Factors Influencing the Use of Online Payment System by Women

Divya Budhia, Dr. Tushinder Preet Kaur

Abstract: *The study aimed to identify the broad factors that were significant in influencing the use of online payment system among the female population. Data had been gathered from 300 respondents from urban areas of Punjab on 12 statements through 5-point rating scale. Factor analysis compressed variables in to four broad factors i.e. convenience, lack of safety, modernity and economic benefits. Discriminant analysis revealed that for factors "convenience" and "economic benefits", a significant difference existed between the means of two groups i.e. users and non-users. The work will serve as a guide to the state in finding ways to promote the use of online payment system among women. JEL Code: M3*

Keywords : Online payment, factor analysis, women, Punjab.

I. INTRODUCTION

Any system which is used to settle financial transactions through the transfer of monetary value is called a payment system. From barter trade to early coinage, from currency notes to paper-less money, payment systems have come a long way. In modern times, payment systems comprise both of physical as well as electronic means of transferring funds. Online payment system is based on internet for processing economic transactions. Online payment is electronic exchange of payment from the buyer to the seller by means of an online payment channel, i.e. the users have the facility to remotely access and engage in exchange with their financial accounts over an electronic system, Khan et al.[1]. This is an approach to provide an opportunity to the customers to do transactions from anywhere i.e. they are not required to move to the bank. In online payment system payer and payee both use online modes to send and receive money. The action or activity of buying goods or services over the internet makes payment system easier. Online payment systems expand the horizons of a business and its sales capacity. It helps to mechanize sales activities, enlarges the number of prospective customers and helps in minimizing the paper work. Usually online payment system helps for low corruption and less black money in the economy. Therefore, it also promotes economic growth in the countries that use the online payment system for most of the transactions. With the explosive growth of the internet, online payment system is an ever more important slice of commercial activities on the web. It includes debit and credit card-swipe or point of sales (POS) machine; e-banking (Mobile banking or banking through computers); digital wallets, etc. Credit cards and debit cards constitute the most popular method of online payment, but debit cards are cheaper than credit cards. There are also alternative payment methods that have emerged and are increasingly capturing market share. Internet banking is one of them, where all the monetary transactions are done using internet connection through mobile or computer. Mobile wallets are run by third-party corporations, such as Paytm, MobiKwick, etc. These companies either take a small percentage out of every transaction or sign contract with organisations which need to make large number of transactions. But, the payment system in any country needs to pass the related tests of safety, reliability, effectiveness and accessibility. In present times, no doubt cards and other digital modes of payments are gaining on popularity but, paper currency notes still make an essential part of the daily life. Even the most cashless countries in the world still use cash for a good percentage of consumer transactions. This is because Cash is a legal medium of exchange and a cash transaction is immediate, thereby removing the risk regarding the payment. Also, use of cash doesn't involve any cost as is the case of debit/ credit cards.

Indian economy had undergone significant changes during the last decade of the previous century, after the economic reforms were introduced in 1991. Liberalisation, privatisation and globalisation were introduced; and banks and financial institutions were also motivated to make efforts towards enhancing economic growth. To bring the payment and settlement systems in line with international standards, the RBI introduced its objectives in a 1998 document on *Payment Systems in India*. After that, *Payment System Vision Documents* have been published from time to time. According to RBI, Payment and Settlement Systems Act, 2007 ensures that all the payment and settlement systems operating in the country are safe, secure, and easily accessible to all [2]. The government has been continuously promoting digital payment systems. It has taken several measures in the current decade to this end. The "Digital India Initiative" was launched to provide internet access to over a billion people to use digital payment techniques for making monetary transfers. With this objective in mind, UPI (Unified Payment Interface), was launched in April 2016.

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Unified Payments Interface (UPI) provides various bank accounts into one mobile application (of any participating bank). It merges several banking features into one hood (GOI).

A major move in this direction was the demonetisation that was done by the Government of India in November, 2016, when currency notes of two thousand and five hundred denominations were sucked out of circulation. Approximately, 85 per cent of the cash in the economy was wiped out. It gave a huge fillip to digital mode of payments. Also, *Aadhaar* Pay was launched in April 2017. AePS allows consumers who do not have smart phones or debit cards to transfer money and check account balances through micro ATMs [3]. The government is also working rigorously to improve the infrastructure required for making digital payments. As on 31 December 2018, India had 1.21 billion mobile phone users, 446 million smart phone users, and 560 million internet users, up from 481 million users in December 2017. But, India has again gone back to cash transactions as the effects of demonetisation have faded out. The currency in circulation to GDP ratio reached 8.8 per cent in March 2017. It leaped to 10.9 per cent in March 2018, and is likely to increase further in 2019 [4]. There are many reasons that are obstructing the growth of online payment in India. A large share of population is illiterate and poor, and therefore lacks awareness. Feature phones are still widely used in rural areas. Also, there is unwillingness to change the mindset among the poor. Most of the bank accounts which have been opened through *Jan Dhan Yojana* are lying un-operational. There is lack of infrastructure, like limited availability of point of sale terminals. Moreover, digital connectivity and security in transactions are not up to the mark in many parts of the country [5]. In India, small retailers don't have enough resources to invest in electronic payment infrastructure. Moreover, internet penetration rate is just 27 per cent in the country, which is quite low as compared to the global median of 67 per cent. The country has to catch up fast in this direction as online payment system, besides offering many advantages like convenience, safety, etc. at individual level, has many benefits at the macro level, which will help the economy in many ways. When people have less cash, there will not be any means to invest in illegal activities. Lesser availability of cash will provide lesser scope for hiding money at homes and evading taxes. More people will come under the purview of taxation, broadening the tax base, which will further lead to lowering of tax rate in the economy. All this will push up the growth rate of the economy. Also, there will be much more transparency and hence accountability with regard to monetary transactions. This in turn will reduce corruption and red-tapism thus, will improve service time. In the long run, this will lead to better business and investment scenario in the economy. This study attempts to find out the awareness and usage of online payment system among female population of urban areas of Punjab. It also aims to identify the factors responsible for its usage or non-usage by the respondents. The findings will help to identify the limitations of the system from the point of view of urban females and removing them so as to make this mode more popular among them.

II. REVIEW OF LITERATURE

According to Das & Agarwal [6], cash proves to be an expensive mode of payment and therefore country needs to move away from cash towards online payment system. Also, moving towards electronic payment modes will help in cutting currency managing cost, tracking transactions, plugging tax avoidance/fraud etc. Jain and Bansal [7] also analyzed the growth pattern of online transaction System. The study states that online payment system takes advantage of technology, and thereby leads to quick payments and remittances and ensures optimal use of available funds for financial institutions, banks, businesses and consumers. As per a study conducted by Kaur and Pathak [8], there were a number of factors which affected the usage of e-commerce payment systems. These included uneasiness in use, cost, security, accessibility and anonymity. There study was based on primary data in which data was collected from 200 respondents through questionnaire on five point likert scale. Yang [9] found that debit cards and net banking were more popular online payment methods in Europe and China. Main factors leading to use of online payment system were ease and the promptness of the transaction. Technical problems and vulnerability to cyber-crime, on the other hand, were found to be the main causes impeding the use of online payment system. Similar results were reported in a parallel study by Khan et al. [1]. It signified that the customer base of online of online payment methods is continuously growing, intimating an increasing acceptance of such payment modes. Convenience in use was found to be the prime reason behind such a trend. It also concluded that an improved amalgamation of online payment systems with economic infrastructure was necessary for the intensification of this payment mode. Also, it recommended establishing a universal benchmark for service providers, enhanced compatibility with customers, and overcoming privacy and security concerns to enlarge the market for this form of payment.

In a survey conducted by KPMG in 2017 [5], comprising 32 per cent female respondents, it was found that nearly 90 per cent of the respondents preferred cashless payment over cash payment, with 48 per cent using digital payment for more than 75 per cent of their transactions. But security concerns and lack of awareness were found to be acting as key barriers. Also, Bazkouski [10] in a study outlined the progress of electronic payment scheme. Various types of online payment system like, M-wallet, credit card, debit card etc. were analysed. The study highlighted the securities issues related to the electronic payment system. In another study, Aigbe and Akpojaro [11] also highlighted the security concerns with regard to digital payment systems as one of the important barriers in its growth. Sagayarani [12], in a study in Indian context, also found that though online payments were becoming popular among masses, but huge population was still outside its ambit. It also asserted that service providers need to persistently make investments in technology up gradation in order to perk up security and provide ease of transaction. People will shift towards cashless modes only when these get simpler, better and safer.

A. Research Gap

Literature review suggested that though a lot of work has been done with respect to online payment system, at international as well as national level, yet the female aspect of the issue has been completely ignored. This study attempts to examine the awareness and usage of online payment system particularly by females residing in urban areas of Punjab. It also strives to explore the factors that influence the usage or non-usage of online payments by the target population.

B. Research Objectives

Thus, the study tries to achieve following objectives:

1. To examine the awareness and usage of online payment system among females in urban areas of Punjab.

2. To explore the factors influencing usage or non-usage of online payment system among females in urban areas of Punjab.

3. To examine whether significant differences exist among the users and non-users, in terms of the extracted factors.

4. To examine which of the factors contribute most to the inter group differences.

III. RESEARCH METHODOLOGY

The purpose of research is to discover answers to the questions through the application of scientific procedures. Here, the techniques used for data collection and data analysis have been stated.

A. Research Design

Exploratory research design has been used in the study to find out the broad factors that promote or affect the usage of online payments among female residents of urban Punjab.

B. Data Collection

i) Method: Primary data has been collected from 300 respondents by means of a survey.

ii) Instrument: Questionnaire was prepared & people were approached to fill up the questionnaires. Statements comprising reasons for using or not-using online payment method were prepared on five point likert scale.

C. Sampling Design

i) Sample Size: Data has been gathered form 300 respondents.

ii) Sampling Area: Data has been gathered from urban areas of Punjab state.

iii) Sampling Technique: Convenience sampling technique has been used.

D. Analysis Technique

Factor analysis has been used to compress data on twelve variables and to arrive at broad factors influencing the usage or non-usage of online payment system among females in urban areas of Punjab. Discriminant analysis has been used to check whether significant differences occurs among the groups of users and non-users of online payment on the basis of extracted factors, and also to examine which of the factors contribute most to the inter group differences.

E. Significance of Study

The study will help to identify the main factors that are responsible for the usage or non-usage of online payment system among females in urban areas of Punjab. Government can use these results to influence the attitude of the females and enhance the usage of this method by initiating appropriate policy measures.

IV. ANALYSIS AND INTERPRETION

Analysis of the data has been divided in to four sections. Section A tells about the profile of the respondents. Section B discusses the awareness and usage of online payment among the respondents. Section C examines the results of the factor analysis. Section D discusses the results of discriminant analysis.

A. Demographic Profile of the Respondents

TableI reveals that the respondents from different age groups, marital and work status have been included in the study so as to get meaningful results.

Table I: Demographic Profile of the Respondents

Age	Below 25	25-45	Above 45
Number	115	105	80
Percentage	38.33	35	26.67
Marital Status	**Married**		**Single**
Number	132		168
Percentage	44		56
Work Status	**Working**		**Non-Working**
Number	144		156
Percentage	48		52

Source: Author's Calculations

B. Awareness and Usage of Online Payment System

Table II: Awareness and Usage of Online Payment System

Awareness	Yes	No
Number	283	17
Percentage	94.33	5.67
Usage	**Yes**	**No**
Number	209	91
Percentage	69.67	30.33

Source: Author's Calculations

TableII shows that though more than 90 per cent of the respondents were aware of online mode of payment, but only about 70 per cent of them were actually using it. That is, approximately 30 per cent of the respondents were depending solely on cash transactions. It is quite high percentage, keeping in mind that all the respondents belonged to urban areas.

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Table III: Awareness and Usage of Online Payment System

Frequency	Daily	More than once a week	Once a week	Once a month or lesser	
Number	04	42	57	106	
Percentage	1.91	20.09	27.27	50.72	
Amount	**Small transactions**	**Big transactions**	**All transactions**		
Number	130	09	70		
Percentage	62.2	4.30	33.5		
Mode	**Smartphone**	**PC/Laptop**	**Both**		
Number	131	17	61		
Percentage	62.68	8.13	29.19		
Method	**Card**	**Wallet**	**Net banking**	**Mobile banking**	**All**
Number	165	17	70	09	05
Percentage	78.95	8.13	33.5	4.31	2.39
Purpose	**Shopping**	**Bill payment**	**Transferring money between accounts**	**B2B transactions**	**Ticket booking**
Number	130	148	70	18	87
Percentage	62.2	70.81	33.5	8.61	41.63

Source: Author's Calculations

Notes: 1. Percentages may not sum up to 100 because of rounding off. 2. Total percentage in some cases exceeds 100 because respondents ticked more than one option.

TableIII shows that majority of the users made use of online payment method just once in a month or lesser than that. Nearly one third of the users used it more than once a week whereas only one fifth of the users used it once in a week. Number of users making online transactions on daily basis was found to be negligible. Moreover, majority of the respondents were using this mode only for small transactions and only one third were using for all kinds of payments. Also, about two third of the respondents did online transactions via smart phones. Less than one in twelve respondents made online payments only through desktop or laptop whereas about 30 per cent of them used both the modes. Further, nearly four fifth of the respondents made use of credit/debit cards for making online payments and about one third used net banking. But, a very low percentage of them used mobile banking or digital wallets. Thus, these methods are still not popular among them. Approximately third fourth of the respondents used online method for making fees/electricity/mobile bill payment and nearly one third used it for shopping purposes. Just over 40 per cent used it for ticket booking and only one third of them used it for transferring money between their own accounts. A very low percentage used it for B2B transactions as most of the female respondents were in to salaried jobs. Thus, most of the respondents used online payment for small transactions and also frequency of their usage is low, reflecting lack of trust.

C. Factors Influencing Usage/Non-usage of Online Payment System

Factor analysis is a multivariate analysis, which is used for data reduction & summarization. It identifies the underlying dimensions or factors. It is an interdependence technique, i.e. it makes no difference between independent and dependent variables. Variables should be interval or ratio scale.

Bartlett's Test of Sphericity
H_0 = the variables are uncorrelated
Here, the null hypothesis of Bartlett's test is rejected. The approx. chi-square is 142.205 which is significant at the 0.01 level.

Kaiser-Meyer-Olkin (KMO) for Sampling Adequacy
- Small value of KMO suggests not applying factor analysis.
- KMO value should be greater than 0.5. Here, the value of KMO is 0.518 (>0.5). Thus, factor analysis may be applied for analyzing the data.

Table of Eigen values showed that first four variables collectively explained more than 70 per cent of the variation. Factors have been explained as per loadings of variables in rotated component matrix. Variables "reduces corruption and black money", "curbs tax evasion" and "gives discounts" have high loadings on factor one. This factor has been thus named "**Economic Benefits**". Variables "easy", "convenient" and "quick" have high loadings on second factor. It has been named "**Convenience**". Third factor has high positive loadings of "prone to hacking" and "use of cash is safer" and high negative loading of "safe". This means that respondents did not find online payments to be safe. This factor is named "**Safety**". Last facto has high loadings of variables "status symbol" and "using cash is outdated". It has been named "**Modernity**". Variable "hassle free" did not have high loading on any of the factors, meaning thereby that this was not important consideration of the respondents.

Thus, it is clear that whereas respondents found online transactions to be convenient, modern and to be offering economic advantages; they found them to be lesser safe as compared to cash transactions.

D. Discriminant Analysis

Results of the discriminant analysis are discussed as follows:
- Eigen value 1.479 which is favorable with 100% variance explained. The square of canonical correlation 0.596, suggests 59.6 per cent of the variance in the discriminating model between the user/non-user is due to the changes in the four predictor variables (i.e. factors).
- Wilk's Lambda is the ratio of within group sum of squares to total sum of square Significance of the discriminant function is shown by Wilk's Lambda, the value of which lies between o and 1. Value less than 5 (or closer to 0) is better. Here, this value is .403, which indicates that the function is significant.
- Classification matrix indicates that discriminant function is able to classify 90 per cent of the objects correctly.

- Out of all the factors that have been extracted using factor analysis, the factor "convenience" has found to be best predictor with coefficient 1.018, followed by "economic benefits" with coefficient 0.657, "modernity" with coefficient 0.086 and "safety" with coefficient -0.053.
- Moreover, one way ANOVA has been carried out to know for which of the factors significant difference exists between the means of two groups. Significant difference in mean of two groups exists for the factors "convenience" and "economic benefits".

V. SUGGESTIONS & CONCLUSION

Indian consumption expenditure is still dominated by cash and cards contribute only a meagre percent of the total personal consumption expenditure. In developed countries, nearly half of the spending happen through cards. Thus, there is huge distance to cover in India. All stakeholders and regulatory authorities have to come together to achieve a "less-cash economy". The rapid growth of smart phones and internet penetration has started to give fillip to online payments in recent years, but concerted efforts are required in this direction so that the momentum is not lost. Following are given some suggestions in this regard:

- First, of all a good awareness campaign regarding the knowledge of online payment system should be initiated by government so that more and more people can be channelized in to the online transactions framework. Financial education programs need to be designed to improve financial skills and increase account ownership in rural India. Dedicated programmes for women can also be started.
- People are increasingly adapting to online transactions but safety risks continue to prevail. This has been found to be the prime reason inhibiting growth of online payments among females in Punjab. Overcoming privacy and security concerns are urgently required to expand the market for this mode of payment.
- Usually different online payment service providers do not cooperate with each other. This creates inconvenience for the consumers. Establishing a universal benchmark for service providers and enhancing compatibility with customers will go a long way in promoting use of online payments.
- Cost of internet facility is high in the country. The government should provide free wifi at public places so that those who cannot afford the high cost of internet can also use it for digital payments.
- Dependency on cash will come down if people are given ample opportunities to save in non-cash instruments that are both safe and inflation-proof.
- The need is also to reduce the cost of electronic payments for merchants, whose thin margins force them to pass them on to households. (The Economic Times, February 12, 2019).
- Government should also focus on developing required infrastructure in rural areas.

- Linking welfare activities with bank accounts is also required.

Though cash is still the main mode of payment, yet online payment system is increasingly becoming popular with the females in Punjab. Many reasons are responsible for it. In this study these have been clubbed in to three main factors i.e. convenience, modernity and economic benefits. This is a very positive outcome as it reflects the psychology of the respondents. They are adopting cashless transactions not only for their own sake, but also for the sake of the benefit of the country. They have been found to be aware of the fact that this mode of payment helps in reducing corruption and black money from the economy and curbing tax evasion, besides speeding up the transactions. One factor namely, safety is acting as a deterrent in the growth of online payment system. The females in urban areas of Punjab thought this mode of payment to be lesser safe than cash payments. This issue needs to be addressed if online transactions are to grow rapidly. Trouble-free and protected payment processes will go a long way in bringing about behavioural changes and thereby faster adoption of online payment. Out of all the factors, for convenience and economic benefits a significant difference exists between the means of two groups i.e. users and non-users of online payment. This means, these factors play the major role in turning a non-user in to a user. Thus, concerted efforts to make online payment methods more convenient and lesser costly will go a long way to promote their use among the female population. Thus, the findings have important policy implications, which need to be implemented by the government to speed up the process of "Digital India".

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Apart from Teaching, she has counselled many students for better carrier opportunities. She has also developed Curriculum as well as Pedagogy for the effective teaching. She has guided two M.Phil scholars and 6 Post Graduation students for research and also coordinated with the other faculties for various research activities. She has been a Steering Committee member and organised conference in LPU. Last but not the least, she has been a part of Panel for the various entry level exams of the University.