A Study of Factors Affecting Consumer Preferences on E-Wallets

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ABSTRACT

As e-commerce continues its rapid growth in the Asiatic region, mobile wallets have become one of the most trusted and preferred ways to pay online. Most of these wallets incorporate multiple payment methods, from bank transfers to credit cards, debit cards, gift cards and more. That way, consumers with or without credit cards, can use mobile wallets. In-store payments drive mobile wallets adoption to a large extent, as more than 90% transactions occur in-store. Mobile wallet providers have now become a kind of mini banking institutions (Payments banks) and it would not be surprising if they will get their banking licenses, and follow the path like Paytm, Airtel etc. This will be very lucrative if we take into consideration the Government’s agenda of financial inclusion. Paytm has over 140 million wallet users, which is double that of Visa and Maestro penetration together (in India). Over and above this, in a country such as India & BRIC nations the remittance market is huge. These Payment banks can also leverage in this landscape.

The financial institutions/e-commerce/lifestyle shops have realized the potential of mobile wallets in terms of consumer experience and loyalty. That is why each one of them is coming up with their own wallet which can be seen with the launch of SBI YONO, BookmyShow’s own wallet to name a few. It would be relatively easier for banks vs a non-bank product, because they already have a trusting customer base and their product is less likely to suffer from interoperability.

This research was carried out with the aim to identify the various factors leading to the increasing preference of customers on switching from traditional modes of payment to digital payment.

KEYWORDS:

E-wallet, Mobile payment, online transaction, e-payment, upi.

I. INTRODUCTION

E-Wallet is a digital technology to pay your bills online instantly without having to pay by cash or use your credit or debit card all the time. It acts like a virtual wallet, which can be preloaded with preferred amount of money from bank account or credit or debit cards and used to spend it online. A smartphone or a tablet can be used to make the payment. With e-Wallet apps installed on mobile, one need not carry cash in their hands every time.

Mobile Wallets or Digital Wallets or e-Wallet apps allows to pay electricity bills, mobile recharge, get movie tickets etc. Mobile wallet contain digital information and it carry in a pocket. A person can use their stored data by using app on their device then type their password or PIN and choosing the information they have to access and interact with mobile wallet payment terminals. Many parties are working in mobile wallet space to innovate new things such as pay pal, amazon, google, apple etc.

The Digital Payments Industry in India including net banking, credit/debit card transactions, prepaid cash cards, mobile wallet and IMPS was estimated at ₹1,630.0 trillion in 2019 and it is expected to grow to double to ₹4,055.0 trillion in 2024, according to CRISIL research. Out of 800 million online transactions made in 2013, 53% were made using credit (21%) and debit cards (32%), while 44% came from Internet banking. The rest were attributed to Mobile Wallet, Pre-Paid Cash cards and Immediate Payment systems (IMPS).
At present, mobile payments form a miniscule part of the overall digital payments industry in India. However, contribution from phones and tablets is expected to increase to 30% by 2021. Mobile Payments in India is estimated to reach ₹92.6 trillion by 2025, with a compound annual growth rate (CAGR) of 22%. The M-wallet market is projected to grow at a CAGR of around 52.21% in the next five years from 2018-2023. Market of m-wallet segment includes transferring of money, services related to banking transactions, value added services such as shopping, ticketing, recharging, and bill payments. In this segment, the highest 38% market share is captured by money transfer businesses, followed by recharge and bill payments, and utility areas by 30% and 12% respectively. Others enjoy 20% market share.

Mobile wallets by providing cashless transactions are changing the traditional ways of making and receiving payments, doing shopping, paying bills etc. Students belong to Generation-Z wants quick food, quick fuel and quick internet. This generation has grown up in a world with technology, connected with social media networks using their smart phones and tablets. Though a lot of research work has been conducted on the use of mobile, but only miniscule amount of research has been done on E-Wallets. This research study is a humble attempt in this direction to know the factors affecting consumer preference of E-wallets.

II. REVIEW OF LITERATURE

A study in Saudi Arabia found that there is a bright future for m-payment. Security of mobile payment transactions and the unauthorized use of mobile phones to make a payment were found to be of great concerns to the mobile phone users. Security and privacy were the major concerns for the consumers which affect the adoption of digital payment solutions. (Bamasak O, 2011).

Mobiles are increasingly being used by consumers for making payments. “Digital Wallet “has become a part of consumers which are nothing but smart phones which can function as leather wallets. Digital wallet offered many benefits while transferring money such as convenience, security and affordability. Usage of digital wallet among youth in the state of Punjab was found to be associated with societal influence and usefulness, controllability and security, and need for performance enhancement. Premium pricing, complexity, a lack of critical mass, and perceived risks are the barriers to adoption of digital payment systems. Taheam K, Sharma R, Goswami S (2016)

A comprehensive model ‘Payment Mode Influencing Consumer Purchase Model’ was proposed by Braga and Mazon. This model considered factors such as temporal orientation and separation, self-control and pain of payment constructs for digital wallet as a new payment mode. Consumer perspective of mobile payments and mobile payment technologies are two most important factors of mobile payments research. Ondrus J, Zmijewska A (2008)

Shin and Ziderman tested a comprehensive model of consumer acceptance in the context of mobile payment. It used the unified theory of acceptance and use of technology (UTAUT) model with constructs of security, trust, social influence, and self-efficacy. The model confirmed the classical role of technology acceptance factors (i.e., perceived to users’ attitude), the results also showed that users’ attitudes and intentions are influenced by perceived security and trust. In the extended model, the moderating effects of demographics on the relations among the variables were found to be significant. Digital wallets offer the consumers the convenience of payments without swiping their debit or credit cards. Instant Cash availability and renders seamless mobility is also a unique feature of these digital apps, for instance the balance in your Paytm wallet can be very easily transferred to your bank account as and when you want. Following are some other advantages of making transactions through e wallets. Shin H, Ziderman A (2009)

Mallat studied consumer adoption of mobile payments in Finland. Study found that mobile payment is dynamic and its adoption depends on lack of other payments methods and certain situational factors. These applications can be downloaded and used for different purposes like making bill payments, doing online shopping and recharging phones etc.

Some of these applications have their own portals a person can perform all the above mentioned and many more tasks via app itself. In all the applications a person has to link his credit/ debit card number with the application to make use of services provided by app. The author agrees on the fact that e-wallets allow the users to enjoy comfortable and easy going platform to
shop and pay, that too in minimal possible time. Mallat N (2004)

Worked upon studying how digitalization of payments can be considered as a boon to growth of a country’s economy. Authors also done an in depth analysis of adoption patterns i.e. how people reacts and adopts digital wallets. In his analysis, he concluded that the number of users incorporating the habit of believing and using digital wallets has increased tremendously. People find it a more convenient and less time consuming way for making the payments. It also elaborates about top five digital wallets in India. However, the question of security remains unanswered. People feel helpless at the time of making international transactions. A lot of security mechanisms are yet to be explored to make the transactions fool proof. Roopali Batra (June 2016)

With the advent of technology, smart phones have grabbed the attention of a wide variety of customers. By using smart phones, it becomes easier for people to use web applications more often. It has become a convenient platform for users to transfer money in fraction of seconds. The credit goes to various government agencies that motivated and reinforced people for using smart phones and this is how people are contributing towards digital India. Trilok Nath Shulka (June, 2016)

III. RESEARCH PROBLEM

1. What are the most important and least important factors that affect consumer preferences towards E-wallets.
2. What are the factors that refrain consumers from using E-wallet applications.

IV. OBJECTIVE OF THE STUDY

1. To study the factors affecting the preference of consumers towards the usage of E-wallets from different geographical region (Majorly Maharashtra).
2. To examine the various factors influencing adoption of E-wallets.
3. To examine the factors refraining the consumers from using E-wallets.

V. RESEARCH METHODOLOGY

RESEARCH TYPE - The research type used here is a descriptive research. Descriptive research mainly deals with the “description of the state of affairs as it is at present”, and there is no control over variables in descriptive research. It is mainly deal with ‘what’ rather than ‘why’.

SAMPLE SIZE - Initial sample size of the study was 186 people who used mobile wallets but 11 responds were found invalid due to several reasons so the actual sample size taken was reduced to 175.

SAMPLING METHOD - The sampling method used for this survey was Convenience and Judgemental & it was carried out through the digital platform using Google Doc which is considered as the most preferred form of survey these days.

QUESTIONNAIRE - We prepared a close ended questionnaire to conduct the survey & collect the data from the respondents.

- Multiple Choice, where the respondents are given a set of alternative choices for each question and they have to choose the one they think the most appropriate.
- Scale, where each question is followed by a scale which has numbers and the respondents are to choose a point in that scale (generally from 1-5) which they feel the most suitable for that characteristic.

DATA COLLECTION METHOD - This research is basically based on primary data collected using a structured questionnaire, administered to vast number of people using internet as a medium.
**STATISTICAL TECHNIQUE –**

Chi Square, it is mainly used to determine the relationship between categorical variables.

Garrett Ranking, it helps to rank the various factors according to their preferences with the help of Garrett ranking table.

**VI. DATA ANALYSIS AND INTERPRETATION**

**AGE**

Interpretation: The number of people in the age group 19-25 have given the maximum response to the survey (79%). Although the response of other age groups are equally significant and accounts to 22% of the survey.

**GENDER**

Interpretation: The gender wise break down of the survey shows that the responses given by Males contribute 65% and Females contribute 35%.

**OCCUPATION**

Interpretation: The survey being online, maximum number of students i.e., 93% have responded since they have quick and easy access and also the time to respond. However, it also has few numbers of Working Professionals, Businessmen and Self-Employed people who use E-Wallets.

**INCOME**

Interpretation: 58% of the respondents have income below 5 LPA and 38% have income between 5LPA-10LPA. Remaining 4% have income more than 11 LPA.
**USE OF E-WALLET**

Interpretation: From the survey it can be inferred that out of the 175 respondents, majority of them preferred Google pay, Phonepe and PayTM and the percentage share of these 3 wallets are also similar leading to the conclusion that these three wallets dominant and almost have the same preference.

**Frequency of Use**

Interpretation: Majority of the respondents preferred using E-wallets daily, followed by weekly and monthly. Few prefer using wallets occasionally which shows that E-Wallets have become a part and parcel of daily life for about 65% of the respondents surveyed.

**Analysis of Different Factors with the Familiarity or Social Acceptance of the E-Wallet Apps**

1. **Comfortable**

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>11.371</td>
<td>16</td>
<td>.786</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>13.858</td>
<td>16</td>
<td>.609</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.220</td>
<td>1</td>
<td>.639</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>175</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Since $p$ value > 0.05 so, null hypothesis is not rejected. So, social acceptance or familiarity of E-wallet apps does not depend upon comfortability of an app.

2. **Convenience**

Since $p$ value < 0.05. so null hypothesis is rejected.

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>27.472</td>
<td>16</td>
<td>.037</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>29.728</td>
<td>16</td>
<td>.019</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>1.844</td>
<td>1</td>
<td>.175</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>175</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

So, social acceptance or familiarity of E-wallet apps depend upon the convenience.

3. **User Interface**

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>20.797</td>
<td>16</td>
<td>.186</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>21.877</td>
<td>16</td>
<td>.147</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>4.673</td>
<td>1</td>
<td>.031</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>175</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Since \( p \text{ value} > 0.05 \) so, null hypothesis is not rejected.

So, social acceptance or familiarity of E-wallet apps does not depend upon user interface of an app.

### 4. Speed

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>38.109(^a)</td>
<td>16</td>
<td>.001</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>25.527</td>
<td>16</td>
<td>.061</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>14.232</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>175</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Since \( p \text{ value} < 0.05 \) so null hypothesis is rejected.

So, social acceptance or familiarity of E-wallet apps depend upon the speed of a transaction.

### 5. Cashback Offers

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>16.073(^a)</td>
<td>16</td>
<td>.448</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>19.433</td>
<td>16</td>
<td>.247</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>2.186</td>
<td>1</td>
<td>.139</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>175</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Since \( p \text{ value} > 0.05 \) so, null hypothesis is not rejected.

Hence, social acceptance or familiarity of E-wallet apps does not depend upon the cashback offers.

### 6. Safety

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>24.713(^a)</td>
<td>16</td>
<td>.075</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>29.296</td>
<td>16</td>
<td>.022</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>5.215</td>
<td>1</td>
<td>.022</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>175</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Since \( p \text{ value} > 0.05 \) so, null hypothesis is not rejected.

Hence, social acceptance or familiarity of E-wallet apps does not depend upon the safety.

### 7. Time Saving

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>30.493(^a)</td>
<td>16</td>
<td>.016</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>28.453</td>
<td>16</td>
<td>.028</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>6.950</td>
<td>1</td>
<td>.008</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>175</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Since \( p \text{ value} < 0.05 \) so null hypothesis is rejected.

Hence, social acceptance or familiarity of E-wallet apps depends upon time saving factor.
Interpretation:

A Garrett ranking test was done to check the Hypothesis that whether there is a significant level of difference amongst the various factors that affect consumer preference of E-Wallets. Here Strongly Disagree had been kept at rank position 1 and Strongly Agree at rank position 5, so this table tells about the factors which are least important for the respondents. From the Ranking we find that each of the factor has its own individual rank of preference, Cashback offers has rank 1 which means respondents bother very least about this factor. Time saving has rank 7 which is the most important factor for the respondents and then Convenient comes after that which has rank 6 and so on. Thus, it can be said that the Null Hypothesis is not accepted rather the Alternate Hypothesis is accepted in this study.

Interpretation:

From the above Bar Graph we found out that there were 2 major issues that were refraining users from using E-wallets.

● The first major issue was Bank Server Problems which was agreed by 81.7% people and the second major issue was Internet Connectivity which was agreed by 66.28% people.

● The issue “Security in Payment” has been further analysed because there are several more parameter affecting this issue. The further analysis is given below.

Analysis of various Security Barriers which refrain consumer from using E-wallets:

<table>
<thead>
<tr>
<th>Factors</th>
<th>None</th>
<th>Trust over service provider</th>
<th>Fear to provide highly...</th>
<th>Loss of personal information</th>
<th>Getting charged for...</th>
<th>Identity theft</th>
<th>I'm already using</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17</td>
<td>19</td>
<td>49</td>
<td>31</td>
<td>43</td>
<td>30</td>
<td>114</td>
</tr>
</tbody>
</table>


Interpretation:

There were various Security Barriers mentioned in the questionnaire like:

a) Already using  
b) Identity theft  
c) Loss of personal information  
d) Getting charged for accidental transaction  
e) Trust over service provider.  
f) Fear to provide highly secured information (card no, cvv, otp, etc.)  
g) None

So, from the above Bar Graph we found that most of the respondents are already using the E-wallet apps and the factors which are majorly responsible to act as a security barrier are “Fear to provide highly secured information (card no, cvv, otp, etc.)” agreed by 28% and “Getting charged for accidental transaction” which is agreed upon by 24.57% people.

VII. DISCUSSION & RECOMMENDATIONS

1. The market is expected to develop at a **CAGR of 15 percent** and is projected to achieve a market size of **USD 2,100 billion (INR 157 lakh crore)** approximately by the end of forecast period.  
Forecast period- "E-wallet Market Research Report - Global Forecast to 2023".

2. The adoption of low-cost smartphones coupled with the availability of high speed internet has enabled many people to access E-commerce and banking on their mobile phones. E-wallet applications should do collaboration with these smartphone providers in order to enhance their reach.

3. A lot of security aspects are still left unexplored. Users have many security related questions unanswered as they don’t know that their personal data is safe or not while giving permission to e-wallet applications to access the various personal sections of data like contacts, files, location etc.

4. Mobile wallets can be introduced in transportation services like busses as a lot of cash transactions are involved on daily basis. Initiatives like implementation of FASTag by the Government of India opens up many opportunities for e-wallets.

   Paytm FASTag is a reloadable prepaid tag that will be mounted on the middle of your vehicle’s front windshield. It enables you to travel hassle-free through Toll Plaza without stopping & applicable toll charges will automatically get deducted from your Paytm wallet. The tag is based on RFID technology and is a part of Government of India initiative.

5. Situations like recent pandemic acts as a boon for e-wallets as the usage of e-wallets provide paperless transactions possible which ensures social distancing and has less threat of transmission of COVID-19.

E-wallet applications should use moment marketing as their advertisement strategy in order to spread
awareness about contactless transactions through their apps.

VIII. LIMITATIONS

- The survey being done via Internet and Google Docs, there was no Physical stimuli involved.
- The respondents personal bias while filling the survey is another limitation that cannot be ignored.
- The respondents were chosen randomly and based on judgement and convenience, the sample cannot be considered a true representation of the population or any particular customer segment.
- The reach of the survey was through the net only and thus the respondents could not be qualified before surveying.
- The time for the survey being short, it was also a limitation to the survey.

IX. CONCLUSION

After demonetization mobile wallet usage has become more popular. It was analyzed with the help of Garrett ranking and found that time saving is the most important factor followed by convenient, third important factor being speed and connectivity of transaction. And the least important factor for the respondents is cashback offers.

Further analysis found that bank server problems and internet connectivity are the most common issues followed by security in payment and UPI related issues faced by the respondents.

Among security in payment there are several other reasons such as fear to provide highly secured information (card no, cvv, otp, etc.), getting charged for accidental transactions, identity theft, and loss of personal information that prevent users from using e-wallets.

Whether it is a payment or transaction, mobile wallet is considered as the most convenient method in recent time. Even in the pandemic situation caused by COVID-19, E-wallet ensures cashless transactions which increases its use in a drastic way. However, for E-Wallets to be a successful concept, there should be proper infrastructure and financial stability in a country to adopt these kinds of changes.

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