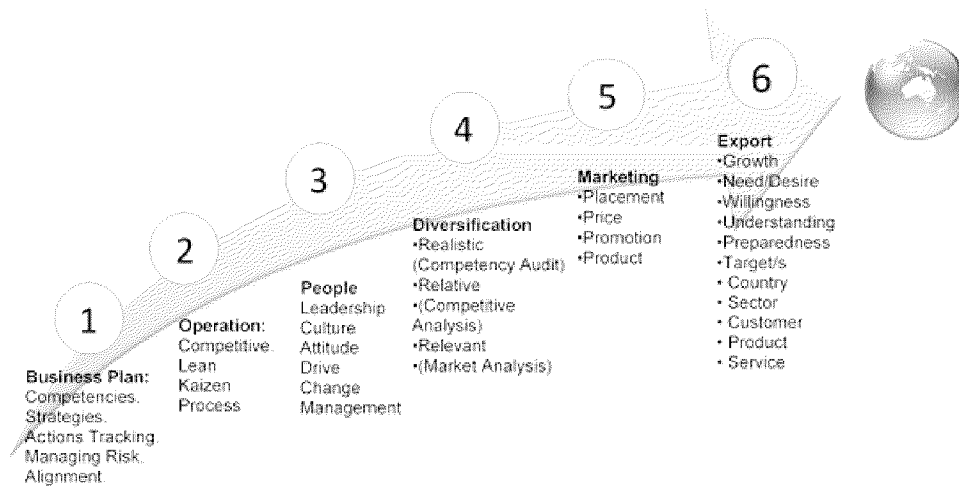


Figure:4, Title: Automotive Supplier Excellence Program, Source: MAI

ASEP is viewed as a unique opportunity for vendors to position themselves on the road to growth and a sustainable future. In order to achieve world-class capability and competency levels, supplier to follow six step processes as shown.

Above information is provided to understand the approach followed by other growing economies for improvement of their suppliers. This helps to widen our knowledge base & perspective.

## VII. Conclusion

Though Tier 2 suppliers have yet to achieve global standard in terms of Quality & Delivery, analysis shows they are always driven by customer requirements. Already under pressure of squeezed margin Indian Tier 2 suppliers, will be reluctant to implement any new initiative unless they consider it beneficial for them. Proposed “add on strategies” based on international literature, provides altogether different strategic options to secure their future in highly competitive environmental.

## VIII. Future Work

The study uses the data from a personal observations & interaction of limited people. Further study is required with bigger sample size and geography.

## IC. Originality/ Value

There is very less literature available from Indian Tier 2 suppliers’ perspective. Paper provides an enhanced perspective of going beyond lean & agile for sustainable performance of Indian Tier 2 suppliers.

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## A Study of Use and Awareness of E-Banking Facilities among People

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### Abstract

The aim of the present research paper is to study the use and awareness of e-banking facilities provided for the users to promote digitalization and cashless transactions for creating a cashless society. There are many e-banking facilities such as Internet Banking, Mobile Wallets, ATM, E-Cheque, Debit Card and Credit Card. These facilities are very useful for the users. For example, these facilities save the valuable time of the users from long queues in banks and the users can do transaction from any parts of the world. The users of these facilities need not to carry cash for shopping instead they can use their debit and credit for it.

**Key Words:** E-Banking, Digitalization, Cashless Transaction, etc:

### Introduction

Probably, future historians of contemporary India might repeat Charles Dickens' feelings about the time –

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way – in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only. (Charles Dickens' *Hard Time*)

It is a famous quote of a legendary author from his historical novel *A Tale of Two Cities* published in 1859. The novel is about French revolution and therefore is significant here in the context of another e-revolution proposed by India's beloved Prime Minister Shri. Narendra Modi. This "best" and "worst" time of India begins on 8<sup>th</sup> November, 2016 when the Prime Minister while speaking about the binary situations faced by the nation announces that, – "On

the one hand, we are now no.1 in the rate of economic growth. But on the other hand, we were ranked close to one hundred in the global corruption perceptions ranking two years back” and declared that “the 500 rupee and 1,000 rupee currency notes presently in use will no longer be legal tender from midnight tonight, that is 8<sup>th</sup> November 2016”.

### **Defining e-banking**

Simplest definition of e-banking is an electronic delivery channel for banking services. However, as notion of e-banking contains several features, devices, mechanisms and systems that allows the customer to make his transition electronically, makes it complex and unfamiliar to the common public. Internet, Computer, Telephone, Mobile, ATM and Point of Sale machines are used in such transition.

Definition clearly reveals that the e-media is now playing a significant role in the Banking enterprise. Moreover, the discussion of e-banking facilities will help to support the definition .e-banking’.

### **E-banking Facilities**

**Internet Banking:** Internet Banking lets you handle many banking transactions via your personal computer. For instance, you may use your computer to view your account balance, request transfers between accounts, and pay bills electronically. Internet banking system and method in which a personal computer is connected by a network service provider directly to a host computer system of a bank such that customer service requests can be processed automatically without need for intervention by customer service representatives.

**Automated Teller Machine (ATM):** An unattended electronic machine in a public place, connected to a data system and related equipment and activated by a bank customer to obtain cash withdrawals and other banking services.

**Debit Card:** Debit cards are also known as check cards. Debit cards look like credit cards or ATM (Automated Teller Machine) cards, but operate like cash or a personal check. Debit cards are different from credit cards. While a credit card is a way to "pay later," a debit card is a way to "pay now." When you use a debit card, your money is quickly deducted from your checking or savings account. Debit cards are accepted at many locations, including grocery stores, retail stores, gasoline stations, and restaurants. You can use your card anywhere merchants display your card's brand name or logo. They offer an alternative to carrying a checkbook or cash.

**Credit Card:** Credit Card is issued by the banks and some other entities authorized by RBI. It gives people the ability to withdraw or use extra money. Credit Card is used for domestic as well as international payment.

**Cheque:** The cheque is one of the oldest methods of cashless payment. In this method, the cheque is issued by the particular person, who wants to give amount of transaction to trader or someone else. That particular cheque gets deposited by that particular person in the respective bank. The nature of cheque is two types such as Crossed and Bearer Cheque. The bank process a payment through a clearing house. The payment made through cheque gets recorded hence it will become possible to find out proof of payment.

**E-Wallet:** A digital wallet refers to an electronic device that allows an individual to make electronic transactions. They might also have their driver's license, health card, loyalty card(s) and other ID documents stored on the phone. The credentials can be passed to a merchant's terminal wirelessly via near field communication (NFC). Increasingly, digital wallets are being made not just for basic financial transactions but to also authenticate the holder's credentials. For example, a digital-wallet could potentially verify the age of the buyer to the store while purchasing alcohol. The system has already gained popularity in Japan, where digital wallets are known as "wallet mobiles".

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# An Analytical Study of Digital Payment System in India

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**Abstract**

Digital indicates to electronic technology and Digital payments mean making the use of electronic technology for the payments on various transactions. Under the Digital payment system various methods are used to make payments. Digital payments are necessary to keep watch on illegal money transactions and also help to eliminate tax evasions. It also helps to put an end to corruption system which becomes the main feature of the country and helps to avoid the possession of excessive amount of cash which leads the various types of crimes as robbery, illegal transactions etc. In the month of April 2017, the total value of Digital Payments touched Rs. 193423.72 billion as compared to 159410.36 billion in the April 2016 registering a growth of 21.3%. And the volume of digital transactions touched to 7046.6 Million in the month of April 2017 which was 10928.6 million in the April 2016 and the growth of transaction is registered 55.1%. This research paper focus on the share of various digital instruments in making the digital payments and the challenges and opportunities of the digital payment system.

**Introduction**

Indian economy is a fast growing economy. In the last few years, the significant development has been taken place in the Indian financial system, which has led to digitization of monetary transactions. Digital payment system is an outcome of changes brought by the information and communication technology.

According to Payment and Settlement Act, 2007, Digital Payments means transfer of electronic funds which is initiated by a person by way of instruction, authorization or order to a bank to debit or credit an account maintained with that bank through electronic means and includes point of sale transfers; automated teller machine transactions, direct deposits or withdrawal of funds, transfers initiated by telephone, internet and, card payment.



**Keywords:** Digital Payment, Electronic Funds Transfer, Clearing Corporation of India Ltd (CCIL), Cheque Truncation System (CTS), Electronic Clearing Service (ECS).

### Research Methodology

The paper is based on the secondary data and the information is collected from the internet via journals, research papers. It is hypothesized that the digital payments will increase in future.

### Objectives of the Paper

1. To study the concept of digital payment.
2. To study the various items of digital payment.
3. To identify the growth of items used for digital payment.
4. To find out the challenges faced in implementation of digital payment.
5. To suggest the remedies.

**Table No.1**

#### Item wise Volume of Digital Transactions in India

Sr. No.	Item	Volume of Transactions (in Million)			2016 % Change over 2015	2017 % Change over 2016
		April 2015	April 2016	April 2017		
1	RTGS	7.9	8.33	9.54	5.4	14.6
2	CCIL Operated Systems	0.23	0.26	0.25	13.8	-5
3	Paper Clearing	94.37	88.26	99.97	-6.5	13.3
4	Retail Electronic Clearing	211.4	316.89	431.1	49.9	36
5	Cards	753.85	925.1	1,035.38	22.7	11.9
6	Prepaid Payment Instruments	74.36	69.3	352.23	-6.8	408.3
	<b>Grand Total</b>	1,142.11	1,408.13	1,928.48	23.3	37
7	Mobile Banking	19.75	48.67	106.18	146.4	118.2
8	Cards Outstanding	585.92	696.05	898.33	18.8	29.1
9	Number of ATMs (in actuals)	190813	213073	221959	11.7	4.2
10	Number of POS (in actuals)	1125952	1403438	2614584	24.6	86.3

Source: Database of Indian Economy, RBI

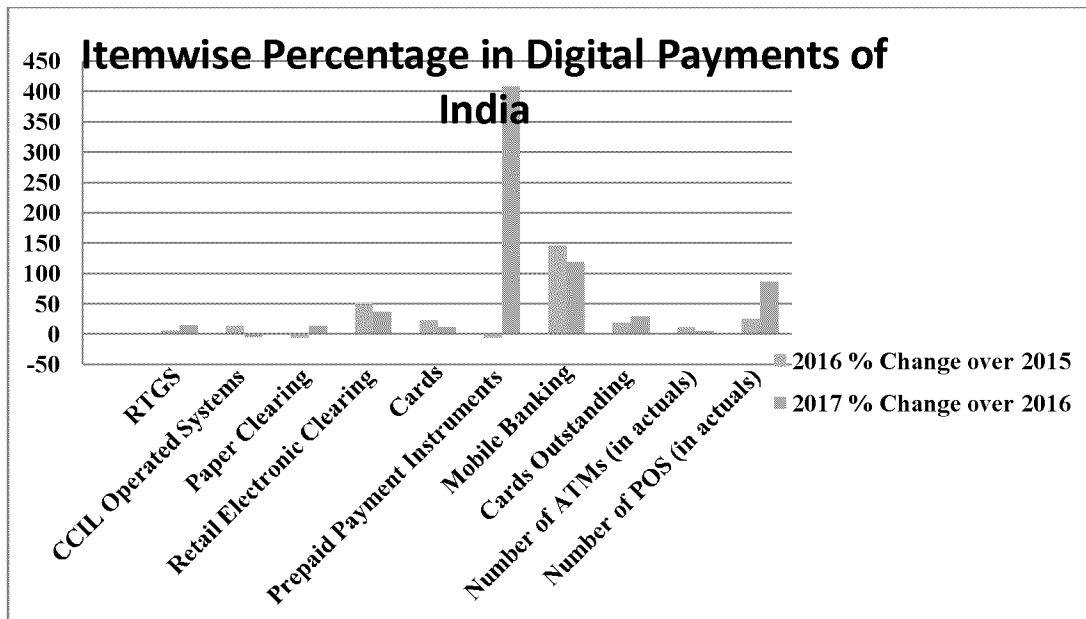


Table no. 1 shows the various items of digital payment during April 2015 to April 2017. From this table we can see increasing trend of RTGS, Paper Clearing, Prepaid Payment Instruments. It can be also observed that there is ups and downs in the case of CCIL Operated Systems, Retail Electronic Clearing, Cards but the percentage of Prepaid Payments Instruments are drastically increased from -6.8% to 408.3% during April 2016 to April 2017. Percentage of Mobile Banking and Number of ATMs shows the decreasing trend but at the same time the percentage of POS is increased which was 24.6 in the year 2016 and it is increased up to 86.3% in the year 2017.

There are some challenges in powerful implementation of digital payments system

**Challenges**

1. Some of the driver of digital payment has its own barriers.
2. Lack of infrastructure such as lack of towers, especially in the rural area.
3. Illiteracy of use of various items for digital payments.
4. Lack of knowledge of digital payment methods.
5. Fear of cyber-crime.
6. The above mentioned challenges are the bottlenecks in implementation of digital payment system successfully. Hence, to overcome these challenges the following remedies can be suggested.

## Suggestions

1. Massive efforts must be taken to make aware about the various items of digital payments.
2. To increase the infrastructure required for implementation of digital payment system say for
  1. example towers, internet etc.
  2. To make the provision for cyber security.
  3. Mobile network should be available in villages and remote areasalso.
  4. PPP model must be promoted to develop the infrastructure.
  5. Efforts must be taken to coordinate the various related departments and increase their
  6. participation.

## Conclusion

Considering the challenges, we feel that we cannot achieve the expected growth of digital payments. But now the government has started to implement the cyber law vary stringently. The debit/credit cards are also easily made available by the banking and financial institutions. Now a days the use of POS by the various sales counters is increasing. We can also see that the smart phones are also available at affordable prices in the market and because of it the literacy of use of digital equipment will increase day by day. Hence, from the above we can envisage that in the coming years the percentage of digital payment will increase.

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## Challenges and Remedies of Cashless Transaction in rural India

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### Introduction

India is known as an agricultural country, as most of the population of villages depends on agriculture. Agriculture forms the backbone of the country's economy. The agricultural sector contributes most to the overall economic development of the country. The Indian village has been a self-sufficient and self-contained economy. During the past half century, rural reconstruction and development have been the major thrust of economic planning, which has caused a rapid transformation in the Indian rural economic structure. These changes have taken place in spheres, such as land reforms, agriculture, animal husbandry, supplies and marketing, village industries, rural leadership, village administration, etc. With the help of the rural development programmes, a cultivator is able to take advantage of the modern technological facilities in his agricultural operations.

### Cashless Transaction in India

Cashless transaction means more and more use of digital mode and less use of cash in transactions. The World Bank's World Development Report-2016 envisages that in many instances, digital technologies have boosted growth, expanded opportunities and improved service delivery. Larger size of digital transaction in the developed economies is one of the factors of less corruption in these countries as compared to developing countries. Therefore, in order to escape from adversaries of corruption and black money and to have more transparent and cleaner economic growth with social Justice, less use of cash is one of the suggested measures.

A cashless transaction is one in which all the transactions are done using cards or digital means. The circulation of physical currency is minimal. The main aim of cashless transaction is to reduce instances of tax avoidance because it is financial institutions based economy where transaction trails are left. It will curb generation of black money. It will also reduce real estate

prices because of curbs on black money as most of black money is invested in Real estate prices which inflates the prices of Real estate markets.

Cashless transaction economy doesn't mean shortage of cash rather it indicates a culture of people settling transactions digitally. In a modern economy, money moves electronically. Hence the spread of digital payment culture along with the expansion of infrastructure facilities is needed to achieve the goal.

According to Training Module on Enabling Digital Payments in Rural India, that advantages of Cashless Transactions as:

- Convenience and ease of transaction and is more secure compared to making transactions involving cash withdrawal.
- Drive the development and modernization of the payment system, promote transparency and accountability, reduce transaction costs, and decrease the size of the grey or informal economy.
- Help business people grow their customer base and resource pool, far beyond the limitations of their immediate geographic area.
- Adds up to environment as no tree will be cut for printing paper money.
- Reduces Corruption

Overall they boost the rural economy and enables better development of the rural masses, also, there are several reasons why the government and the Reserve Bank of India brings up measures to promote cashless transaction economy. Besides convenience, digital transaction gives more scope for recording of transactions and in this way it is a first step against the spread of unaccounted money or black money. Secondly, the problem of counterfeit notes can also be avoided when payment is settled digitally.

### **The importance of the study**

The importance of this study is to identify the possibility of benefiting from the cashless Transaction in the rural India and how to manage and guide it by adopting a clear and specific strategy for managing the cashless Transaction in the rural system, especially taking into account the distinctive nature of the rural India. The real importance of this study is that it crystallizes scientifically the concept of the cashless Transaction and the importance of its effective and efficient management in the rural India. It also opens up new horizons for further studies of the future. Moreover, the scarcity of serious scientific studies on the subject

constitutes another dimension that supports the importance of study.

### **The problem of the study**

A government in recent years sought to apply financial policies to paid in the direction of application the cashless transaction in dealing, but those policies and new regulations passed When how success and progress hunters who can be achieved in the practical application of these systems, and the ability to reduce the challenges that may face the application of cashless transaction in the Indian country side, and on the other hand, these new policies and regulations depend on the degree of success and progress that can be achieved in the practical application of these systems, the ability to reduce the challenges that may face the application of the cashless transaction in rural India, and on the other hand deal with the problems that may face the rural India with the cashless transaction.

### **Objectives of the study**

The main objectives of the research study are given below

1. To study the awareness of cashless transition.
2. To know the need for cashless transaction in rural India.
3. To find out the challenges of cashless transition in rural India.
4. To identify the problems arising in the rural India from the application of the cashless transaction.

### **Methodology of the study**

In order to achieve the pre-set goals of this study and to answer the questions mentioned previously, the researcher used the descriptive approach, focusing on the documentary analysis method. Accordingly, the study was divided into two parts: the first part relates to the theoretical framework, the second part relates to analysis and results based on extrapolation and recommendations.

### **Features of Rural Indian Economy**

Some of the distinguished features of the present day rural economy are as follows:

#### **1- Commercialization of Agriculture:**

In the present days, a large part of rural economy has been opened up, which has made commercialization of agriculture possible. The extent of commercialization of agriculture in rural economy marks the stage of its development.

The major factors contributed to the commercialization of agriculture are as follows:

- a. High production and productivity gains have turned out agriculture to be a profitable proposition.
- b. The increase in production was possible due to the use of advanced technology in agricultural operations.
- c. The massive expansion of road transport has reduced the distance between rural and urban areas.
- d. Development of regulated markets and cooperative marketing structure have helped the farmers to break away from village system of moneylenders and middlemen.

## **2- Rural Society under the Impact of Urbanism**

The past five decades have witnessed the rural society of India in getting exposed to the waves of urbanism. Most of the features of urban areas have been modified and diluted into the rural society. This has led to a new way of urbanism called rural-urbanism.

Urbanism has induced the disintegration of traditional joint family, disappearance of neighborhood, sophistication, emergence of individualism, etc. Urbanism also created new social institutions, which were absent in the traditional rural set up. Urbanism has also brought about modernization.

Contacts between the rural and urban areas have been increased due to the development of the means of transportation. Similarly, the means of communication such as radio, transistor, television and telephones have brought the remote villages nearer to the urban towns. Increase in the contacts between the rural and urban areas has enabled a quick assimilation of rural areas with the mainstream of urban life.

## **Conclusion & Recommendation**

The main objectives of the study understand the Challenges of the cashless transaction on the rural India. For the purpose of completing the study, the researcher used the descriptive approach, focusing on the documentary analysis method. The study concluded that there are many challenges faced by the Government in rural areas in their efforts towards a cashless transaction. The study recommends developing the infrastructure for the cashless system in rural areas and working to find mechanisms that enable the Indian citizen in the country side to be able to deal with modern technology, continuous developments and improve the culture in the rural areas.

- Improvement in infrastructure: Low-cost Smartphone especially designed for rural areas

with regional languages. Swift implementation of Bharat Net, ensured supply of electricity, better and cheap internet connectivity by creating hotspots and rationing of free data as proposed by Telecom Regulatory Authority of India on monthly basis, improvement in banking services especially online services.

- Digital Literacy: Digital literacy is one of the biggest hurdles in transition towards cashless economy

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## Impact of Digital Payment Cashless Economy on Indian Economy

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The last decade has seen tremendous growth in use of internet and mobile phone in India. Increasing use of internet, mobile penetration and government initiative such as Digital India are acting as catalyst which leads to exponential growth in use of digital payment. Electronics Consumer transaction made at point of sale (POS) for services and products either through internet banking or mobile banking using smart phone or card payment are called as digital payment. The consumer perception of digital payment has a significant and positive impact on adoption of digital payment. The structured questionnaire was used as research tool for understanding consumer perception of digital payment. Primary data was collected from 150 respondents in Delhi. ANOVA and frequency analysis was used to analyze the responses. ANOVA indicate that there is no significant variance in consumer perception based on the demographic factors such as gender, age, profession and annual income of the patients. However education was found to significant influence for adoption of digital payment.

Adoption of cashless transaction has been significantly pushed by Prime Minister Mr. Narendra Modi as part of government reforms after demonetization of high value currency of Rs. 500 and 1000 (86% of cash circulation). The demonetization resulted in unprecedented growth in digital payment. By February this year, digital wallet companies had shown a growth of 271 percent for a total value of US\$2.8 billion (Rs. 191 crores) [1], Indian government and private sector companies such as Paytm, Freecharge and Mobikwik had been aggressively pushing several digital payment applications, including the Aadhaar Payment app, the UPI app, and the National Payments Corporation of India (NPCI) developed the Bharat Interface for Money (BHIM) app. Digital transfers using apps has brought behavioral change and helped in the adoption of digital payment. This has resulted in ease of transfer of money in rural areas which was not touched earlier by the digital payment method. Now many foreign investors want

to invest in digital payment industry which is new attractive destinations because of scope of tremendous expansion in India.

### **Digital Payment Modes in India**

There are several mode of digital payment available in India Online or mobile wallets. They are used via the internet and through smartphone applications. Money can be stored on the app via recharge by debit or credit cards or net-banking. Consumer wallet limit is Rs. 20,000 per month and the merchant wallet limit is Rs. 50,000 per month after self-declaration and Rs. 100,000 after KYC verification.

**Prepaid credit cards:** Pre-loaded to individual's bank account. It is similar to a gift card; customers can make purchases using funds available on the card -and not on borrowed credit from the bank. Can be recharged like a mobile phone recharge, up to a prescribed limit.

**Debit/RuPay cards:** These are linked to an individual's bank account. Can be used at shops, ATMs, online wallets, micro-ATMs, and for e-commerce purchases. Debit cards have overtaken credit cards in India. The number of debit cards in December 2015 increased to 630 million compared to 22.75 in 2014.

**AEPS:** The Aadhaar Enabled Payment System uses the 12-digit unique Aadhaar identification number to allow bank-to-bank transactions at PoS. AEPS services include balance enquiry, cash withdrawal, cash deposit, and Aadhaar to Aadhaar fund transfers.

**USSD:** Stands for Unstructured Supplementary Service Data based mobile banking. It is linked to merchant's bank account and used via mobile phone on GSM network for payments up to Rs. 5,000 per day per customer.

**UPI:** The United Payments Interface (UPI) envisages being a system that powers multiple bank accounts onto a single mobile application platform (of any participating bank). Merges multiple banking features, ensures seamless fund routing, and merchant payments. It facilitates P2P fund transfers.

Digital payments in India have been experiencing exponential growth and with growth of internet and mobile penetration, in coming years the country is ready to witness a huge rush in the adoption of digital payments.

### **Mobile Banking**

Mobile banking (also known as M-banking, mbanking) is a term used for performing balance checks, account transactions, payments, credit applications and other banking

transactions through a mobile device such as a mobile phone or Personal Digital Assistant (PDA). The earliest mobile banking services were offered over SMS, a service known as SMS banking. Mobile banking is used in many parts of the world with little or no infrastructure, especially remote and rural areas. This aspect of mobile commerce is also popular in countries where most of their population is un-banked. In most of these places, banks can only be found in big cities, and customers have to travel hundreds of miles to the nearest bank. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information.

### **Conclusions**

Present study has made an attempt to understand customer perception regarding digital payment. It was found that demographic factor except education does not have much impact on the adoption of the digital payment. Anova computation supported this finding as there was no significant difference is perceived by the respondents on the basis of gender age, profession and annual income. It was only education level of the respondents where significant difference is perceived by the respondents. It indicates that adoption of digital payment is influenced by the education level of the customer. If a person has studied beyond matriculation and internet savvy, he or she will be inclined to use the digital payment mode. It was also found that in the areas/region where education level is high such as Delhi NCR and other metropolitan area, the possibility of acceptance of digital payment is much higher. The growth of users of Smartphone and internet penetration in such area also facilitated the adoption of digital payment.

Based on the result of the descriptive analysis study it can be concluded that the majority of current e-banking users are youth between the age of 18 up to 35, gender wise the males are the dominant users, occupationally salaried and students are the majority users and business men/women are not active participant in using the service, educational level diploma and above diploma holders are the majority users and the banks do not keep full record of their customer profile in standardized way for easy reference. There is a relationship between demographic characteristics and customer satisfaction in e-banking than ordinary banking. The banks are currently providing e-banking service for ordinary saving account holders and current account holders and in the city there are only two e-banking delivery channels of which ATM the most widely used and POS service is not well known among customers like that of ATM even this channels provide limited in comparison to bank hall service given by the banks' employees

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## Digital Payment System: An Overview

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### Abstract

The main aim of this research paper is to understand digital payment system and its usages in India, growth of digital payment system in India. It is a better and important way to go cash less with digital payment system methods. Awareness about digital payment system are very low in rural area as compare to urban area, its required to follow this system properly in the rural areas.

**Keywords:** *Digital Payment System, Methods, BHIM, Usages and Growth.*

### Introduction

Digital payment is a way of payment which is made through digital modes. In digital payments, payer and payee both use digital modes to send and receive money. It is also called electronic payment. No hard cash is involved in the digital payments. All the transactions in digital payments are completed online. It is an instant and convenient way to make payments. In a system of inter-woven financial and international economic linkages, an efficient payment and settlement system is paramount. In the Indian set up with an enormous spread of banking and non-bank financial institutions and other financial organizations, ensuring adequate payment and settlement structures with strong security measures is critically significance.

### Objectives of the Study

1. To study digital payment system in India.
2. To study the methods of digital payment system.
3. To know digital payment systems usages.
4. To suggest important things for better progress.

### Research Methodology

The present study is based upon secondary sources of the data which is collected by the researcher from various books, research papers, news, articles, newspapers and various websites.

## **Methods of Digital Payment System**

An electronic payment is any kind of non-cash payment that doesn't involve a paper check. Methods of electronic payments include credit cards, debit cards and the ACH (Automated Clearing House) network. The ACH system comprises direct deposit, direct debit and electronic checks.

The following methods are involved in Digital Payment System;

### **Adhaar 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. AADHAAR Enabled Payment System (AEPS) is to empower a bank customer to use AADHAAR to access his/her AADHAAR – enabled bank account and perform basic banking transactions that are intra-bank or interbank in nature through a business correspondent. It serves another important goal of RBI in electrification of retail payments.

### **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. Individuals, firms or corporates maintaining accounts with a bank branch can transfer funds using NEFT. Even such individuals who do not have a bank account (walk-in customers) can also deposit cash at the NEFT-enabled branches with instructions to transfer funds using NEFT.

### **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). Considering that the funds settlement takes place in the books of the Reserve Bank of India, the payments are final and irrevocable. The RTGS system is primarily meant for large value transactions. The minimum amount to be remitted through RTGS is 2 lakh.

### 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.

### Immediate Payment Service (IMPS)

An IMP provides 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.

### 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.

### MICRO ATMS

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

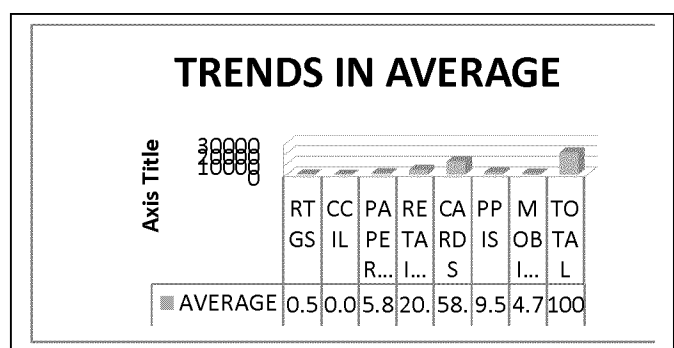
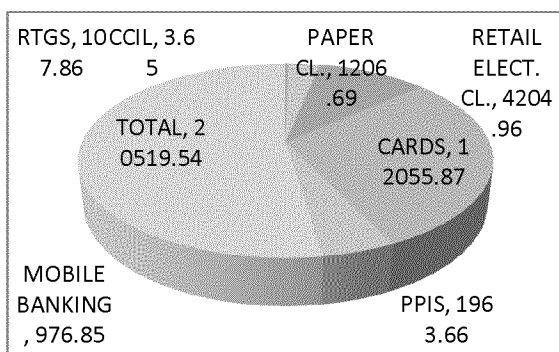
#### Digital Payment Systems

Sr. No.	Payment Procedure	Year, 2017 Month Wise (in Millions)			Total
		September	October	November	
01	RTGS	9.61	10.00	10.83	107.86
02	CCIL Op. Sty.	0.30	0.27	0.33	3.65
03	Paper Clearing	94.37	96.41	98.79	1206.69
04	Retail Elect. Clearing	427.72	444.62	460.10	4204.96
05	Cards	1105.00	1144.31	1118.71	12055.87
06	Prepaid Pay. System	240.29	245.18	236.16	1963.66
07	Mobile Banking	113.43	147.82	156.05	976.85

(Source: RBI Bulletin January, 2018)

The above table depicts increasing trends in digital payment system for the month of September, October, November of 2017 year. It is founded that the highest digital payment happened 12055.87 Million by cards which includes Debit Cards and Credit Cards usages at usage at ATMs and usage at Pos, 1105 million in September, 1144.31 million in October and 1118.71 million in November. Followed by the Retail Electronic Clearing systems 4204.96 involves ESC DR, NEFT, IMPS, NACH it’s also shows increasing trends payments by this system are 427.72 million in September, 444.62 million in October and 460.10 million in November. Prepaid Payment Instruments (PPIs) also in increasing 240.29 million in September, 245.18 million in October and 236.16 million in November total is 1963.66 million. The prepaid payment instrument includes M-wallet, PPI Cards and Paper vouchers. In Paper Clearing it is founded 1206.69 million means 94.37 million in September, 96.41 million in October and 98.79 million in November. Mobile Banking is also increasing in the payment systems. Total usages and payments done under mobile banking is 976.85 million means 113.43 million in September, 147.82 million in October and 156.05 million in November. RTGS (Real Time Gross Settlement) is on second last position in done total digital payments 107.86 million which are 9.61 million in September, 10.00 million in October and 10.83 million in November it includes; customer transactions, interbank transactions and interbank clearings. The CCIL Operated System is founded at the lowest than other payment systems. It involves; CBLO, Govt. Securities clearing and Forex Cleaning. It is observed that only 3.65 million transactions have been done through this systems, means 0.30 million which are 0.27 million in September, 0.33 million in October and 10.83 million in November.

**Growth in Digital Payment Systems (on an Average Basis):**



The above table table shows the increasing trends in digital payment systems on an average basis. In shows the highest percentage in cards i.e. 58.74%, 20.48% in retail electronic



clearings, 9.56% in PPIs systems, 5.87% in Paper clearings, 4.75% in mobile banking 0.53% in RTGS and 0.08% in CCIL.

### **Suggestions**

A digital payments system in India is very importance recent year. The scope will cover listed number of payments under the coverage of digital payments only. It is now a matter of increasing awareness transact to India.

1. Firstly we need to educate to all peoples of India about digital transaction
2. To open Digital Transaction Centre at Taluka or District places for digital payment literacy.
3. To encourage the people to make their all transaction through Cheque and Demand Draft.
4. To make all the payments by using Debit and Credit Cards.
5. To start every transaction through Net Banking, Mobile Banking and Mobile Wallets for saving trees and time.

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## Digital Payments Overview On Rural Sector

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### Abstract

In line with Government reforms prime Minister Narendra Modi has pushed Indians to adopt cashless transactions, giving the digital payments sector. This paper focused on digital payments in rural area. Now a day's Rural India has significant impact on the economic progress of the country. The need for improving the trends of digital payments model in rural sector is very important. Considering the benefits like transparency in transactions, scope for curtailing parallel economy and improving the ease of business, it is very essential that the transformation towards digital payments, even in the rural economy is empowered.

**Keywords:** digital payment, rural India, digital transactions

### Introduction

Indian economy is one of the fast growing economies of the world. Despite of global turbulences of economic conditions, Indian economy has been focusing on development. In the recent past, there are significant developments that has taken place in the Indian financial system, which has led to huge transformations, trends and changes in the business dynamics. Though the government of India has been focusing on the digital transactions initiatives since last few years, the actual impact of digital payments has taken place in India in significant manner post the demonetization period. India economy has the intrinsic structure of rural and urban economic developments. Majority of the Indian economy depends on rural economy, and only when the digital payment methods become an integral part of rural economic development, the digital initiatives could be considered as successful. In the recent past, digital payments has gained momentum in the country, both in the case of rural and also the urban segments .

### **Objectives of the Study**

1. To study the digital payment and cashless economy through Aadhaar pay in rural sector.
2. To examine the Digital Payment Challenges in Rural sector.
3. To know the problems and of digital payment in rural sector.

**Research Methodology** The study is based entirely on analysis of secondary data, and as such, all limitations inherent to the primary data directly affect the reliability secondary data.

**Limitation of the study**-The limitation of conducting research very small business, we cannot need to settings limits the reliability of the collected data. Furthermore, there is a time lag between the collection of data and its subsequent analysis for the purpose of this study.

### **What are the digital payments?**

Digital payments refers to electronic consumer transactions, which include payments for goods and services that are made over the internet mobile payments at point- of-sale(pos)via Smartphone application (apps) , and peer to peer transfers between private users.

**Digital Payment in Rural** India More than half a million volunteers helping job seekers in different rural schemes now have a new target: To enroll people and shops in e-economy and train them in cashless transactions. And despite an incentive of Rs 100 for making each village shop accept any form of digital payment, volunteers across India are facing a daunting task. So far, just 55,000 merchants have gone digital and 2.5 million rural Indians enrolled in cashless transactions after the government recalled Rs 1,000 and Rs 500 notes on November 8. The National Payment Corporation of India (NPCI), to ease formats of two payment systems USSD and UPI. In villages, people prefer fingerprints over other security features and it will help in higher rates of enrolment. But even the rural development ministry’s own set-up for cashless economy needs major improvements.

### **Challenges in Digital Payment in Rural sector**

In November 8th 2016 central government has taken important step to demonetization of Rs.500 and Rs.1000 currency. But in the rural India where cash was the kind, the options of digital payments were exercised by very few retail outlets and also the consumers were wary of using such trends. After November 8th 2016, some changes took place in Indian economy; it was process of digital payments system. significant developmentshas taken place in the digital payments and many mobile wallet companies, PoS service providers, e-commerce players, and

government initiatives has been focusing on improving the digital payment solutions. But some of the importance challenges of digital payments system in India are as follows:

- Currency denominated economy: High level of cash circulation in India. Cash in circulation amounts to around 13% of India's GDP.
- Transactions are mainly in cash: Nearly 95% of transactions take place in cash. Large size of informal / unorganised sector entities and workers prefer cash based transactions.
- Mobile Internet penetration remains weak in rural India: In India there is poor connectivity in rural areas. Lower literacy level in poor and rural parts of the country makes it problematic to push the use of plastic money on a wider scale.

**Problems of Digital Payments in Rural sector** These are the problems that may occur in rural areas if digital payments system is applied in India.

- Electricity is not provided to all the villages.
- Quality electricity to be provided to villages
- ATM centres to be provided at least at a distance of 3 kms for easy access.
- At present there are 480 accounts for every 1000 adults. This need rectification and covers the entire adult population.
- There are only 40000 banks for six lakh villages. At least one bank for every 5000 adults are to be provided.

### **Achieving a cashless rural economy**

- Worldwide there is a tremendous interest among policymakers to explore the possibility of moving towards a cashless economy. Digitisation of transactions is the best way to move towards cashless economy.
- Rural areas are home to two thirds of the country's population of some 870 million people where much of the challenge lies in achieving cashless transactions for the rest of the decade.
- It is estimated that rural users will constitute almost half of all Internet users in 2020. Number of connected rural consumers is expected to increase from 120 million in 2015 to almost 315 in 2020.

## Conclusion

Technology systems, architecture and infrastructure are mature enough to enable the billion urban people in India to transact digitally. It is now a matter of increasing awareness transact to rural India. The Niti Aayog panel on e-payments which is working to promote the use of digital payments systems in rural India, where card based payments are more common in rural area. The Indian economy will digitalise in rural area through mobile based payments that are faster and cheaper to roll out. It is a matter of increasing awareness in rural area. Improved solutions in terms of UPIs, mobile wallets, and digital transactions with more secured features, ease of transactions and reduced cost of managing the digital payments could lead to more potential developments and supporting in improved conditions of digital payments processing in rural sectors. However, National Payments Corporation of India (NPCI) new payment application are designed to work on all phones with or without internet and even without phones is helping rural India.

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## Growth of Digital Payment Systems in India: An Overview

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### Abstract

Digital Payment system is crucial for the every human beings, because day by day increase and updated the technology that's why digital payment needs not only in India but also in the world. The present era is entering into a new pace in payment system by using digital wallets filled with coupons and offers. In this today's busiest world people don't have their time to sit and relax then how can do their personal works like to recharge their phones, to pay electricity bill, online buying, money transfer or to online shop etc. The present research paper is focusing on the growth of digital payment system in India.

**Keywords:** Digital payment system, digital wallets, online.

### Introduction

The government reforms, Prime minister Narendra Modi has pushed Indians to adopt cashless transactions, giving the digital payments sector an important growth. The sector is experiencing unprecedented jump in growth since November last year, when the government demonetized high currency bills (Rs. 500 and 1000). This represented 86 percent of India's cash in circulation. By February this year, digital wallet companies had shown a growth of 271 percent for a total value of Rs. 191 crore.

### Objective of the study

- To study the profile of digital payment system.
- To study the growth of digital payment systems in India.

### Research Methodology

The researcher used secondary data.

That is text book, National and International Journal, report, internet etc.

## **Major new digital payment modes in India**

### **Online or mobile wallets**

- Online wallets are used via the internet and through Smartphone applications.
- Money can be stored on the app via recharge by debit or credit or net banking.

### **Prepaid credit cards**

- Pre-loaded to individual's bank account.it is similar to a gift card; customers can make purchases using funds available on the card - and not on borrowed credit from the bank.
- Can be recharged like a mobile phone recharge, up to a prescribed limit.

### **Debit/Rupay cards**

- These are linked to an individual's bank account.
- Can be used at shops, ATMs, online wallets, micro-ATMs, and for e-commerce purchases.

### **AEPS**

- The Aadhaar enabled payment system uses the 12 - digit unique Aadhaar identification number to allow bank- to- bank transaction at PoS.
- AEPS services include balance enquiry, cash withdrawal, cash deposit, and Aadhaar to Aadhaar fund transfers.
- Stands for unstructured supplementary service data based mobile banking.

### **UPI**

- The United Payment Interface ( UPI) envisages to be a system that powers multiple bank accounts onto a single mobile application platform.
- Merges multiple banking features, ensures seamless fund routing, and merchant payments.
- Facilitates P2P fund transfers.

**Interpretation and analysis**

**Table no. 1**

**Annual data 2015-16 and 2016-17**

	<b>2015-16 April to March</b>	<b>2016-17 April to March</b>	<b>Growth Rate (Percentage)</b>
<b>Volume (Million)</b>	7046.6	10928.6	55.1
<b>Value (Billion)</b>	1723425	2141071	24.2

**Source:** - Database of Indian Economy- RBI –Provisional Data.

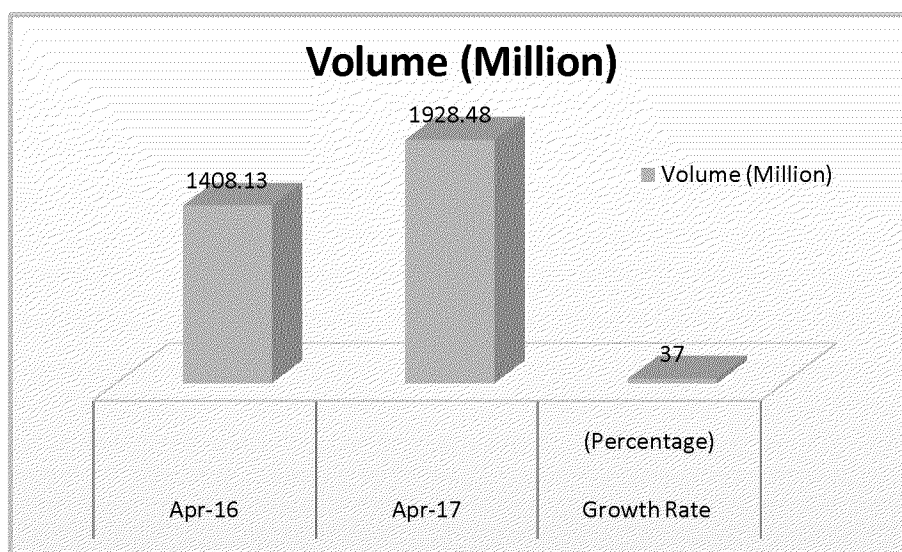
**Table no.2**

**Monthly data April 2016 and April 2017**

	<b>April 2016</b>	<b>April 2017</b>	<b>Growth Rate (Percentage)</b>
<b>Volume (Million)</b>	1408.13	1928.48	37.0
<b>Value (Billion)</b>	159410.36	193423.72	21.3

**Source:** - Database of Indian Economy- RBI –Provisional Data.

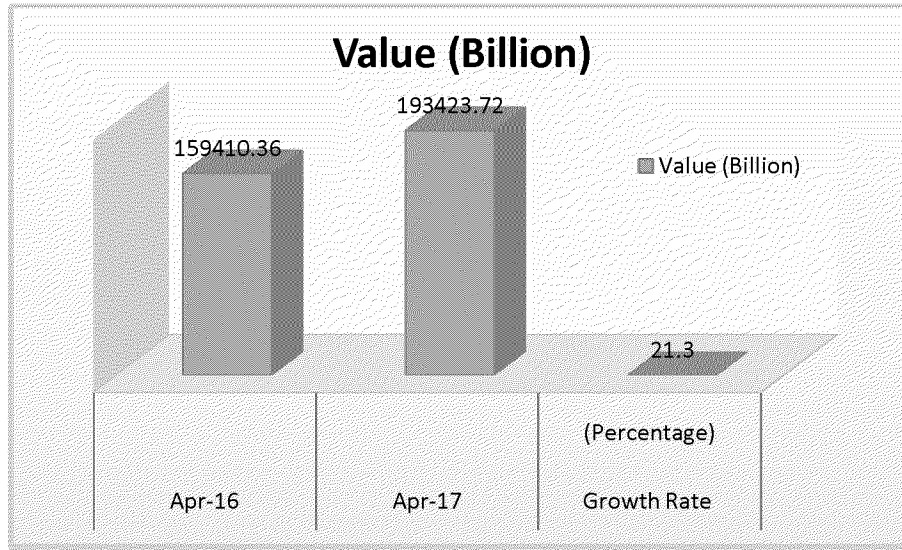
**Graph No. 1.1 Distributions of monthly Volume (Million) data in April 2016 and April 2017**



**Graph No. 1.1** reveals that distributions of monthly volume (Million) data in April 2016 and April 2017. In the month of April 2017, the total volume of Digital Payments touched about 1.9 billion as compared to 1.4 billion in April 2016 registering a growth of 37 percent.



**Graph No. 1.2 Distributions of monthly Value (Billion) data in April 2016 and April 2017**



**Graph No. 1.2** show that Distributions of monthly Value (Billion) data in April 2016 & April 2017. In the month of April 2017, the total value of Digital Payments touched Rs. 193423.72 billion as compared to 159410.36 billion in the April 2016 registering a growth of 21.3 percent.

**Conclusion**

On the basis of this research study the conclusions comes out that day by day increasing digital payment system. Digital payments are available various modes, there are many benefits that are related directly or indirectly to the India’s economy with the use of digital payment system for making various transactions in the market. eople are more aware 2017 as compared to 2016 about the online payments through mobile applications and there is a wider increase in growth rate.

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## Cashless transactions in India

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### Introduction

The Cashless transactions more transparency more scalability and accountability will be obtained “ The new monetization will force the merchant they accept the cashless transaction” as per the government of India, every method of fund transfer of digital money is termed as ‘Prepaid payment instruments’ for example online banking, credit cards, debit cards, E-wallets etc . Electronic payment systems as a part of the e-business have already become an essential part of the people who are working with the help of Internet. Now, connected with e-banking they are making our lives more easier and providing additional services such as e-shops and e-bay buying, giving an opportunity to buy different goods under the lower price. “Ease of automated processing, immediacy of result, openness and accessibility of payment processes, loss of collateral information, globalization and emergence of new business models. These high level principles are aspects of payments impacted by the new ecommerce technologies. They will have an increasing impact upon security of payments”

**“A cashless economy is one in which all the transactions are done using cards or digital means. The circulation of physical currency is minimal. India used too much cash for transactions.”**

**KEYWORDS:** Cashless transactions, Digitalization, cashless economy, challenge.

**The methods of cashless transactions are three types these are follows.**

#### 1. UPI

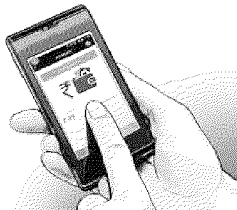
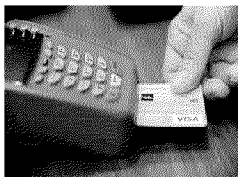
UPI (**Unified Payment Interface**) is a kind of payment system which throw which can transfer the money between two different parties. By using UPI a bank account can be initiated to transfer money from any time anywhere with the help of few clicks. For this some steps need to be taken that are. Register mobile number into bank Download UPI app nto smart phone Generate a unique ID into it Set UPI pin.**POS (point of Sale) :-**Point of

sale generally means any location where a sale or transaction may take place such as shopping malls, a market or a city where something likely is going to be brought or sold.

**E-Wallet :** This term is used for a kind of electronic device that allows anyone to perform an electronic transaction. To use this service you just need a computer or a smart phone. To perform an online transaction through an E-Wallet anybody has to follow the following steps.

- Download any E-Wallet like SBI Buddy.
- Use your Mobile number for registration
- Connect your Debit/ Credit card or Net banking with it.

**Digital Payment Methods:** 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 the professed roles of Digital India. As part of promoting cashless transactions and converting India into a less-cash society, various modes of digital payments are available.



• **Prospects of Cashless Transaction:**

2. **Removal of Convenience Fee Digital Literacy:** - Only the elite class has a good hand at the gadgets and their usage. Believe it or not, more than half of the nation still does not know how to use a computer, leave aside the sophisticated smart phones.
3. **More Banks in villages :-**The capital city New Delhi alone has about 20 HDFC bank branches. There are several villages and tehsils that don't even have one. More the banks, more the cash deposits in accounts. Banks in villages should be helpful in teaching the residents the process, usage and benefits of plastic.
4. **Illegal political funding :-**Political donation is the major concern in the country. Majority of the funding in the political party is unaccountable which is not revealed by the party as well as the donor.
5. **Control black money :-** Black money has become a hazard now a day's cashless transaction become very important to control the black money. Whenever we buy any product, the distributor do not disclose their income to the government and hence

escape from given the tax that money do not come under government surveillance hence consider black money.

6. **Control over fake note :-** It is impossible to make fake noted if the cashless transaction is used by every individual in the society because notes become useless.
7. **Tax payment:** - No one can store money with themselves as all the transaction will be done online. So, everybody has to pay tax for what they have.
8. **No funding to terrorism :-** Funding to the money with themselves as all the transaction will eradicate black money as well as fake currency hence no support to terrorism.
9. **Securities:-**Any financial transaction requires security for its proper functioning. In current financial transactions scenario password is a major component which deals with the issues if security.
10. **9. Mobile banking:** Mobile banking refers to the use of Smartphone or other cellular device to perform online banking tasks while away from your home computer, such as monitoring account balances, transferring funds between accounts, bill payment and locating an ATM
11. **10. Internet banking:** Online banking, also known as internet 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
12. **Card banking:** Bank-issued plastic card with a magnetic stripe that holds machine readable identification code. Bank cards are used for electronic commerce (with magnetic stripe readers or via Internet) and for banking transactions through automatic teller machines (ATMs). Two main types of bank cards are credit cards

### ❖ **Challenges of Cashless Transaction**

**There are many impediments for India before it can emerge as a cashless society like:**

1. **lack of digital literacy.** People in rural still don't know what actually Smartphone mean. For them mobile is still a mode of communication only.
2. **lack of internet facilities and without it a country cannot think of becoming digital.** There are still many rural and urban areas where you might difficulty in having access to 2G network, let alone 3G, 4G.

3. **Lack of trust due security risks in digital transaction.** Many people believes that digital transaction is not secure and recent hacking incident of ATMs further solidify their fear. Government should bring stringent provision for ensuring digital transaction security.

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# Issues and Challenges of Digital Payment Systems

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## Abstract

E-commerce (electronic commerce or EC) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the Internet. These business transactions occur business-to-business, business-to consumer-to-consumer or consumer-to-business. The success of electronic commerce depends upon effective digital payment systems. The Internet and on-line businesses are growing exponentially. Due to this explosive growth, electronic commerce on the Internet uses various digital payment mechanisms that can cater for much diversity of applications. Digital payments are financial transactions made without the use of paper documents such as cheques. Digital payments include debit card, credit card, smart card, e-wallet, e-cash, electronic cheques etc. Digital payment systems have received different acceptance level throughout the world; some methods of Digital payments are highly adopted while others are relatively low.

The present paper is focused on the issues and challenges in Digital payment and to examine the problems faced by consumers during Digital payments.

**Keywords:** E-commerce, digital payments, Internet banking, Mobile banking and payment gateways, challenges of digital payment.

## 1. Introduction

Digital payment is a way of payment which is made through digital modes. In digital payments, payer and payee both use digital modes to send and receive money. It is also called electronic payment. No hard cash is involved in the digital payments. All the transactions in digital payments are completed online. It is an instant and convenient way to make payments. If we talk about cash payments, you have to first withdraw cash from your account. Then you use this cash to pay at shops. Shopkeeper goes to the bank to deposit the cash which he got from

you. This process is time-consuming for you and also for the shopkeeper. But in digital payments, the money transfers from your account to the shopkeeper's account immediately. This process is automatic and neither you nor the shopkeeper is required to visit the bank. Digital payments save you from long queues of ATMs and banks. Because, if you pay digitally, you won't need to withdraw cash from your account. It also lots of time and a little bit money as well.

Digital payment systems are proliferating in banking, retail, health care, online markets and even government. Organizations are motivated by the need to deliver products and services more cost effectively and to provide a higher quality of service to customers. Electronic payments first emerged with the development of wire transfers. Electronic funds transfer is an electronic transfer of information that equates to moving funds from one financial institution to another. Digital payment systems are alternative cash or credit payment methods using various digital technologies to pay for products and services in electronic commerce. It involves many security issues

## **2. Objective**

- To focus on the issues and challenges in Digital payment.
- To examine the problems faced by consumers during digital payments.

### **3.1 Different Types of Digital Payments**

From commonly used cards to newly launched UPI, digital payments has many types of payment. Some modes meant for tech-savvies and some for less-technical persons. Below are the different modes of digital payments.

- **UPI apps**

UPI or unified payment interface is a payment mode which is used to make fund transfers through the mobile app. You can transfer funds between two accounts using UPI apps. You will have to register for mobile banking to use UPI apps. Currently, this service is only available for android phone users. Hence you can use UPI only when you have an android phone. You need to download a UPI app and create a VPA or UPI ID. There are too many good UPI apps available such as BHIM, SBI UPI app, HDFC UPI app, iMobile, PhonePe app etc. It is not mandatory to use the UPI app from your bank to enjoy UPI service. You can download and use any UPI app.

- **AEPS**

AEPS is an Aadhaar based digital payment mode. The term AEPS stands for Aadhaar Enabled Payment Service. Customer needs only his or her Aadhaar number to pay to any merchant. AEPS allows bank to bank transactions. It means the money you pay will be deducted from your account and credited to the payee's account directly. You need to link your Aadhaar number to your bank account to use AEPS. Unlike Debit cards and USSD, AEPS does not have any charges on transactions. You can use AEPS with the help of PoS (Point of sale) machines. You can withdraw or deposit cash, send money to another Aadhaar linked account with it. The good thing about AEPS is that it doesn't need your signature, bank account details or any password. It uses your fingerprint as a password. No one can forge your fingerprints, thus it is the most secure digital payment mode.

- **USSD**

USSD banking or \*99# Banking is a mobile banking based digital payment mode. You do not need to have a Smartphone or internet connection to use USSD banking. You can easily use it with any normal feature phone. USSD banking is as easy as checking your mobile balance. You can use this service for many financial and non-financial operations such as checking balance, sending money, changing MPIN and getting MMID. The \*99# code works as a bridge between your telecom operator's server and your bank's server. It uses your registered mobile number to connect with your bank account. Hence, dial \*99# with your registered number only. USSD banking has a transaction limit of Rs. 5000 per day per customer. RBI has also set a maximum charge of Rs. 2.5 per operation.

- **Cards** Cards are provided by banks to their account holders. These have been the most used digital payment modes till now. Many of us use cards for transferring funds and making digital payments. Credit cards, debit cards and prepaid cards are the main types of cards. You can also use Rupay debit card for digital payments.
- **Credit cards** are issued by banks and some other entities authorized by RBI. These cards give you the ability to withdraw or use extra money. Credit cards are used for domestic as well as international payments.
- **Debit cards** are issued by the bank where you have your account. You can use these cards for the money in your account. The payments you make with these cards debit from your account and credit immediately to the payee's account. You can use these cards to make payments to one bank account to another.



- **Prepaid cards** are another type of cards which you use to pay digitally. You must have to recharge these cards before using just like prepaid SIM cards.
- **E-Wallets** E-wallet or mobile wallet is the digital version of your physical wallet with more functionality. You can keep your money in an E-wallet and use it when needed. Use the E-wallets to recharge your phone, pay at various places and send money to your friends. If you have a Smartphone and a stable internet connection, you can use E-wallets to make payments. These E-Wallets also give additional cash back offers. Some of the most used E-wallets are State bank buddy, ICICI Pockets, Free charge, Paytm etc.
- **Payment Gateways** A payment gateway is an e-commerce service that allows merchants to accept credit card and other forms of Internet transactions securely via website.

## **1.2 Issues and Challenges Regarding Digital Payment Systems**

### **3.2.1. Lack of Usability**

Electronic payment system requires large amount of information from end users or make transactions more difficult by using complex elaborated websites interfaces. For example credit card payments through a website are not easiest way to pay as this system requires large amount of personal data and contact details in web form.

### **3.2.2 Lack of Security**

Online payment systems for the internet are an easy target for stealing money and personal information. Customers have to provide credit card and payment account details and other personal information online. This data is sometimes transmitted in an un-secured way, (Kolkata and Whinston, 1997). Providing these details by mail or over the telephone also entails security risks (Guttman, 2003, Laudon and Traver, 2002).

#### **Issues with e-Cash**

The main problem of e-cash is that it is not universally accepted because it is necessary that the commercial establishment accept it as payment method. Another problem is that when we makes payment by using e-cash, the client and the salesman have accounts in the same bank which issue e-cash. The payment is not valid in other banks.

### **3.2.3. Lack of Trust**

Electronic payments have a long history of fraud, misuse and low reliability as well as it is new system without established positive reputation. Potential customers often mention this

risk as the key reason why they do not trust a payment services and therefore do not make internet purchases (Lietaer, 2002)

### **3.2.4 Lack of Awareness**

Making online payment is not an easy task. Even educated people also face problems in making online payments. Therefore, they always prefer traditional way of shopping instead of online shopping. Sometimes there is a technical problem in server customers tried to do online payments but they fails to do. As a result they avoid it.

### **3.2.5. Online Payments are not Feasible in Rural Areas**

The population of rural areas is not very literate and they are also not able to operate computers. As they are unaware about technological innovations, they are not interested in online payments. So the online payment systems are not feasible for villagers.

## **3. Conclusions**

Electronic payment refers to the mode of payment which doesn't include physical cash or cheques. It includes debit card, credit card, smart card and E-wallet etc. The effectiveness of electronic payment system depends largely on the availability of an efficient ICT infrastructure where reliable network connectivity, durable hardware and high expertise in ICT are available. The successful implementation of electronic payment system depends on how the security and privacy dimensions perceived by consumers as well as sellers.

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# Digital Payment System Cashless Transaction: Modes, Advantages and Difficulties

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## Abstract

The RBI and the Government are making several efforts to reduce the use of cash in the economy by promoting the digital/payment devices including prepaid instruments and cards. RBI's effort to encourage these new varieties of payment and settlement facilities aims to achieve the goal of a 'less cash' society. With limited cash in hand and an indefinite crunch in sight, most people are rushing to cashless transactions. Digital transactions bring in better transparency, scalability and accountability. The new move will compel more merchants to accept digital money. Cash may no longer be king.

**Keywords:** Convergence, NEFT, RTGS, AEPS, point of sale

## Introduction

### Cashless Transaction Economy

The RBI and the Government are making several efforts to reduce the use of cash in the economy by promoting the digital/payment devices including prepaid instruments and cards. RBI's effort to encourage these new varieties of payment and settlement facilities aims to achieve the goal of a 'less cash' society. Here, the term less cash society and cashless transaction economy indicate the same thing of reducing cash transactions and settlement rather doing transactions digitally.

Cashless transaction economy doesn't mean shortage of cash rather it indicates a culture of people settling transactions digitally. In a modern economy, money moves electronically. Hence the spread of digital payment culture along with the expansion of infrastructure facilities is needed to achieve the goal.

On November 8th, government withdrawn Rs 500 and Rs 1000 notes- two highest denominations in circulation. Main objectives were to fight counterfeit money and black money. The action has given tremendous boost to cashless transactions as card based and digital

payments were not hindered when all high denomination cash transactions suffered because of absence of high denomination currencies.

### **Efforts towards cashless transaction economy**

The RBI and government have launched several measures for the spread of electronic and other non-cash settlement culture.

The Vision-2018 for Payment and Settlement Systems in India brought by the RBI in June 2016 reiterates the commitment to encourage greater use of electronic payments by all sections of society so as to achieve a “less-cash” society.

“The broad contours of Vision-2018 revolve around five Cs — coverage, convenience, confidence, convergence, and cost. To achieve these, Vision-2018 will focus on four strategic initiatives such as responsive regulation, robust infrastructure, effective supervision and customer-centricity,” – RBI. The vision statement highlights following plans:

- The regulator wants to reduce the share of paper-based clearing instruments
- It aims to raise growth of the digital payments space
- It wants to ensure accelerated use of Aadhaar in payment systems

Government also made fiscal measures for the encouragement of card culture in the 2016 budget. Exempting service charge on card-based and other digital payments was one such step.

Aadhar based payment system will be a big boost for promoting the cashless transaction culture.

A committee of seven members, chaired by a ministry official, Neeraj Kumar Gupta was formed to recommend steps for the reduction of cash based transactions.

The technology has spread internet banking, mobile banking, prepaid instruments, credit and debit cards etc. and at the same time, electronic payments system is fast growing. All these indicate that India is moving towards the RBI’s goal of less cash economy-steady but slowly.

It’s time to go cashless. The purpose of demonetization is not only to remove black money but also to encourage cashless payment. Instead of breaking heads by standing in ATM queue you should adopt a cashless method for the transaction. A cashless method is more transparent as every transaction can be traced easily as it leaves its footprints. Many smart people have adopted new cashless payment options.

## **Modes of cashless transactions**

### **1. Cheque**

The cheque is one of the oldest methods of cashless payment. It is a known method to everyone. In this method, you issue a cheque for the specific amount to someone else. The cheque gets deposited in the respective bank. The bank processes a payment through a clearing house.

The entire transaction done through cheque gets recorded and there is a proof of payment. However, there are instances where cheque payments get dishonored due to signature mismatch or insufficient fund. In order to avoid such issue, we can use other cashless payment options.

### **2. Demand Draft**

Demand draft is another rudimentary way of cashless transaction. It is safest option to receive payment from anyone. Demand draft (DD) never gets defaulted as it is signed by the banker. The disadvantage of DD and cheque is you need to visit a bank in order to deposit cheque and demand draft. The clearance of cheque or DD takes additional time.

### **3. Online Transfer – NEFT or RTGS**

The third simplest method for the cashless transaction is online transfer using NEFT or RTGS. In order to do online money transfer, you need internet banking facility. Online transfer using NEFT or RTGS is comparatively faster than cheque or DD. Online transfer can be done from anywhere using internet facility.

### **4. Credit Card or Debit Card**

Credit card or debit card is another cashless payment method. The usage of credit card and debit card was limited in India. However, usage of credit card and debit card is increasing now because of demonetization. The limitation of this payment method is an availability of swipe card facility (PoS) at merchant end.

### **5. E-Wallets**

E-Wallet is next cashless payment option. E-Wallet can be used to purchase products starting from grocery to airline tickets. In order to use E-Wallet customer and merchant, both require a smart phone with active internet connection. The most popular example of E-Wallet is PayPal.

After registering for E-Wallet you need to link your credit card or debit card with your E-Wallet id. You can use E-Wallet for fund transfer or online shopping. It is simplest cashless method.

### **6. Mobile Wallets**

The next cashless payment method is a mobile wallet. You do not need a debit card, credit card or internet banking password for making payment using a mobile wallet. Just load money in your wallet via IMPS and use it on the move. You can download mobile wallet app from play store. Few examples of mobile wallets are Paytm, PayUmoney, MobiKwik, etc.

### **7. UPI Apps**

UPI is a mobile payment system which allows you to do various financial transactions on your smartphone. UPI allows you to send or receive money using virtual payment address without entering bank information. Merchants can enroll with banks to accept payments using UPI. Like in the case of a PoS machine, the merchant would require a current account with a bank to accept UPI payments. The examples of few UPI Apps are SBI Pay, Union Bank UPI App, Phonepe, etc.

### **8. Gift Card**

The next cashless payment method is a gift card. Gift card is a readymade card and can be purchased from a merchant or from the bank. The gift card is loaded with a fix cash amount you can purchase any item from the specific vendor by using a gift card.

### **9. Aadhaar Enabled Payment System**

Aadhaar Enabled Payment System (AEPS) is one of the best cashless payment methods. AEPS is like Micro ATM it uses smartphone and a finger-print scanner for the transaction. In order to use this facility, it is mandatory to link your Aadhaar card to your bank account. You can use AEPS in order to perform transactions like Aadhar to Aadhaar fund transfer, Cash withdrawn, Cash deposit, etc.

### **10. Unstructured Supplementary service Data**

You can use USSD cashless option if you don't have a smartphone or internet connection. Unstructured Supplementary Service Data is mobile banking service. From any mobile phone, you can dial \*99# and use this service. You can do all these things which are available to a person with smartphone and internet connection. Almost including SBI, ICICI, BOB, Axis Bank and PNB supports USSD payment option.



### **Advantages of cashless transactions**

There are several reasons why the government and the RBI bring up measures to promote cashless transaction economy. Besides convenience, digital transaction gives more scope for recording of transactions and in this way it is a first step against the spread of unaccounted money or black money. Secondly, the problem of counterfeit notes can also be avoided when payment is settled digitally.

### **Convenience**

The ease of conducting financial transactions is probably the biggest motivator to go digital. You will no longer need to carry wads of cash, plastic cards, or even queue up for ATM withdrawals. It's also a safer and easier spending option when you are travelling. The benefits are enormous if you leave out the low-income group, which will face a huge challenge. For the rest of the country, it is constructive and simple. It will be especially useful in case of emergencies. The freedom to transact whenever and wherever you want. You don't have to be physically present to conduct a transaction or be forced to do so only during office hours.

### **Discounts**

The recent waiver of service tax on card transactions up to Rs 2,000 is one of the incentives provided by the government to promote digital transactions. This has been followed by a series of cuts and freebies. It's a good time to increase your savings if you take advantage of these. For instance, 0.75% discount on digital purchase of fuel means that the petrol price in Delhi at Rs 63.47 per litre can be brought down to Rs 62.99/l with digital payment.

Similarly, saving on rail tickets, highway toll, or purchase of insurance can help cut your costs. Add to these the cash back offers and discounts offered by mobile wallets like Paytm, as well as the reward points and loyalty benefits on existing credit and store cards, and it could help improve your cash flow marginally.

## Tracking spends

If all transactions are on record, it will be very easy for people to keep track of their spending. It will also help while filing income tax returns and, in case of a scrutiny, people will find it easy to explain their spending. Besides the tax, it will have a good impact on budgeting.

## Budget discipline

The written record will help you keep tabs on your spending and this will result in better budgeting. Various apps and tools will help people analyse their spending patterns and throw up good insights over a couple of years. Controlled spending could also result in higher investing. If the same amount of cash does not flow back into circulation and people continue to use mobile wallets and cards, it is also likely to bring down the latte factor. This means that the Rs 10 you spent on candy or chips, or that regular cup of coffee office is likely to take a hit since you will be short of loose change and smaller currency notes. There's a lesser chance of budgetary leaks and unaccounted for spends sneaking into your budget at the end of the month.

## Lower risk

If stolen, it is easy to block a credit card or mobile wallet remotely, but it's impossible to get your cash back. "In that sense, the digital option offers limited security," says Pai. This is especially true while travelling, especially abroad, where loss of cash can cause great inconvenience. Besides, if the futuristic cards evolve to use biometric ID (finger prints, eye scan, etc), it can be extremely difficult to copy, making it a very safe option.

## Small gains

It may not seem like much of an advantage, but being cashless makes it easy to ward off borrowers. Another plus is that you can pay the exact amount without worrying about not having changed or getting it back from shopkeepers.

**Go digital, get discounts** **Service tax:** Waiver of service tax of 15% on digital transactions up to `2,000. **Fuel:** 0.75% discount on digital purchase of fuel through credit/debit cards, e-wallets or mobile wallets. **Rail tickets:** 0.5% discount on monthly and seasonal suburban railway tickets from 1 January 2017. Online rail ticket buyers get up to `10 lakh free accident insurance too. **Rail catering:** 5% discount on digital payments for railway catering, accommodation, retiring rooms, etc. **Highway toll:** 10% discount on NH toll payment via RFID or fast-tags in 2016-17. **Insurance:** 10% discount by government general insurers on premium paid online via their portals. 8% discount on new LIC policies bought online via its site. **POS:**



Rs 100 a month is the maximum rent that PSU banks can charge for PoS terminals. **Rupay:** Kisan credit card holders to get RuPay Kisan cards.

### **Difficulties of cashless transactions Higher risk of identity theft**

The biggest fear is the risk of identity theft. Since we are culturally not attuned to digital transactions, even well-educated people run the risk of falling into phishing traps. With the rising incidence of online fraud, the risk of hacking will only grow as more people hop on to the digital platform. Besides, the latest move by the government to remove the two-factor authentication process for online transactions up to `2,000 will not help. Irrespective of the size of transaction, the absence of this additional layer of security will expose thousands to the risk of identity theft. Another weak link is the inadequate redressal mechanism. With the poor redressal system in India, imagine what a poor rickshaw puller will do if he has his Aadhaar ID stolen? Given the tedious process and poor grievance redressal, people will have no easy recourse if they lose money online. There is no stringent legal process to deal with this kind or scale of fraud. Add to it the mass identity theft from banks' or companies' databases and it can turn into a financial nightmare akin to the data breach in the Indian banking system in October this year.

### **Losing phone**

Since you will be dependent on your phone for all your transactions on the move, losing it can prove to be a double whammy. It can not only make you susceptible to identity theft, but you could also be rendered helpless in the absence of physical cash or any other payment option. This can be especially problematic if you are travelling abroad or in smaller towns or villages with lack of banking infrastructure or other payment options. Another drawback is that you need to keep your phone constantly charged. If the phone dies on you, you will be stranded, particularly if you are in the middle of an important purchase or dealing with an emergency.

### **Difficult for tech-UNSAVVY**

India has a low Internet penetration of 34.8%(2016), according to the Internet Live Stats, and only 26.3% of all mobile phone users have a smartphone (2015), as per Statistical figures. Besides the practical difficulty of going digital, a bigger block is the psychological shift. You are suddenly jumping three generations to the digital medium. It's a problem for the older people, who may suddenly find themselves locked out of their accounts if they can't download an app or don't have cash. The digital medium may prove a challenge for the tech-unfriendly

people, who will need more time to adapt or the availability of other options to conduct transactions.

### **Overspending**

While there is no denying the convenience of card or mobile wallet transactions, it could open a spending trap for an unsuspecting population. According to behavioural finance theorists, the pain of parting with money is felt more acutely if you use physical cash instead of a card. Hence, using cash instead of cards or mobile wallet acts as a natural bulwark for people who find it difficult to control their spending. This is the reason that people could end up overspending, throwing their budgets into disarray.

Besides, a high penetration of the digital payment system is contingent on the fact that the same amount of cash does not come back into circulation. If it does, people are more likely to switch back to the former ease of using cash as it is a habit that they may find difficult to break.

### **Conclusion**

With limited cash in hand and an indefinite crunch in sight, most people are rushing to cashless transactions. Digital transactions bring in better transparency, scalability and accountability. The new move will compel more merchants to accept digital money. Cash may no longer be king. While you wait for the serpentine queues at ATMs to peter out and currency notes of Rs 100 denomination to become easily accessible again, the adoption of digital payment solutions is picking up at a furious pace. Everyone from the neighborhood vegetable vendor to the chai and bhelpuri-wala is embracing digital payment solutions to tide over the cash crunch. ET Wealth conducted an online survey to find out the level of adoption of digital payment solutions and user habits. The findings reveal that while people are getting comfortable with cashless payments, some mindset issues are holding back many from embracing the newer platforms. The findings also suggest that the usage habits of those who have taken to cashless modes could be exposing them to security threats.

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# The Demonetization Move in India: A Key Issue Threatening Economic Output

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## Abstract

The present research paper is a focus on the decision made by the Prime Minister of India Narendra Modi to demonetise 500- and 1000-rupee banknotes in the year 2016 and its impact on Indian Economy. Modi declared that use of all Rs.500 and Rs.1000 banknotes of the Mahatma Gandhi Series would remain invalid past midnight. He also announced the issuance of new Rs. 500 and Rs. 2000 banknotes of the Mahatma Gandhi New Series in exchange for the old banknotes. The long queues of people standing outside a bank still linger in our minds to exchange Rs. 500 and Rs. 1000 banknotes on 10<sup>th</sup> November 2016. On 8<sup>th</sup> November 2016, the Indian Government made the announcement about the demonetisation of all Rs. 500 (US\$7.80) and Rs. 1,000 (US\$16) banknotes of the Mahatma Gandhi Series. The government claimed that the decision has been made to restrict the silhouette economy and break down on the use of illicit and counterfeit cash funding illegal activity and terrorism. All of a sudden, the decision is made that causes the prolonged cash shortages in the couple of weeks and months creating commotion in the Indian economy. It immensely created a threatening economic output as well. The people thus tolerated the effects of demonetization and GST in the name of *Achche Din Aayenge*. Is the demonetisation a giant requirement of the Government of India? The question baffles all. In economic terms, has it been a magnificent move of the government to cope with a globalized economy?

**Keywords :** PM Narendra Modi, demonetisation, terrorism, Rs. 500 and Rs. 1000 banknotes, economic

### **Research Paper**

The government's policy caused a huge cash shortage, with people having to spend many days standing in ATM lines trying to withdraw their own money. Some even died in the process.

(<http://www.bbc.com/news/world-asia-india-41100610>)

After the announcement, the BSE SENSEX and NIFTY 50 stock indices fell over six percent on the day. Because of the demonetisation, the country faced severe cash shortages with severe effects across the economy. People suffered a lot to exchange their bank notes standing in lengthy queues. It also caused several deaths of people rushing to exchange cash. The move received support from several bankers and some international commentators. Some also criticized it as poorly planned and unfair practice at that moment.

By the end of August 2017, 99% of the banned currency was deposited in banks, leaving only around Rs.14,000 crore of the total demonetised currency discarded.

([https://en.wikipedia.org/wiki/2016\\_Indian\\_banknote\\_demonetisation](https://en.wikipedia.org/wiki/2016_Indian_banknote_demonetisation))

In addition, international airports were instructed to facilitate an exchange of notes amounting to a total value of Rs. 5,000 for foreign tourists and out-bound passengers. Cash withdrawals from bank accounts were restricted to Rs. 10,000 per day and Rs. 20,000 per week per account from 10 to 13 November. This limit was increased to Rs. 24,000 per week from 14 November 2016. Under the revised guidelines issued on 17 November 2016, families were allowed to withdraw Rs. 250,000 (Rs. 2.5 lakh) for wedding expenses from one account provided it was KYC compliant. The rules were changed for farmers who are permitted to withdraw Rs. 25,000 per week from their accounts against crop loans.

A Central Bank's report released in August 2017 stated that 99% of the Rs. 500 and Rs. 1000 notes that were demonetised returned to the banking system. Therefore, the government failed in its aim of purging black money from the economy. India's Prime Minister Modi, had said that due to demonetisation, corrupt officials, businessmen and

criminals — popularly believed to hoard large amounts of illicit cash — would be stuck with “worthless pieces of paper”.

([https://en.wikipedia.org/wiki/2016\\_Indian\\_banknote\\_demonetisation](https://en.wikipedia.org/wiki/2016_Indian_banknote_demonetisation))

Vivek Kaul, the economic analyst opines in a BBC article that “demonetisation had been a failure of epic proportions.”

Finance Minister Arun Jaitley said that demonetisation would clean the complete economic system, increase the size of economy and revenue base. He mentioned the demonetisation along with the upcoming Goods and Services Tax (GST) as “an attempt to change the spending habit and lifestyle.”

([https://en.wikipedia.org/wiki/2016\\_Indian\\_banknote\\_demonetisation](https://en.wikipedia.org/wiki/2016_Indian_banknote_demonetisation))

Anna Hazare, Indian social activist considers demonetisation as a revolutionary step. The international response was positive which saw the move as a bold crackdown on corruption. International Monetary Fund (IMF) issued a statement supporting Modi’s efforts to fight corruption by the demonetisation policy. Chinese state media *Global Times* appreciated the move and termed it as “fierce fight against black money and corruption.” Jyrki Katainen, Former Prime Minister of Finland and Vice-President of European Commission opined about the demonetisation as a transparent move which strengthens Indian economy. In the words of Justin Rowlett, BBC’s South Asia Correspondent, it is the move for its secrecy and success. He elaborated on the rationale behind demonetisation.

The Indian Supreme Court while hearing one among a slew of cases filed against the sudden demonetisation decision in various courts, observed that it “appears to be carpet bombing and not surgical strike” which government repeatedly claims it to be.

([https://en.wikipedia.org/wiki/2016\\_Indian\\_banknote\\_demonetisation](https://en.wikipedia.org/wiki/2016_Indian_banknote_demonetisation))

To Kaushik Basu, Former Senior Vice-President and Chief Economist of the World Bank, considered it a ‘major mistake’ and expressed his view that the ‘damage’ is possibly much greater than any possible benefits. However, Pronab Sen, former Chief Statistician and Planning Commission of India member, called it a “hollow move” since it didn’t have any goals

of tackling black money or fake currency. Prabhat Patnaik, a former professor of economics at the Jawaharlal Nehru University, Delhi considered the move as ‘witless’ and ‘anti-people’. Thus, demonetization as a move was criticized severely as it caused much hardship to common people.

Demonetisation is a situation where the Central Bank of the country (Reserve Bank in India) withdraws the old currency notes of certain denomination as an official mode of payment.

(<https://timesofindia.indiatimes.com/topic/Demonetisation>)

Deepak Parekh, Chairman of HDFC appreciated the decision to ban the Rs. 500 and Rs. 1000 notes. He opined that the move derailed the economy expressing skepticism about its outcome. To Rajiv Bajaj, an Industrialist criticised the demonetization for both the wrong execution and the concept of demonetization.

On 8 November last year, the Modi government decided to demonetise 500 (\$7; £6) rupee and 1,000 rupee notes, which were worth 15.44tn rupees in total. The idea was to target both counterfeit currency and "black money", or unaccounted wealth, the prime minister told the nation. This was backed up by the government press release accompanying the decision. Black money is essentially money that has been earned but on which taxes haven't been paid.

(<http://www.bbc.com/news/world-asia-india-41100610>)

A survey records demonetization situation as the worst one as eighty-three percent of people being unable to withdraw money in Hyderabad, while in Pune, the figure was sixty-nine percent. Several people were also reported to have died from standing in queues for hours together to exchange their old banknotes. Deaths were also attributed to lack of medical help due to refusal of old banknotes by hospitals.

In addition, Mamata Banerjee, Arvind Kejriwal and Pinarayi Vijayan, the Chief Ministers of several Indian states have severely criticized demonetization. It resulted into the major protests against the decision in their states and in parliament. By and large, the move to demonetise and attempt to hinder black money was appreciated, but the manner in which it was

carried out by causing hardships to common people was strongly criticized. Several government ministers had declared before the demonetisation that they were holding large amounts of cash. This led to speculation about whether and when the ministers had deposited the cash they held.

As the latest Economic Survey of the government of India points out : “India's demonetisation is unprecedented in international economic history, in that it combined secrecy and suddenness amidst normal economic and political conditions. All other sudden demonetisations have occurred in the context of hyperinflation, wars, political upheavals or other extreme circumstances.”

(<http://www.bbc.com/news/world-asia-india-41100610>)

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# Online Payment System on E-Commerce in India

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## Introduction

The most popular definition of E-Commerce is based on the online perspective of the conducted business. E-commerce provides the capability of buying and selling products, information and services on the Internet and other online environments. As for any trading activity, the issue of safe and reliable money exchange between transacting parties is essential. In an e-commerce environment, payments take the form of money exchange in an electronic form, and are therefore called Electronic Payment

The merchant sell the goods to customer and customer pay the price with the help of E-Payment system .In offline world the payment are made with cash or through cheque.In online sales accepting payment is a curial aspect of the transaction

## Research Methodology

This studied have been carried out on Online Payment System. Data used in this study collected basically from the secondary sources. Primary data also collected through personal interview method conducting the person who is supposed to have knowledge about the topic. Secondary data have been collected from various sources including websites, newspapers, various published and unpublished article about pre-primary education etc.

## What is Online Payment?

Online paymentis when the customer or buyer makes his payment transactions for the goods or services purchased with the use of the Internet – to be online. “This typeof payment lowers the costs for businesses as the more payments made electronically(online or offline) the less they spend for paper and postage. Also, it helps on improvingcustomer retention as he is more likely to return to the same e-commerce site where his other information has already been entered and stored.” With online payment, it is notnecessary for the payer to be in a long queue as payment is made in just a click of amouse. Additionally for example, almost all the banks

have an online bill paymentservice where it is offered free of charge and is available all days of the week or 24/7shall I say.

### **Online Payment Methods**

- 1) **Credit Cards:-**This has been the dominant form of online payments when purchasing online. However, many people still resist the appeal and simplicity of credit-card transactions due to security concerns. Until now there are a high risk for stolen cards, identity theft thus customers fear credit-card fraud by merchants and other parties. Yet, there are some credit card issuers who have features that provide online fraud protection.
- 2) **Virtual Credit Cards:-**This virtual credit card is an innovation in online credit cards. Credit card issuer provides a special number that can be used in place of the regular credit card number to make online purchases. This allows the user to use a credit card online without disclosing the actual number. Additionally, the user gives a transaction number instead of the credit card number – example is *Private Payment* by American Express.
- 3) **Debit Cards:-**With the debit card, the money for a purchased item comes directly out of the holder's checking account. The actual transfer of funds from the holder's account to the merchant's takes place within 1 or 2 days
- 4) **Smart Cards:-**This card looks like any plastic payment card but it has a microchip embedded on its face. This can hold more information than ordinary credit cards with magnetic strips. Rather than holding only card's information, it can also hold information for such as healthcare, transportation, identification and banking, and others. This enables information for different purposes to be stored in one location. The smart card can be used to make purchases over the Internet with the use of a card reader to read the card details necessary for payment and secure sending of data over the Internet
- 5) **E-Checks:-**An e-Check is an electronic version or representation of a paper check. It contains the same information as a paper check and based on the same legal framework. It works the same as the paper check however they are faster, cheaper and more secure. To pay by e-check, an account number is keyed in and together with the bank's routing number. The vendor authorizes payment through the customer's bank, which then either initiates an electronic funds transfer (EFT) or prints a check and mails it to the vendor
- 6) **Peer-to-Peer Payments:-**P2P payments are one of the fastest-growing online payment schemes as they enable the transfer of funds between two individuals. PayPal is one of

the first companies to offer this service. A user will open an account with the username, password and also an e-mail address as well as the payment card or bank account number. Then the user adds funds to their account and once account has been funded, the money can be sent to the recipient who also has an account at PayPal, for instance. The e-mail that is sent to the recipient contains a link back to the service's (PayPal) website and can transfer the money from the PayPal account to their credit card or bank account.

### **The following steps are carried out for payments during online procedures**

1. The payment procedure is initiated by the applicant. The applicant selects a bank.
2. A payment request is sent to the bank that contains an XML message with a redirection URL that points to the government application. In response, the bank opens a session and forwards the user to the given URL.
3. The authority's application forwards the applicant on to the online banking application of his bank. After he has been authenticated, the payment transaction is carried out.
4. Before the transaction is carried out, the bank checks if there is still a connection open between the bank and the authority.
5. After the connection is confirmed by the authority, the bank carries out the money transfer.
6. A confirmation message is sent to the authority stating whether the payment was successful or not.
7. The authority responds with an acknowledgement message.
8. The payment process is finalized and the applicant is referred back to the authorities application.

### **Limitations of traditional Payment Systems in the context of online Payments**

Several limitation of traditional payment system in the context of e commerce can be outlined.

- a) Lack of usability
- b) Lack of security
- c) Lack of eligibility
- d) High usage costs for customers and merchants

- e) Lack of efficiency
- f) Lack of consistency

## Conclusion

Technology has inarguably made our lives easier. It has cut across distance, space and even time. One of the technological innovations in banking, finance and commerce is the Online Payments. Online Payments (e-payments) refers to the technological breakthrough that enables us to perform financial transactions electronically, thus avoiding long lines and other hassles. Online Payments provides greater freedom to individuals in paying their taxes, licenses, fees, fines and purchases at unconventional locations and at whichever time of the day, 365 days of the year. On the basis of present study, first remark is that despite the existence of variety of e-commerce payment systems, credit cards are the most dominant payment system. This is consequences of advantageous characteristics, most importantly the long established networks and very wide users" base. Second, alternative e-commerce payment systems are some countries are debit cards. In fact, like many other studies, present study also reveals that the smart card based e-commerce payment system is best and it is expected that in the future smart cards will eventually replace the other electronic payment systems. Third, given the limited users bases, e-cash is not a feasible payment option. Thus, there are number of factors which affect the usage of e-commerce payment systems. Among all these user base is most important. Added to this, success of e-commerce payment systems also depends on consumer preferences, ease of use, cost, industry agreement, authorization, security, authentication, non-refutability, accessibility and reliability and anonymity and public policy.

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# Electronic Commerce Impact and its Role in Life

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## Abstract

Information progress has contributed to the need for electronic payment solutions as the types of services provided electronically, particularly government ones, all require payment of fees online using a system. With the expansion of the use of these systems and the demand of consumers from many categories and sectors of the purchase, commercial banks and specialized companies are raving for electronic payment facilities in providing the features and incentives that contribute to meet the needs of all customers.

This research discusses the types of electronic payment methods in terms of technology and the conclusion of their advantages, disadvantages and security, and determines the best payment method that can be used in banks and companies. It is worth mentioning that the electronic payment tool has emerged in conjunction with the emergence of e-commerce, so it is closely related to information and communication technology, so that electronic payment methods become one of the components of e-commerce, which completes its electronic procedures from sale and purchase. Electronic payment methods Prepaid cards Debit Card Debit Card is issued by a bank in which the customer opens an account. This method is a debit balance.

**Word keys:** Electronic payment, e-commerce

**Research problem:** What is the role of electronic payment to achieve electronic commerce? What is the general concept of electronic commerce and its importance and types?

## Hypotheses

There is a role of electronic payment to achieve electronic commerce

There are defects in electronic payment that can be avoided

Criteria for selecting payment methods must be available

### **Significance of the paper**

The importance of research is highlighted by the fact that e-commerce is important today as e-commerce includes all commercial transactions, from the sale and purchase of goods and services, and is considered by economic analysts as a new engine for economic development and it is an effective and quick way to conclude transactions and products and services and promote them

### **Objectives of the paper**

The research objectives are:

- Explain the concept of e-commerce and this is because the term is modern.
- We will also give a look at its development and importance.
- To identify the types of payment methods available in electronic commerce.
- It is also important and both positive and negative.

### **Research Methodology**

Descriptive approach: in order to describe and interpret and analyze the search results will be performed by the researcher to test the research hypotheses

#### **Introduction**

In this era, human life is characterized by many activities related to information technology and communication, which are characterized by the speed and abundance of information. Among the results of this development is the emergence of new terms that transcended the physical and geographical boundaries and abolished all restrictions that limit the freedom of man to exercise and among these new terms is the term e-commerce, which has become widely used by many individuals.

#### **Forms of e-commerce**

We can summarize forms of e-commerce in the following elements:

- E-Business Unit between Business Unit:
- This type of e-commerce uses businesses with each other. The business makes contacts to make orders to its suppliers using the telecommunications network and information technologies. It can also receive invoices and make payments via this network using these technologies. This form of trade is the most common At the present time, both locally and globally. Qandilji, Amer(2009)

- E-commerce between business and consumer unit:
- With the advent of online shopping or so-called online shopping centers, the consumer has the ability to purchase and pay for the value of the goods available through credit cards, electronic banks, or by money when the item is received.
- E-commerce between the business unit and the local government administration: By expanding the business activity of the business units, they can not cover all their administrative transactions on time. Therefore, e-commerce was used to cover the transfers, such as paying taxes and various transactions between companies and entities Local and government.
- E-commerce between consumers and local and government administration: This form of electronic commerce is newly established and not expanded and it organizes many activities, including electronic tax payment.

### **Problems of electronic commerce**

Despite the many advantages offered by e-commerce as mentioned above, there are some obstacles in the way of the expansion of the introduction in a way that makes it a modern alternative to traditional trade, and these obstacles due to the nature of this type of trade itself, including due to the circumstances As outlined below: Qandilji, Amer(2009)

- 1 The predominance of the risk factor in e - commerce due to the lack of confidence in dealing in this way, whether to grandmother or to facilitate manipulation of transactions conducted by it Bilhashmi Gilali Tariq(2001)
- 2 Insufficient security elements for means of payment.
- 3 Difficulty of dealing in many cases due to the multiplicity of standard standards applied by different countries in this regard.
- 4 the fear of penetrating the commercial sites by the hackers of the Internet ,,.,.,.,, which is happening now widely until it recently reached the penetration of the position of Microsoft itself and the resulting huge material losses.

### **Definition of electronic payment**

E-payment is an integrated system of e-government programs designed to facilitate secure e-payment. The system operates under a set of rules and laws that guarantee the confidentiality of insurance and protection of purchase procedures and ensure access to the service. The electronic payment feature supports major credit cards as well as e-currency and direct debit from the account.



**Advantages of electronic payment methods**

- For the owner of the card: Check the electronic payment methods of the owner of several advantages, the most important of which is ease of use, as it provides security instead of carrying paper money and avoid theft and loss, and the owner of the opportunity to obtain free credit for a specified period, and also able to complete transactions immediately upon mentioning the card number.
- For the trader: The most powerful guarantee of the rights of the seller, contributes to increased sales and has removed the burden of follow-up of customers' debts as long as the burden lies with the bank and exporting companies. Yaissi Farid(2005)
- For its source: Interest, fees and fines are profits from banks and financial institutions. City Bank earned \$ 1 billion from credit card holders in 1991.

**Disadvantages of electronic payment methods:**

- For the owner of the card: the risks arising from the use of these means to increase borrowing and spending beyond the financial capacity, and not pay the cardholder in time, the value of his name on the black list.

- For its source: The most important risk facing its issuers is the extent to which cardholders pay for debts due to them and the source bank bears the expenses of their loss.

**Conclusion**

E-commerce has developed at a tremendous pace, with the development of its support from the knowledge-based economy and the information and communication technology that underpin it.

E-commerce, in turn, has solved many of the problems of traditional trade and created its own commodities. It provides fast and wide access to business information all over the world and facilitates the interaction of all economic clients, suppliers, All the dealers around the world, and gave small companies the opportunity to achieve a global competitive advantage without the need to create a huge building and incur large costs, the possession of a computer and the participation in the bank has a sophisticated payment system helps people to reach what was previously cost them A pro-big effort.

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# A Study of Online Shopping Security Challenges and its Solutions

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## **Abstract**

E-Commerce refers to the exchange of goods and services over the Internet. The shopping through ecommerce has penetrated all segments of goods ranging from groceries to electronic goods and even vehicles. Rapid growth in mobile computing and communication technologies has facilitated popularity of e-commerce. The main impediment in growth of e-commerce is cyber fraud and identity theft. Hackers are people who carry out the cyber crime. Hence, poor security on e-Commerce web servers and in users computers is core issue to be resolved for rapid growth of e-commerce. This paper provides directions for e-commerce security so as to improve customer confidence in e-commerce shopping.

**Keywords:** e-Commerce, Security, Threats and Vulnerabilities, SQL Injection, DDoS, SSL, Firewall, Session Hijack, Viruses.

## **I. Introduction**

Online shopping or exchange of goods or services over the Internet is as old as Internet. It is gaining popularity and has tremendous scope for growth as computing devices and communication technologies are making rapid advancements and becoming cost effective day by day. Mobile computing has enormous potential to make e-commerce a most popular mode of shopping. Entrepreneurs want to provide quality of service to customers and maintain customer's trust by ensuring high availability, sufficient capacity, and satisfactory performance for their e- Commerce Web systems. Security is main concern of customer that is hampering the rapid

growth of e-commerce transactions. Security issues such as destruction, disclosure, and modification of data, denial of service, fraud, waste, and or abuse of network resources must be resolved in order to build trust of customers in the e-commerce. e- Commerce environments consist of front-end web pages, back-end databases, web servers, and internal network

infrastructure. The vulnerable areas of an e-commerce system must be identified and resolved to reduce the risk of security threats.

### **Iii: Technical Components Of E-Commerce Security**

There are four components involved in Ecommerce Security: client software, server software, the server operating system, and the network transport. Each component has its own set of issues and challenges associated with securing them:

- Client software is becoming increasingly more security-focused; however single-user desktop operating systems historically have had no security features implemented. Ecommerce software that relies on the security of the desktop operating system is easily compromised without the enforcement of strict physical controls.
- Server software is constantly under test and attack by the user community. Although there have been cases of insecurities, a system administrator keeping up with the latest patches and vendor information can provide a high degree of confidence in the security of the server itself.

### **Iv. E-Commerce Security Tools**

- Firewalls – Software and Hardware
- Public Key infrastructure Encryption software
- Digital certificates
- Digital Signatures
- Biometrics – retinal scan, fingerprints, voice etc
- Passwords

### **V. Secure Online Shopping Guidelines**

1. Research the Web Site before You Order
1. Do business with companies you already know. If the company is unfamiliar, do your homework before buying their products. If you decide to buy something from an unknown company, start out with an inexpensive order to
2. learn if the company is trustworthy. Reliable companies should advertise their physical business address and at least one phone number, either customer service or an order line.
3. Research the Web Site's Privacy and Security Policies
4. Every reputable online Web site offers information about how it processes your order. It is usually listed in the section entitled —Privacy Policy. You can find out if the

merchant intends to share your information with a third party or affiliate company. Do they require these companies to refrain from marketing to their customers? If not, you can expect to receive —spam (unsolicited email) and even mail or phone solicitations from these companies.

2. **Be Aware of Cookies and Behavioral Marketing**
5. Online merchants as well as other sites watch our shopping and surfing habits by using "cookies," an online tracking system that attaches pieces of code to our Internet browsers to track which sites we visit as we search the Web."Persistent" cookies remain stored on your computer while "session" cookies expire when you turn the browser off.
3. **What's Safest: Credit Cards, Debit Cards, Cash, or Checks?**
6. The safest way to shop on the Internet is with a credit card. In the event something goes wrong, you are protected under the federal Fair Credit Billing Act. You have the right to dispute charges on your credit card, and you can withhold payments during a creditor investigation.
4. **Keep Your Password Private**
7. Many online shopping sites require the shopper to log-in before placing or viewing an order. The shopper is usually required to provide a username and a password.
8. Never reveal your password to anyone. When selecting a password, do not use commonly known information, such as your birthdate, mother's maiden name, or numbers from your driver's license or Social Security number. Do not reuse the same password for other sites, particularly sites associated with sensitive information. The best password has at least eight characters and includes numbers and letters. Read our Alert "10 Rules for Creating a Hacker Resistant Password" to help you choose a safer password.

## **VII. Conclusion**

E-commerce is widely considered the buying and selling of products over the internet, but any transaction that is completed solely through electronic measures can be considered e-commerce. Day by day E-commerce and M-commerce playing very good role in online retail marketing and peoples using this technology day by day increasing all over the world. E-commerce security is the protection of e-commerce assets from unauthorized access, use, alteration, or destruction. Dimensions of e-commerce security; Integrity: prevention against unauthorized data modification, No repudiation: prevention against any one party from renegeing

on an agreement after the fact. Authenticity: authentication of data source. Confidentiality: protection against unauthorized data disclosure. Privacy: provision of data control and disclosure.

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## A Comparative Study of Google Tez and Paytm

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### Abstract

this paper is all about the comparison of digital payment through the mobile application such as Google Tez and Paytm. In this paper we compared both apps by advantages.

**Keywords-** UPI, Tez, Paytm

### Introduction

India is rapidly turning into a lucrative market for the payment sector. With the demonetization back in November 2016, the industry grew 55% in 2016–2017. As per a study by Boston Consulting Group, the **Indian payment industry will be worth \$500 billion by 2020** and that accounts a whopping 15% of the country's total GDP!

Nowadays apps like Paytm wallet or Tez is gearing up to match the shift in consumer habits and enhance infrastructure. Hence it can be predicted by 2022, 80% of India's urban population is expected to adopt digital payments. With an estimated growth of the infrastructure and 5 million Point of Sale (PoS) machine by December 2017–70% of the retail will be adopting the apps like Paytm wallet by 2022.

Google Tez is based on UPI that could further power the use of apps like Paytm or Google Tez. UPI surpassed all the mobile wallet apps in the area of the amount of money exchanged. As per RBI, a staggering sum of 41.3 billion INR has been exchanged using UPI platform in August compared to 27.2 billion with mobile wallet apps. But as per transaction UPI scores 16.6 billion and mobile wallet apps scores 89.7 million.

The direct comparison between these two apps is not easy because both of them work differently. Although both enable e-payments, the way they do so is different. So, before

knowing why to use Google Tez or why Paytm is better, first needs to have a quick look at how the two apps work. To this, here working is elaborated as:

**a. Google Tez uses UPI**

In Google Tez to make payments from where to get the money need not to bother. The Google Tez is not going to store your money, at least not right now. Instead, Google Tez connects to bank account using Indian government Unified Payment Interface (UPI), which is an interface that allows money to be moved from almost any bank account in India to any other account immediately and in real-time. There are over 50 banks that are part of UPI, including big banks like SBI, HDFC and ICICI. If you have an account with any of these banks, you can connect that account to the Google Tez app. Then, whenever you want to make a transaction you can specify the details of recipient and if your account has money, the payment will be made.

**b. Paytm is an e-wallet**

But Paytm is different. It doesn't use UPI, or at least primarily it doesn't. When you user installs Paytm, he or she also has to create a Paytm account. This account then becomes an e-wallet where certain amount of money (the monthly limit for regular users is Rs 20,000) can be kept. This e-wallet, once the money is gone, has to be recharged using a debit card, credit or through Paytm authorised recharge points.

When you make the payment through Paytm, the money doesn't move from a bank account to a bank account. Instead, it moves from a Paytm e-wallet to other Paytm e-wallet. Of course, this money can then be moved to a bank account but a Paytm user has to follow a separate procedure for that.

### **Advantages of Google Tez**

As you can see, given the way it works, the Google Tez has a number of advantages. It also has technology lead in my opinion given the fact that probably some of the smartest engineers in the world will be working on it. It's for nothing that Google is the world's topmost technology company. It does solve some seriously pesky problems and its product managers are among the best in the world. For now, here is some of the advantages that Google Tez has.

- Google Tez connects directly to bank accounts so there is no moving-money-around business. Also, you don't have to again and again recharge your e-wallet. If you have the money in your bank account, you have it Tez.
- Google Tez has a much simpler user interface.



- Some of the Google Tez features are delightful and useful. The Cash mode, which uses sound and proximity to move money without requiring a bank account number or phone number, is a cleverly designed feature. Similar is the way transactions and chats between people carrying out transactions are merged. In a way paying or receiving money through Google Tez is like chatting on WhatsApp.
- As noted earlier, Google Tez probably has a technology lead in terms of infrastructure behind it. Google is also a company here with more money. And that may turn out to be advantageous to Tez in the future. Although, it must be noted that even if Google has a technology lead, it is going to be limited by the infrastructure that powers UPI. That infrastructure is not managed by Google.

### **Advantages of Paytm**

- Unlike Google Tez, which relies on UPI and consequently third-party services and infrastructure, Paytm can control user experience from top to bottom. This may help Paytm offer much better and seamless experience compared to what Tez can manage.
- Paytm has a first-mover advantage. It is widely known and widely accepted. In other words, you can really make a payment to a sabziwallah with Paytm nowadays. It is more useful.
- Although e-wallets need to be recharged from time-to-time, they have an advantage when it comes to safety and security. Even if there is a breach, your bank account will not be compromised. You will probably end up losing only the money that was in the e-wallet. In case of a breach in an app like Tez or BHIM or in the UPI framework, there is a risk of your bank account getting compromised.
- You can use a credit card with Paytm. In other words, you can borrow money and use it through Paytm. Although not ideal, there might be situations when you have to use a credit card. Tez, on the other hand works, only if you have money in your bank account.

### **Conclusion**

Given the fact that both Tez and Paytm work differently, ideally, it is all between maintaining an e-wallet and making payments from the bank account directly. For some people the UPI method, making payments directly, is going to work better. For others, the e-wallet option will be better. Then there is also the question of using a credit card.

But it could be concluded that, right now Paytm has an advantage when it comes to e-payments. It is accepted at more places and is really convenient. It has more business using it and hence we can make payment at more shops and services using Paytm. The Google Tez is something new.

But on the other hand, if we primarily want an app to share money with friends or are moving money from bank accounts to other accounts, the Tez works better. Overall, UPI does seem like the future of e-payments in India. So it is possible that in future Tez, if it keeps up, may go past Paytm. But right now, Paytm is a more useful e-payments app.

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# A Study of Digital Payment System Challenges and Opportunities

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## Abstract

The Indian government has taken the back of many cash policies in order to reduce the performance of the cash system Perhaps the most prominent of these policies was to change the currency of the category Rs.500 to the category Rs.2000, It is worth mentioning that Indian society is divided into two layers, the first layer is in urban society, the second layer is in rural society, which accounts for 75% of the total Indian society, this latter society is characterized by a set of qualities that may limit the effectiveness of the cashless economy in the country side due to the high illiteracy rate, low level of awareness and education, and the negative impact on productivity of individuals, the low awareness of technological methods and the low awareness of marketing and export methods. Therefore, this paper focuses on studying the elements of the success of the cashless transaction in the rural India, the search for solutions to the challenges that may face the cashless system for achieving its objectives.

**Key Words:** Digital Payment, Cashless system.

## Objectives

- To study the digital payment system in India
- To know the challenges and opportunities of digital payment system in India.

## Challenges for Digital Payment System

1. **Approach of General Public:** People of rural India still unable to perform cashless transactions as well as they are not ready to perform cashless transactions. In India most of urban younger population trying to use digital payment system to fulfill financial transaction but elder educated people still afraid to do this type of transactions. People using smart phones and internet but when we thought or talked about digital payment

they are rejected to do transactions. These people dominated by currency and depended on cash transactions.

2. **Poor Infrastructure:** India known for agro-based economy and mofusial area, after the Independence of India, Government of India trying to push up and promote banking business in rural India, but still half of Indian villages still unbanked. As per statistics provided by World Bank on 18 ATM's available for 100000 people of India. Retailers also not prepared to install PoS for their shop.
3. **Mobile Users:** As per the data available 90 crore mobile phones actively working in India, but out these only 17% of mobiles are smart phone and only 22% of mobile users using internet on mobile, so, it is found that the compatibility of mobile phones for using digital payment system is very low and most of mobile phone users not able to use digital payment system.
4. **Internet Users:** Only 22% population of India using internet and in urban area most the representative of younger generation using internet perform basic banking utility services on mobile. Overall less than the  $\frac{1}{4}$  populations are internetes savvy, still more that  $\frac{3}{4}$  of population required to attached or literate internet to perform these transactions.
5. **Cyber Security:** Cyber security is the major challenge for digital payment system in India, recently hackers hacked the banking data all over world and most of the banking business the word suffering from this hacking problem. ATM machines and CBS system affected on large scale due to Ransom ware (Virus).
6. **Retain the Customer:** After the introduction of digital payment system, most of the mobile users or card users trying to perform financial transaction digitally, but many times this type of transactions failed, in that case customer afraid to loose their money, customer feeling unsecured to perform this type transaction again. So, it is a big hurdle to retain customers after transaction failure.
7. **Use of ATM's:** After the demonetization and induction of digital payment system Government of India issued order to Banks to issue ATM cum Debit Cards to the account holder and 22 crore Rupay Debit cards issued by the banks. But 92% of card holders using this card to only for withdrawals of cash. Indian economy is known for cash dependent economy and overall 13% of GDP value of cash currently in circulation in economy of India.

8. **Internet Connectivity:** Due to poor infrastructure of telecommunication system, still most of the part of India still detached from internet connectivity, due to this problem digital payment system not working properly. Mobile users also facing this problem of failure of digital transaction. Most of cases due poor connectivity of the internet transactions will be failed and due to this problem customer could not ready to do this transaction again. This problem affected on customer mindset negatively.
9. **PoS Machine:** PoS machine is the one the best source of e-commerce for digital payment system, but most of the merchants are not ready to install this system or they given a priority to cash transactions and another thing is that after introductions of digital payment system most of merchants in urban area trying to install this machine but due to poor internet connectivity this machine cannot working properly and in rural India most of the merchants willing not interested to install PoS machine.
10. **Lack of Knowledge for Card Utility:** Every customer of the bank has ATM or Debit card but they don't have any knowledge about card utility except withdrawal of cash or balance enquiry. They don't use this card for another purpose like online shopping, mobile or dth recharge, reservation, etc.
11. **No. of Bank Accounts:** As per the NITI Ayog statistics only 58.7% households of India having bank accounts, in other words almost half of the total adult population don't have their bank accounts.
12. **Financial Illiteracy:** 70% of Indian population dwells in rural India and as per census of 2011 almost 40% of population still illiterate and as per NITI Ayog 41.3% of adult population still bank less. So, on the basis of above statistics, it is found that half of the total adult population still not access banking services.
13. **Retailers Approach:** Most of retailers not accepting the cards because of they don't have any infrastructure and they are not ready to install this type of infrastructure. Their approach regarding digital payment system is negative.
14. These are the major challenges for digital payment system or cashless transactions in India due to this hurdles people of India or merchant are not ready to perform transactions digitally.

## Opportunities of Digital Payment System

The opportunities available for digital payment system are as follows:

1. **Stopping of Corruption:** Use of Hard cash leads to corruption, but use of digital payment system helps to reduce corruption because every transaction done through digital mode.
2. **Tax Collection:** Digital payment system promotes legal financial transaction and every legal transaction leads to collection of tax.
3. **Revenue Generation:** After the use of digital payment modes, every business transaction has been recorded and every business maintain books of accounts in fair manner (without malpractice), the result of that tax calculation and filling return will be done in time, therefore digital payment system helps to generate revenue in the economy.
4. **Employment:** Digital payment system, leads to legal financial transaction in India and helps to reduce theft of tax, result of this revenue will generate and this revenue will invest or use to create employability.
5. **Transparency:** Use of digital payment modes brought transparency in business, with the help of this every business transaction has been recorded and affect of that every business trying to maintain books of account update without malpractice. Use of this also helps to reduce black money.
6. **To create Cashless Society:** Use of digital payment system or use of modes of digital payment, it promotes the cashless transaction and leads to create cashless society. As per the statistics available 97% of population using hard cash for financial transaction. After the introduction of digital payment system Indian economy leads to create cashless society.
7. **Financial Literacy:** Promotion of digital payment system motivates the people to learn about varied banking apps or various modes available for online banking transaction. This motivation creates awareness about banking services and products, due this people of India become literate to perform banking transaction through digital mode.
8. **Cost Reduction:** Use of hard cash, leads to high maintenance cost, but after the use of digital payment system, it reduced around 80%, and also reduced in cost of

printing and distribution of currency all over country. Reduction in cost leads to revenue generation in India.

9. **Stopping Black Money:** Black money, is one of the major and burning problem of the Indian economy, due to this most of the Indian currency hold by people illegally. This is the dead currency. But after the introduction of digital payment system, use of hard cash will be reduced and all financial transaction will be done through digital mode and effect of that number of legal transaction increased and limitations comes on illegal transaction, result of that black money could not be increased.
10. **Development of Telecommunication Sector:** After the successfully progression of this system, positive effect of that seen in telecommunication system of India, use of mobile, smart phones, internet, etc. has been increased day by day and result of that, growth of this sector will be seen and opportunity of employability also been increased.
11. **Service Tax:** Every electronic financial transaction, help to generate revenue in form of service tax and it helps to Government to generate revenue and economic development.
12. **Develop Accounting Culture:** Digital payment system leads to develop accounting culture in business class because of every business financial transaction done electronically and record of all transactions easily available from bank records and result of that, it helps to every businessman to record business transaction.
13. After the demonetization and introduction of Digital Payment System Government of India, Reserve Bank of India, all commercial banks and various institutions already taken initiative to promote digital payment system in India and they trying best to spreading awareness in all over India, but still I found some challenges for going smoothly to this system even though this has some opportunities.

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## Demonetisation, Digital Payment and Cashless Society in India

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### Abstract

Demonetization is the process of withdrawal of a particular form of currency from circulation. Demonetization becomes necessary whenever there is a change in the national currency. The old unit of currency must be retrieved and replaced with a new currency unit. It involves either introducing new notes or coins of the same denomination or completely replacing the old denominations with the new denomination which is usually carried out as an ambush on the black market. In India demonetization has occurred thrice. The first was on 12<sup>th</sup> January 1946, second on 16<sup>th</sup> January 1978, and third was on 8<sup>th</sup> November 2016 Tuesday the sudden declaration to de- adaptation the high section money notes of Rs.1000 and Rs. 500 sent tremors all over the nation. Give the planning, and financial and political repercussion of the choice, many named it a financial emergency. Demonetization is trailed by remonetization to supplant the old stopped money with cash in the economy. Remonetization after demonetization is a tough assignment started by Government to make India Digital. The Digital India program is a main program of the Government of India with a dream to change India into a carefully enabled society and information economy. “Faceless, Paperless, Cashless, “is one of expressed part of Digital India.

This article has made an attempt to assess how the tool of Demonetization can be used to eradicate parallel economy. Demonetization is one of the big steps initiated by Government in addressing the various issues like black money, counterfeit currency, corruption, terrorism etc.

**Keywords:** Demonetization, Remonetisation, Indian Economy, Black Money, Tax Evasion, Swiss Bank, Corruption.

## **Introduction**

Money is the life blood of every economy. With the growth of civilization and mankind, the needs of human beings increased. In order to fulfil humans unlimited wants barter system emerged. But over a period of time, the invention of money became a strong pillar to build an economy. Money exchange appears to be more convenient than barter because it obviates the “double coincidence of wants” and is capable of sustaining relatively complex economy. Money exchange facilitates ease of doing business, facilitates taxation and national integration. All activities such as production, exchange, distribution, services etc. form an economy. It is called formal economy. An informal economy is neither economic activity/activities that is neither taxed nor monitored by Government, contrasted with a formal economy. Presence of corruption, black money, counterfeit currency, poor governance etc. promotes and establishes parallel economy.

## **Reasons of Demonetization**

- To promote a Cashless economy.
- To eradicate counterfeit currency.
- Eliminate black money.
- To combat corruption.
- To combat inflation.
- Crackdown on terrorism and Naxalism.
- To promote a cashless economy.

## **Research Methodology**

The paper is based on secondary data. The data has been collected from internet.

## **Objectives of Demonetization**

The main objectives of demonetization are:

- To eradicate black money.
- To remove counterfeit currency.
- To fight against terrorism.
- To stop money laundering activities.
- To mitigate corruption and so on.

## **Procedure for Exchange Old notes**

The Reserve Bank of India laid down a detailed procedure for the exchange of the demonetized banknotes with new Rs.500 and Rs.2000 banknotes of the Mahatma Gandhi New Series and Rs.100 banknotes of the preceding Mahatma Gandhi Series. Following are the key points:

1. Citizens will have until 30 December 2016 to tender their old banknotes at any office of the RBI or any bank branch and credit the value into their respective bank accounts.
2. Cash withdrawals from bank accounts will be restricted to Rs.10, 000 per day and Rs.20, 000 per week from 9 November 2016 till 24 November 2016.
3. For immediate cash needs, the old banknotes of value up to Rs.4000 per person can be exchanged for the new Rs.500 and Rs.2000 banknotes as well as Rs.100 banknotes over the counter of bank branches from 10 November 2016 by filling up a requisition form along with a valid ID proof.
4. All ATMs will dispense bank notes of only 50 and 100 rupee denominations.

## **What is Digital Payment?**

Digital payment is a way of payment which is made through digital modes. In digital payments, payer and payee both use digital modes to send and receive money. It is also called electronic payment. No hard cash is involved in the digital payments. All the transactions in digital payments are completed online. It is an instant and convenient way to make payments.

## **How to define digital payments?**

Payments are made using payment instruments. Cash, for example, is a payment instrument. So too are checks. However, digital payments are not one instrument but rather an umbrella term applied to a range of different instruments used in different ways. In this section, we provide some parameters for creating this definition.

### **Types of Digital Payment Methods in India**

- Banking cards
- USSD
- Aadhaar Enabled Payment System (AEPS)
- UPI
- Mobile Wallets
- Bank pre-paid cards

- Point of Sale (PoS)
- Internet Banking
- Mobile Banking
- Bharat Interface for Money (BHIM) app

### **Advantages of Digital Payments**

**Easy and convenient:** Digital payments are easy and convenient. You do not need to take loads of cash with you. All you need is your mobile phone or Aadhaar number or a card to pay. UPI apps and E-Wallets made digital payments easier.

**Pay or send money from anywhere:** With digital payment modes, you can pay from anywhere anytime. Suppose your close friend's mother fell ill at night. He called you at midnight and asked some money. Don't worry, you can send money to your friend using digital payment modes such as UPI apps, USSD or E-Wallets.

**Discounts from taxes:** Government has announced many discounts to encourage digital payments. If you use digital modes to make a payment up to Rs. 2000, you get full exemption from service tax. You also get 0.75% discounts on fuels and 10% discount on insurance premiums of government insurers.

**Written record:** You often forget to note down your cash spending. Or even if you note, it takes a lot of time. But you do not need to note your spending every time with digital payments. These are automatically recorded in your passbook or inside your E-Wallet app. This helps to maintain your record, track your spending and budget planning.

**Less Risk:** Digital payments have less risk if you use them wisely. If you lose your mobile phone or debit/credit card or Aadhar card you don't have to worry a lot. No one can use your money without MPIN, PIN or your fingerprint in the case of Aadhar. But it is advised that you should get your card blocked if you lost it. Also call the helpline of your E-wallet to suspend the wallet account to prevent anyone from using your wallet money.

### **Drawbacks of Digital Payments:**

Every coin has two sides so as the digital payments. Despite many advantages, digital payments have a few drawbacks also.

**Difficult for a non-technical person:** As most of the digital payment modes are based on mobile phone, the internet and cards. These modes are somewhat difficult for non-technical persons such as farmers, workers etc.

**The risk of data theft:** There is a big risk of data theft associated with the digital payment. Hackers can hack the servers of the bank or the E-Wallet you are using and easily get your personal information. They can use this information to steal money from your account.

**Overspending:** You keep limited cash in your physical wallet. Hence, you think twice before buying anything. But if you use digital payment modes, you have all your money with you always. This can result in overspending.

### **Future of Digital Payments:**

The future of digital payments is very bright. India is experiencing a remarkable growth in digital payments. In 2015-16, a total of Rs. 4018 billion transacted through mobile banking as compared to Rs. 60 billion in 2012-13. The percentage of the digital payments through other modes is also increasing in a significant speed.

### **There are many factors which are affecting the future of digital payments.**

- Digital revolution
- Government's support
- Convenient way to pay

### **Conclusion**

Central government's recent decision to demonetise the high value currency is one of the major step towards the eradication of black money in India. The demonetization drive will affect some extent to the general public, but for larger interest of the country such decisions are inevitable. Also it may not curb black money fully, but definitely it has major impact in curbing black money to large extent.

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## Digital Payment: Adoption, Acceptance and Changing the Game of Woman Entrepreneurs in India.

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Paithan.

### Abstract

Over the last decade, a digital revolution has been gaining ground in the business world. While physical credit cards and cash have been the dominant methods for transactions, new payment methods via QR and Near Field Communication (NFC) technology have followed. Dubbed “frictionless payments”, these digital payment methods have the potential to become a mainstay in global businesses. India has joined other countries in the digital payment revolution a lot faster than the past where we often lagged behind in adopting technology, especially in the financial sector. This is set to have a transformative impact on our country, especially as digital payments spread into rural areas. There were many developments that quietly led up to support the digital payments phenomenon. The Eighth annual Global Entrepreneurship Summit GES2017 is focusing on the role women entrepreneurs play in advancing inclusive growth, with one key area of discussion being the digital economy.

**Key Points:** Meaning of Digital Payment, different types of digital payments, adoption and acceptance of digital payment in India and also digital payments changing the game of woman entrepreneurs.

### Introduction

The pace of shift to digital payments has significantly increased with the strong move towards cashless economy. Adoption of digital payments is visible when country’s Honorable Prime Minister, Shri Narendra Modi, Money popular referred to as BHIM, two months after announcing demonstration and this mobile application, created a world record of sorts when it was downloaded more than 17 million times in less than two months. Other channel such as Immediate payment Services (IMPS), has witness growth of 97 per cent with about 72 million transaction. Country’s leading mobile wallet service provider has-150 million users as today.<sup>1</sup>

The world's preeminent business leaders, innovators, investors, and entrepreneurs are gathered in India for the eighth annual Global Entrepreneurship Summit (GES). GES2017 is focusing on the role women entrepreneurs play in advancing inclusive growth, with one key area of discussion being the digital economy.<sup>2</sup>

### **Objective of study**

- 1) To study the Digital payments with various types.
- 2) To study adoption and acceptance of digital payment in India.
- 3) To study digital payment promote to women entrepreneurs

### **Research Methodology**

The present research is mainly based of secondary data. The secondary data collected from related articles research papers, journals, papers, books, various websites.

### **What is Digital Payment?**

Digital payment is a way of payment which is made through digital modes. In digital payments, payer and payee both use digital modes to send and receive money. It is also called electronic payment. No hard cash is involved in the digital payments. All the transactions in digital payments are completed online. It is an instant and convenient way to make payments. Digital payments has many types of payments such as: Unified payment interact, Aadhaar based digital payment mode (AEPS), USSD banking or a mobile banking, cards- Credit cards, debit cards and prepaid cards also use Rupay debit cards and digital payments and E-wallet or mobile wallet.

### **Digital payment - Adoption and Acceptance in India**

India has joined other countries in the digital payment revolution a lot faster than the past where we often lagged behind in adopting technology, especially in the financial sector. This is set to have a transformative impact on our country, especially as digital payments spread into rural areas.

Statistics show that in 2012, 86.6% of payments in India were cash payments, and between 2012 and 2013, India had more than 7600 Crore pieces of currency floating in the economy. Yet, popularity of digital payments has been rising due to factors like a young population, rising number of smartphones and Internet users—experts predict a 100% rise in usage by 2020, a friendly regulatory environment, and a booming e-commerce sector.<sup>3</sup>



There were many developments that quietly led up to support the digital payments phenomenon-

- India has the third largest internet user base in the world, with more than 300 million users. Nearly 50 per cent i.e. 150 million users are mobile-only internet users. This may be significant number from an absolute perspective but it still represent only 19 per cent of population using the internet and even lesser percentage using mobile internet. These number have increase substantially if digital payments have to make the impact they promise.<sup>4</sup>
- The government's focus on banking for the unbanked through schemes such as the 'Jan Dhan Yojna' where 200 million unbanked individuals were brought into the banking sector. Also, the extension to Aadhar to pension and Provident Fund has helped in the financial inclusion.<sup>5</sup>
- The banking industry has also seen mobile and internet banking transaction increase to 27 per cent overall transaction in April 2016, an increase from 8 per cent in March 2012. There has also been increase in card based transactions.<sup>6</sup>
- The government of India has taken upon itself to create an eco system for cashless digital economy. This means fostering an environment conducive for growth and innovation in the Fin Tech industry. The Indian Fin Tech software market is forecasted to touch USD 2.4 billion in the year 2020 from the current USD 1.2 billion.<sup>5</sup>
- The RBI has also responded to the growing trends in its report, 'Vision 2018'-where it states that new policies with focus on electronic payment will influence the trends in electronic payment system in the country.<sup>6</sup>
- There has been significant growth in the e-commerce market place. India's e-commerce market (revenues) grew from USD 3.8 billion in 2009 to USD 23 billion in 2015.<sup>7</sup> The trends of online shopping are also tending significantly towards mobile devices.
- Since the government's demonitisation announcement, Indian bitcoin adoption has been on the rise. Indians are likely to adopt crypto currencies in the form of bitcoins. For bitcoin to gain adoption and become the foundation of a new global financial system, companies should continue to innovate and make it easier for consumers to buy, hold, and spend bitcoin.<sup>8</sup>

The volumes should expand dramatically so that large merchants can starts accepting payment in bitcoin. Awareness for bitcoin should be spared along with these developments.

Blockchain is a fundamentally more scalable, reliable, and secure solution than the then, and even the present day, payment processing technologies used by some of the biggest processors and gateways in India.

In other countries, convenience and ease of use have been the primary reasons for people adopting digital payment solutions. However, in India, especially in non-metro cities, close to 60% of respondents in the Google-BCG market study, cited offers and discounts as the reason for using digital payments.<sup>3</sup>

Simply put, making a digital payment was helping people save money, which encouraged them to spend more, which in turn encouraged sellers to continue offering more incentives. This means those who would otherwise not buy products or services online are doing so because making a digital payment is a money-saving proposition.

By 2020, we shall be making digital payments primarily for purchases in the organized sector, which is set to account for 34% of all payments. Next most popular options are likely to be bills, recharges, and utility payments (20%), modern trade (12%, and, surprisingly, payment of rent and other professional services (11%).<sup>3</sup>

### **Digital Payment - Women Entrepreneurs**

E-commerce in India is projected to hit \$ 200 billion by 2026 at a 30% compound annual growth rate. This explosive growth has allowed aspirational entrepreneurs to attain nationwide reach for their businesses, creating a platform where they can credibly build their brand. With 8 million businesses run by female entrepreneurs women are key to this growth, with homemakers, career women, and even Instagram sellers all taking part.

### **Conclusion**

Above study concluded that the digital payment landscape in India is undergoing a massive transformation. Indian customers have shown tremendous affinity to digital technologies, with growth rates for mobile phones and e-commerce adoption far outstripping rates in developed economies. Digitalization is a positive move for Indian woman, they allows opportunities for ‘flexi-work’ and diminishes the reliance on physical workspaces and balancing work home commitments. Digital payments can promote woman’s economic empowerment and yield social and economic gain. The Government of India’s ‘Digital India’ initiative aimed at transforming India into a digitally empowered society and knowledge economy is expected to further accelerate awareness, availability and adoption of digital technologies.

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# Digital Payment System: Uses of Mobile Banking

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## Abstract

Mobile banking is an electronic system that provides most of the basic services available in daily, traditional banking, but does so using a mobile communication device, usually a smart phone. In some cases, a well-developed mobile banking system can actually provide point-of-sale ability similar to an ATM or credit card, except the purchaser buys by using their phone instead. With the ease of mobile smart phones and their wide variety of applications today, it's not surprising the mobile banking is now coming into full vogue. However, the concept and ability is not a new concept. Mobile banking is growing yet there are numbers of issues and threats in mobile banking system and the major problem of mobile banking is its non-adoption by the customers. This research focuses on the barriers in adoption of mobile banking.

(**Keywords-** “Digital Payment System: Mobile Banking, uses, Net Banking.”)

## Introduction

The report of Cellular Operators Association of India (COAI), the mobile users' base in India is expected to zoom to 893 million by 2012. This is a 150 million increase of what was projected earlier. India is now the second largest mobile market in the world after China, which has over 650 million subscribers, with India having 400 million mobile users. According to COAI's projection, there will be 1.24 billion mobile users in 2015 - which means one phone for every Indian. With this strong base Mobile banking is expected to be successful if the Banks convince the customers with security. Mobile banking as a financial tool has been seeing its time of acceptance occur very much thanks to increasing mobility offered by smart phones. Phones essentially pack the capability of a basic computer and Internet access into a communication device.

## Objectives of the Study

- To study the barriers in using Mobile banking services.

- To study the perceived utility of various Mobile banking services.
- To suggest ways to improve the usage of Mobile Banking.

**Research design**

Descriptive research design has been used for this study. This helps in the deliberate selection of a particular unit of universe for constituting sample that represents all units.

➤ **Sample size:**

The data were collected from a sample of 400 respondents out of the total population **Data**

**Data Data collection:**

The study is based on primary and secondary data. The primary data .

**Table 1 : Demographic and Career profile of the respondents**

<b>CFC cwz Description</b>	<b>F</b>	<b>Percent</b>
<b>AGE</b>		
20 to 30 years	162	40.50%
30 to 40	80	20%
40 to 50	90	22.50%
Above 50 years	68	17%
<b>Total</b>	<b>400</b>	<b>100%</b>
<b>Gender</b>		
Male	208	52%
Female	192	48%
<b>Total</b>	<b>400</b>	<b>100%</b>
<b>Education qualification</b>		
school	101	25.50%
Graduate	212	53%
Illiterate	86	21.50%
<b>Total</b>	<b>400</b>	<b>100%</b>
<b>Income</b>		
Less than 15000	200	50
15000 to 30000	100	25
Above 30000	100	25
<b>Total</b>	<b>400</b>	<b>100%</b>
<b>Profession</b>		
Business	150	37.50%
Salaried	200	50%
others	50	12.50%
<b>Total</b>	<b>400</b>	<b>100%</b>

**Source:** Primary Data

Table 1 depicts the demographic and career profile of the respondents. It reveals that 40.5% of the respondents belong to the age group of 20-30 years, 52% are Male, 67% are married, 53% are Graduates, 50% of the respondents have Less than 15000 income and 50% are employed.

### **Perception towards Mobile Banking**

67% of Mobile Banking users agree that the service is more convenient than traditional banking;

Transactions can be done faster and allows easier maintenance of transaction activities. 51 % agree that Mobile Banking is better than traditional banking; however, on average the users were uncertain whether Mobile Banking is more reliable or safer and secure (49% were indifferent).

### **Findings**

67% of Mobile Banking users agree that the service is more convenient than traditional banking;

Transactions can be done faster and allows easier maintenance of transaction activities. The Mobile banking services perceived to have high utility were Review (checking) accounts balances (86%), Recent transactions / Mini-statements (60%), Review credit cards balances (45%), Status on cheque Stop payment on cheque (2%) and Alerts on account activity (4%) This suggests that overall most of the customers prefer information based services rather than financial services provided by the bank. It is clear that major mobile banking users are interested in having the information of various types like checking balance, review mini statement, review credit card balances rather transaction based services is not preferred by the customer it may be due to lack of security, network problem or insufficient operating guidance as founded in this research as a major barrier.

### **Suggestions**

The customers are indeed happy with the advantages of mobile banking but reluctant to use it for want of security. If steps are taken on the part of the Bank to eradicate this fear and provide proper operational guidance then sure majority of the Mobile users could be deviated from traditional Banking to Mobile Banking.

## Conclusion

One of the major hurdles to overcome for successful consumer acceptance of mobile banking is financial systems security. The idea of managing funds over a cell phone or similar, with a signal that can easily be grabbed by others with the right equipment, is a scary idea for many consumers. The customers must be made to understand the system and explain its safety and make them overcome their fear.

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## Current Scenario in Digital Payment System “Demonetization – A Success for Digital Payments”

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### Abstract

Demonetization is the act of stripping a currency unit of its status as legal tender. It occurs whenever there is a change of national currency: The current form or forms of money is pulled from circulation and retired, often to be replaced with new notes or coins. Sometimes, a country completely replaces the old currency with new currency. An e-commerce **payment system** facilitates the acceptance of **electronic payment** for online transactions. Also known as a sample of **Electronic Data Interchange (EDI)**, e-commerce **payment systems** have become increasingly popular due to the widespread use of the internet-based shopping and banking. This article aims to explore demonetization in India, digital payment system and thus identify advantages. The paper discusses conceptual framework, digital payment platforms, instruments and services available in the economy and their robustness. The article also defines strategies to overcome the challenges faced by the economy in digitizing the financial system. This paper emphasizes on advantages and the suggestions that prove the Digital Payment System as very outsourcing and beneficial system which can be utilized by every person.

**Keyword:** Demonetization, Digital Payment System, Scenario.

### Introduction

#### India's Demonetization

Demonetization is the act of stripping a currency unit of its status as legal tender. It occurs whenever there is a change of national currency: The current form or forms of money is pulled from circulation and retired, often to be replaced with new notes or coins. Sometimes, a country completely replaces the old currency with new currency.



### **Electronic Payment Framework in India**

Electronic payment system and mechanisms were existing in India. National Payments Corporation of India (NPCI) promoted by RBI was brought into existence to promote retail payment systems by providing access to standard payment mechanism to common man in 2008. The range of products offered by NPCI are,

National Financial Switch (NFS) was developed by Institute for Development and Research in Banking Technology (IDRBT) in 2004. NFS provides a network of ATMs across India.

- **National Automated Clearing House (NACH)** facilitates high volume inter-bank electronic transactions like electricity bills, water bills, salary etc which are recurring in nature. The government has created a terminal called NACH's Aadhaar Payment Bridge (APB) System to provide subsidies to the poor under Direct Benefit Transfer Scheme.
- **Immediate Payment Service (IMPS)** was launched in November 2010, as a 24/7 instant interbank fund transfer platform through mobile phones.
- **RuPay** a term coined from two words "rupee" and "payment" is a domestic card scheme launched by NPCI in 2014, to fulfill RBI's vision.
- **Cheque Truncation System (CTS)** commenced in 2010 to ensure faster payments of cheques by stopping the physical movement of cheques. The CTS works by capturing the image of the cheque and magnetic ink character recognition (MICR) and transmitting it to the other bank.
- **Aadhaar Enabled Payment System (AePS)** is a model developed by RBI, NPCI, UIDAI, IDRBT and some other representatives of banks and research institutions, to enable bank transactions like balance enquiry, cash withdrawal, cash deposit and Aadhaar to Aadhaar funds transfer. These organizations have also enabled transactions on PoS (microATMs) and are further working on to make the system work smoothly.
- **Unified Payments Interface (UPI)** which was launched in April 2016 is an electronic fund transfer platform which can be operated 24/7 for 365 days of the year. It is operated on a mobile platform. The UPI app powers the multiple bank accounts to operate on a single platform. It operates on a virtual payment address. Per transaction cost of UPI is only Rs.0.5 while in case of IMPS transactions it is Rs.5.
- **\*99#** is a payment service provided by GoI in 2014, as a part of Pradhan Mantri Jan DhanYojana (PMJDY). This service was proposed to cater common man as it can be

operated through any featured mobile phone and doesn't require internet connectivity. The key services offered by \*99# are, Account Balance, Mini statement, send money using MMID, send money using IFSC, send money using Aadhar Number, show MMID, change M-PIN, generate OTP. \*99# service works on Unstructured Supplementary Service Data (USSD) technology, a service is provided by Telecom Service Providers (TSPs) on all GSM mobile phones. The transactions through this service can be done only in banking hours and per transaction cost is Rs.1.5.

- **BHIM** is a new digital payments app based on the Unified Payments Interface (UPI). The app is currently available only on Android; so, iOS, Windows mobile users etc. are left out. BHIM is also supposed to support Aadhaar-based payments, where transactions will be possible just with a fingerprint impression.
- **E-wallets** allow people to transact online by using any electronic gadget like computer or a smartphone. Post demonetization move in India on 8th November 2016, the RBI has promoted the national banks to create their own wallets and thus wallets like SBI-Buddy came into existence.
- **Paytm** is an e-wallet company in India has further got license to enter in the domain of payment banks.
- **Other private e-wallet companies like Freecharge** - Freecharge is e-wallet service provider along with mobile recharge facility.
- **MobiKwik** is an e-wallet company.
- **IndiaBankBazaar.com** provides an online platform for loans and insurance products.
- **Lendingkart, Policy Bazaar and VistaarFinance** are an online lending platform for SMEs.
- **Capital Float** is an online lending platform for working capital finance to SMEs.

### **Suggestions to Improve Digital Payments System**

Keeping in view the problems faced by public after demonetization and government promoting digital payment systems rather than using cash. Indian government has to take various measures to overcome this situation and to make public use more digital methods. Some of these are discussed hereunder:

- Internet connectivity should be available everywhere. The connectivity should have adequate bandwidth and should be available free or at cheapest rates.

□ Cyber Security framework must be strengthened by the government. There were many cases which reported that security has been breached and the personal data of many customers has been taken out. The website of IRCTC, Canara Bank was also breached. The legal framework should be quick enough to punish the culprits as well as proper IT mechanism should exist to avoid any frauds and to ensure the security.

□ Mobile network availability should be available in villages and remote areas also.

□ Financial and digital literacy will be an important step in improving the situation. Common man should be informed and educated about various financial instruments and use of mobile technology to access banking facilities.

□ Awareness to be created amongst public to use digital technology and mobile apps. Government should try to build confidence and trust among the public.

## **Conclusion**

Demonetization was done to curb black money in Indian economy. Digital payment systems were existing earlier also in India, but now government is encouraging people to use digital medium of transaction rather than cash, because of limited supply of currency. The initiative by the government to back the bank accounts by biometric aadhaar authentication numbers is a move which has lasting effects. The biometric backed bank accounts not only makes the system fool proof but also serves as an excellent instrument for illiterate people to make payments with just their thumbprints. There are some problems for public to use cashless digital methods at present. But government can create awareness, build trust, provide cyber security framework and provide necessary infrastructure to make it possible for public to adopt digital payment systems.

This data and the analysis of the scenario throughout the paper makes us realize that the DPS has successfully lead the way out to black money. Even the simplest of the technologies can be applied to the use by common people and made them to utilize online systems proving more secure and hassle-free.

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