

## Mobile Wallet Integration: A Wellspring of Prospects and Hardships

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### ABSTRACT

**Purpose:** With the increase of customer base for mobile wallets in India, there is also a significant increase in the rise of competition, and this brings many private m-wallet companies into the market. These apps are continuously trying to adjust themselves into the changing environment. In the path of growing better and better, these companies are also facing threats and gains opportunities as well. This paper has critically analysed these various threats and opportunities being faced by these wallet companies. In this paper, study have identified threats or vulnerabilities for mobile wallets application. Mobile wallet is the combination of hardware and software. So every new invention in hardware and software can be considered as a threat or an opportunity as well. Now digital economy has entered into every aspects of life whether it is mobile payments or real time traffic apps. Many countries are looking the digital economy has a major source for creating jobs, improvement or productivity and a driven factor for the economy.

**Design/Methodology/Approach:** A mobile wallets payment is a very big platform for latest technology which helps financial institution in India and also to increase consumer base. The reduction of security issues and many other threats will automatically magnify the adoption of mobile wallets. There is a crucial need to make people aware about the mobile wallets services which are comfortable, easier, confidential and safe instrument.

**Finding:** This paper highlighted the major threats of mobile wallets are frauds, consumer mindset, accessibility etc, and the opportunities are increased interest for consumer, demonetisation, expanding smart phone user base etc.

**Originality/Value:** This paper will benefit all users of mobile wallets.

**Paper Type:** Theme Based Paper.

**KEYWORDS:** Mobile Wallets | Threats | Opportunities | Economy | COVID-19

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## Introduction

Now, mobile is not used only for making calls, sending messaging but also for sending money, receiving money, online shopping etc. with just one click. Now a day, there are 70+ applications which are attracting you to give them a spot in your mobile and this piercing competition among themselves. They are trying to overcome their threats and to grab opportunities. They are going on the path to be a best version of their selves. They are looking for the opportunities to get a bigger market shares and to minimise their threats by doing collaborations, agreements etc. As India is stepping towards cashless economy, there is a wider market for these m-wallets retailers to cover by seeing its wider market share, many new comers attracted towards this business. But this also brings threats to them and hence the numbers of fake apps are also on the rise. As RBI and many financial institutions are trying their best to protect customers from cybercrimes and frauds, but the hackers are also trying to evolve new technologies to hack the money at their own level. Not only this, there are various opportunities and threats which are also being covered in this paper.

There are various factors that make consumers hesitate to use them which can be called as threats but also there are various factors that make consumers to pursue these e-wallets. These can be described as opportunities. In 2011, Google has introduced Google wallet, which made it the first tech giant to bring one to the market. This was based on the technology called near field communications (NFC). It made people capable to use these wallets to make payment, earn loyalty points etc. But unluckily, this technique does not become popular. The worst was that, merchants also did not welcome it. But after some time, apple pass book launched, than apple pay and then Samsung also adopt this way. Now there is a chaos of these mobile wallets in the market and customers have so many options. To make customers attracted towards e-wallets. It is necessary for these e-wallets companies to overcome its threats and grab the opportunities it faces.

These m-wallet companies are also helping government in making a cashless economy. The major trends are paytm, free charge, mobikwik, SBI money and many more mobile apps. Today, the mobile wallets have various key features which are same as physical cash like anonymity, transferability and security (Bosamia, 2017). Now the current digital economy are seeing to create an industrial system with artificial intelligence (AI) that helps in making smart cities, digital currencies and so forth. And with this there come new technologies in the market named as digital economy (2001), crypto currency and blockchain (2008), internet of things (2012), the fourth industrial revolution (2016). This growth of digital technologies, social network and smart phone has led to faster and targeted customers companies and start-ups and mobile wallets are the key enablers for digital economy. (LOO-SEE BEH)

## Review of Literature

Bohemia and Deepak C et al has defined the role of frauds and security in creating threats for mobile wallets by posing a negative image of e-wallets in the minds of consumers. Tolety has showed how a physical currency has a detrimental effect on a country's economy. Gabriel et al described that to be a winner in this cut throat environment, it is necessary for these e-wallet players to raise funds. R.Sivajothi has shown that a rural India is an opportunity for e-wallets because of the large consumer base. Dr. T. Durai has made us understand to know that with the digital financing and financial inclusion, e-wallets players can achieve their target. M.S.Smitha has defined the contribution of demonetisation in the increasing number of revenues of e-wallets.

## Threats

**Fraud and security:** - perceived security has a positive effect on trust towards m-wallet. If a mobile wallet gives security to its users, they will certainly have a trust about that mobile wallet and trust has positive effect on attitude; so perceived security also has a positive effect on attitude. The user's perception, behaviour can be changed in the positive direction if a mobile wallet follow this variable.

While thinking about using the mobile wallet. Security is the main question arises in the mind of consumer. Consumer is in the main concern that if he uses mobile wallets, his credentials can be shared. The m-wallet industry is trying its best to make its transactions secure by adopting various high classes standards. Accordingly, hackers are also upgrading their techniques to make a safer path for theft. This hacking cause a loss of trust to user and a financial loss and mainly the reputational loss to that m-wallet company (*lyra*). RBI is also taking measures to protect customer form any fraudulent transactions that happen on mobile wallet. RBI has mandated that all m-wallet players will have to provide contact information that will be open for 24/7 for customers loss or theft. There are so much ways by which hacker can hack your bank account and can steal money from your bank. Some of these are

- Phishing SMSs promising income tax refund.
- The KYC update hoax.
- Simple to crack passwords.
- Fake UPI posed payment banks.
- Fraudulent NPCI/UPI/BHIM handles and frauds.
- Lack of awareness of UPI payment options.

Hence RBI has also issued guidelines to protect consumers from these frauds. If a consumer has faced any loss due to unauthorised transactions, then only he will be solely responsible for this. But if he has reported about this within 3 days, he will get the entire amount. But if he reports



within 4 to 7 days, then the amount refunded will be the lower of transaction value or rupees 10000. To become a successful m-wallet fraud should be less and security should be high only then a market wallet can grab a big market share.

The m-commerce service provider should take action against the unauthorised access to the consumers' accounts, should improve data protections security systems and refund policies. So that consumers' trust towards m-commerce can be increased and also there should be a third-party verification system as VeriSign and TRUSTe.

Some of the main attacks are:-

- Phishing attacks: - Customers have various type of information in their mobile phones, which are in a great prone to attacks. Usually these attacks happen through e-mail. In this users are put to a trap to disclose his information.
- Social engineering: - Usually, users data is available on public domain and it is easy for the attackers to steal this data from there. This information can be sold in underground market forums.
- Some time, hackers create fake website, malicious URL, insecure WIFI hotspot etc. and then grab his information for mobile wallet payments.
- OS permission: - many apps takes permission of the users and these can be the easy way for the hackers to use his information.

There are various types of frauds as well which can be caused by mobile devices as unauthorised access of lost or stolen mobile devices, implementation issues installation of malware. Some of the mobile wallet application threats are reverse engineering. In this attackers attack on passwords and encryption keys etc. Some merchant threats are uploading on the POS contactless payment terminal, man in the middle etc. Some payment service providers threats are compromise of payment gateways, data connectivity compromise and acquirers threats are installation of malware, repudiation of mobile payment authorization.

**Cash based economy:-** The adoption of digital wallets in India is somehow difficult; because India is traditionally cash based economy. It was estimated that 11% of India's GDP was in physical currency during 2015-16. This is a worst condition for any developing country across the world. It means that a number of people do not have bank facilities or have a limited access to technology. Cash based economy faces many threats. With the increasing dependency on physical cash, the aim of financial inclusion is very far to achieve. It is very difficult for the people to change their old habits. To make a good consumer base, these digital wallet providers should make people aware of these causes of physical cash.

**Counterfeit currency:** - Now a day, many countries are facing economic war and economic terrorism. Many countries have started printing Indian currencies using their minting technologies. Many reports reveal that during 2014-15, between 8 to 40% of total money circulating in India is counterfeits.

- Cross Border Terrorism: -Often, terrorism is funded through this counterfeit currency.
- Black Money: -Hoarding of cash is very easy without having an account and this hoarding leads to price rising as well as widens the gap between the destitute and affluent.
- Tax Evasion:- With physical cash, government cannot keep a track of the real income of its citizens and with this, many business and private proprietor reveals only a small fraction of their income for tax evasion. This results in shrinkage of income and poor economy for country.
- Harming the Environment: -The paper which is used to print currency obtained through the cutting of trees.
- Hygiene Problems:- Currency notes cannot be washed even we do not wash hands after touching the notes and this invited a number of viruses and bacteria.
- Easy Wear and Tear: - Physical cash can easily become damaged and can lose its value.

**Regulatory Compliance:-** To start m-wallet, the e-retailer company has to go through some regulatory compliance. It needs to do a lot of paper work. The compliance does not require only financial regulations, but also consumer based regulations. There is a strict compliance that should be followed.

Reserve bank of India issues guidelines to give a framework to open a prepaid payment instrument (PPI) i.e. mobile wallets in the country so that this section can develop in a customer friendly manner. RBI issues these guidelines under section 18 of the payments and settlement system act, 2007. After this act, many banking and non banking entities started issuing PPI in the country after taking approval or license from the RBI and followed the various guidelines issued by RBI. But till now there has been many amendments have been done on "issuance and operation of PPIs" which was issued in April 2009, by seeing into its developments and growth done by PPI issuers. All these providers who got license from RBI to issue loadable or reloadable PPI depending up on the category of PPIs. But banks have been permitted by the RBI to issue and reload such PPI in their branches and ATMs against payment by cash/debit to bank account/credit cards etc. Banks are also eligible to issue semi-closed PPI through its agents by cash/credit card/debit card. But it has to fulfil all these conditions: for selling PPIs the issuer has done proper due diligence of that agent

before appointing him as an agent. For any act of agents regarding payment instrument, issuer shall be responsible. Any omission or commission done by agents regarding PPI, the issuer shall be responsible as a principle.

There are too many guidelines given to these players by RBI. Every wallet player is now required to comply with the new requirements by 30 September 2020 for the financial positions as on 31<sup>st</sup> March 2020. As per the new guidelines the m-wallet are required to have a 25 crore to maintain base requirement. It is 5 times than before. This will put small players in great crisis and company also has to convert it without KYC wallet to full KYC within 60 days from the date of issue. In reality there does not exist a particular set of regulations for mobile payments. In fact, regulation is layered. Mobile payment operators have to comply with various kinds of regulations such as payment regulation, consumer regulations, privacy regulations, and technology regulations as will. Not only this, these companies have to comply with finance, competition tax, intellectual property regulations.

**Consumer Mindset:** - In India, going cashless is still a great fear. At this time, when whole globe is going towards being digital, some consumers and merchants are still hesitate to adopt it. It is not that e-wallet is not good; it is their lack of knowledge, which makes it not good. Cash on delivery is a traditional payment system in India, that's why using cash or via credit or debit card is always considered better than PPI. Large customer base links the very idea with fraud, they think what if their phones get hacked? What if they lose their device? What if their essential credentials are shared? For the e-wallet company, who wants to make a good consumer base, have to break these stereotypes. Only then their wallet can survive in market and make profit. For doing this, they should run marketing campaigns to make people believe that e-wallet's security cannot be easily compromised. Trust has a positive effect both on attitude and intention. Once the user's trust has been won, he will pursue other to use e-wallet and with this the India's going digital dream can become true.

It is the consumer's mindset that makes the path for the m-wallet companies' success. Now digital economy is changing itself into global commerce. In e-commerce the sale of physical product is mediated by a digital platform, so the consumer mindset is the main point. There are various factors that influence the consumer mindset to adopt specific technologies. Some of which are perceived consumer behaviour, security perceptions, convenience, social influence, consumer intention, perceived value and trust, all these factors contribute in manipulating the consumer's

mindset. But among these perceived usefulness is the main contributing factor which is a significant one. It causes to influence the consumer mindset to adopt the mobile wallets. Because perceived usefulness has a direct and positive impact on consumer's intention to use mobile wallet services. But Alaeddino et al. also gave another main factor that influence the path of going physical wallet to digital wallet and that is the perceived ease of use which can enhance the consumer mindset to use the mobile wallet.

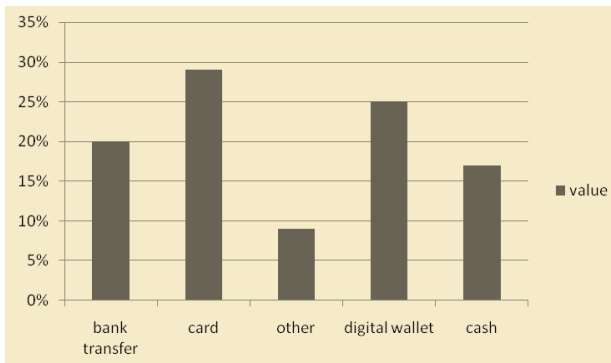
The perceived usefulness and perceived ease of use both are positive factors. They have direct and positive relation with the consumer's intention but perceived risk of use can be count under negative factors i.e. if the degree of risk is high, the mobile wallet adoption rate would be low, and so the financial service providers should take keen interest in these three factors. Figure 1 shows how these factors influence the consumer mindset.

**More Use of Credit and Debit Cards:**-Cards are still posing a great challenge and financial loss for these e-retailers companies. Since on using debit and credit card, there are no transactions limits, which make user to use cards instead of mobile wallets. Because in e-wallet transaction limit is fixed this is usually 100000 in case of UPI transaction for full KYC.

The main threats which are being faced by m-wallet are rewards points facility. E-wallet does not reward point. Reward point means the points given by the credit card company to the user on spending a certain amount of money. Credit Card Company allows cardholders to earn one or more points per dollar in spending etc. The consumers can use these reward points for buying gift cards from retailers or for travelling purposes etc. The debit card payments through POS terminals or card reading machines shows a good adoption of digital payments for merchant transactions. According to the RBI data, debit card transaction has increased from 301 million in January 2018 to 366 million in July 2018. This shows that people have started using debit card for their purchases. Hence plastic cards are also a big hurdle for e-wallet companies.

But this threat is changing into opportunity as the time lapses according to the data from RBI compiled by Bloomberg Quint. The share of card payment stood at 49.36% in January 2019 which was 8.15% in January 2015. The share of mobile payment has increased to 27.9% compared to just 3.5% 4 years ago. In card payment Bloomberg Quint has included credit, debit cards used at ATMs and point of sale. Wallets and mobile application are included in mobile wallet according to figure 1 shows the various e-commerce payment method which is this split on the basis of value.





**Figure-1E-Commerce payment by split by value method**

**Limited Funding:** - In today’s scenario, many e-wallets companies are facing limited funding. Because of the limited funding many e-wallets players are finds it difficult to run its businesses smoothly and without any cost hindrance. There is a cut throat competition among the e-retailers companies to get the consumer base. So they are also looking to cut

this competition. Both these purposes can be completed by industry consolidation. Now these e-retailers companies are trying to get mergers and acquisition. For eg: Flipkart acquiring phone pe and Jabong acquiring Pay U citrus payments etc. By this strategy, these companies can eliminate cost hindrance and competition as well. But limited funding is still posing a threat to small e-retailers companies.

Here are the examples of top 5 e-retailers companies who are using acquisition as a major source for funding and remove competition from the market. Table-1 shows the how Amazon is making tie ups and acquisition with other organisations for making people aware about its brand that are not using e-commerce market much. Table-2 shows the acquisitions made by flipkart to maintain its leadership position. Table-3 shows the various acquisitions made by paytm.com. Paytm.com is not just acquiring the new start ups, but also it has started entering in the higher education platform.

**Table 1 Tie ups and acquisitions made by amazon.in**

Date	Organisation	Type of Transaction	Amount
22-09-16	Dabur India Ltd.	Partnership	Undisclosed
28-10-16	Westland Books	Acquired	Undisclosed
23-09-17	Shoppers shop ltd.	5% stake	179.25cr.

**Table 2 Acquisitions made by flipkart.com**

Announced Date	Organisation	Type of Transaction	Amount
22-12-10	WeRead	Acquired	Undisclosed
09-02-12	letsBuy.com	Acquired	Undisclosed
22-05-14	Myntra	acquired	\$300,000,000
01-09-14	Ngpay	Acquired	Undisclosed
29-04-15	Appiterate	Acquired	Undisclosed
01-09-15	FX Mart	acquired	\$6,800,000
03-12-15	MapMyIndia	Acquired	Undisclosed
01-04-16	PhonePe	Acquired	Undisclosed
10-04-17	eBay India	acquired	Undisclosed
26-09-17	F1 Info Solution&services Pvt Ltd	acquired	Undisclosed

**Table 3 Acquisitions made by paytm.com**

Announced Date	Organisation	Type of Transaction	Amount
07-12-15	Near. In	Acquisition	\$2M
04-01-16	Shifu	Acquisition	\$8M
26-09-16	EduKart.com	Acquisition	Undisclosed
11-11-16	Shopsity.com	Acquisition	Undisclosed
20-06-17	Insider. In	Acquisition	Rupee 350M
13-11-17	Nearbuy.com	Acquisition	Undisclosed
13-11-17	Little Internet Pvt ltd.	Acquisition	Undisclosed
30-05-13	SHOPO	Acquisition	Undisclosed

**COVID -19 Outbreak:-** As the growing pandemic of COVID -19 , there are also some crisis for industry to gain the immunity. The biggest threat these days, the e wallets companies are facing is that this pandemic has posed a bigger change for payment providers due to increase in non-performing loans, revenues are also getting declining. There is a greater demand on customer service loans. There is a reduction in consumption and trade and this brings a shrink in total payment volumes also. The major drastic result will be seen in long term because at this time many of these payment providers are making operating model changes, greater flexibility etc.

But it is also true that COVID-19 will increase the fraud cases. Because people are moving towards cashless economy, there will be so many opportunities for criminals. In these scams, include impersonating public health authorities or other government organisations and demanding payments from the target. This pandemic is also changing the equation of trust towards these digital payments. There are two reasons for this .The first reason is frauds that have been mentioned above and second reason is that there is a worldwide economic distress. Because revenue is too low, so every businesses and individuals are in a money tight position whether it is of big or small size, this virus has put every businesses into a very challenging financial situation and with this the general scrutiny of all outgoing cash flows can increase. The situation is worse for small and individual consumers, because for them use of debit and credit cards and digital payments are going to shrink.

#### **Some other threats:-**

Other potential issues with mobile wallets are:-

- The theft of mobile phones will continue and increase. If near field communication (NFC) able phone become more expensive per unit, then the cases of thefts will also increase. Because NFC capable mobile started to begin sale more and more, so its demand will increase and it will encourage theft.
- If user's mobile phone lost, then it will also cause a loss of identity and financial information as well if a thief steals a phone, then he will get extra benefits of financial and identity information and user can be exploited on the basis of this information.
- Not only this, there are another threats of pay and touch technology also, which is that a common user is not very well aware of the fraudulent NFC 's possibilities. There are other ways also by which a user can be exploited without technology based effort. Very often, it is the human error that encourages crimes.

So to stop these thefts, it is necessary that a small investment should be done in this area so that user's trust can be gained.

## **Opportunities**

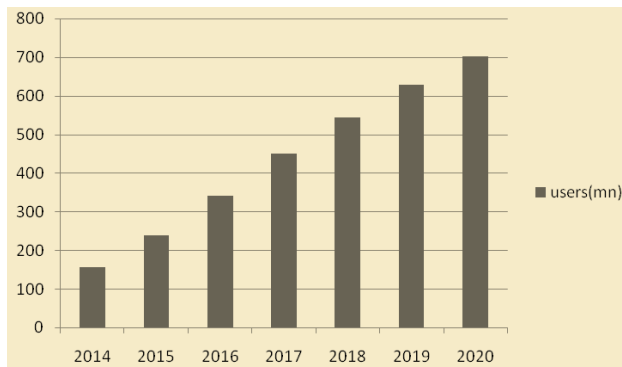
**Rural areas: -**Rural area posed both opportunity and threats to m-wallet Company; Because of the population of rural area. If people use m-wallets as a major source of payments, they need to go to banks branch physically. So if the rural population starts using these m-wallets, it will increase a good consumer base for the e-payment companies. And once rural people develop a positive attitude towards these e-wallets, the financial inclusion programme of government of India will also start to rise.

Rural India can be looked as a golden opportunity for e-wallet companies. The reason is that it is the home to about 870 million people. According to the report by management consultancy firm BCG titled "rising connected consumer in rural India", BCG has forecasted that alone rural India will make half of the internet users in 2020. While the internet connected rural users will be 315 million in 2020 from 120 million in 2015. This is because mobile handsets will become cheaper and wireless data networks. But digital payments in India are likely to *arise* if rural Indian can be taken in financial inclusion, smart phone penetration, supportive regulatory policies etc. So banks are now starting opening branches in rural areas at a faster speed of CAGR 7.2% then the overall bank branch network growth was 6.5%.

There is a great potential that rural India can also become a cashless economy. Rural people are now ready to learn. If a person receives benefits from digital payment in no time the rest of village will follow this trend. Government can also plan for increasing usage of mobile wallets for rural people are motivating the use of internet through free data and smart phones, giving laptops to students, undisturbed network connectivity, better accessibility to POS, awareness about digital transaction etc. are opportunities of digital wallets service providers. (Sivajothi, 2019)

**Expanding Android User Base: -** As of now, we know that e-wallets only work through Smartphone because e-wallets give their services only through smart phones. The good news is that, the owners of smartphones in India are increasing day by day. Only a decade ago, the mobile phone makers were worried about boosting product ownership and working on the strategies to grow the same. Now smart phones are being bought by every section of the society. In fact, many people buy more than one model for convenience as well as for enjoyment. According to a survey, today 4 in 10 people are having smart phones. This number is significantly improving with each day. It also indicates the users of mobile wallets are also on the rise. This creates a big opportunity for mobile wallets to grab a goods consumer base to gain a bigger market share. And with this, people are also becoming comfortable in using mobile technology. Scanning of QR codes, NFC, mobile payments are seems to be very easy for consumers. According to a research it forecast that the

number of smartphone users is on rising figure 2 shows the number of smart phone users in various years worldwide.



**Figure 2 Number of Smartphone Users In Various Years**

It is a major driving factor for mobile wallets companies and the main reason for the growth of smart phone penetration is the decreasing prices of handset and data plan tariffs. There is an arrival of many Chinese smart phones in India some of these are Xiomi, coolpad, Oppo etc. which cause the decline in selling prices. Now anyone can obtain a smart phone within the range of 5000 to 15000 easily. With the increase of smart phoned, there also an increase in the mobile internet users. Because now many telecom operators has declined their service charges because of piercing competition among themselves and technology is also gaining momentum. This is a great opportunity for m-wallet service providers in India.

**Increased interest in mobile payment among smart phone owners:-** Since the younger generation is tech savvy, they are becoming more and more aware about the cashless payments. As the number of smart phone owners is increasing the mobile payments transactions are also increasing the tech-savvy people are very open to using cashless payments if there arise an opportunity for them. Now almost android phones have shopping apps installed in them. These people want to shop can purchase goods; items can pay bills and get coupons etc. Now people are starting to shift to digital economy than plastic cards. According to the report released by e-marketer in 2018, the total smart phone users who are using mobile wallets were 73.9 million.

Not only in India, but in Singapore also, the usage of credit or debit card was on the rise. It was in April 2017, when QR was introduced in the market and it made people of Singapore enable to use mobile wallets for receiving and paying money through generation of QR code. This made the digital payments, especially small size payments more easy. With the introduction of new technology, the trend of the mobile wallets usage is also growing up. The areas where consumers have to use physical cash as a preferred mode for payment, i.e. small merchant, now consumer are expecting to receive benefits by improved technology. With the evolution of QR code for payment technology, the card sales for small

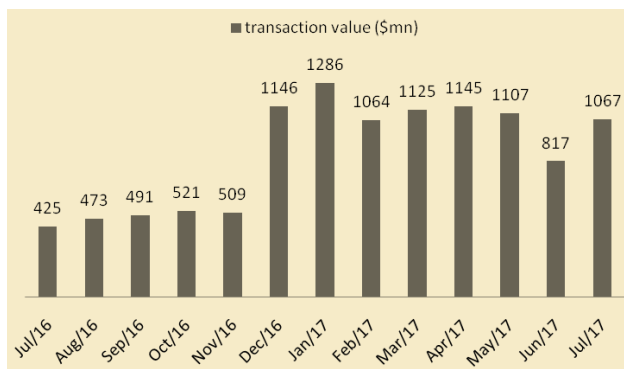
merchants also rising up. As the new payment technology are convenient mainly for small size transaction, new entrepreneur who had just started his business from low –cost, also gain benefits from this technology.

**Digital Finance and Financial Inclusion:-** Digital finance and financial inclusion has a positive impact on adoption of mobile wallets. First we need to understand the meaning of financial inclusion and digital finance. Financial inclusion can be defined as a process of including the suppressed section or weaker section and low income group people in the financial services at a bearable cost. Financial inclusion means have accessibility to various financial products and services like bank account, insurance etc. Financial inclusion will help these people to have a bank account, stability, motive to save and credit as well. Now a day, government is taking keen interest to have all people in a wider area of financial inclusion. This aim can be achieved through new banking technology. These days banks are also gaining new technology for their consumer. This is called 'digital finance'. In digital finance, consumers are being provided with the banking services, greater control on their finance, ability to send or receive payments through their smart phone devices, personal computer etc. So achieving the aim of financial inclusion is very easy e digital finance. Digital finance and financial inclusion both have various benefits for users, financial service providers, government or economy. This is necessary to reduce poverty levels also. So to curb the poverty G-20 and World Bank also led the initiative of financial inclusion, accessibility to various banking services, mobile banking etc through digital.

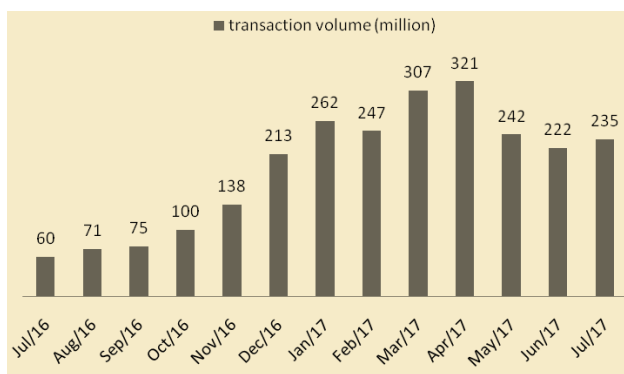
Digital financing is convenient and easier than traditional banking because it enables low income and poor people to save and get loans. Also it is necessary for public to have convenient mode of payments as they need not to keep travelling with keeping money themselves. Financial inclusion means accessibility and using a set of proper financial services by households and firms to enhance their lives. Yan Shan and Yiping Huang in 2016 has introduced a new term in china named internet finance and fintech. Internet finance means using new business model of using internet and information communication technologies so that one can achieve a range of financial activities, such as online lending , third party payment, crowd funding , online insurance etc. Agufa Midika Michelle in 2016 found that in kenya there is no correlation between digital finance and financial inclusion. But banks are still adopting digital financial services to lower their operating cost which are associated with opening and operating branches to improve their profitability. Peterson k Ozili in 2018 have found that impact of digital finance on financial inclusion and stability. He concluded that digital finance through fintech providers has a direct and positive effect for financial inclusion in a developing and advanced country.

**Demonetisation:** - Demonetisation is proved a boon for e-retailers companies. It gives the major contributions to adoption of mobile wallet in India. At the time of demonetisation, many people had to stain in a long queue for new currency. Then these mobile wallets gained a ninja speed growth. Both whether it is proximity and non proximity payments have witnessed strong growth in the Indian mobile payments industry. Within m-wallets grew fastest growth at global level. Now India is the second largest market for these e-wallet payments in the world, and it carries a large customer base i.e. more than one billion. India has improved mobile broadband with low tariffs and also affordable smart phone prices so that every citizen of the country can become aware of these m-wallets.

Demonetisation has given a blue spoon in the mouth of e-wallets companies. Figure 3 shows the research by counterpoint technology market research showing that demonetisation has doubled the m-wallet growth within a year. Figure shows month wise transaction value and volume of m-wallets.



**Figure-3 Month Wise Transaction Value of Mobile Wallets**



**Figure-4 Month Wise Transaction Volume of Mobile Wallets**

On 8<sup>th</sup> November, 2016 when Hon'ble Prime Minister MODI announced the demonetisation in the country almost 86% of India's currency was void. This announcement was made to clean out the black money supply. All 500 rupees and

1000 rupee notes were voided and public was given a 50 day period to exchange their notes with the bank with the newly designed 500 and 2000 rupee notes. Demonetisation was not a new term in Indian economy; it has been announced two times in 1946 and in 1978 in Indian history. After the day following the Modi's announcement, the banks were also in a great danger because banks did not have enough of the newly designed currency. And this turned to an opportunity for these e-wallets companies. The most interesting side effects of the demonetisation were that more and more peoples started doing digital payment. At this time, the use of digital wallets, debit cards and credit cards also goes on the rise. Initially, demonetisation paralysed the Indian economy, but now it is catalysed the economy's digital system. According to digital summery of 2015, out of the 7 billion population of the world, 5 billion have mobile phones and 2 billion had bank account. Only in India 800 million have a mobile phone and 250 million consumers were using mobile phone to make digital payments. Indian economy was considered as cashbased economy. But after the demonetisation, this cash based economy changes to cash less economy.

**Portable Banking and Inventive Mobile Payments Applications:**

- Now, a new trend has come to the market which is known as versatile wallets. Many banks in the present are providing this service to its clients. This technology is used to exchange cash from one record to the next. With this late exchange and equalization can also be checked. This technology also helps to encourage cashless instalment. A technology named portable remote store is also gaining popularity. In this technology, users need not to have a physical check with them. They can avail all the benefits of a check just by clicking a picture of the check and sent it to the bank electronically. This brings so much convenience for clients as well as for banks. Clients need to ferry out with keeping cheques with themselves and banks cannot be blame if check lost. Web clients are increasing year by year. Tech savvy consumers are likely to have new technologies and cash less economy. Hence this can be very big opportunities for m- wallets companies.

**Priorities For Retailers and Restaurants:-** Richard Crone, CEO of woodland hill, California-based mobile payments advisory from crone consulting said, that a mobile wallet which is embedded with gift cards, private label card, open loop payment cards is a priority for a retailer to give eminent services to his consumers. With this retailers can establish a good relationship with his customers before and after the purchase and this builds a strong CRM (customer relationship management) model, which is ignored by most of the merchants.

Crone said that with a mobile wallet, merchant is able to communicate various offer, discounts to his customers and customers need not to pay a visit to his store. Customer can make his shopping list and wishing list as well. He further says using an own mobile app is more beneficial





for a merchant that is using the third party's wallet because through own wallet, merchant can know the wishing list of a particular customer. This facility is not available with a third party wallet i.e. apple pay, Google pay. For making a best mobile wallet, merchant should try to make the customer's experience seamless by adding the value adding features. There should be various kinds of gift card, rewards cards etc. so that when a customer makes a purchase he can use these cards for payments. It will work like extra incentives for customers. Double diamond payments research's ogle by said that a location based retailers should focus on their best customers by offering them their own wallets that makes and account on file relationship.

**Benefits to Consumers:-** A blog by Teri Liach, Chief Marketing Officer, Black Hawk network said that considering a mobile wallet only as a container of payment card that give a faster payment is a short sightedness. She said carrying a plastic card for payment is not so much difficult for a customer, they can use it and swipe it but customer always find it difficult to carry all their rewards points, gift cards, loyalty cards as well as IDs with themselves. She said mobile wallet is a helper for consumer to track all their rewards, loyalty points and offers, rebate etc. with this, merchant can also use in store location technology which will strengthen the customer merchant relationship. In a survey it was found that 59% of the customers allowing their retailers where they are in the store for exclusive values and savings. Card linking is none of the best advantages given by mobile wallets. Now there are so much offer and loyalty point and it has become difficult for customers to remember all these offers and card linking helps customers to get a targeted offer without using a paper coupon, voucher etc. customer loads that offer available in their card through mobile device, any app or via online . When the customers want to purchase something they uses cards and they get all the benefits, discounts linked to that card.

**COVID-19:-** COVID-19 has also given these e-retailers business an opportunity to grow. With the growing pandemic of COVID-19, the consumers have now started to believe in social distancing. The general public continues to trust payments system and service providers. The foremost opportunity is that in starting of March, 2020 world health organisation said that coronavirus may be spread through banknotes. So WHO recommended using contactless payments to control the virus. COVID -19 undercuts the use of cash physically and opened the door of opportunity for online orders. Now to make themselves keep away from the virus, people are using cashless system. RBI also urged people to use the digital payments as the preferred source of payments to reduce the spread of corona virus. "The RBI and the governments are giving a lot of emphasis in encouraging digital payments" said Shakti Kant Das, RBI Governor. "Physical cash handling as a daily routine is being considered as a major cause of concern for risk contamination. contactless

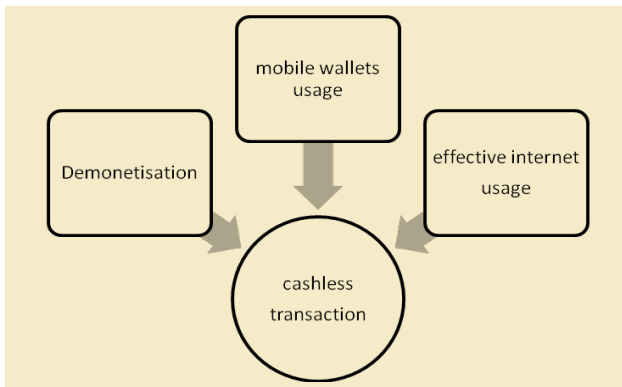
payments would be the way ahead and payments modes like UPI, IMPS, RTGS, mobile wallets and net banking could contribute effectively in reducing human interactions" said Mandar Agasne, the founder of banking technology provider Sarvatra technology.

This pandemic has also influence the debit and credit card, digital wallet like Phone Pe, paytm allows users to make payments without touching card to a terminal or entering a PIN. With this one can estimate that in future the use of thesetoken based wallets will be on the rise and the use of physical payments card will shrink. Those businesses or an organisation which does not accept the payment form digital wallet will loss a large market share. As the government urges people to stay at home, so there is an explosion on online shopping and delivery system. Business like phone pe and Amazon are getting a huge spike in its demand. So everyone who goes usually for groceries or even for small items are now prefer to buy these products online.

Not only has this, COVID -19 will also changed the consumer behaviour towards digital innovation. Social distancing is likely to speed up digital banking services and this will force many merchant who preferred physical cash to change their payment system to digital payment system. Thus COVID-19 will change the overall look of the economy when life will get back to the normal. The major opportunities that these e-wallets companies see will be:-

- Cash and cheques will be replaced by digital payment systems.
- Many merchants who are in remote areas will also build an infrastructure that will support government's cashless economy campaigns.
- Traditional payment system will be replaced with digital payment system.

**Cashless India: -**The devolvement of technology and initiatives taken by the government helped India to become cash less. Government's cashless economy aim is an opportunity for mobile wallets and mobile wallets are also an opportunity for government's cashless economy. Because government aim is to make India a cashless economy persuades people to adopt mobile wallets and mobile wallet adoption leads to government cashless aim. The main and major contributing factor leading to adoption of mobile wallet is demonetisation; because at the time of demonetisation, governments and banks were in a cash tight position for newly designed currency. In its report, RBI says that in September 2017, the mobile payment startup cashless transaction 13.5 % growth and in the period of 6 months i.e. from August to March. The digital transaction grown from 109.82 trillion to 124.69 trillion. To develop the adoption of mobile wallets Hon'ble PM Modi gave a quote "my mobile...my bank...my wallet..." figure 5 provides the proposed conceptual model for adopting cashless transaction.



**Figure 5 Proposed Conceptual Frameworks**

for adopting cashless India aim there are also other modes available like banking cards, USSD, AEPS, UPI, mobile wallets, banks prepaid cards, point of sale, internet banking, mobile banking and micro ATM. But if we analyse the post demonetisation and pre demonetisation era there is a ninja increase in the adopting mobile wallets transactions.

According to the study conducted by Google and the Boston consulting group in September 2016, which by the year 2020 around 15% of GDP will be contributed by mobile wallets and in 2023, the cashless transactions will be higher than cash based transactions and 40% of the consumer payment segment in 2020 would be the cashless mode of payment.

So we can say that mobile wallets are the future cash. The day when all the small shopkeeper/ kirana/ grocery will accept the mobile payments as a main source of transaction is not so far. This also implies those physical wallets are on the path of redundancy. So to make people aware about the cashless transactions, it is not necessary only to make people aware about ht benefits of m-wallets, but also to make them able to choose the best among the various m-wallet. By this, sooner it will be a great success and banking will go eco-friendly.

## References:-

- Agarwal , S W Bernard yeung , Xin Zou (2018) mobile wallees and entrepreneurial growth
- Alaeddin, O., Rana, A., Zainudin, Z., & Kamarudin, F. (2018). From physical to digital: investigating consumer behaviour of switching to mobile wallet. *Polish Journal of Management Studies*, 17. Pp:24-27
- Arnfield,R. (2015). Mobile Wallets 101. Retrieved September, 15, 2015.pp:9-11
- Ayodeji ,O, Kumar V, Kumar S online retail in inida a comparative analysis of top business playerspp:1-26
- Balaji, K. C., & Balaji, K. (2017). A study on demonetization and its impact on cashless transactions. *International Journal of Advanced Scientific Research & Development*, 4(3), 58-64 pp:62
- Beh, L. S. (2019). Digital economy: A paradise or threat in the new norm?.
- Bhakta P (2018) UPI is stealing a march over mobile wallets now <https://m.economicstimes.com>
- Bosamia, M. (2018). Mobile Wallet Payments Recent Potential Threats and Vulnerabilities with its possible security Measures. pp:1-6

- Chawla D.,Joshi H. (2019) consumer attitude and intention to adopt mobile wallets in india-an empirical study *international journal of bank marketing*. Volume 37 no.7 2019 emerald publisher ltd pp:1590-1618
- Cox, C., & Sanchez, S. (2012). Transforming the customer experience: the promise of mobile wallets. *First Data Corporation*. Pp:1-13
- Das, A., Satija, T., Zilpe, S., Kavya, J., & Kar, N. (2018). A Study of Threat Model on Mobile Wallet Based Payment System. *International Journal of Computational Intelligence & IoT*, 2(4). Pp:762-763
- Dingee, M. (2019). Unpacking the Digital Consumer Mindset. In *Consumer Behavior and Marketing*. IntechOpen pp:1-4
- Dr Sundararaj ,J.(2018) mobile wallet metamorphosis for green banking international research journal of commerce.pp 1-8,
- Durai, T., & Stella, G. (2019). Digital Finance And Its Impact On Financial Inclusion. *Journal of Emerging Technologies and Innovative Research (JETIR)*, 6. Pp:1-7
- ET BFSI (2020) "RBI pushes digital payments in the time of COVID-19" [bfsi.economicstimes.indiatimes.com](https://bfsi.economicstimes.indiatimes.com).
- FE ONLINE (2017) demonetisation effect: mobile payments double in 1 year; 4G to aid faster growth than China <https://www.financialexpress.com>
- FE ONLINE (2017) 7 key challenges India's mobile wallet industry need to overcome <https://financialexpress.com>
- Gupta, A. (2019). Rise and Evolution of Mobile Wallets in India. *International Journal of Management, IT and Engineering*, 7(11), 194-214
- Gupta P (2019) UPI gives tough competition to mobile wallets; trusted more for high volume transactions <https://www.financialexpress.com>
- Hassan, M. A., & Shukur, Z. (2019, September). Review of Digital Wallet Requirements. In *2019 International Conference on Cybersecurity (ICoCSec)* (pp. 43-48). IEEE.pp:45-46
- J.P.Morgan e commere payments trending india-JP Morgan <https://www.jpmorgan.com>
- Kulkarni P (2019) 8 digital payment related scams & how you can avoid them. <https://meconomicstimes.com>
- Marinković, V., Đorđević, A., & Kalinić, Z. (2020). The moderating effects of gender on customer satisfaction and continuance intention in mobile commerce: a UTAUT-based perspective. *Technology Analysis & Strategic Management*, 32(3), 306-318.
- Mittal, S., & Kumar, V. (2018). Adoption of Mobile Wallets in India: An Analysis. *IUP Journal of Information Technology*, 14(1).
- Mohammad Abdullah R, Maarop N, Yahya Y, Shariff S, Samy G,Azizian Afactors influencing the NFC mobile wallet proximity pament adoption from the human and security perspectives pp:2-4
- Peeters J (2018-2019) data protection in mobile wallets pp4-11
- Pachare, S. M. (2016). Demonetization: unpacking the digital wallets. *We'Ken-International Journal of Basic and Applied Sciences*, 1(4), 180-183.
- S.Keelery (2020) UPI usage in india in 2019 by platform <https://www.statista.com>
- Sarika, P., & Vasantha, S. (2019). Impact of Mobile Wallets on Cashless Transaction. *International Journal of Recent Technology and Engineering (IJRTE)*, 7(6S5).pp: 1164-1168
- R.Sivajothi (2019 ) digital payments for rural india challenges and opportunies . research explorer a blind review and referred quarterly international journal ISSN 2250-1940 volume 7 issue 2 pp:1-4
- Singh R (2016) demonetisation: how digital challenges turn into opportunities like mobile wallets in rural India.
- S.M.D. Ali S, M.D Akhtar W& S.K. Safiudin (2017) digital payments for rural india-challenges & opportunities. *The international journal of management &applied science* volume 3 issue-6 jan 2017



- TOI (2019). RBI sets new rules to protect consumers from fraud transactions on paytm, phone pe or other mobile wallets, <https://timesofindia.indiatimes.com>
- Tolety, R. K. E-Wallets–Their cause, Rise and Relevance pp:3
- Tyagi H (2019) lost money in e-wallet fraud? Here’s what you need to do <https://www.timesonews.com>
- Vijai, C. (2019). Mobile Wallet and its Future in India pp:2-3
- Whitehead, S., & Farrell, G. (2008). Anticipating mobile phone ‘smart wallet’crime: Policing and corporate social responsibility. *Policing: A Journal of Policy and Practice*, 2(2), 210-217.
- Yadav, P. (2017). Active determinants for adoption of mobile wallet. *I-manager’s Journal on Management*, 12(1), 7-14. Pp:9-13 <https://www.financialexpress.com>

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## Annexure 14.19

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**Reviewers  
Memorandum**

**Reviewer's Comment 1:** The paper is strategically planned and executed. It identified threats or vulnerabilities for mobile wallets application. It highlighted the major threats of mobile wallets are frauds, consumer mindset, accessibility etc, and the opportunities are increased interest for consumers, demonetisation, expanding smartphone user base etc.

**Reviewer's Comment 2:** The theme is contemporary in nature. With the increase of customer base for mobile wallets in India, the research is growing in the area. This paper will benefit all users of mobile wallets.

**Reviewer's Comment 3:** The study is purely based on secondary data. Empirical investigation could have been added to authenticate the secondary literature. This leaves the scope for future studies.



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**Editorial  
Excerpt**

The article has 2% of plagiarism which is the accepted percentage as per the norms and standards of the journal for publication. As per the editorial board's observations and blind reviewers' remarks the paper had some minor revisions which were communicated on a timely basis to the authors (Preeti, Supriya and Ashima), and accordingly, all the corrections had been incorporated as and when directed and required to do so. The comments related to this manuscript are noticeably related to the theme "**Mobile Wallet Integration**" both subject-wise and research-wise. A mobile wallets payment is a very big platform for the latest technology which helps financial institutions in India and also to increase consumer base. This paper aims to identify the threats or vulnerabilities for mobile wallets application. Overall, the paper promises to provide a strong base for further studies in the area. After comprehensive reviews and the editorial board's remarks, the manuscript has been categorized and decided to publish under the "**Theme Based Paper**" category.

**Acknowledgement**

The acknowledgment section is an essential part of all academic research papers. It provides appropriate recognition to all contributors for their hard work and effort taken while writing a paper. The data presented and analyzed in this paper by (Preeti, Supriya and Ashima) were collected first handily and wherever it has been taken the proper acknowledgment and endorsement depicts. The authors are highly indebted to others who facilitated accomplishing the research. Last but not least, endorse all reviewers and editors of GJEIS in publishing in the present issue.

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