



## A STUDY ON CONSUMERS PREFERENCE TOWARDS DIGITAL PAYMENT SYSTEM

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### **Abstract**

*Indians are becoming savvy at digital payment, and most companies are not wasting any time in setting up their wallets. 2016's demonetisation may have kicked up the so-called Cashless India procession, but if numbers have ever given us an indication of where the future is headed, then the narrative has been set up rather nicely.*

*Electronic commerce (e-commerce) continues to have a deeply impact on the global business environment, technologies and applications have begun to focus more on more. Now a day's customers and businesses are using the internet to conduct business and to run it which gives an incredible growth for e-commerce. Ecommerce engages different kinds of phases like www, digital rights management, security, privacy issues and electronic payment systems. Now days in market areas there are different types of electronic payment systems available.*

**Keywords** - Digital payment, Demonetisation, E-Commerce, Electronic payment systems, Cashless India.

### **INTRODUCTION**

Digital payment system facilitates the acceptance of electronic payment for online transactions. Also known as a sample of Electronic Data Interchange (EDI), e-commerce payment systems have become increasingly popular due to the widespread use of the internet-based shopping and banking.

Over the years, credit cards have become one of the most common forms of payment for e-commerce transactions. In North America almost 90% of online retail transactions were made with this payment type. Turban et al. goes on to explain that it would be difficult for an online retailer to operate without supporting credit and debit cards due to their widespread use. Increased security measures include use of the card verification number (CVN) which detects fraud by comparing the verification number printed on the signature strip on the back of the card with the information on file with the cardholder's issuing bank. Also online merchants have to comply with stringent rules stipulated by the credit and debit card issuers (Visa and MasterCard) this means that merchants must have security protocol and procedures in place to ensure transactions are more secure. This can also include having a certificate from an authorized certification authority (CA) who provides PKI (Public-Key infrastructure) for securing credit and debit card transactions.

Despite widespread use in North America, there are still a large number of countries such as China and India that have some problems to overcome in regard to credit card security. In the meantime, the use of smartcards has become extremely popular. A smartcard is similar to a credit card; however it contains an embedded 8-bit microprocessor and uses electronic cash which transfers from the consumers' card to the sellers' device. A popular smartcard initiative is the VISA Smartcard. Using the VISA smartcard you can transfer electronic cash to your card from your bank account, and you can then use your card at various retailers and on the internet.

There are companies that enable financial transactions to take place over the internet, such as PayPal. Many of the mediaries permit consumers to establish an account quickly, and to transfer funds into their on-line accounts from a traditional bank account (typically via ACH transactions), and *vice versa*, after verification of the consumer's identity and authority to access such bank accounts. Also, the larger mediaries further allow transactions to and from credit card accounts, although such credit card transactions are usually assessed a fee (either to the recipient or the sender) to recoup the transaction fees charged to the intermediary.

The speed and simplicity with which cyber-intermediary accounts can be established and used have contributed to their widespread use, although the risk of abuse, theft and other problems—with disgruntled users frequently accusing the intermediaries themselves of wrongful behavior is associated with them.

## REVIEW OF LITERATURE

Leung and Lai (2001), -Improving the quality of the credit authorization processes a quantitative approach. This paper proposes that the quality of a company's authorization system should be measured by two major considerations. First, the system should enhance quality of customers service by reducing the waiting time at the point of sale. Second, it should reduce the risk of accepting transactions of bad credit. In this paper, a major credit card company is used to demonstrate how the credit authorization process can be improved using a quantitative approach. Opportunities for quality improvement were first identified through brainstorming sessions with top management, by using quality improvement tools. A queuing model was then used to redesign the authorization process. Finally, simulation model was used to test and evaluate the new process design. As a result of these improvements, it was determined that more than US\$2.5 million were saved annually and authorization efficiency was improved by more than 40 percent.

Azhagaiah (2002), -Credit creation through plastic money. This paper focuses the issues of credit cards usage among consumers. It exhibits the recent development, evaluate the present status and assesses the future of the consumer indebtedness by credit card debt. It also discusses the financial position of the banking sector in India. Strategies used by the banks to meet competition in credit/debit cards are also discussed. Credit to individuals and house holds has a vital role to play to create bank's credit and money supply. Author point out that the role of credit cards in the money market, in the years to come, will be very bright. There is no doubt, the banks which concentrate more on credit cards will get more benefits by means of credit creation.

Lee, Jinkook (2002), –Consumers Use of Credit Cards: Store Credit Card usage as an Alternative Payment and Financing Medium. asserts consumers use of store issued credit cards with particular attention to their function as an alternative payment and financing medium. Using 1998 survey of consumer finances data, the researchers found that credit availability through bank cards is negatively correlated with consumer use of store cards as a financing medium, suggesting the role of store cards as a supplementary credit line. A negative relationship is also found to exist between consumer's bankcard usage and their use of store cards for a transaction purpose, indicating that store cards function as a substitute payment medium. Consumer's usage of store cards varies according to function and is related to number of variables including the use of bank cards, credit history, and attitude towards credit, income, education and ethnicity.

Chakravorti (2003), –Theory of credit card networks: A survey of the literature shows that credit card provide benefits to customers and merchants not provided by other payment instruments as evidenced by their explosive growth in the number and value of transactions over the last 20 years. Recently, credit card networks have come under scrutiny from regulators and antitrust authorities around the world. The cost and benefits of credit cards to network participants are discussed. Focusing on interrelated bilateral transactions several theoretical models, have been constructed to study the implications of several business practices of credit cards networks.

Gupta (2003) –Legal and regulatory framework of credit cards asserts that the regulations of credit card business in India is diffused and need to be streamlined. Whereas in developed countries the law on credit card business is comprehensive and straight forward, its Indian version requires a structural change. Hence, there is a need to explore that various legislative premises of the inferior and unclear Indian version for protection of interest of cardholders and healthy growth of the industry.

Saha (2003), –The booming credit card business of Indian banker. In this study analysis has been done of the credit card business in India. Article is both from the banker point of view and from the users point of view. It is estimated that the credit card volume is increasing around 15% p.a. on average for last 10 years and volume of transaction increased by 20% on an average in last 10 years in India. Various hypothesis and objectives are set to find out which bank offer varieties of services to consumer in relation to credit card. A comparative analysis is made for all the credit cards. In general, most of the credit card is liabilities etc. taken into account for selecting the best credit card provider in country. The study also finds that city bank is the best card which provides all the facilities at the minimal charges.

Bandyopadhyay (2004) in his article –Credit cards look for an Ace put the light on various issues like, major card players are issuing cards without much checking credentials. It adds to non performing assets [NPA] levels in its portfolio but overall, about 0.6 percent of personal consumption expenditure in India is through credit cards. He suggested that (I) the increasing card use could be by making all utility payments through cards by installing more electronic draft capture (ii) the government can do by waiving the tax on credit cards which is a big disincentive for card users (iii) to bring down the default rate, bank must set up credit bureau. This will enable banks to detect the first sign of default in advance and sound a red alert so that prospective defaulters can be weeded out.

Bhargava (2004) title –Debit cards: A new generation plastic money analyses that debit cards are fast catching up with the customers. A combination of factors like ease of availability, debit-averse profile of customer and zero interest rates are propelling the usage of Debit Cards. The study emphasizes to increase the usage of these cards, bank will need to improve infrastructure and continues to focus an increasing installations of point of sale[POS] in smaller cities and on the locations which are frequently used by cardholders, and to develop new marketing programmers that educate customers on the benefits of replacing cash with plastic.

## **RESEARCH OBJECTIVES**

### **PRIMARY OBJECTIVE**

- To study the technological preferences of customers of Digital payment providers on digital payment system.

### **SECONDARY OBJECTIVES**

- To identify the different modes of digital payments available to its customers
- To identify to grievance handling mechanism on digital payments.
- To identify that customer prefer to pay through digital payment method.
- To find out the problem faced by customer while making digital payments.
- To provide suitable suggestions to improve the technologies of digital payment system
- To identify the opinion on compulsory digital payments by some services and receiver for some services.

### **NEED FOR THE STUDY**

- Electronic commerce (e-commerce) continues to have a deeply impact on the global business environment, technologies and applications have begun to focus more on more. Now a day's customers and businesses are using the internet to conduct business and to run it which gives an incredible growth for e-commerce. Ecommerce engages different kinds of phases like www, digital rights management, security, privacy issues and electronic payment systems. Now days in market areas there are different types of electronic payment systems available.
- In this Ecommerce issue paper, we will discuss the different types of payment system which are currently being used in the market-place and further going to discuss in favor of and defraud of each type of payment system. At finally, it is fast and steady progress technologically electronic payment systems in the recent years, as most focused on integration between the various components needed in the complete purchasing process to produce end-to-end solutions rather than in the

actual payment systems. Outcome of the study will enable Digital payment providers to enhance their digital payment system as per the expectations of its customers.

### **SCOPE OF THE STUDY**

- Indians are becoming savvy at digital payment, and most companies are not wasting any time in setting up their wallets. 2016's demonetization may have kicked up the so-called Cashless India procession, but if numbers have ever given us an indication of where the future is headed, then the narrative has been set up rather nicely.
- Thinking ahead from the past is always fraught with hazards. When it comes to the future of digital payments, it may be a case of same-same but different. Various technologies, propositions and use cases will continue to co-exist in the digital payments future. Advancements in digital technology continued to shape the payments industry in 2015 as mobile, online and other digital forms of digital payments moved into the mainstream. This study will enable the digital payment system companies to identify the key features to be enhanced and improve the customer base for digital payment mode transaction.

### **RESEARCH METHODOLOGY**

The purpose of the study is to investigate technological preferences of consumers of digital payment providers on digital system. Data will be gathered for the study utilizing a survey questionnaire, which is a quantitative research approach. The survey questionnaire will include two sections: the first section will collect participant demographic data, and the second section will concentrate consumers preference towards digital payments. Data will be collected from a sample of 150 participants who have used digital payment at least once. The sample will be selected using the convenience sampling method. Data collected will be analyzed through chi-square, ANOVA and correlations. Consumers' opinions and experiences about digital payment system will be measured using a Likert scale ranging from strongly disagrees to strongly agree.

### **RESULTS AND DISCUSSION**

#### **ANALYSIS USING CHI-SQUARE**

Chi-square is the sum of the squared difference observed (o) and the expected (e) data (or the deviation, d), divided by the expected data in all possible categories.

#### **Null hypothesis (H<sub>0</sub>):**

There is a relationship between Age and ANNUAL SALARY.

#### **Alternate hypothesis (H<sub>1</sub>):**

There is no relationship between Age and ANNUAL SALARY.

<b>Table 1 AGE * ANNUAL SALARY Crosstabulation</b>						
			ANNUAL SALARY			Total
			Below 2 Lakhs	3 Lakhs	Between 3-4 Lakhs	
AGE	Between 18 and 30	<b>Count</b>	64	34	28	126
		<b>% within AGE</b>	50.80%	27.00%	22.20%	100.00%
		<b>% within ANNUAL SALARY</b>	100.00%	100.00%	53.80%	84.00%
		<b>% of Total</b>	42.70%	22.70%	18.70%	84.00%
	Between 31 and 45	<b>Count</b>	0	0	18	18
		<b>% within AGE</b>	0.00%	0.00%	100.00%	100.00%
		<b>% within ANNUAL SALARY</b>	0.00%	0.00%	34.60%	12.00%
		<b>% of Total</b>	0.00%	0.00%	12.00%	12.00%
	Between 46 and 60	<b>Count</b>	0	0	2	2
		<b>% within AGE</b>	0.00%	0.00%	100.00%	100.00%
		<b>% within ANNUAL SALARY</b>	0.00%	0.00%	3.80%	1.30%
		<b>% of Total</b>	0.00%	0.00%	1.30%	1.30%
<b>Over 60</b>	<b>Count</b>	0	0	4	4	

		<b>% within AGE</b>	0.00%	0.00%	100.00%	100.00%
		<b>% within ANNUAL SALARY</b>	0.00%	0.00%	7.70%	2.70%
		<b>% of Total</b>	0.00%	0.00%	2.70%	2.70%
<b>Total</b>		<b>Count</b>	64	34	52	150
		<b>% within AGE</b>	42.70%	22.70%	34.70%	100.00%
		<b>% within ANNUAL SALARY</b>	100.00%	100.00%	100.00%	100.00%
		<b>% of Total</b>	42.70%	22.70%	34.70%	100.00%

<b>Table 2 Chi-Square Tests</b>			
	<b>Value</b>	<b>df</b>	<b>Asymp. Sig. (2-sided)</b>
<b>Pearson Chi-Square</b>	53.846 a	6	.000
<b>Likelihood Ratio</b>	60.122	6	.000
<b>Linear-by-Linear Association</b>	32.166	1	.000
<b>N of Valid Cases</b>	150		
a. 7 cells (58.3%) have expected count less than 5. The minimum expected count is .45.			

$$\text{Degree of Freedom} = (r-1) * (c-1) \\ = 2 * 2 = 04$$

**Calculated value = 53.846**

**Tabulated value = 9.488**

$$Z = Z_{cal} > Z_{tab} \quad Z = 53.846 > 9.488$$

Hence, the Alternate hypothesis [H1] is accepted

Since the calculated value is greater than the tabulated value, we accept the alternate hypothesis and hence there is a relationship between Age and ANNUAL SALARY.

### ONE-WAY ANOVA CLASSIFICATION

#### Null hypothesis (H<sub>0</sub>):

There is a significance difference between the connectivity problem affects digital payments and merchant acceptance is the problem for digital payment practice.

#### Alternate hypothesis (H<sub>1</sub>):

There is no significance difference between the connectivity problem affects digital payments and merchant acceptance is the problem for digital payment practice.

Table 3 Descriptives								
THE CONNECTIVITY PROBLEM AFFECTS DIGITAL PAYMENTS								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
<b>Strongly Agree</b>	1	1	.	.	.	.	1	1
<b>Agree</b>	40	1.83	0.501	0.079	1.66	1.99	1	3
<b>Neutral</b>	70	3.04	0.204	0.024	2.99	3.09	3	4
<b>Disagree</b>	35	4.11	0.323	0.055	4	4.23	4	5
<b>Strongly Disagree</b>	4	5	0	0	5	5	5	5
<b>Total</b>	150	3.01	0.952	0.078	2.85	3.16	1	5



<b>Table 4 Test of Homogeneity of Variances</b>			
THE CONNECTIVITY PROBLEM AFFECTS DIGITAL PAYMENTS			
<b>Levene Statistic</b>	<b>df1</b>	<b>df2</b>	<b>Sig.</b>
12.549 <sup>a</sup>	3	145	.000
a. Groups with only one case are ignored in computing the test of homogeneity of variance for THE CONNECTIVITY PROBLEM AFFECTS DIGITAL PAYMENTS.			

<b>Table 5 ANOVA</b>					
THE CONNECTIVITY PROBLEM AFFECTS DIGITAL PAYMENTS					
	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Between Groups</b>	118.804	4	29.701	266.018	.000
<b>Within Groups</b>	16.189	145	.112		
<b>Total</b>	134.993	149			

**Calculated value = 145**

**Tabulated value = 3.37**

$$F = F_{cal} > F_{tab} \quad F=145 > 3.37$$

Hence, the Alternate hypothesis [H<sub>1</sub>] is accepted.

The calculated value of F is greater than the tabulated value. Hence, we reject the null hypothesis and conclude that there is no significance difference between the connectivity problem affects digital payments and merchant acceptance is the problem for digital payment practice.

### ANALYSIS USING KARL PEARSON'S CORRELATION

Correlation analysis is the statistical tool used to measure the degree to which two variables are linearly related to each other. Correlation measures the degree of association between two variables.

#### Null hypothesis (H0):

There is positive relationship between the digital payments is safe and digital payment methods help to save time.

#### Alternate hypothesis (H1):

There is negative relationship between the digital payments is safe and digital payment methods help to save time.

<b>Table 6 Correlations</b>			
		<b>DIGITAL PAYMENTS ARE SAFE</b>	<b>DIGITAL PAYMENT METHODS HELP TO SAVE TIME</b>
<b>DIGITAL PAYMENTS ARE SAFE</b>	<b>Pearson Correlation</b>	1	.807**
	<b>Sig. (2-tailed)</b>		.000
	<b>N</b>	150	150
<b>DIGITAL PAYMENT METHODS HELP TO SAVE TIME</b>	<b>Pearson Correlation</b>	.807**	1
	<b>Sig. (2-tailed)</b>	.000	
	<b>N</b>	150	150
**. Correlation is significant at the 0.01 level (2-tailed).			

$$r = \frac{N\sum XY - \sum X\sum Y}{\sqrt{N\sum X^2 - (\sum X)^2}\sqrt{N\sum Y^2 - (\sum Y)^2}}$$

r= .807

Since  $r$  is positive, there is positive relationship between the digital payments is safe and digital payment methods help to save time.

### **LIMITATIONS OF THE STUDY:**

For anything there should be some limitations like that my project also have certain limitations. The following are some limitations what I faced:

- The information provided by majority of the respondents could also be biased or inaccurate. No independent verification of the data was possible.
- Time is one major constraint, which limits the effective data collection.
- Non-availability of data collection from all customers of Digital payment providers
- The sample size is only 150 so the sample may not be truly representative of the total population
- Reliability and accuracy of the analysis depends on the respondents' openness and trueness towards each question in the questionnaire.

### **CONCLUSION**

Digital payment system is a way of making transactions or paying for goods and services through an electronic medium, without the use of checks or cash. ....The electronic payment system has grown increasingly over the last decades due to the growing spread of internet-based banking and shopping. This study has been undertaken to understand the technological preferences of customers of Digital payment providers on digital payment system. For this purpose, responses from the customers of Digital payment providers have been collected and analyzed. Based upon the findings out of the research, few valuable suggestions have been given to improve the technological features of digital payment system.

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