

Consumer Preferences for Electronic Payment System

Dr. Priyanka Zala

Asst.Professor, Faculty of Business Administration- GLS University, Ahmedabad, India.

Abstract

With the emergence of Information and Communication technology use of electronic payment system is increasing day by day. There is prominent change in the preference of consumer for payment of goods and services. The present study analyse consumer preferences for electronic payment system. It focuses on analysing influence of various demographic factors like age, gender, education, occupation and monthly income on selection of patent options by consumers. It also highlights modes of banking service preference, device used for the digital payment system, electronic payment service usage and payment apps usage. From the study it is observed that debit card, net banking and credit card are most preferred and frequently used by respondents whereas IMPS (36.4%) and NEFT/RTGS (35.9%) are least preferred. Result of chi-square test clearly proves that majority factors under study are independent only one factor that is use of debit card is affected by age.

Introduction

Method of payment plays crucial role in successful business network. It facilitates liquidity in the economy and stimulates economic growth of the country. Electronic Payment system is financial exchange of funds online. It functions with the help of integrated hardware and software and facilitates payment of goods and services online irrespective of time and location. It aims at increasing efficiency, security, convenience and ease of electronic transaction.

Government of India have taken initiatives like Digital India programme, demonetization, National Optical Fibre Network (NFON), Untied Payment Interface (UPI) and Bharat Interface for Money (BHIM) to promote usage of Electronic payment system in India. Electronic transactions payment system is executed with the help of various modes of electronic payment system.

Modes of Electronic Payment System

Electronic Payment System comprise of below mentioned modes of Electronic Payment System.

1. Debit and Credit Cards:

Debit card is bank card or plastic payment card that can be used instead of cash while paying for goods and services. In debit card transaction money is directly debited from card user's account.

Credit card is issued by bank to cardholder; it enables cardholder to pay for goods and services as cash advances. Amount of credit depends upon the line of credit granted by bank.

2. Electronic Clearing Service:

There are two types of Electronic Clearing Service that is ECS (Debit) and ECS (Credit). ECS Debit is generally used by consumers for small payments like telephone bill, gas bill, electricity bill, insurance etc. ECS (Credit) is used by institution for large payments like salary, dividend and commission.

3. Real Time Gross Settlement (RTGS):

RTGS is the fastest money transfer system in which fund transfer from one bank to another. Here real time Gross Settlement means transaction is immediate and without clubbing it with any other

transaction. For fund transfer through RTGS one should have IFSC code, account number and name of the beneficiary. Minimum limit for RTGS transaction is of 2, 00,000.

4. The National Electronic Fund Transfer(NEFT):

NEFT is a countrywide fund transfer system in which transactions are made batch wise. It helps in transferring funds from any NEFT enabled bank branch to another NEFT enabled bank branch of individual, firm or corporate. In NEFT generally transaction is settled next day and like RTGS it does not have minimum limit for transaction.

5. Immediate Payment Service (IMPS):

IMPS is an inter-bank electronic fund transfer system in India. IMPS service is available 24X7 and can be avail through mobile banking application. One needs registered mobile number of receiver and Money Identifier code issued by banks for successful transaction.

6. Bharat Bill Payment System:

BBPS is integrated bill payment system facilitate payment of electricity, gas water, mobile, landline, DTH etc. at anytime from anywhere across country. It also helps in collecting bills fast and also in keeping track of bills.

7. Aadhaar Enabled Payment System (AEPS):

Objective of AEPS is to motivate customers for using AADHAR for performing basic bank transactions. In AEPS AADHAR is used as basic identification to perform bank activities.

8. Mobile Payment System:

Mobile payment system is payment and fund transfer services performed through mobile.

Review of literature

The research on electronic payment mainly refers to consumer preferences for electronic payment system. The electronic mode of payments like debit card, credit card, smart card, e-wallet etc. Literature reveals that several studies have been conducted on this topic in India. Several studies in India have attempted to identify prominence on cashless transaction system, technological breakthrough; important factors need to be considered for the success of e-commerce payment systems and problems of insufficient facilities of ICT in rural area. The reviews of some of the important studies are presented below.

Vahid Rangriz and Dr. M. G. Basavaraja (2011) found that customers give importance to security so banks should reassure customers for high standard of security. He also recommended that training sessions should be organised for customers to promote e-banking system.

Abdelghani Echchabi (2011) found that perceived ease of online banking services usage had higher influence on the intention to adopt online banking services by male respondents as compare to female respondents in Morocco.

Ahmed Kaleen and Saima Ahmad (2008) had conducted survey on banker's perception of the benefits of electronic banking. Results reveal that bank employee with less than 10 years of experience believes e-banking improve service quality. Employees with experience over 10 years feel that e-banking helps in getting quick responses from customers.

Singh Sumanjeet (2009) mentioned that electronic payment system helps in performing financial transactions electronically. It saves time and effort of individual while paying for goods and services and also gives freedom of purchases at unconventional locations and time.

Eben Otuteye (2003) concluded that there is rapid growth in E-payment system in India but still there is lot to be done as people rely more on cash transactions as compare to E-payment system. For enhancing scope of E-payment system emphasis should be on four major factors i.e. innovation, incentive, customer convenience and legal framework

Abdul Naveed Tariq (2009) conducted a survey in urban Morocco to study consumer's willingness for online shopping. He considered demographic factors and also trust and security related factors. Results revealed that majority of respondents are willing to shop online and demographic factors have impact on their willingness to purchase online.

Objectives and Hypothesis Development

Objectives

The present study is undertaken with the aim to;

1. To study preferences of consumer's for electronic payment system
2. To identify various methods of e –payment system available currently in the market.
3. To study the effect of demographic factors on selection of payment options by consumers

Hypothesis

Based on the above stated objectives, the following hypothesis is formulated:

Ho = There is no significant influence of demographic factors on selection of payment options by consumers

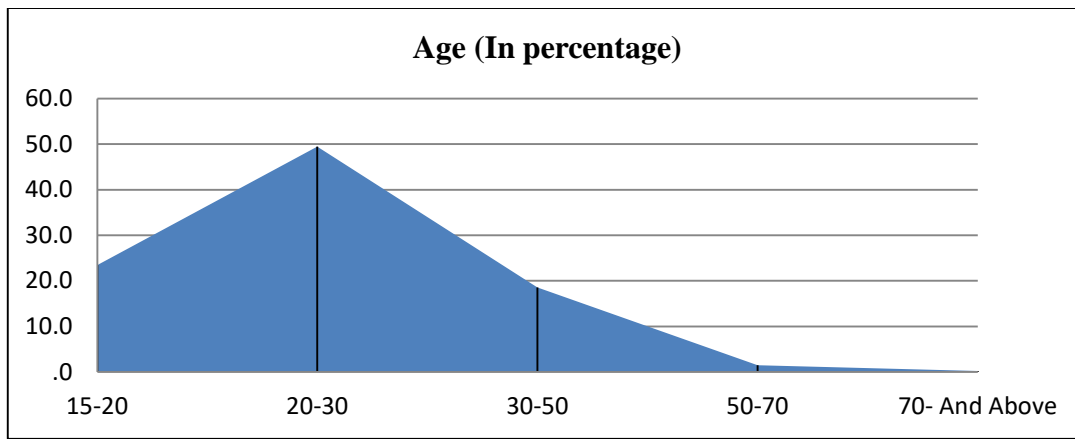
Here, demographic factors consists of age, gender, education, occupation and monthly income

Methodology

This is an analytical study to analyse consumer preferences for electronic payment system. To conduct this study primary data as well as secondary data have been collected. Primary data is collected from 437 respondents of Gujarat state and secondary data are obtained from various journals and websites. The primary data is collected with the help of structured questionnaire from the various respondents who are using e-payment system. A structured questionnaire consists of closed end questions. To test the hypothesis, chi-square analysis is used. The data is analysed with the help of excel and SPSS. Margin of error and confidence level for current study is 5% and 95% respectively.

Data Analysis

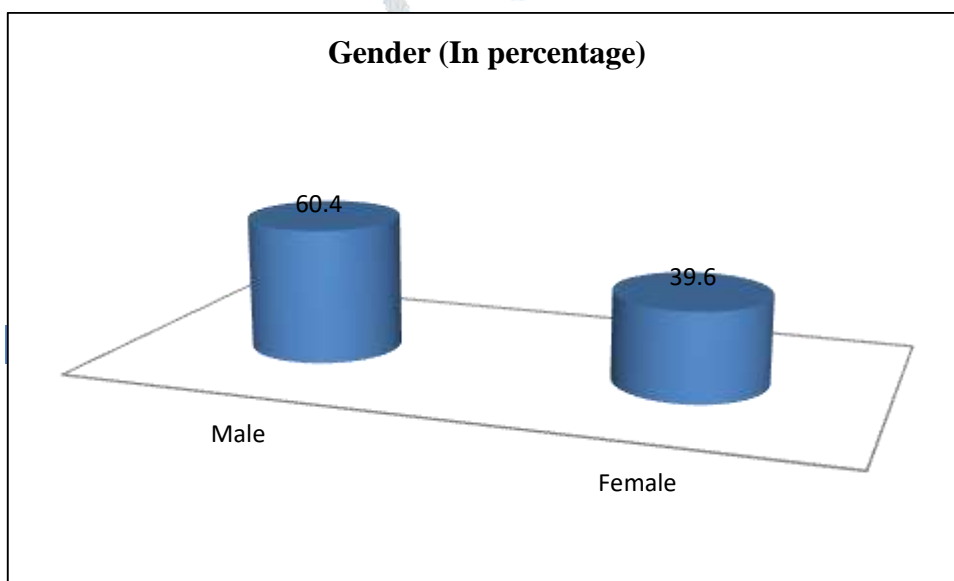
Figure 1: Age of respondents (In percentage)



Source: Primary data

Figure 1 state respondent’s age information. Majority (49%) of respondents belong to age group of 20-30. 23% , 19%, 1% and 0.02% respondents fall under the age group of 15-20, 30-50, 50-70 and 70 and above.

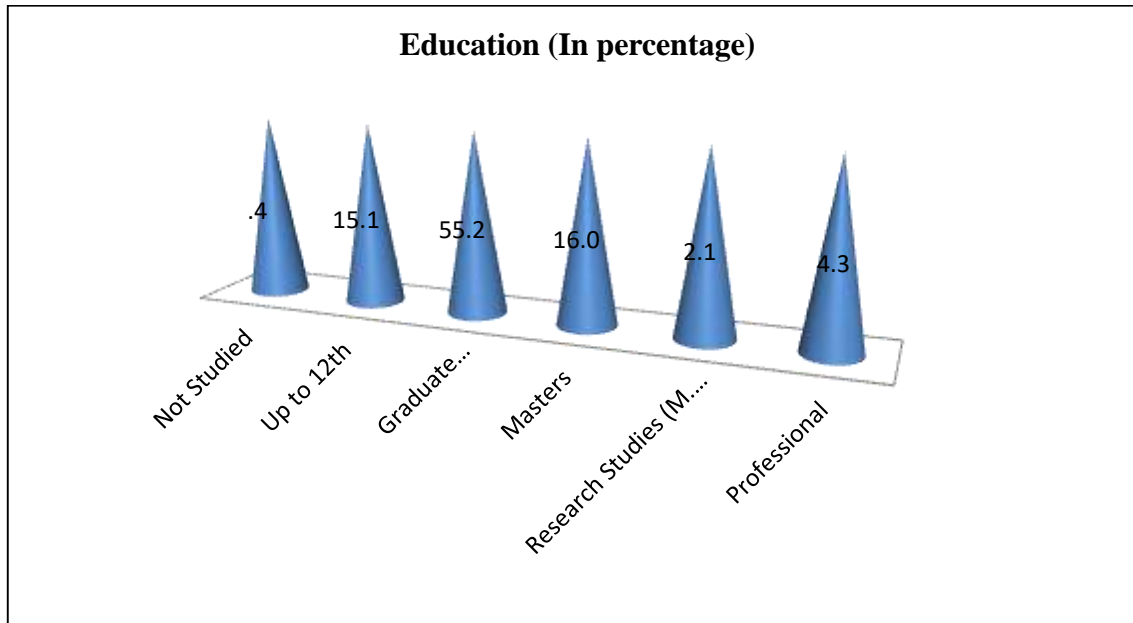
Figure 2: Gender of respondents (In percentage)



Source: Primary data

Figure 2 presents the gender profile of the respondents. The numbers of male respondents were significantly higher than the female respondents. Out of 437 respondents 60.4% were male and 39.6% were females.

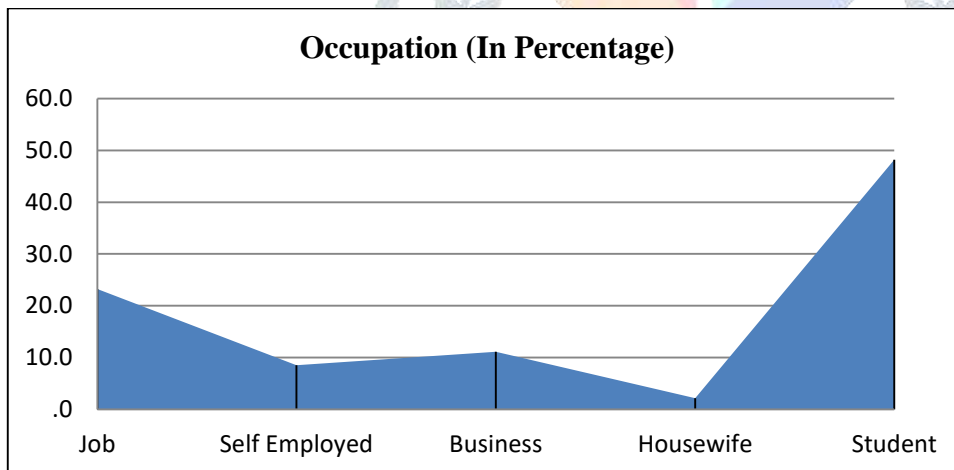
Figure 3: Education of respondents (In percentage)



Source: Primary data

Figure 3 shows out of 437 respondents 55.2% are graduate. 15.1% have studied up to 12th standard whereas 0.4% are not studied at all. 16%, 2.1% and 4.3 % respondents have master, research and professional degrees.

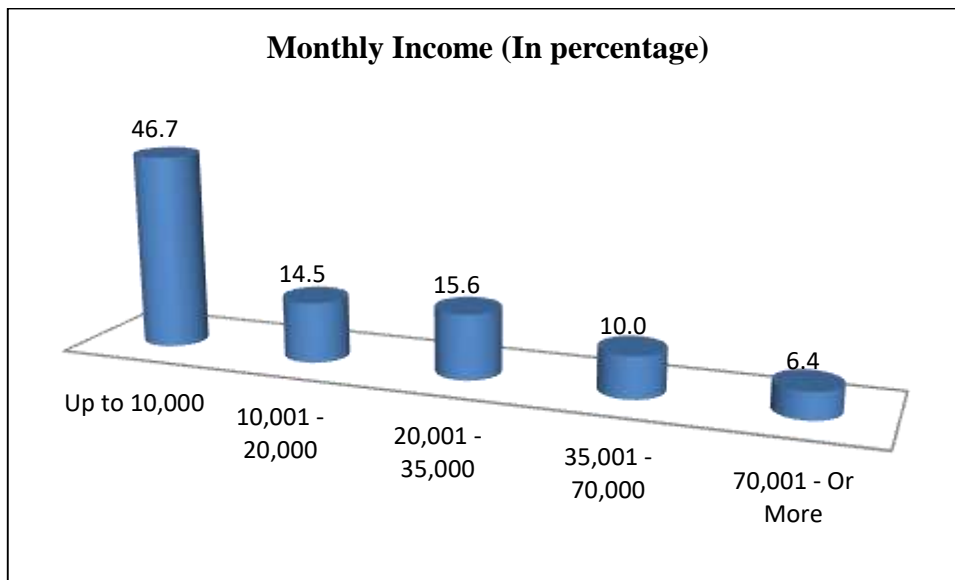
Figure 4: Occupation (In Percentage)



Source: Primary data

Figure 4 depicts majority of respondents(48%) are students. 23% respondents are having job whereas 11% have their own business. 9% and 2% are self-employed and housewives respectively.

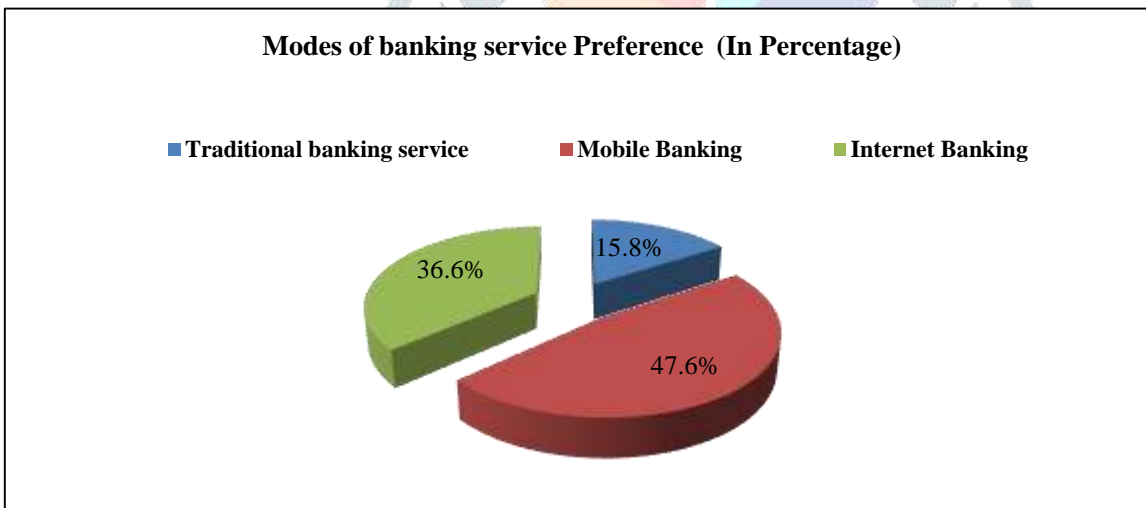
Figure 5: Monthly Income (In percentage)



Source: Primary data

Figure 5 shows that majority of respondent’s monthly income is up to 10,000. It is obvious as 48% of respondents are students. 14.5%, 15.6%, 10% and 6.4% respondents monthly income is in the range of 10,001-20,000, 20,001-35,000, 35,001-70,000 and 70,001 and more respectively.

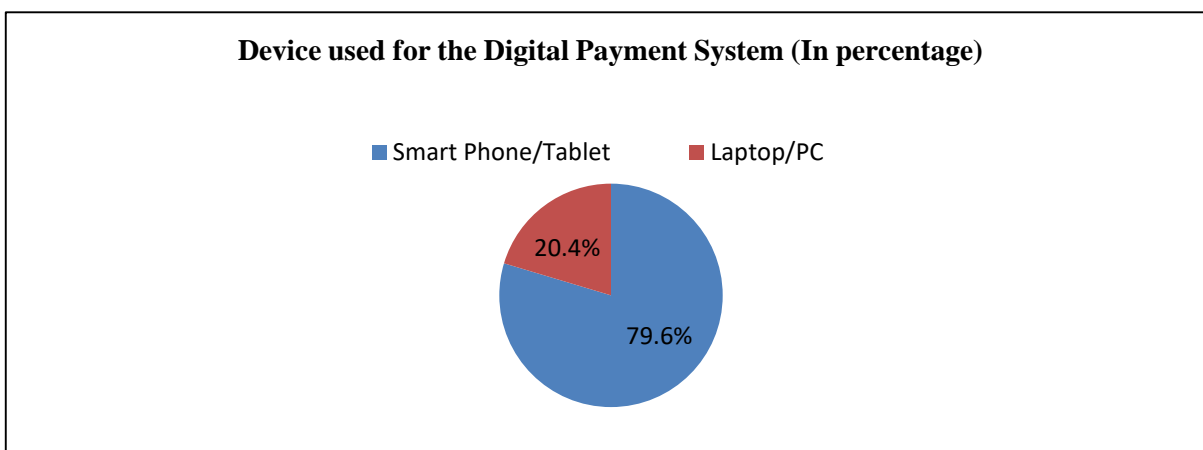
Figure 6: Modes of banking service preference (In Percentage)



Source: Primary data

Figure 6 shows the frequency distribution of the respondents on the basis of modes of banking service preference. Majority of respondents (47.6%) prefer to use mobile banking. 36.6% and 15.8% respondents prefer to use internet banking and traditional banking service respectively.

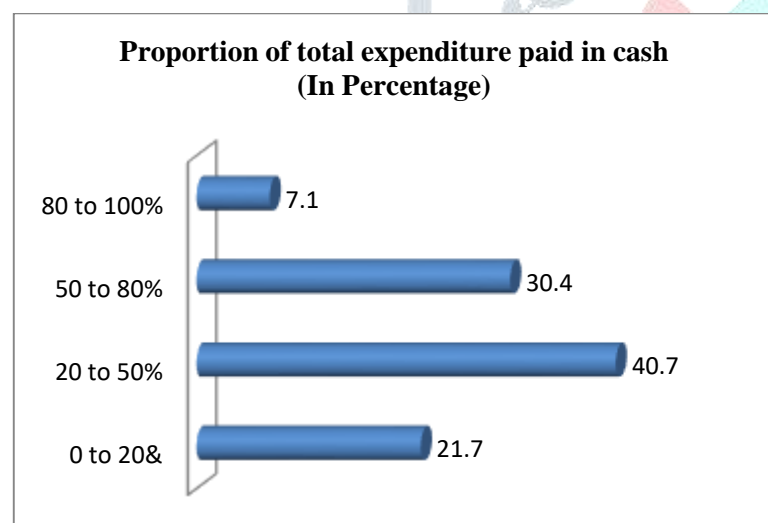
Figure 7: Device used for the digital payment system (In percentage)



Source: Primary data

Figure 7 shows that majority of respondents(80%) prefer to use smart phone/ tablet to access the digital payment system, while the rest 20% of the respondent use Laptop/ PC.

Figure 8: Total expenditure paid in cash (In Percentage)



Source: Primary data

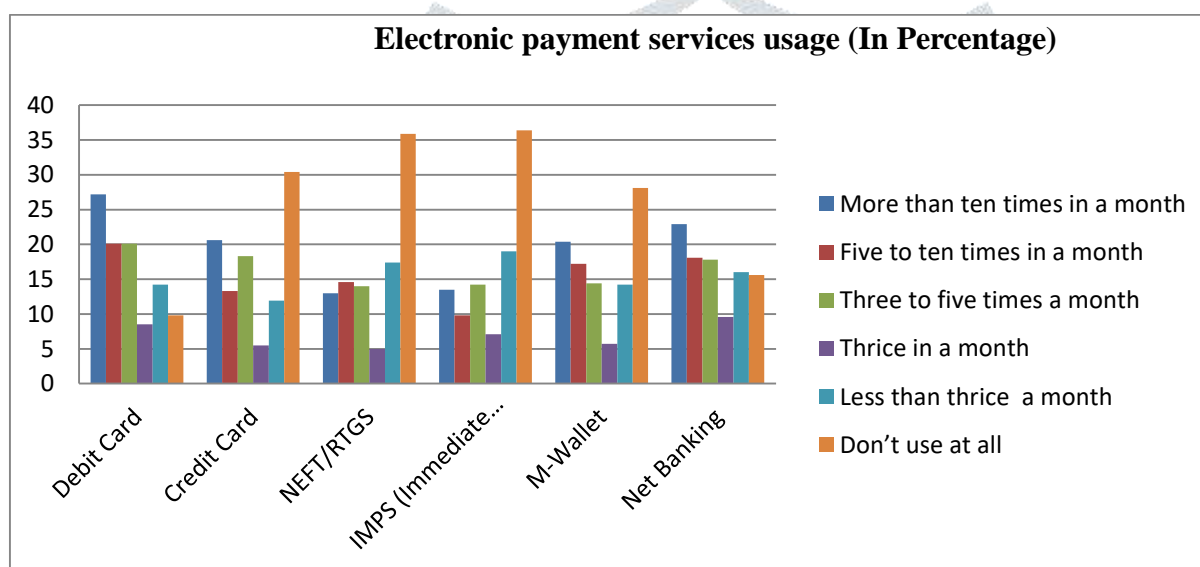
Figure 8 shows what percent of total expenditure respondents prefer to pay in terms of cash? The result shows that 21.7% of the respondents prefer to pay up to 20% in cash, 40.7% of the respondents prefer to pay 20% to 50% in cash, 30.4% of the respondents prefer to pay 50% to 80% in cash, while only 7.1% of the respondents prefer to pay 80% to 100 % in cash. With increased use of mobile banking and online payment options we can see increase in usage of electronic payment system.

Table 2: Electronic payment services usage (In Percentage)

	Debit Card	Credit Card	NEFT/RTGS	IMPS (Immediate Payment Service)	M-Wallet	Net Banking
More than ten times in	27.2	20.6	13.0	13.5	20.4	22.9

a month						
Five to ten times in a month	20.1	13.3	14.6	9.8	17.2	18.1
Three to five times a month	20.1	18.3	14.0	14.2	14.4	17.8
Thrice in a month	8.5	5.5	5.0	7.1	5.7	9.6
Less than thrice a month	14.2	11.9	17.4	19.0	14.2	16.0
Don't use at all	9.8	30.4	35.9	36.4	28.1	15.6

Figure 9: Electronic payment service usage (In percentage)



Above table and graph shows frequency of electronic payment services usage. Analyses of first three range of frequency that is three to five times in a month to more than ten times in a month reveals that debit card, net banking and credit card are frequently used. Net banking (9.6%), debit card (8.5%) and IMPS (7.1) are used thrice in a month. Results show that IMPS (36.4%) and NEFT/RTGS (35.9%) are least used options by respondents.

Table 3: Payment Apps usage

	Bank mobile App	UPI (Unified Payments Interface)	BHIM/ Govt. Apps	E-Wallets	PayTm	Mobikwick	Airtel Money	Jio Money	Oxygen Wallet	Free charge
Frequently	48	17.6	16.2	28.6	54.7	18.1	20.4	14.2	12.8	12.8
Sometimes	30	32.5	28.1	31.8	29.5	27.7	22.9	33.6	21.1	37.3
Not at all	22	49.9	55.6	39.6	15.8	54.2	56.8	52.2	66.1	49.9

The table 3 depicts that PayTm(54.7%),bank mobile App(48%) and E-wallets(28.6) are frequently used by respondents. 66.1%, 56.8%,55.6%, 54.2% respondents don't use oxygen wallet, airtel money, bhim govt. apps and mobikwick at all

Hypothesis testing

Table 4:Chi square test values

	Age	Gender	Education	Occupation	Monthly Income
Debit Card	.011 Ho : Rejected	.236 Ho : Accepted	.304 Ho : Accepted	.096 Ho : Accepted	.528 Ho : Accepted
Credit Card	.507 Ho : Accepted	.744 Ho : Accepted	.578 Ho : Accepted	.673 Ho : Accepted	.065 Ho : Accepted
NEFT/RTGS	.804 Ho : Accepted	.079 Ho : Accepted	.519 Ho : Accepted	.650 Ho : Accepted	.057 Ho : Accepted
IMPS	.319 Ho : Accepted	.384 Ho : Accepted	.782 Ho : Accepted	.142 Ho : Accepted	.216 Ho : Accepted
M-Wallet	.841 Ho : Accepted	.593 Ho : Accepted	.283 Ho : Accepted	.486 Ho : Accepted	.373 Ho : Accepted
Net Banking	.382 Ho : Accepted	.861 Ho : Accepted	.223 Ho : Accepted	.206 Ho : Accepted	.459 Ho : Accepted

Source: Primary data calculated with SPSS

The above table gives summary of chi square values and test results (in bracket) that whether null hypothesis is accepted or rejected. As per chi square analysis if the significant value of is greater than 0.05 null hypotheses is accepted and vice a versa.

Findings

The study revealed that consumers prefer mobile banking services (47.6%) and internet banking services (36.6%) more as compare to traditional banking services (15.8%). It is observed from the study that younger people tend to adopt newer technologies more quickly than older people.

Majority of respondents (79.6%) use smart phone/tablet only 20.4% use laptop/pc for the usage of electronic payment system.

From the study it is observed that debit card, net banking and credit card are most preferred and frequently used by respondents whereas IMPS (36.4%) and NEFT/RTGS (35.9%) are least preferred payment options.

Study reveals PayTm (54.7%), bank mobile App (48%) and E-wallets (28.6) are frequently used by respondents. 66.1%, 56.8%, 55.6%, 54.2% respondents don't use oxygen wallet, airtel money, bhim govt. apps and mobikwick at all

Result of chi-square test clearly proves that majority factors under study are independent only one factor that is use of debit card is affected by age.

Conclusion

After demonetisation and with the emergence of Information technology use of electronic payment system is increasing day by day. It is found that usage of mobile banking and internet banking is prominent as compared to traditional banking. Debit card, net banking and credit card are most preferred payment options among respondents. It was found that PayTm, bank mobile App and E-wallets are frequently used by respondents. Results of chi square reveals that majority factors under study are independent only one factor age has its influence on the usage of debit card.

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Appendix
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 Questionnaire
Consumer's Preferences for Electronic Payment System

1. Which banking service do you prefer more?
 - Traditional Payment Service
 - Mobile Banking
 - Net banking
2. Which device do you use for Net Banking /Mobile Banking?
 - Smart Phone /Tablet
 - Laptops/PC
3. How frequently do you use the Digital Payment System?
 - Once in a month
 - Once in fifteen days
 - Once in a week
 - Three to four times in a week
4. Approximately what proportion of your total expenses do you pay in terms of cash?
 - 0 to 20%
 - 20 to 50%
 - 50 to 80%
 - 80 to 100%
5. Rank following payment options on the basis of your usage. (1 being the highest and 5 being the lowest)

Payment options	More than ten times in a month(1)	Five to ten times a month (2)	Three to five times a month(3)	Thrice in a Month (4)	Don't use at all (5)
Cash					

Cheque					
Demand Draft					
Debit Card					
Credit Card					
NEFT/RTGS					
IMPS (Immediate Payment Service)					
M-Wallets					
Net Banking					

6. For which purposes do you use the Digital Payment system? (Please give rank, 1 being the highest and 3 being the lowest)

Purpose	Frequently (1)	Sometimes (2)	Not at all (3)
Mobile Bill Payment			
Bank to Bank Fund Transfer			
In store POS(For Shopping)			
Payment of Fuel Bills at Petrol Pump			
Utility Bill Payments (Electricity, Gas, etc.)			
Payment of Hotel Bills			
Travel Bookings			
Book Cinema Ticket			
Investment (Payment of Life and Gen. Ins/MFs etc.)			
Payment of Fees of son/daughter			
If any other please specify			

7. Rank following reasons for the use of digital payment. (1 being highest and 4 being lowest)

Reasons for use of digital payment	1	2	3	4
One Click Payment				
Offers/Benefits				
Pay anywhere any time				
Easy to track expenses				
Convenience of not carrying cash				
No hassle of change				
Paper less work				
Less time for banking				
Bank is very far from place of work or home				
If any other please specify				

8. Which issues do you face while using Digital Payment system? (Rank 1 being the highest and 3 being the lowest)

Problems faced	Frequently (1)	Sometimes (2)	Not at all (3)
Server Errors of Banking System			
Technical Issues with net provider/Low speed of internet			
Additional Service Charges			
Fraud			
In appropriate Card Data Security			
Hidden Charges			
Forget Password/Pin number			
Uncomfortable while using electronic payment system			
Requires more accuracy while using electronic payment System			
Lack of evidence immediately after that transactions			
Not sufficient safety measures/Hacking of accounts or Information			
If any other please specify:			

9. Which mobile payments apps do you use? (Please rank 1 being highest and 3 being lowest)

Applications	Frequently (1)	Sometimes (2)	Not at all (3)
Bank mobile App			
UPI (Unified Payments Interface)			
BHIM/Govt. Apps			
E-Wallets			
PayTm			
Mobikwick			
Oxygen Wallet			
Freecharge			
Airtel Money			
Jio Money			
If any other please specify			