Factors Influencing Customers for Using Mobile Wallets

*Dr. Debarun Chakraborty
**Soumya Kanti Dhara

ABSTRACT

Mobile wallets are increasingly being adopted by people as a new way of doing transaction in the 21st century. During the last few years, the use of mobile wallets, as a new payment channel has evolved as another source of doing the transaction. After the announcement of banning Rs. 500 & Rs. 1000 as well as trying to make the transactions digitized by the Indian Government, resulted a boost in increase of mobile wallets. The other factors which are influencing the use of mobile wallets are user's convenience, real time message services, 24x7 services, shopping offers, safety & security and wide availability of smart phones at affordable prices. The existing review of literature also depicts that mobile wallets are really useful for every kind of transaction. 200 respondents who are using various mobile wallets in Kolkata participated in the study. Convenience sampling technique for data collection and Structural Equation Modeling (SEM) to perform data analysis has been used in the study. The findings revealed that which are the most influencing factors in use of mobile wallets in present scenario and reasons for use of various mobile wallets.

Key Words: Mobile payment, Mobile wallet, Customer adoption, SEM, Convenience

1. Introduction

Although different methods of cashless payment are being adopted throughout the world in developed countries, it has far reaching impact on the developing countries. The developing countries are deploying cashless payment system in order to upgrade the financial services as well as to eliminate the encumbrances in using paper based cash. One such difficulty encountered is the authenticity of paper based money (fake notes) in which the individual often fail to detect. Paper based money is also subject to mutilation and damage mainly due to physical handling and transfer from one hand to another. Such mutilated, damaged and fake notes are often rejected during payments and receipts. Although coins are available, there denominative figures are much lower to make large payments. Counting of paper notes is also a time consuming process and there are often chances to commit mistakes by the person involved in handling cash. Sometimes the Tax authority fails to keep track of illegal payments and income which is generally made in cash and have no documentation of the transaction involved. The impact of demonetization on 8th November 2016 announced by the Government of India resulted severe cash shortages with severe detrimental effects across the economy of the country and people seeking to exchange their bank notes had to stand in lengthy queues, and several deaths were linked to the inconveniences caused due to the rush to exchange cash. Limits were also set on the amount of cash withdrawal per day from a user's account.

To overcome the aforesaid problems the developing countries are deploying cashless payment mechanism where the physical currency notes will be eliminated. Some means of cashless payment are Internet Banking, Debit Card/Credit Card Payment, Mobile Banking and use of Mobile Wallets. The system of payment services operated under financial regulation and performed via mobile devices is referred as Mobile Wallet. Mobile wallet can be linked with concerned user account having the facility of internet banking and can also store debit and credit card information the purpose is to make e-commerce more effective, efficient, secured and available at any time anywhere.

Mobile Wallets in India:

India aims to become cashless today. The online mode of payments has been increasing, but fast, ease, safe and secure procedure is being expected. Mobile Wallets or Digital Wallets or e-Wallet apps allow paying electricity bills, mobile recharge, getting movie tickets and doing a lot more right from a mobile phone. By linking one's Credit or Debit Cards or Bank accounts with these e-Wallet apps, he/she can easily make a payment using a mobile.

One can generally load money into these digital wallets via Internet banking or via Credit or Debit Card. On most of these e-Wallets, for users who have submitted their KYC documents, the limit can be upto Rs 1,00,000.

The infrastructure on top of which end-user apps are built, which one can use the features offered by it is known as Unified Payment Interface or UPI. It is the new mode of payment. Sending and receiving using UPI app is through Virtual Payment Address (VPA) and there is no need to add the beneficiary account details, account number, and IFSC

*Assistant Professor, Haldia Institute of Technology
**Assistant Professor, Haldia Institute of Technology

code. Every bank has its own UPI app that allows sending and receiving payments between any two bank accounts provided that the user has installed this UPI app in their Smartphone.

Mobile Wallet Apps in India:

Mobile wallets allow in making bill payments, mobile recharge, transfer funds etc. using mobile. With e-Wallet apps installed in mobile phones, there is no need of carrying cash. Following are some mobile wallet applications in India to make online payments.

1. PayTM

PayTM is one of the best digital wallets to make payments. It allows adding one's Credit/Debit cards and linking the bank account to it. Make use of QR code to send and receive payments easily. PayTM mobile wallet allows buying movie tickets, online mobile recharge, pay electricity and landline telephone bills and other utility bills from a mobile phone. It is available for Android, iOS, and Windows Mobile Phone.

2. Mobikwik

Mobikwik is another versatile and secure app that allows paying or transfering money using the mobile number. It allows making mobile recharge and paying bills in seconds. Using Mobikwik mobile wallet in buying anything online one can get good discounts. Making bill payments, mobile recharge, shopping and more has become easy with Mobikwik mobile wallet. It is available for Android, iOS and Windows Phone.

3. Free Charge

FreeCharge e-Wallet allows adding credit and debit cards which make it easy in making payments. It is the fastest growing digital payment platform allowing in paying electricity bills, mobile and DTH recharge and many more. One can avoid long queues using FreeCharge mobile wallet. It makes us easy to make online and digital payments securely using mobile. FreeCharge is available for Android, iOS and Windows Phone.

4. State Bank Buddy

State Bank Buddy by State Bank of India is the first Indian mobile wallet available in 13 Indian languages. Using this sending money, asking reminders to clear dues, instant bill payments and more have become possible. Sate Bank Buddy mobile wallet helps in doing so by linking your credit or debit cards to it. It allows loading an amount into your wallet and making payments to the contacts on phone book. It is available for Android and iOS.

5. HDFC PayZapp

PayZapp from HDFC Bank is available to customers of all banks and allows in making payments with just a single click. One can make payments easily by adding credit or debit card details. One's card details are safe with the bank. PayZapp mobile wallet does three security checks for every transaction. It is available for Android and iOS.

6. ICICI Pockets

Pockets app is the first mobile wallet app in India allows in bringing UPI (Unified Payment Interface)-based payments. ICICI developed this mobile wallet, and it helps making payments online. One can shop anywhere, pay anyone and bank with ease. It allows transferring money, booking tickets, mobile recharging and more. With just a single click, one can send and receive payments to and from Pocket users. It is available for Android and iOS.

7. LIME

LIME is launched by Axis Bank providing payments, banking, and shopping facilities. It is available for an account and non-account holders both. Shopping bills, mobile recharge, buying movie tickets and more things can be made using LIME mobile e-wallet. Just adding one's credit or debit card details, one can make payments through mobile. It is available for Android.

8. PhonePe

PhonePe from Flipkart Group Company works over Unified Payment Interface. It allows making all payments securely. One can make bank to bank transfers using Virtual Payment Address. As it is a UPI app, there is no need to add details of the beneficiary account. PhonePe mobile wallet provides discounts and coupons in online shopping. One can top up their mobile wallet by linking it to the bank account and allows transaction maximum up to a limit of Rs. 1,00,000. It is available for Android.

9. Ola Money

Ola Money allows making payments for all the daily needs. One can recharge Ola Money wallet using credit/debit card or net banking. One can keep track of their transactions looking at transaction history. Paying for the Ola and other cabs also made easy using this mobile wallet. Ola Money mobile wallet helps in transferring money to our friends. It is available for Android and iOS.

10. Airtel Money

Airtel Payments Bank launched Airtel Money wallet. Making payments, doing mobile recharge and transfering money to our relatives and friends having any bank account have become possible using this mobile wallet. One can shop online with great discounts and coupons. Banking and remittance services are supported by Airtel Money. With this e-Wallet app, one can make payments with just a single click. It is available for Android, iOS and Windows Mobile Phone.

2. Literature Review

Madan et al. (2016), described that, it has been said that the consumers are well affected through the provision of regulatory support and the promotional benefits of mobile wallets and adopting the same in making payments.

Painuly et al. (2016), iterated that, to ensure smart, quick and secured monetary transactions Mobile Wallets are gaining importance in various fields of business of different sizes in the new era of globalization to assist the needs of buyer and seller. It has also been said that retail sector, service providers, financial institutions, hotels and restaurants played a vital role in introduction and promotion of mobile wallets intending commercial advantages in business.

Rathore (2016), illustrated the different entities benefited through the use of mobile wallets which are customers, bank and financial institutions, mobile operators. It has been aimed to understand the consumers' perception of mobile wallets influenced by the following factors such as pricing (transaction/service charges) convenience in e-commerce, user friendliness, brand loyalty, privacy and security, usefulness of digitized wallet, discount coupons. From the findings of the study, the significant factors responsible in adoption of mobile wallets by the consumers are convenience in e-commerce, brand loyalty and usefulness of digitized wallet. The consumers are deviated from the adoption of mobile wallets due to lack of inherent safety, security, and privacy and dependency on internet connectivity in processing payment. Demand for the adoption of mobile wallets has been growing increasingly among the shoppers because of 24x17 retailing from anywhere, convenience in usage, and user-friendly interface.

Taghiloo et al. (2010), demonstrated that a mobile wallet uses wireless technology to carry physical wallets in electronic gadgets like smart phones or personal digital assistants. It has been proposed that mobile wallet is a new approach making cashless payment where the exchange of physical money can be eliminated. In addition to the user's authentication through digital certificate and user's payment information being held, it facilitates auto-availability of shipping information at the point-of-sale to speed up the order fulfillment process. The user gets secured, smart and hassle-free services.

Sardar (2016), analyzed that the factors influencing to opt for mobile wallets are instant payments, reputation of the company, one stop shop, seamless process, instant refunds, rewards and offers. In his findings, instant payment being the most important factor that influence to opt for mobile wallets. Majority the respondents (about 90%) voted for instant payments. About 83.3% of the respondents believe that the instant refund provided by the Mobile wallet companies being the second important

factor of choosing mobile wallets. It was inferred that since the country is moving away from cash-based payment towards a cashless payment system, this will help to reduce cost of currency management, track transactions, check taxable income, fraud avoidance etc. Most of the e-commerce companies have their own e-wallets and offer discounts on digital wallets.

Doan (2014), proposed that the purpose of using mobile wallets are recharge and broadband top-ups, Instant money transfer to any bank, online shopping and merchant payments, payments for booking transport facilities, utility bill payments. The major advantages being (1) Cannot be misplaced, snatched or pick-pocketed, (2) Easy payment of bills in a single tap, (3) Hassle free from entering card numbers and passwords every time to access bank accounts, debit/credit cards, (4) massive rewards in the form of cash backs and discounts.

Shankar et. al (2016), explored that certain factors having significant impact on adoption of mobile banking by the Indian consumers are awareness, usefulness, ease of use, compatibility, social influence, security and privacy risk, self-efficacy, financial cost. Furthermore, they proposed to identify which factors have a major influence on adoption intention in context with m-banking.

Taheam et. al (2016), conducted a study which focuses on tracing the factors that to drive the usage of digital wallet among the young generation in the state of Punjab. The findings suggest that (1) controllability & security, (2) societal influence & usefulness and (3) need for performance enhancement are the three factors which drive the usage of digital wallet among the youths of Punjab.

Cash Star, Digital Research, Inc. (2013), in their study explored the consumer opinions and their behaviors on eGifting, digital wallets, and mobile payments, and their relationships to brands, loyalty, and spending behavior. The study investigates "the triggers for eGifting" and "the potential for brands". This extract of the full report highlights key findings about eGifting and the use of brand/retailer mobile apps and digital wallets and the implications and opportunities for brands. The key findings of the study were (1) the eGifting and mobile applications associated with increase in spending for a brand, (2) the younger consumers are interested in downloading mobile apps from a retailer/brand and accessing their brand benefits. (3) The use of digital wallets leads to greater likelihood and frequency of mobile purchases.

3. Factors Influencing Growth of Mobile Wallets in India

Technology: Due technical advances in IT infrastructure, mobile communication has become much more effective

for the business concern, public service providers and consumers to reach every corners of the world at any time and unite in a common marketplace for exchange. This is mediated through smartphones equipped with 3G/4G data communication technology that can operate under 3G/4G networks of the mobile communication service providers. The modern smartphones are available in Android, IOS, Apple and Windows operating system and among them Android phones being much more popular. The transactions can be monitored by the entities involved and the Income Tax Authority if required.

Commercial: Apart from online buying of consumer goods a customer can pay utility bills, recharge mobile, pay and download e-books, music, video, and software license through mobile wallet. Business entities provide cashback, coupon redemption in the mobile wallet of the customer's account.

Economic: Since smart phones are readily available at reasonable prices one can easily afford them with ready to use apps. Android phones have become more popular owing to its cost effectiveness and free downloadable apps. To get the facility of Mobile Wallet one can open an account through free registration process.

Social: People standing in a queue for booking tickets for various means of transport, cinema tickets, LPG cylinders, paying electricity & telephone bills, municipality and income tax, cash withdrawal from bank, post office or ATM has become the major source of inconvenience. One has to attend some of these on working days and obviously during the working hours. Although ATM is an exception i.e. (24/7 services), people may have to face the following inconvenience:

- ATM is out of service.
- No cash availability in the ATM counter
- Failure in detection of ATM card
- Limitation in the amount of cash to be dispensed and in the note denomination to be dispensed.
- Long waiting time standing in a queue and often tussles are created with the person taking a long time in the ATM counter for withdrawal from multiple accounts

4. Objective of the Study:

To study the factors influencing the consumers for using mobile wallets.

4.1 Hypothesis of the Study:

Ho1= There is no association between Convenience Factors & 24*7 access

Ho2= There is no association between Convenience Factors & anytime anywhere

Ho3= There is no association between Convenience Factors & paperless payment

Ho4= There is no association between Cost-related Factors goes & availability of smart phones at affordable price

Ho5= There is no association between Cost-related Factors & low or free data.

Ho6= There is no association between other factors & demonetization effect

Ho7= There is no association between other factors & timeliness

5. Research Methodology:

The aim of the study is to identify the factors affecting consumers for using mobile wallets.

- **Research Design:** Researcher has completed this study based on the Descriptive Cross-sectional Design which helped him to find out the factors affecting consumers for using various mobile wallets.

- **Sampling Design:** The research has been conducted in Kolkata and 200 respondents have given their responses with reference to a questionnaire. The Convenience Sampling Method has been used to conduct the research.

- **Primary & Secondary Data:** Primary data has been mainly collected with the help of close ended questionnaire to conduct the research. Secondary data has been collected from various magazines, journals, research papers etc.

- **Statistics used in Research:** Researchers used Structural Equation Modelling (SEM) with Confirmatory Analysis with AMOS Software and all the responses have been collected from the respondents with the help of 5 point Likert Scale from strongly agree to strongly disagree.

6. Analysis and Interpretation:

Validity & Reliability:

The construct validity contains convergent & discriminant validity. Here between the various variables of the factors is having the strong co-relation coefficient & most of the co-relation coefficients values are in higher ranges. So, here it proves that the convergent validity exists.

The responses collected from the respondents have been used to find the reliability of the entire data set and it provides the Cronbach's Alpha Value of 0.854 which is on

Reliability Statistics

Cronbach's Alpha	N of Items
.854	10

a very higher side. So, from the responses we can easily interpret that the data are reliable to start the analysis.

Summary of Model:

The factors which are mainly influencing the customers for using mobile wallets has been divided by three sub-factors & ten variables have been distributed to these sub-variables. The above explained theory was tested using structural equation modeling using the software AMOS. The degree of freedom was 32 and chi-square value is 218.2. The number of the variables in this model is provided below:

Number of variables in your model:	23
Number of observed variables:	10
Number of unobserved variables:	13
Number of exogenous variables:	13
Number of endogenous variables:	10
Number of distinct sample moments:	55

Number of distinct parameters to be estimated:	23
Degrees of freedom (55 - 23):	32

The construct model defined that which the factors are mainly influencing the various customers on choosing different mobile wallets. The variables are divided in three main factors which are labeled as convenience factors, cost related factors & other factors. The regression weights of each variable as result of the construct are shown in the table below. As shown in the table 1 all the regression weights are almost high and significant. The high value of the standardized weights indicates the higher influence of the variable on various factors. The results as shown in table 2 indicate that the demonetization effect is the most influencing factor followed by anywhere anytime & user-friendliness. The result also reveals that from the convenience factor the higher influencing variable is anytime anywhere, from the cost related factors special offers is having highest influencing factor & from the other factors demonetization effect is the most influencing factor.

Table 1: Regression Weights Model

Variables		Factors	Estimate	S.E.	C.R.P
USERFRIENDLY	<---	Convenience_Factors	1.000		
24*7	<---	Convenience_Factors	.401	.068	5.903***
ANYTIME	<---	Convenience_Factors	1.022	.076	13.482***
PAPERLESS	<---	Convenience_Factors	.775	.079	9.761***
SMARTPHONE	<---	Costrelated_Factors	1.000		
SPECIALOFFERS	<---	Costrelated_Factors	1.059	.089	11.864***
LOWORFREEDATA	<---	Costrelated_Factors	.734	.085	8.589***
SAFETY&SECURITY	<---	Other_Factors	1.000		
DEMONETIZATION	<---	Other_Factors	1.183	.106	11.152***
TIMELINESS	<---	Other_Factors	1.153	.114	10.122***

Estimate of Regression Weight:

1. When Convenience Factors goes up by 1, 24*7 access goes up by 0.401

2. When Convenience Factors goes up by 1, anytime anywhere goes up by 1.022

3. When Convenience Factors goes up by 1, paperless payment goes up by 0.775

4. When Cost-related Factors goes up by 1, availability of smart phones at affordable price goes up by 1.059

5. When Cost-related Factors goes up by 1, low or free data goes up by 0.734.

6. When Other factors goes up by 1, demonetization effect goes up by 1.183

7. When Other factors goes up by 1, timeliness goes up by 1.153

Table 2: Standardized Regression Weights Model

Variables		Factors	Estimate
USERFRIENDLY	<---	Convenience_Factors	.729
24*7	<---	Convenience_Factors	.324
ANYTIME	<---	Convenience_Factors	.763
PAPERLESS	<---	Convenience_Factors	.538
SMARTPHONE	<---	Costrelated_Factors	.688
SPECIALOFFERS	<---	Costrelated_Factors	.672
LOWORFREEDATA	<---	Costrelated_Factors	.474
SAFETY&SECURITY	<---	Other_Factors	.588
DEMONETIZATION	<---	Other_Factors	.791
TIMELINESS	<---	Other_Factors	.604

Table3: Model Fit Summary

Model Fit	Statistic
Chi-square	218.2
CMIN/DF	4.818
GFI	.928
CFI	.913
NFI	.916
AGFI	.908
TLI	.901
RMSEA	.041
RMR	.039

The RMSEA value indicates the amount of unexplained variance or residual is below than 0.05 & it is well accepted. GFI, CFI, AGFI, TLI and NFI value are in complete agreement & all are higher than 0.9 for acceptable model. The model fit statistics from AMOS output is shown in the table. The CMIN/DF value is also less than 6 & RMR value is less than 0.05. The goodness of fit indices (CFI, NFI and GFI are greater than 0.9) indicates the fitness of the model & hence it can be concluded that all the three factors are significantly influencing the decision of using mobile wallets.
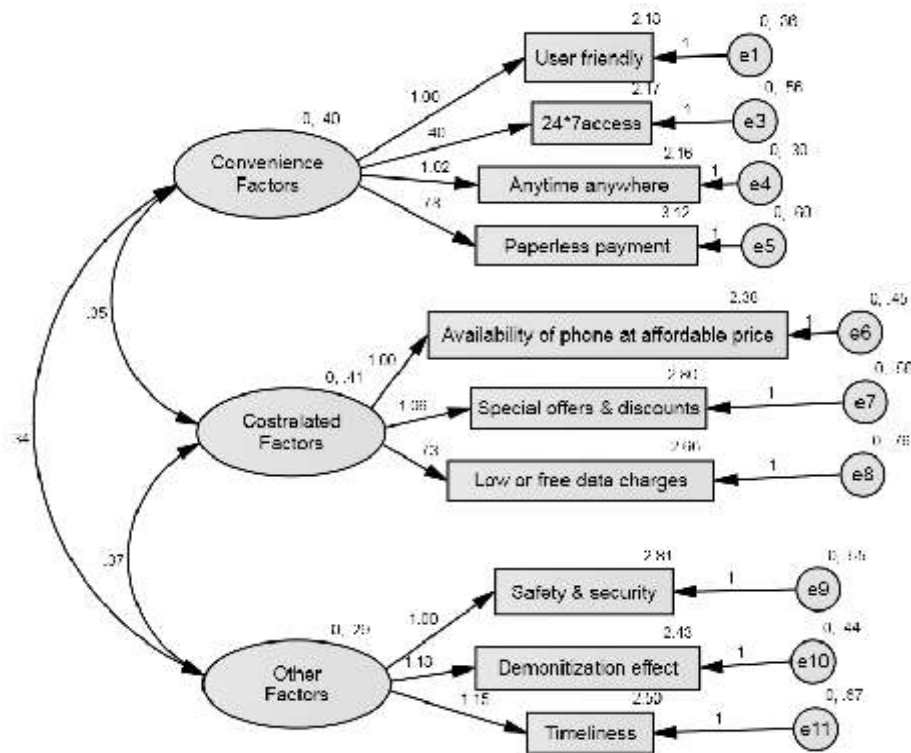
Figure 1: Construct Model

HYPOTHESIS:

Ho1= There is no association between Convenience Factors & 24*7 access

Ha1= There is a association Convenience Factors & 24*7 access

Here the Null hypothesis has been rejected & alternate hypothesis has been accepted.

Ho2= There is no association between Convenience Factors & anytime anywhere

Ha2= There is a association between Convenience Factors & anytime anywhere

Here the Null hypothesis has been rejected & alternate hypothesis has been accepted.

Ho3= There is no association between Convenience Factors & paperless payment

Ha3= There is a association between Convenience Factors & paperless payment

Here the Null hypothesis has been rejected & alternate hypothesis has been accepted.

Ho4= There is no association between Cost-related Factors goes & availability of smart phones at affordable price

Ha4 = There is a association between Cost-related Factors goes & availability of smart phones at affordable price

Here the Null hypothesis has been rejected & alternate hypothesis has been accepted.

Ho5 = There is no association between Cost-related Factors & low or free data.

Ha5 = There is a association between Cost-related Factors goes & low or free data

Here the Null hypothesis has been rejected & alternate hypothesis has been accepted.

Ho6 = There is no association between other factors & demonetization effect

Ha6 = There is a association between other factors & demonetization effect

Here the Null hypothesis has been rejected & alternate hypothesis has been accepted.

Ho7 = There is no association between other factors & timeliness

Ha7 = There is a association between other factors & timeliness

Here the Null hypothesis has been rejected & alternate hypothesis has been accepted.

7. Findings

The study founds an association between all the factors namely convenience factors, cost related factors & other factors with all the variables which are related to the various sub factors. The convenience factors & 24*7, anytime anywhere & paperless payment is having significant relationship, because all the values are quite significant (<0.05). The cost related factors & special offers & low or free data is having significant relationship. The last factor named as other factors is also having significant relationship with demonetization effect & timeliness. The results indicate that the demonetization effect is the most influencing factor followed by anywhere anytime & user-friendliness. The result also reveals that from the convenience factor the higher influencing variable is anytime anywhere, from the cost related factors special offers is having highest influencing factor & from the other factors demonetization effect is the most influencing factor.

8. Limitations

- The survey has been done in Kolkata. The other parts of West Bengal or even in other parts of India the study can be replicated to understand the behaviour of consumers.

- Sample size of 200 is small; increasing the sample size can give other results also.

9. Conclusion

From the study it can be said that mobile wallet has been playing a significant role for fast, ease, safe and secured way of payment in favour of developing India to get transformed into a cashless and digitized nation. Although miles to go ahead but the high pace of technology adoption and deployment, increasing momentum of literacy and social awareness and degree of adaptability with the change may lead not too long waiting for the destiny. The cost effectiveness to access new technology will promote the propensity to buy and use technology gadgets for cashless transaction which can improve the economy of our country.

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