# MOBILE WALLET TOWARDS CASHLESS PAYMENT IN INDIA: CHALLENGES AND OPPORTUNITIES

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***Abstract***

*India is moving at a rapid pace towards Digital payments to become a cashless less society and to create knowledge economy. There is a tremendous interest among stack holders such as government, RBI (custodian of Indian banking system), academicians, Banks, Service Providers to explore the opportunities of moving towards a cashless economy. Mobile wallet is next big disruptive payment technology which is becoming quite popular in India that has been helping India in a great way to become cash less society. There are many leading players like PayTm, Mobikiwik, Airtel Money, Freecharge and Government enabled, UPI based BHIM App which are successfully acquiring the considerable user base. This study attempts to know how mobile wallet is instrumental in accomplishing the goals of cashless economy and the challenges it faces and barriers & obstacles while adopting technology. This study is conducted using secondary data, simple qualitative analysis methods using the Secondary data along with Tools and charts and trend graphs to understand the cashless payment systems.*

***Keywords:*** *Mobile Wallets, Cashless Payments, Digital Payments*

## Introduction

Digital payment landscape in India is undergoing a massive transformation. Indian consumers have shown tremendous affinity towards digital technologies with growth rate for mobile phones, e-commerce adoption outstripping developed economics. Government of India "Digital India" Initiative aimed at transforming India to a digitally empowered society and knowledge based economy is expected to further accelerate awareness, availability, and adoption of digital technologies. Major benefits of moving towards the cashless include greater financial inclusion, formalisation and integration of the economy, increasing the tax net and making payments and money transfers faster and simpler for citizens.

Mobile wallets are becoming popular and successful in implementing cashless mode of payments. Paytm is one of top most wallets that have been shown phenomenal success in terms of acquiring already, 150 million user. Mobile wallets are becoming more reliable options and replacement for physical wallet, where you don't need to carry your physical wallet or cash and you just carry smart-phone and pay as you go.

Niti Aayog, CEO, Amitabh Kant said that debit and credit cards as well as ATMs will be redundant in next three-four years and people will use their mobile phones for financial transactions. He further said that with India being a country where 72 per cent population is below 32 years of age, it will have an advantage over other regions like the US and Europe in terms of demographic dividend and India is the only country in the world with billion biometrics and as many mobile phones and bank accounts and therefore, in future, it will be the only nation which will make a lot of disruptions[1].

For the month ending April 2017, number of transactions using Prepaid Payment Instruments – essentially Mobile Wallets and PPI Cards were 320 million and total value of transaction is 7442 crores. grew by 22% as compared to February 2017, and 375% compared to March 2016, according to data from the Reserve Bank of India[2]

**Defnitions - Mobile Wallets**

**Mobile Payment** is a transfer of funds in return for a good or service, where a mobile phone is involved in both the initiation and confirmation of the payment. M-payment is a crucial driver for the growth of the e-commerce industry and Mobile wallet in India. People can shop online; book movie tickets, rail or flight tickets; and pay their bills by making m-payment through their debit and credit cards.

**Mobile wallet** is the disrupting technology in the digital payments initiative which is playing crucial role in terms of moving towards cashless payments. Mobile wallets such as Paytm, Airtel Money, Oxygen wallet, Ola Money, Mobikwik etc. came as a boon during the month of November and December of 2016 when the entire India was struggling to get cash for daily expenses and was waiting outside banks for 4-5 hours to withdraw some money during demonetization. A mobile wallet is a virtual wallet, which can be created and managed using a mobile application installed on your smartphone. The word "virtual" is used because instead of using your physical plastic card, such as Credit card/Debit card etc., to make purchases, the user can pay with smartphone, tablet, or smart watch. The users can preload a certain amount in that digital/virtual account created with the mobile wallet service provider using Credit Card/Debit Card/ Internet Banking, and spend it at various online and offline merchants listed with the mobile wallet service provider. Also consumers can pay various utility bills such as electricity bills, post-paid mobile bills using a mobile wallet. Broadly, Mobile wallets usually fall into one of 3 categories-Open, Semi-Closed and Closed.

**Semi-Closed Wallets**: Allow payments to partnering merchants and transfers to other users. These do not allow transfers to other bank accounts or cash withdrawals. (For example, Airtel Money, Paytm, and Mobikwik). This means that once the money is loaded it has to be spent on goods and services offered by merchants which have partnered with the service provider and cannot be withdrawn. Most mobile wallets in India fall into this category.

**Open Wallets**: Allow payments, transfers to other users, and other bank accounts and cash withdrawals (For example, Vodafone M-Pesa). These wallets can only be offered in partnership with a bank.

**Closed Wallets:** Money loaded can only be used on goods and services offered by the provider. (For example, Flipkart, Snapdeal). These types of wallets are popular with e-commerce companies for refunds, cancellations and gift cards and allow money spent by users to remain within the company's ecosystem.

**Importance of the Study**

This Research paper focuses on impact of mobile wallet towards cashless system in India. India is predominantly cash society where majority of transactions are happening through the cash. The primary reasons are,

- Major section India's population are still not familiar Mobile Payment systems or Digital payment systems or cards even though continuous focus being given by RBI and Government of India.

- Retail merchants in India prefer accepting the cash that forces the customers to pay by cash because merchants think that electronic payments take away their margin by means transaction fees.
- Most importantly, cash payments allow people to keep such transactions off the books and evade the tax.

But India is now moving towards cashless society and Government of India has been pushing "Digital India Programme" which is the flagship programme of Government of India with a vision to transform India digitally empowered society and knowledge based economy. Main benefits of cashless policy is that it will increase employment, reduce cash related robbery thereby reducing risk of carrying cash. Consumer can benefit avoiding long queues, wasting time, smaller coins change issue, convenience of payment, hazel free payments and freedom of making payment any time and anywhere and mostly saving time and money in the process of cashless payments.

Cashless policy will also reduce cash related corruption and attract more foreign investors to the country because it brings in transparency and confidence in the investor. Cashless System helps to modernize the payment system and reduces the cost of banking service. Digital banking solutions will make the banking transaction to be easier by bringing services closer to its customers hence improving banking industry performance. Cashless payments system also created lot of opportunities for Fin-tech companies to start many start-ups in the financial domains and grown into leading players like PayTM, and Mobikiwik etc.

Among all the cashless payment modes, Mobile Wallet is the popular mobile payment system which is predominantly used by the consumers that helps to achieve the cashless society. Hence this study "Impact of Mobile Wallets towards cashless payments system in India" is most relevant in the current context.

**Statement of Problem**

Mobile wallet market in India is growing rapidly due to growing number of smart phone users coupled with attractive discount offers and raising disposable income. Mobile wallet market has observed huge traction due to Demonetization of INR 500 and INR 1000 currency notes by the government of India. In addition, Government's digital payment initiatives like Unified Payment Interface (UPI) have increased the mobile wallet market across the country. There are many leading mobile wallet companies in India like PayTm, Mobikiwik, Oxygen wallet, Airtel Money, SBI Buddy , Vodaphone m-pesa etc who offer various payment services like Money Transfers, Recharges, Utility Bills and Online Payment and Offline payments at the POS etc are using mobile wallets. Government has been pushing digital payments in a big way to create a cashless society and mobile wallet has been planned as the leading payment option for cashless mode of payments. The example is introduction of BHIM based on the Unified Payment Interface.

Even though mobile wallets are quite popular, still the adoption rate of mobile wallets is very less when compared with projection and usage of debit and credit cards. More over, the Debit and Credit cards are used mainly to with draw the cash only which is defeating the purpose of cashless payments. The mobile wallets adoption rate is low due to many problems. Mobile wallet is largely used by the Tech-Savvy users and urban users who have the bank accounts; it has not been penetrated much among un-banked population and rural people who do not have bank accounts. Mobile wallets are not interoperable or the money is transferable between the different wallet companies which makes to consumer to hesitate to keep the money in the wallet. Indian consumer always thinks of safe and security of cash, and also consumers are feeling in-secured to store all

the credit and debit card critical data in the wallet websites. In addition, the awareness of wallets and its usage and eagerness to use wallets are very less due to poor digital literacy rate, which is also one of main reason for lesser adoption.

Smart phone is a must for moving towards a cashless economy. Over 40% of the people of India's affordability to have smart phone is a real challenge to achieve this. On the one side government of India is making efforts to make cashless economy, on the other hand coming out with new currency is making a dent in achieving this goal. Hence this study is planned to study the impact of mobile wallets in implementing cashless payment system and identify the possible challenges that faces and opportunity that offers. This study basically solves following three questions.

**Research Questions**

- How does the mobile wallet impact cashless payment systems in India?
- What are challenges and opportunities while using mobile wallets for cashless payment systems?

**Objectives of the Study**

Based on the research questions, following objectives are derived to set the focus of the study:

- To examine impact of the mobile wallets in the cashless payments
- To study the challenges and opportunities of using mobile wallet.

**Review of Lietrature**

**Nina Mallet (2006)**[1] had attempted a study on "consumer adoption of mobile payments using qualitative method" and empirical data was collected from 6 focused group sessions from interviewees who are from Helsinki Metropolitan area in Finland. His findings concluded that relative advantage of mobile payments is related to the specific benefits provided by the new mobile technology such as time and place independent payments, remote and ubiquitous access to payment services, avoiding queues, complementing cash payments. This study also found that in certain use situations like unexpected need of payment, time pressure and lack of cash or loose change, the advantage of mobile payments become more important .He also suggested many other determinants and factors such as compatibility. Complexity, costs, network extension, trust, and perceived security. Since Mobile wallet belongs to mobile payments category, this study concluded that above findings are applicable for mobile wallet adoption either partially or fully.

**Dr.Hema Swetha Rathore et.al (2016)**[2] **:** This study explored the various factors that can affect consumer decision to adopt the digital wallet in online payment. This study conducted using ANOVA method. The study has found various factors such as usefulness, alternative choice for online payment, satisfied and security and safety are the major factors plays important role in using digital wallet. This study further suggested that promotional programme, more discounts and reward points could increase the mobile wallet popularity and adoption. This study concluded that digital wallet is quickly becoming mainstream mode of online payment. The shoppers are adopting mobile wallets at an incredible rapid phase, largely due to convenience and ease of use. Tech-savy shoppers are increasingly demanding seamless omni-channels, retails experiences and looking for solutions. This study concluded that online cashless payments yet to penetrate all the section of people which may happen in the coming years.

**Manpreet Kaur (2017)[3]:** This study has examined the role of Demonetization and the role of Electronic Payment System. This study concluded that the cashless transaction system is reaching its growth day by day , as soon as the market become globalised and the growth of banking sector more and more the people moves from cash to cashless system. The cashless system is not only requirement but also a need of today society. All the online market basically depends on cashless transaction system. This study furthers found that the cashless transition is not only safer than the cash transaction but is less time consuming and not a trouble of carrying and trouble of wear and tear like paper money. It also helps in record of the all the transaction done. So, it is without doubt said that future transaction system is cashless transaction system.

**Manjiri A., Dr. Prapti Deshmukh (2017)[4]:** This study proposed cashless payment system that may remove all issues that generally arise in traditional cashless payment Systems. It has proposed to use biometric as a password instead of using a general password. For this purpose, fingerprint biometrics stored in UID database is used. It has also found out the issues in the Mobile wallets and UPI and cashless mode of transactions

**Impact of Mobile Wallet in the Cashless Payment System**

India has many cashless payment options which is popular among the users and government of India is pushing the all the stack holders to use the cashless payment systems. Some of the popular cashless payments systems are.

**United Payments Interface (UPI)**: UPI is simply a system which integrates multiple banking features into one app. The system was launched by the National Payments Corporation of India in April 2016 and allows anyone with a bank account to send and receive money from their smart-phones either through any bank's UPI app. Users need to just need to select their bank account and setup a Virtual Payment Address (VPA) and an MPIN (Mobile Banking Personal Identification Number) which are the only two things required to make transactions. This makes the transactions done through UPI faster and safer. The cost of using UPI is minimal, cost a maximum of *Rs*. 0.50 and the value of transfers is capped at *Rs*. 1 lakh per day.

**Aadhaar Enabled Payment System (AEPS):** This is developed for remote areas without access to banking infrastructure. This system allows people to use their Aadhaar numbers to access various banking services through a Business Correspondent or a 'Bank Mitra' (an authorized person who acts as an agent of the bank at places where it is not possible to open a branch of the bank). Once the 'Bank Mitra' is able to verify their identity, he/she can help people deposit and withdraw cash, as well as pay utility bills and transfer money using an internet-based interface provided by the bank

**Mobile Wallets: M**obile wallets are essentially virtual wallets in which users can put in some money which can then be used to make online and offline transactions. For instance, one can simply pay for groceries through their cell phones at a grocery store that accepts payments made through mobile wallets as long as there is enough money pre-loaded into the wallet. Mobile wallets can also be used to recharge DTH plans, mobiles and pay utility bills as well as transfer money to friends and family. However, most wallets only allow people to transfer money to other users of the same service, partnering vendors and do not permit the withdrawal of cash.

**National Electronic Fund Transfer** (NEFT): This is a country- wide payment system that facilitates the transfer of funds from one entity to the other. Under this Scheme, individuals, firms and corporates can electronically transfer funds from any bank branch to any individual, firm or

corporate that has an account with any other bank within the country. NEFT payments are capped at *Rs.* 50,000 per-transaction.

**Real Time Gross Settlement** (RTGS): RTGS is meant to be used for high-value transactions with the minimum amount that can be transferred being set at *Rs.* 1 lakh. Transactions made through this are monitored by the Reserve Bank of India and cannot be reversed. Electronic Clearing System (ECS): This service facilitates the payment of utility bills in particular.

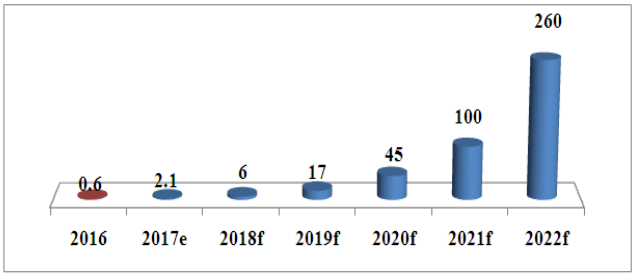
**Mobile Banking:** These banking services can be accessed by anyone as long as they have cellular data, a smart-phone and an app for the particular bank they have an account that they want to operate in. Different banks offer their own apps and offer various banking services through them

**Banking Cards:** Credit cards, debit cards and prepaid cards all fall under these categories. These can be used to either make payments online using a digital payment gateway (which is provided by the merchants) or at a physical store via a machine. To ensure security, banking cards generally provide a two-step verification process using PINS which can be created by users or passwords which can either be preset by users or single-use auto-generated passwords that are sent to a user's registered mobile number or email. Banking cards can also be used to access other pre-paid digital payments instruments like mobile wallets. Only vendors have to pay a small percentage of the amount they receive via a banking card as transaction charges.

**Mobile Wallet Impact on Cashless Payments**

As per the TechSci Research report the Mobile wallet market is forecasted to reach USS 6.6 billion by 2020. Mobile wallet transaction is among the fastest growing paperless modes of payment or banking, and it is expected that the majority of transactions will go paperless in the next 10 years.

Chart 1 Mobile Wallet Transaction Vol in Billions - FY2016 to FY2022




Source: RNCOS, RBI

As per the above chart the mobile payments are growing at the rate 132% from 2016 to 2022 and reach around 460 billion by the end of 2022 The mobile wallet market in India is projected to exhibit exponential growth during the forecast period, on account of rising smart-phone penetration rate, growing mobile internet user base, and increasing government support.

In addition, mobile wallet companies operating in India are also offering attractive deals and incentives to attract new users. In recent years, wallet companies have increasingly formed collaborations with service providers and financial institutions to offer a robust and seamless mobile wallet platform to the users.

Usage of mobile wallet is growing across various applications such as money or banking transactions, mobile recharge & bill payments, ticket bookings, utility applications (electricity bills, gas bills), Transportation, Online Purchases, and Retail purchases in the stores etc. In addition, approval of payment bank licences of major companies such as Paytm, Vodafone, Airtel, etc. is projected to drive growth in the innumber of banking transactions through mobile wallet over the next five years.

The primary reasons to use a mobile wallet are that they make the payment process faster and are considered by many to be safer.

**Convenience:** The biggest selling point for mobile wallets is convenience. Using a mobile wallet means that one does not have to deal with cash or punch in debit/credit card numbers, pins and passwords each time they need to pay for something. Additionally, transferring money to friends and family can be far easier with a mobile wallet which usually just requires their mobile number to complete the process

**Safety :** The fact that one does not have to give out their bank account or credit/debit card details means that mobile wallets can often be a safer digital payments option. Users can also load small amounts of money which can significantly reduce the potential loss in case the mobile wallet's credentials and details are compromised.

**Challenges and Oppportnities of Using Mobile Wallet**

There are many Cashless methods and payment techniques that are provided by various competing business models and driving adoption. Still India uses mainly the cash. Paper currency facilitates making transactions anonymous, helping agents to avoid laws, regulations and taxes.

The trend is that retail payments in India are still dominated by cash, with a mere 6-7% of transactions conducted electronically. The rest are in cash or cheque. Uber is primarily a cashless service elsewhere in the world, but more than 50% of Uber trips in India are paid for in cash. In the same way another leading cab company, OLA Cabs says that 50% revenue are received in cash and 50% payment from digital money[3]. In India, merchants are forcing the choice of cash payments on customers because electronic payments eat into their margins just like everywhere else in the world. Some other reasons that stops using digitial payments are customers still find cash more convenient, access is an issue for individuals without bank accounts and fraudsters continue to find opportunities in electronic transactions.

Consumers who have tried using digital payments but have now shifted to other modes such as cash, card and online banking say the inconvenience of remembering log-in credentials, insufficient acceptance, possibility of a technical or human mistake during a transaction and frequently running out of balance are the top reasons for lapsing, according to the report by Google and BCG.

Hence, expanding merchant acceptance is critical to driving mass adoption of cashless payments by consumers. As of 30 September, the number of POS devices which accept debit and credit cards as modes of payments at merchant outlets was a mere 1.49 million, according to the Reserve Bank of India's (RBI's) monthly bulletin. Indians had nearly 730 million debit cards and 27 million credit cards at September end. The Debit cards are mainly used for just withdrawing the cash from ATMs[4].

Leading Mobile wallets providers such as Paytm, Mobikwik and Ola Money offer ease of transaction to customers are still in the starting phase of adoption as only around one-fifth of India's population has a smart phone where these services can be used. Government has launched UPI (Unified Payment Interface) based technology which helps to transfer the funds from any banks to any bank. UPI based BHIM is becoming more popular for transferring funds comparing with the mobile wallets because of user friendly and hazel free User Interface. But there are many UPI apps flooded in the market, developed by various Banks, which are difficult to operate, makes the consumer not to trust and also less user friendly apps stops the consumer adoptions.

Interoperability issues are causing friction between banks and mobile wallet service providers. On 16 January, for instance, *Mint* reported that ICICI Bank Ltd had blocked transactions on payments app PhonePe in at least the second such instance of a commercial bank trying to protect

its turf against non-bank mobile wallet and payment companies. A day later, PhonePe allege that ICICI was blocking transactions. On 4 January, CNBC-TV18 reported that SBI had blocked net-banking transactions with e-wallet firms, although it allowed customers to top up their mobile wallets with debit and credit cards. At the time, SBI said the service was blocked because of security concerns[5]. This kind of issues makes the consumer not to trust the wallets and hence lesser adoption rates.

**Conclusion**

Even though there are many technology platforms like mobile wallet, UPI in India which offers cashless mode of payment, still the adoption rates are very low. One of the major reason is the smartphone penetration is just 300 million users are using the smart phones for mobile payments out of 1 billion mobile subscriber bases, as per TRAI. Majority of consumers are using Debit cards to withdraw the Cash from ATMS. Mobile wallets consumers are concerned on the security to cashless payment and wallets are linked with bank accounts for top up of cash into wallets. According to cyber security observations while those who have been transacting online are fairly well-versed with the threats one can face while paying online, it's the first-time users or new adaptors that need to be educated on the risks they are exposed to. A mass awareness programs and many incentive schemes, many top-up centres, would motivate the users to use wallets. Many mobile wallets are not interoperable which causes friction among the Banks, Wallets companies and ultimately customers are unhappy to adopt. An open-access platform is required that would allow for interoperability for wallets operators, and diverse choice for customers. This will allow banks to have a wider acceptability of popular third-party prepaid cards and wallets, with minimal loading failure rates. Also it will inter-operate seamlessly with minimal friction across a multi-sided base comprising wallets, banks and common merchants (same QR code for instance). Also banks will have to rework service level agreements with their PoS merchants and card networks to ensure a much higher reliability. Government should facilitate for creating uniform framework or guidelines to interoperate and integrate seamlessly between the various stack holders involved in the Digital platform. India is too large a country and it is long way to go, diverse in perceptions and culture, behaviours to have a one size-fits-all strategy for a cashless world. When we offer an open access platform which allows multi wallets will encourage more consumers move from cash to cashless economy. This will also allow bank to have wider acceptability of popular third party prepaid and wallet with minimal loading failures rates. It is suggested that bank may think to rework service level agreements with this POS merchant and card networks to ensure much reliability. A movement special effort is required to make a paradise from the cash to cashless economy through introducing more option in accepting multiple cards a special incentive zero service charges.

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