ABSTRACT
Going cashless is trending in India nowadays. After the Demonetization move by the government, people have gone digital and starting to adopt modern ways of cashless payments. The sole purpose of Demonetization is not only to remove black money from the economy but also to encourage people for adopting cashless payment options. Instead of standing in a queue for the withdrawal of money, it is much better to adopt cashless payment options for the transactions. A cashless method can be traced easily as it leaves its footprints and hence is more transparent. UPI (Unified Payments Interface) is a mobile payment system, which allows you to do various financial transactions on your Smartphone. UPI allows you to send or receive money with the help of virtual payment address without entering the bank information of the other person. A merchant has to enroll with the banks in order to accept payments through UPI. One of the main areas of concern among online users is security. The application should be able to provide a solution for end-to-end strong security and data protection. Security meaning not to reveal too much data likes banking or personal details, which could be misused by someone. For the convenience of the customers, the solution had to offer 1-click 2-factor authentication, which can help in protecting against phishing, risk scoring, loss of data etc.

KEYWORDS: Demonetization, Cashless payment, Unified Payments Interface, Smartphones, Online marketing, Advertising space, Consumer Behaviour.
BACKGROUND

Online Transactions

The foundation of the Internet has offered new advanced business transactions and models for the world economy. For Global communication, marketing on the internet have become the best, most commonly and widely used form by the companies. Online Marketing is an art and science of selling products and services over digital networks, such as the on the Internet and cellular phone networks. Online marketing involves an art of finding the right online marketing mix of strategies appealing to the target markets which will eventually help in increasing the sales of the company. Online marketing can be defined as the application of internet and digital technologies in co-existence with traditional communications for attaining the marketing objectives of the companies. Promotional marketing messages can be also delivered to consumers via internet. It includes email marketing, search engine marketing, social media marketing, many types of display advertising (including web banner advertising), and mobile advertising. Some of the various advantages of Online marketing are: Firstly, it can be availed by both small and large companies as it is much affordable than traditional mediums of marketing. Secondly, as compared to traditional media where the space for advertising the products and services are less, there is no such limit on the advertising space. Thirdly, access to information and retrieval is much faster than fax and overnight mailing system. Last but not the least, site can be accessed and visited by anyone from any part of the world and shopping can be made more private and swiftly.

Payment Options

E-Commerce is a term which is being widely used in today’s world. It is an upcoming, fast-spreading way of doing business for expansion towards a larger audience base which were not possible by the traditional retail. It is the exchange of goods and services enabled with the help of an electronic method. E-Commerce comprises of various categories such as B2B (Business to Business), B2C (Business to Consumer), C2B (Consumer to Business) and C2C (Consumer to Consumer). Everything except delivery of goods, all the things from advertising to payment for the physical goods and services can be done technically with the help of electronic means. According to consumer’s preference, they can make payments for their ecommerce transactions in many ways. Some of the ways for the payment through electronic modes are smart cards, credit cards, debit cards, digital payments wallets, Net-Banking and more.
Going cashless is trending in India nowadays. After the Demonetization move by the government, people have gone digital and starting to adopt modern ways of cashless payments. The sole purpose of Demonetization is not only to remove black money from the economy but also to encourage people for adopting cashless payment options. Instead of standing in a queue for the withdrawal of money, it is much better to adopt cashless payment options for the transactions. A cashless method can be traced easily as it leaves its footprints and hence is more transparent. Some of the payments options that can be adopted by the online consumers are:

1. **Cheque**
   Cheque is one of the oldest forms of cashless payment options available to any consumers. It is a known method to everyone. In this, a customer issues a cheque of a particular amount to another customer. The cheque has to be deposited in the respective bank. Then the bank processes a payment through the clearing house. All the transactions done through cheques are being recorded and there is a well-kept proof of all of them. However, there can be an instance of dishonor of the cheque because of the mismatch or insufficient fund in the account of the customer. In order to avoid those issues and the fine imposed by the banks for dishonoring of cheques, customers should adopt other payments options which are available to him.

2. **Demand Draft**
   Demand draft is another elementary way of cashless transaction. It is considered to be one of the safest ways of receiving money from someone. DD never gets defaulted as it is signed by the banker. Being the safest of all, the disadvantages of Demand Draft and cheques are that the customers need to go to the bank for depositing cheques and DD. Also as compared to other payments options, DD and cheques take additional time for their clearance and the transfer of money.

3. **RTGS and NEFT**
   National Electronic Funds Transfer (NEFT) and Real-time Gross Settlement(RTGS) are payment systems that enable the users to transfer funds electronically from their bank account to another person’s bank account directly. Both of these payment options help consumers in replacing the need to draw a physical cheque and go to the bank for depositing the same. A user can transfer the funds from his home/office via Internet Banking as per his comfort. Also, they are more cost effective, and funds get transferred in shorter period of time as
compared to the cheques and the demand draft. For NEFT and RTGS, the user needs to register beneficiary name for transferring money. There is no upper limit on the amount per transaction. However, there is the lower limit of Rs.2 Lakhs in case of RTGS and a ceiling limit of Rs. 50,000 in the case of NEFT.

4. Debit Card/ Credit Cards
Debit and Credit card are one of the most popular digital payment methods worldwide. In case of the purchase made through Debit Card, money is transferred from the bank account of the cardholder to the bank account of Merchant. However, in case of Credit Card, cardholder gets a loan for a shorter period and the customer is supposed to pay back the amount within the specified period (from 30 to 45 days). Popular gateways are Visa, MasterCard, American Express and Rupay. RuPay is a domestic gateway, which is launched recently by NPCI. RuPay cards got recognition when they were issued to all the Jan Dhan accounts in India.

5. Digital Wallet
Digital wallets are considered to be the best and the simplest way of transferring money to someone. After Demonetization, people started using digital payments options on a large scale. In a digital wallet, money is loaded from the bank account of the customer using debit/credit cards or net banking to make payments to people/merchants using the same wallet, thus providing a convenient cashless payment mode. Currently, the share of digital payment wallets is very small in digital payments industry in India. As per the data of RBI, a total amount of Rs. 376.78 Billion were transacted till December via digital wallets as compared to Rs. 137 Billion in 2015-16. Value of transaction made via digital wallets increased by 123%.

6. UPI Apps
UPI (Unified Payments Interface) is a mobile payment system which allows you to do various financial transactions on your Smartphone. UPI allows you to send or receive money with the help of virtual payment address without entering the bank information of the other person. A merchant has to enroll with the banks in order to accept payments through UPI. The UPI payments applications can be used for: Paying for Cash on Deliveries, merchant transactions at Physical/e-commerce stores, making IMPS alike payments without knowing Bank A/c or IFSC's of the other person and also allows cash settlements in real-time. UPI can be used for the payment of utility bills, insurance premiums or Transfer Money to friends and
relatives. Some of the examples of few UPI Apps available on the internet are SBI Pay, ICICI Pocket, Axis Pay UPI App, Union Bank UPI App, PNB UPI, Phoneme, TranZapp etc.

**7. Gift Card/ Prepaid Card**

The next cashless payment method is a gift card. Gift Card/ prepaid card is a kind of a readymade card that can be purchased from a merchant or from the bank. It is a card which is loaded with a fix cash amount which can be used while purchasing any item from the specific vendor by using that gift card. It can only be used with that specific vendor only.

**8. Aadhaar Enabled Payment System (AEPS)**

Aadhaar Enabled Payment System (AEPS) is considered one of the best cashless payment methods. AEPS is like Micro ATM which with the help of a Smartphone and a finger-print scanner transaction can be made possible. In order to use this facility, it is compulsory to link Aadhaar card to the bank account. AEPS can also be used to perform transactions like Aadhaar to Aadhaar fund transfer, Cash withdrawal, Cash deposit etc.

**9. Unstructured Supplementary Service Data (USSD)**

USSD can be used by the customers of India even if they do not have access to a Smartphone or an internet connection. Unstructured Supplementary Service Data (USSD) is mobile banking service. For using this service, a person can dial *99# from any mobile phone and use this service. With USSD, a person has the access to all the services which he can avail using a Smartphone or an internet connection. Almost all banks including SBI, ICICI, BOB, Axis Bank and PNB support USSD payment option.

**Unified Payments Interface (UPI)**

Unified Payments Interface (UPI) is a system that combines multiple bank accounts into a single mobile application by merging several banking features, seamless fund routing and merchant payments into one hood. UPI caters to “Peer to Peer” collection request which can be scheduled and paid as per requirement and convenience. Each Bank nowadays provides its own UPI App for Android, Windows and IOS mobile platform(s). Since when UPI has been launched, there has been a number of UPI apps been introduced. ICICI Bank’s I-Mobile and Yes Banks Phonepe were the pioneers. Following their acceptance by the online consumers, gradually other banks also launched their UPI app namely PNB UPI, Allahabad Bank UPI, SBI Pay, Axis Pay, Trupay, Mahapay, Indian Bank UPI, Canara Bank UPI- eMpower etc. UPI has now become operational with seamless network. In the days to come, UPI will be a
leading payment interface considering its simple operational functions and following
advantages. NPCI has also built other capabilities that allow users of feature phones to access
their bank accounts through the unstructured supplementary service data (USSD) technology.
This will help in the expansion of the availability of banking services to feature phone users,
who are still in the hundreds of millions. Also those people who do not have a mobile phone,
Aadhaar enabled payment systems (AEPS) comes into play which with the help of biometrics
help in making transaction. This will ultimately help the nation in moving towards cashless
economy. Banks are now taking relative measures or steps to improve their infrastructure for
providing its services to all the online as well as offline consumers.

According to the study by NPCI, the total number of non-cash transactions per person was
just 6 per year. According to them, only a fraction of the 10 million-plus retailers in India
accept card payment and have its infrastructure. Currently this number stands at 0.6 million,
or 6%. These numbers show us the capability and potential that exists as penetration of smart
phones is projected to rise from the current level of 150 million to 500 million over the next
few years.

The main reason for the implementation of UPI was to simplify and provide a single interface
across all segments. The key drivers for this are:

**Simplicity:** Reason for making the UPI was to make the application as simple as possible.
According to NPCI, Payment and receiving payments from others should be as easy and fast
as taking out a phonebook and making a call on mobile phone. An account holder should be
able to send and receive money from their mobile phone with just a code without knowing
any other bank/account details. All a customer needs to know is to “pay to” or “collect from”
a “payment address” with the help of a single click.

**Innovation:** UPI should have been made in such a way that it comes up with a solution so
that innovations on both payee and payer side can evolve without changing the whole
interface. It should allow the application providers to take benefits of enhancements in mobile
devices, providing with integrated payments on new consumer devices with innovative user
interface features, take advantage of newer authentication services, etc.

**Adoption:** Given the size of the potential user base, the aim was to have a solution which
should not crash and be available to all billion users which will help in enabling large scale
adoption. An interface which should allow adoption across Smartphone and feature phones
consumers and provide full ability across all payment players and phones. Also, People should be able to send money to others who are not yet using any mobile application and vice versa.

**Security:** One of the main areas of concern among online users is security. The application should be able to provide a solution for end-to-end strong security and data protection. Security meaning not to reveal too much data likes banking or personal details which could be misused by someone. For the convenience of the customers, the solution had to offer 1-click 2-factor authentication, which can help in protecting against phishing, risk scoring, loss of data etc.

**Cost:** India is a cost-centric country and any product or services being expensive will have a short life and lesser acceptance by the customers. Since mobile phone number can be used as an authentication device, using virtual payment addresses and third party portable authentication schemes such as Aadhaar, it should allow both acquiring side and issuing side cost to be brought down.

**Recent Trends**
As the country reels under the cash crunch, banks and payments companies are readying war chests to finance advertising campaigns pushing their digital payments instruments and trying to get more people to use plastic cards and mobile wallets for small value transactions. Payments Company National Payments Corporation of India (NPCI), which runs the RuPay cards payment platform, is all set to promote Unified Payments Interface (UPI), its latest Smartphone-based peer-to-peer payments system. UPI was touted to revolutionize peer to peer payments, but hasn't delivered on that promise yet.

![Figure 1: Volume of Transactions in Various Digital Payment Systems (In Millions)](source: www.rbi.org.in & www.npci.org.in)
As we can see in Figure 1 that Volume of transactions in various digital payments (In millions) has been shown. In this, it indicates the number of transactions that were taken place during the period of April to December (2015) and from April to December (2016). This bar diagram states that before Demonetization, the transactions were mostly done through Debit cards. It shows that 6801.84 million transactions were done in 2015 and 7851.05 million transactions were done in 2016. And the least amount of transactions was done through RTGS with 72.02 million transactions in 2015 and 76.89 million transactions in 2016. It clearly denotes that though after Demonetization, Debit cards are still considered to be the easiest and favorable way for making payments.

As we can see in Figure 2 that Increase in the values of transactions (%) has been showed. In this, it indicates percentage value increase in the transactions from 2015 to 2016. This figure depicts that, highest increase in the value of transaction has been in IMPS with 138.3% followed by M-wallets with 123.2%. Also we can see that, the lowest increase in the value of transactions has been in the Debit cards with 0.5%. This clearly shows that after Demonetization, people have started adopting to other ways of making the payments such as IMPS and M-wallets which is good for the Indian economy.

**Reasons for Slow Growth of UPI**
The Reserve Bank of India (RBI) Payment System Vision Document (2012-15) says that UPI envisages a payments architecture that is directly links to the achievement of the goals of electronic payments, a cashless economy, and financial inclusion by using the latest technology trends. As we all know that there are several UPI applications available on the
internet, there remains some factors because of which their acceptance is still an issue. As compared to other E-Wallets available who have a comparatively large customer database with them, UPI apps have a long way to go. One of the main reasons for non-acceptance of UPI is the unreliable and unstable Mobile network connectivity. Without the help of fast internet, it is impossible to make a transaction. In a place like India where there is not enough financial inclusion and financial literacy, it is difficult for the banks to provide its UPI’s to all the customers. Since a lot of people do not have a Smartphone or proper infrastructure, they will not use these services. Also UPI as compared to Paytm, Mobikwik or freecharge, are not accepted everywhere. Various cash back offers given by E-Wallets are attracting customers away from UPI. NPCI has reported worth of Rs. 835.13 crores, up by 37% over the corresponding period in January. Growth has gone down by 134.5% clocked between December and January. However, UPI has continued to take the spaces occupied by E-Wallets.

**Challenges Faced By UPI**

UPI aims to boost the concept of Digital India by incorporating digitization in the financial sector; however, it also has certain limitations. Operating of mobile phone is the basic challenge in Mobile Banking. Though majority of Indian population uses Smart phones, there remains a substantial amount of the population those who use feature phones, especially in the villages or in the rural areas. Also, mobile compatibility is considered another major issue with the mobile banking which lowers the speed of online transactions. Security is considered to be the major concerns in mobile banking. Since now in UPI, a customer does not have to give his personal credentials like account details, it increases high risk for possibility of fraud. Smart phones still remain the most preferred targets of the hackers or cyber-criminals. Connectivity being a crucial role in mobile banking transactions banks needs to scale up their infrastructure for handling growth of the customer base. UPI will be the future of the banking industry in India with more emphasis on next generation digital payments that are gaining preference among the customers. Digital India initiative will further fuel the growth of digital payment platforms such as UPI by boosting the growth of mobile banking.

Dr Hem Shweta Rathore (2016) talked about the factors that lead to acceptance of digital wallets by consumers. In today’s-world, smart phones have become an essential part of our daily life. Due to the advancements in technology, consumers can now use their smart phones for making payments for all the transactions with the help of various applications available on
the internet. She emphasized on the fact that when smart phones can function as leather wallets for the consumers, known as “Digital Wallets” or “Mobile Wallets”, then why one would carry cash. According to the study, she tried to study about the various factors that can affect a consumer’s decision to adopt digital wallet as a mode of online payment. The study also attempted to find out the challenges and risks faced by the consumers of Digital wallets. Farah Diba Abrantes Braga, Giuliana Isabella and José Afonso Mazzon (2013) further confirmed the fact that in the current digital economy, Digital Wallets as a payment mode are becoming a trend in the economy. According to past studies, it shows how payment modes influence the spending behavior of the consumers. However, they have considered cash and credit cards, not the Digital money. Through their study they have shown how integration of different constructs relates to payment methods and review how they influence consumer behavior. They have proposed the fact that digital money also influences consumer behavior by producing same effects such as Debit cards do. Along the paper they have also presented 14 propositions. Also Roopali Batra and Neha Kalra (2016) commented that India is headed on to the path of a major digital revolution. Digitalization in payment mechanisms will be seen as a landmark in this era of cashless economy in the future. Their research aimed at examining the adoption patterns of digital wallets by of the online consumers. They have further identified the challenges and barriers for the adoption of Digital Wallets. The results indicated that Time saving and ease of usage were found to be the main reasons for the acceptance of Digital wallets by the consumers. However, safety and security of their money transacted still remained a major concern for them.

Majid Taghiloo, Mohammad Ali Agheli, and Mohammad Reza Rezaeinezhad (2010) stated that in today’s world, E-commerce depends highly on the network infrastructure of banking. However, whenever communication with the banking network is not established, business activities will have to suffer. They proposed a new approach of Digital Wallets on the mobile devices which without exchanging physical money or without communicating with the banking network, transaction can be made possible. A digital wallet allows users to make an electronic payment which hides the low-level details of executing the payment protocol used to make the payment. The main features of proposed approach are fault tolerance, secure awareness, and infrastructure-less protocol. Donald L. Amoroso and Rémy Magnier-Watanabe (2011) stated that the purchase of services or goods using mobile technology heavily depends on the availability, acceptance and reliability of mobile wallet systems. After reviewing a broad literature review of mobile technology adoption, they proposed a
comprehensive model integrating eleven key consumer-related variables that affects the adoption of mobile payment systems. Jiangping Wan, Ming Zeng, and Lianyu Liang (2013) did an empirical study on the usability impact factors of electronic wallet-one card solution within the college students. Their study includes the analysis of the current situation, the analysis of the behavioral habits of college students, and setting up of a preliminary usability evaluation indicator system and its factor analysis of electronic wallet-one card solution for college students. Kunal Taheam, Rahul sharma and Saurabh Goswami (2016) discussed about the growing era of digital technology. Since world has been advancing tremendously towards e-transactions with a positive approach, economy has to adapt to Digital Wallets which are considered to be the best possible medium of electronic transactions. By discovering the adoption behavior of consumers towards digital wallets, their study focused on knowing the factors that lead to the usage of digital wallets among youth in the state of Punjab. It was found that controllability and security, societal influence, usefulness and the need for performance enhancement were the factors leading to the usage of digital wallets among youths in Punjab. Mr. Sai Kalyan Kumar Sarvepalli and Dr. N. R. Mohan Prakash (2016) confirmed the fact that in today’s world almost all the users have a smart phone and are well connected with internet. This gives a huge opportunity for the organizations to grab the market provided they bring in some innovation in their operations. One such innovation in the recent times is known as the “Virtual Wallet” which in near future might replace the physical wallet and its usage. With the introduction of the Virtual wallets, the shopping experience of the consumers has changed totally. It has become very easy for them in both the modes either online or offline purchases. They have attempted to present virtual wallets mechanism in India by analyzing the advantages, disadvantages, issues and challenges faced by Virtual Wallets. Ambarish Salodkar, Karan Morey, Prof. Mrs. Monali Shirbhate (2015) proposed the implementation, merits and future scope of the electronic wallets. Digital wallets are virtual or a cashless service provider which can be used as a substitute for physical cash and cash transactions. In their study they have focused on providing a new way of shopping and buying commodities without the application of physical transaction taking place. With the click of a button, customers should be able to carry out secure transactions that are quick, effective and efficient. However, Security still remains the primary concern for most of the customers. For using this Digital payment wallets service, customer needs to create a unique code for transactions. This code will allow the users for accessing their accounts. Mohammad Salah Uddin, Member, IACSIT, and Afroza Yesmin Akh (2014) stated that the purpose of their study was to contribute to the design of e-wallets in Bangladesh. E-
wallets intend to replace the existing physical wallet, with its facility like notes, coins, plastic cards, ATM cards and loyalty cards etc. Business through the internet and smart phones has so far been dominated by the traditional business payment methods. However, traditional business models are increasingly coming up against their limits.

Vidyashree DV, Yamuna N, and Nithya Shree G (2015) stated that the present era is entering into a new face of payment systems by using Digital Wallets which are filled with coupons and offers. In today’s world, where people do not have time to sit and relax, then how their personal works like to recharge their phones, payment of electricity bill, insurances or to shop etc. can relax. Hence, to ease their stressed life new applications have been introduced like Paytm and Pay u money. People are using these applications in their smart phones in higher percentage which makes their works easier. Octavian Dospinescu (2012) proposed a new approach regarding the “E-wallet” concept. Though the “E-wallet” concept has many implementations, he considered improving the concept by present level of knowledge by joining the Near Field Communication technology and the concepts about money. He stated that the new electronic prototype will act as a wallet by using only a smart phone because of the proposed architecture which embeds concepts like money, cards, payments and receipts in a single secured mobile application. Justinas Legas (2013) study has shown that few of the players in the market seem to internalize the difference between the mobile wallet and mobile payments. Mostly, agree to the fact that mobile wallets are meant to provide more than only a payment function. Hence, focusing more on the mobile payments rather than on the mobile wallets extended functionality will narrow down the perspective of BMD (Business Model Development). From a technology point of view, there is no consensus on what be the leading technology should be. Finally, there seems to be a lack of knowledge of monetizing mobile wallet services. Harshal R. Kanhekara, Mrs. Sayali N. Manea (2015) suggested that money transaction is a process which should be digitized for more security and the ease of the individual. Thus, by making Digital wallets available to the customers, money transactions can be made much simpler and effortless. By using Digital wallets one can keep all his important cards such as, driving license, health cards, debit cards and credit cards etc. at one place with much more security. Digital wallet can be our transaction medium which can be accessed anywhere such as shops, malls or for transferring money to someone else. Also with security features like finger print scanning, our money and important information will be safe. Finally, if our smart phone is lost, we can still recover it with GPS and get back out wallet which makes it even more digitally safe. Pinal Chauhan (2013) confirmed that using
the basic concepts of Embedded Systems can act an idea for changing the future of Cards (Banking, Petro, Health, Tele-voice, etc.) has been proposed by her. There are various reasons which leads to the design or introduction of E-wallets. They are requirement of a special card reader, limited lifetime, and acceptance being the main disadvantages of today’s traditional cards. The main reason for its introduction was to make paperless money transaction easier. Mukta Sharma, and Dr. R.B. Garg (2013) stated that the worldwide proliferation of the Internet has led to the birth of electronic payment system. Electronic payment systems are payment service software’s that enables customers to pay the monetary value of the purchases made by them in digital form. Parties who are conducting electronic businesses and transactions have never seen each other face-to-face, nor have they exchanged currency or hard copies of documents hand-to-hand. Nowadays, society prefers cash, cheques or meeting physically for completing the transactions to the mode of internet. However, trust, security, and ease of usage are among the major factors that affect the adoption of e-payment systems.

Basavaraj Nagesh Kadamudimatha (2016) talked about the world moving towards Digitalization. Digital wallets are an integral part of electronic commerce. Electronic commerce as the name suggests provides a platform for electronically trading on the internet. In an electronic commerce environment, payments are done digitally with the help of digital wallets and are therefore known as digital payments. Digital wallets will definitely be one of the best business options in the upcoming future. In India, Digital wallet created a new way of buying products. It provides the ability for carrying out secure transaction which is quick and efficient. Since last decades, online consumers on internet are increasing which gives a huge opportunity to the businesses of digital wallets for rapid growth. Denis Dennehy and David Sammon (2015) confirmed this by saying that mobile payments (m-payments) are being adopted increasingly by the organizations as a new way of doing business in the 21st century. During the last few years, the increased use of mobile-payments as a new payment mode has resulted in an increase in the volume of transactions. For this reason, his paper presented the findings of a review of literature aimed at identifying the key research theme. Dr. Poonam Painuly and ShaluRathi (2016) stated that in recent times, growing technology and mobile have together marked their presence felt in the financial transactions. The facility of speedy, secure and smart financial transactions is supported by the concept of “Mobile Wallet”. M-wallets have assisted the needs of the business owners and the customers on the same go. The complexity of money transactions forced and also promoted the usage of
mobile wallets in today’s world. Their study aimed at studying about the concept of mobile wallet and its growing importance on a global platform, ranging from small businesses to large ones, from wholesalers to retailers and even general public too. Also, various vendors and service providers have introduced this concept and promoted these services for business and commercial advantage. This explains the application and usage of wallet money endorsed by different companies. Amal Nair, Manisha Dahiya, Naman Gupta, Rachna Yadav and Richa Mehta (2016) also stated that digital wallets are online platforms that stores user’s payment information and passwords and allows them to make electronic transactions and make their life easy. Out of the benefits of electronic wallets, few of the important ones are transferring money, paying bills and services like payment to cab services. Apart from the ease of access and ease of use, it is extremely useful for huge unorganized sector where cash is considered as the most appropriate medium of payment. Different people from different backgrounds respond differently when it comes to use of digital wallets. Thus it is becoming important for all the digital wallets organizations to segregate the customer base for the wallets as per the people who wants to use and respond towards the wallet. After seeing so many frauds and cases recently related to cash, people feel that this will be the most famous mode of currency transaction in the coming future. Dr. A. Kumudha and Dr. K.S. Lakshmi (2016) stated that a technological innovation has led to the rise of digital marketing i.e., marketing using internet and other technologies. In India, the digital marketing is in growing stage with most transactions are still taking place in cash. After demonetization, the surge in the digital marketing was seen. He studied the way for a new trend of digital marketing and its implications on online shopping and digital payments and implications on the rural consumer.

Dr. Ramesh Sardar (2016) studied about the M-wallets as they have emerged as the most significant contributor in pushing cashless and electronic payments. The surge of smart phones and the internet connectivity of 3G and 4G connectivity has reflected in the tremendous growth of Mobile-wallets in India. He focused on preferences towards the mobile wallets among the urban population of Jalgaon city and how demographic variables have an effect on the usage of mobile wallets. Gurpreet Singh Sambhy (2014) said that IT and payment systems have seen the introduction, acceptance and wide scale deployment of electronic payment systems. The payment systems introduced mobile payment systems and their associated services. Major players involved in mobile payment systems include telecom operators, banks, merchants and consumers. They should aggregate their resources and
develop an ecosystem which would help the individuals in benefiting the overall mobile payment ecosystem. Financial institutions and mobile carriers are becoming increasingly interested in collaborating with each other in order to provide mobile payments from card-based to phone-based. In a developing country like India, mobile payment systems have experienced rapid growth, deployment and acceptance in a very short span of time. However, these systems need to mature and needs to be customized. Mia Olsen, Jonas Hedman and Ravi Vatrapu (2012) contributed to the theory and practice of digital payments by conducting a design science inquiry into the m-wallet. According to their findings from their design science inquiry into m-wallets was that everyday life contexts required evaluation criteria to be expanded beyond “functionality, completeness, consistency, accuracy, performance, reliability, usability, fit with the organization, and other relevant quality attributes” that are used within current design science work. Jean-Michel Sahut (2008) said that despite being the strongest and consistent increase in the usage of electronic payment methods worldwide, the diffusion of electronic wallets is still far from widespread. His study focused on a joint approach for analyzing key factors that affects the adoption of e-wallets by using the ‘TAM’. Sanaz Zarrinkafsh (2015) stated that the widespread use of smart phones and technological advancement in communication technologies are the reason for quick transformation in mobile payment systems. Due to these technologies it is now possible for consumers having smartphones to pay for their purchases through various payments systems. Mobile wallets are designed to eliminate the need for consumers to carry multiple cards in their wallets, thereby making it more convenient for consumers to shop. Mobile wallets represent a major advancement in mobile marketing because of which marketers can reach and serve their customers in a very personalized way. The potential benefits of mobile wallets for both marketers and consumers depend upon the speed of adoption of this new technology. His study examined the factors that influenced consumer’s decision to adopt mobile wallets. Vivek Reddy (2017) explained the present and future of Electronic payments systems by saying that electronic commerce and electronic businesses are the inevitable mediums of exchange in this increasingly wired world. For better understanding it would be better to not only look at the current systems, but also consider what the future might hold for them. He described about the characteristics of the current systems in place and provided a brief analysis of how each works. Satish Padhi and Vaibhav Parikh (2015) stated that NPCI has implemented a ‘Unified Payment Interface’ (UPI) which will help in consolidating payment systems in India. The UPI uses a single application programming interface (API) with a series of supporting APIs to allow the users to fully utilize their smart phones as the primary
device for all payments. This initiative could significantly bolster the use of m-payments in India. SrivalliArkalgud has explained that Electronic Commerce industry is exploding at a fast pace. One of the key aspects of electronic commerce is payments. There are several methods for making payments electronically which includes Credit Cards, Electronic Checks, Electronic Cash, Debit Cards, or Charge Cards. He discussed about the major electronic payment methods namely Credit Card Processing, Electronic Check Processing, and Electronic Cash. He represented an overview of each architecture has described two commercial implementations of the architecture. AbhayUpadhayaya (2012) talked that in electronic commerce, the challenges of payment transactions were earlier underestimated. Business through the internet and smart phones has so far been dominated by the methods of payment systems in traditional business. However, in the light of advancement in e-commerce, traditional business models are increasingly coming off against their limits. Also, E-wallet is a convenient, easy-to-use, secure global payment system which is considered flexible “personal banking system” with a number of payout and pay-in options. I-Payout use the latest security systems to ensure E-wallet security.

Princewill Aigbe, Jackson Akpojaro (2014) and Tamara Adel Al-Maaitah, Abdullah Osman, Mohammad Subeari (2015) suggested that to cut the cost of mediators, financial institutions are direct dealing with the consumers and sharing information with the internet users as well as encourage customers to pay on line. But the main problem faced by these organizations is that consumers are unwilling to give or send their personal and sensitive information for the transactions. They are scared that during the transactions hackers and internet interlopers may access and steal their information and use that for their own use. Their study focused on some of the security features such as authentication, authorization, privacy and encryption that can very well influence consumer’s perceptions of security for their electronic finance transactions. This will also help in contributing towards enhancing customers' perceptions that the electronic finance transactions are totally secure and safe to send through sensitive information and pay on-line.

RESEARCH
For the collection of the data for the research, Exploratory method was adopted so that statistically accurate data can be collected and analyzed. Also, descriptive research was also done in order to describe the characteristics and phenomenon of the study. Causal research
was also done to study about the cause and effect relationship about the factors and its effect on the consumer’s preferences.

**Sampling and Population**
Data for the research was collected from respondents who reside in Delhi/NCR. A sample size of 200 respondents have been taken in order to study about the objective. For the collection of the data, Random sampling method was adopted. For the research, respondents were selected on a random basis and most of them were approached in public places, friends and relatives.

**Design and Tools**
The following methods of data collection has been used:-
- Interview Method
- Questionnaire Method

**Data Collection**
Data was collected through both primary and secondary method. Primary data is the raw data that is collected by the researchers as the first hand information from the samples taken into observation for specific purpose. The primary data is collected through surveys, personal interviews with the help of designed questionnaire, observation. Collection of data is done with help of designed questionnaires and personal interviews. Questionnaires are closed end, like scale method is been used to design the questionnaire. For the purpose of this project we surveyed 200 consumers of different age group filled questionnaire. The secondary data refers those, which are already stored somewhere for someone’s requirement or reference. It can be collected from sources like books, internet etc. For my study purpose I have also used various sources of secondary data. I have used sources such as Internet, books, discussing with friends, etc.

**Research Questions**
- What are the reasons online consumers are not using UPI?
- What is the perception that online consumers hold for UPI?
- What are the factors that can help UPI in boosting its acceptance?
- What are the strategies that can be used by UPI for increasing its acceptance?
Objectives of Research

- To study about the perception that online consumers hold for UPI,
- To study about the reasons for non-acceptance of UPI,
- To study about the strategies that can be used by UPI to increase its acceptance, and
- To study about the factors that can help boost the acceptance of UPI.

Demographic Profile Analysis

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</table>

Do you own a Bank Account?

Interpretation: This chart depicts how many respondents who have been chosen for the survey own a Bank account. This chart is necessary because it shows that whether they are eligible for using the UPI based applications. 96% of respondents had Bank accounts.
Are you using any UPI based App?

Figure: 4.2

**Interpretation:** This chart depicts that whether the respondents who are having Bank accounts are using any UPI based Apps. Out of 200 respondents, 79% people were not using UPI and 21% were using UPI. This shows that for the adoption of UPI by the online consumers, a lot of work has to be done for its wide acceptance.

![Image of a pie chart showing 75% No and 25% Yes]  

Figure: 4.3

**Interpretation:** The following chart depicts the relationship between respondents having the Bank account and whether or not they are using UPI. This charts shows that 7 respondents did not have Bank account. Out of the remaining 193 respondents, everyone was having a bank account. Out of those 193 respondents, 154 people were not using UPI and only 39 people were using UPI. This shows the non-acceptance of UPI among online consumers.
Figure: 4.4

**Interpretation:** This chart shows the relationship between the number of males and females respondents with the acceptance and usage of UPI. As per this chart, 52 females were not using UPI and 14 were using UPI. And out of the 134 males, 109 respondents were not using UPI and 25 respondents were using UPI.

Figure: 4.5

**Interpretation:** This charts depicts the UPI based Apps that are being most commonly used by the respondents of the survey. According to the survey, maximum people were using BHIM App with 42%, followed by Phonepe by YES Bank with 24%, SBI pay by 17% respondents, Axis pay with 5% and so on. BHIM App being an initiative by the government with simple interface and instant fund transfer were mostly adopted by the customers.
**Interpretation:** This chart depicts what factors are most important for the acceptance and usage of UPI. According to this chart, Instant transfer of funds has been ranked one, followed by user interface, ease of use, acceptability and last is security. As per the study, the main reason for using UPI is instant transfer of funds.

**Figure: 4.6**

**Interpretation:** This chart depicts the Issues/problems being faced by the people while using UPI. According to the study, respondents have faced issues like Security of payments and Time consumption the most. Followed by the loss of money, acceptability and complex user interface.

**Figure: 4.7**
**Interpretation**: This chart depicts whether the issues/problems faced by the respondents were resolved or not. According to the survey, 4 respondent’s issues were not resolved. 7 respondent’s issues were resolved but it took some time and 3 respondent’s issues were resolved without any delay.

**Figure: 4.9**

**Interpretation**: This chart depicts the Factors that lead to non-acceptance of UPI by the online consumers. Factor that is most common among the following respondents were Lack of acceptability, followed by complex in operating and lack of awareness. People prefer to use E-wallets nowadays for making transactions.

NPCI has taken an initiative in creating a beautiful platform for addressing a big area of Friction for small payments, enrolling banks and third parties for the usage of UPI. But NPCI has left UPI for automatic adoption and scaling to chance. It is right that banks are motivated for participating in the platform and also, some banks or third parties have already launched
their Apps on Google play store. But UPI does not treat the various sides of the platform. NPCI has left it to the banks for educating their customers regarding UPI and motivate them for enrollment into UPI. But since Banks were not getting or generating fees or revenue/commissions on their products like they used to on Debit and credit cards, they did not give full attention to it. Also when users do not log in into their internet banking Apps, they were not able to collect data’s on customers spending habits, which help them in cross selling and up selling their products. Hence, banks do not see UPI as high-priority project for them and instead they are investing in their large wallets. Because of which, people who all are interested in UPI may not be able to use it as conveniently as possible. As per the study, there are several factors that led to non-acceptance of UPI by the online consumers. Factors are complex in operating, Lack of wide acceptability, Lack of Awareness, Lack of security of transaction and Lack of offers. According to respondents, Lack of Wide acceptability has been the most important factor due to which UPI were not adopted by Most of the online consumers, followed by the Lack of awareness of the Apps to the customers by either Banks or the Government. The most important factor leading to the usage of UPI by some of the respondents are Instant transfer of funds followed by user interface and ease of use.

For the adoption of UPI by customers, NPCI should take some measures and adopt some strategies in order to motivate people for using UPI. Since every customer is different, so are his needs. NPCI should run campaigns for traders and small merchants or rickshaw drives or cash and carry bags buyers and agricultural market committees. In order to have an immediate impact and have an important role in demonetization, NPCI should specially focus on some of the things in order to ignite the interest among the online consumers. Firstly, they should find a way for compensating banks for the commissions, fees and data which they will not be able collect. Secondly, they should identify large customer groups and should be motivated to use UPI. Thirdly, different pricing strategies should be adopted for different customer groups.

It can be understood broadly that the factors that lead to non-acceptance of UPI by the online consumers are crucial. The factors that lead to non-acceptance of UPI by the online consumers Reason for making the UPI was to make the application as simple as possible. According to NPCI, Payment and receiving payments from others should be as easy and fast as taking out a phonebook and making a call on mobile phone. An account holder should be able to send and receive money from their mobile phone with just a code without knowing
any other bank/account details. All a customer needs to know is to "pay to" or "collect from" a “payment address” with the help of a single click.

UPI should have been made in such a way that it comes up with a solution so that innovations on both payee and payer side can evolve without changing the whole interface. It should allow the application providers to take benefits of enhancements in mobile devices, providing with integrated payments on new consumer devices with innovative user interface features, take advantage of newer authentication services, etc.

Given the size of the potential user base, the aim was to have a solution which should not crash and be available to all billion users which will help in enabling large scale adoption. An interface which should allow adoption across Smartphone and feature phones consumers and provide full ability across all payment players and phones. Also, People should be able to send money to others who are not yet using any mobile application and vice versa.

One of the main areas of concern among online users is security. The application should be able to provide a solution for end-to-end strong security and data protection. Security meaning not to reveal too much data likes banking or personal details which could be misused by someone. For the convenience of the customers, the solution had to offer 1-click 2-factor authentication, which can help in protecting against phishing, risk scoring, loss of data etc.

India is a cost-centric country and any product or services being expensive will have a short life and lesser acceptance by the customers. Since mobile phone number can be used as an authentication device, using virtual payment addresses and third party portable authentication schemes such as Aadhaar, it should allow both acquiring side and issuing side cost to be brought down.

REFERENCES


