



## A STUDY ON CONSUMER'S PREFERENCE TOWARDS UPI PAYMENT MODE

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### ABSTRACT:

The Indian market is increasingly adopting UPI payments, with businesses utilizing the internet to conduct their operations. The Cashless India movement has been accelerated by the demonetization of 2016 and the growing focus on e-commerce. This study investigates the technological preferences of UPI payment provider customers, identifying the various payment modes, grievance management processes, preferred payment methods, and issues encountered. The convenience sampling method was used to gather responses from 150 UPI payment companies' customers. The data was evaluated using statistical tools like Karl Pearson's Correlation, the Chi-square test, and the One-way Anova test. The findings suggest suggestions for improving UPI payment mode based on the technological preferences of UPI payment providers' consumers.

### 1. Introduction

UPI payment option accepts electronic payments for online transactions. E-commerce payment methods, also referred to as Electronic Data Interchange (EDI), have grown in popularity as more people utilize the internet for buying and banking. Credit cards have become a popular payment method for e-commerce transactions. In North America, this payment method was used for nearly 90percent of online retail purchases. Turban et al. go on to say that an online business would struggle to survive without credit and debit cards due to their ubiquitous use. Card verification numbers (CVN) are used to detect fraud by comparing the number on the card's signature strip to the information on file with the issuing bank. Online retailers must adhere to strict standards set by credit and debit card providers (Visa and MasterCard). This includes implementing security protocols and procedures to ensure secure transactions. To

secure credit and debit card transactions, consider obtaining a certificate from an approved certification authority (CA) that offers PKI (Public-Key Infrastructure).

Despite broad use in North America, many countries, like China and India, still have security challenges with credit cards. Meanwhile, smartcards have become immensely popular. A smartcard is similar to a credit card, but it has an inbuilt 8-bit microprocessor and uses electronic cash to transfer funds from the consumer's card to the seller's device. VISA Smartcard is a well-known smartcard initiative. The VISA smartcard allows you to transfer electronic currency from your bank account to your card, which you can then use at numerous merchants and online.

PayPal and other companies facilitate online money transactions. Consumers can easily open online accounts and transfer monies from traditional bank accounts (using ACH transactions) after verifying their identification and ability to access them. Some larger mediaries accept credit card transactions, but normally levy a fee to the recipient or sender to cover the intermediary's transaction fees. The ease with which cyber-mediary accounts can be formed and utilized has contributed to their widespread use, but they also carry the potential of misuse, theft, and other issues, with angry users frequently accusing the mediaries of wrongdoing.

## **Objectives**

### **Primary Objective**

To study the technological preferences of consumers of UPI payment providers on UPI payment mode.

### **Secondary Objectives**

1. To identify the different modes of UPI payments available to its consumers
2. To identify to grievance handling mechanism on UPI payments.
3. To identify that consumer prefer to pay through UPI payment method.
4. To find out the problem faced by consumer while making UPI payments.
5. To provide suitable suggestions to improve the technologies of UPI payment mode
5. To identify the opinion on compulsory UPI payments by some services and receiver for some services.

### **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 responded UPI payment mode users 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 consumers of UPI 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 responded UPI payment mode users' openness and trueness towards each question in the questionnaire.

## **2. Literature Review**

The article "Why smart cards have failed looking to consumers and merchant reactions to a new payment technology" by Plouff, Yandenbosch, and Hulland (2000) discusses the challenges faced by banks and other financial services community members in promoting smart card technology as a viable retail point-of-sale alternative and outright replacement for cash in everyday consumption situations.

The article also discusses the effect of interest rates on the use of credit cards, which are increasingly used to finance consumption. Steindl (2000) demonstrates that a fall in money demand lowers interest rates, while credit card usage increases demand for credit, raising interest rates. The study concludes that credit does not simply replace money in financing expenditure; rather, greater credit card use must result in higher consumption expenditure

Warwick and Mansfield (2000) examine credit card behavior among college students at a Midwestern school, finding that most students are unaware of their credit card interest rate and have a realistic attitude toward using credit cards despite their lack of information about the card's contents. Leung and Lai (2001) propose a quantitative approach to improving the quality of credit authorization processes, focusing on minimizing wait times at the point of sale and lowering the risk of accepting transactions with weak credit. Azhagaiah (2002) explores the challenges surrounding credit card usage among consumers, analyzing the financial situation of India's banking sector and banks' strategies for competing in the credit/debit card market.

Chakravorti (2003) demonstrates that credit cards give benefits to customers and merchants that other payment instruments do not, as indicated by their spectacular increase in the quantity and value of transactions over the last 20 years. Gupta (2003) states that the regulations governing the credit card industry in India are fragmented and need to be streamlined. Saha (2003) investigates the credit card business in India, reporting a 15 percent annual increase in credit card volume and transaction volume over the last ten years. The survey concludes that City Bank is the best card, providing all the benefits at the lowest possible cost.

### **3. Research Methodology**

Any formal marketing research project's success is dependent on a strong study design. A good research design includes problem characterization, precise methods of data collecting and analysis, time required for the research effort, and an estimate of costs to be incurred. The purpose of a study design is to ensure that the necessary data is obtained precisely and efficiently. A research design is just a framework or plan for analyzing data. It is a blueprint for completing a study. It resembles an architect's blueprint (map) for building a house. It is worth noting that a research design is simply the framework for the investigation, ensuring that the study is relevant to the topic and employs cost-effective methodologies.

According to Claire Seltizetal, research design is a catalog of the phases and facts involved in the development of a research effort. It is the structuring of data gathering and analysis in a way that tries to balance relevance to the study purpose with efficiency in method."

#### **Research Design**

Descriptive research design is also known as explanatory design. This is the one that simply defines things, such as demographic traits. The descriptive research is often focused with determining the frequency with which something occurs or the relationship between two variables.

#### **Sample Size**

It refers to the number of elements from the population to be sampled. The survey's sample size is 150.

#### **Data Sources**

After identifying and defining the research problem and deciding the precise information needed to address it, the researcher's responsibility is to look for the type and sources of data that will produce the desired results. Data collection occurs through two sorts of data sources.

Data sources may be classified as

- Primary data
- Secondary data

**Sampling**

The census approach is the collection of data on every unit of the population. The sampling method is a methodology in which just a small subset of the population under research is examined for examination. There are two major categories into which various sampling methods can be classified.

The two categories are

- Probability sampling
- Non-probability sampling

The study used convenience sampling, which falls under non-probability sampling.

**Data Analysis and Interpretation**

**Statistical Tools**

**CHI- SQUARE TEST I – ( $\Psi^2$ )**

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 (Ho):**

There is a relationship between Age and ANNUAL SALARY.

**Alternate Hypothesis (H1):**

There is no relationship between Age and ANNUAL SALARY.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
AGE * ANNUAL SALARY	150	100.0percent	0	0.0percent	150	100.0percent

AGE * ANNUAL SALARY Crosstabulation						
			ANNUAL SALARY			Total
			Below 2 Lakhs	3 Lakhs	Between 3-4 Lakhs	
AGE	Between 18 and 30	Count	64	34	28	126
		percent within AGE	50.8percent	27.0percent	22.2percent	100.0percent
		percent within ANNUAL SALARY	100.0percent	100.0percent	53.8percent	84.0percent

		percent of Total	42.7percent	22.7percent	18.7percent	84.0percent
Between 31 and 45		Count	0	0	18	18
		percent within AGE	0.0percent	0.0percent	100.0percent	100.0percent
		percent within ANNUAL SALARY	0.0percent	0.0percent	34.6percent	12.0percent
		percent of Total	0.0percent	0.0percent	12.0percent	12.0percent
Between 46 and 60		Count	0	0	2	2
		percent within AGE	0.0percent	0.0percent	100.0percent	100.0percent
		percent within ANNUAL SALARY	0.0percent	0.0percent	3.8percent	1.3percent
		percent of Total	0.0percent	0.0percent	1.3percent	1.3percent
Over 60		Count	0	0	4	4
		percent within AGE	0.0percent	0.0percent	100.0percent	100.0percent
		percent within ANNUAL SALARY	0.0percent	0.0percent	7.7percent	2.7percent
		percent of Total	0.0percent	0.0percent	2.7percent	2.7percent
Total		Count	64	34	52	150
		percent within AGE	42.7percent	22.7percent	34.7percent	100.0percent
		percent within ANNUAL SALARY	100.0percent	100.0percent	100.0percent	100.0percent
		percent of Total	42.7percent	22.7percent	34.7percent	100.0percent

**Chi-Square Tests**

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

Degree of Freedom= (r-1) \*(c-1)  
 = 2\*2= 04

Calculated value = 53.846

Tabulated value = 9.488

Z = Z cal > Z tab      Z= 53.846 > 9.488

Hence, the Alternate hypothesis [H1] is accepted

**Inference:**

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 (Ho):**

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

**Alternate hypothesis (H1):**

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

Descriptives								
The Connectivity Problem Affects UPI Payments								
	N	Mean	Std. Deviation	Std. Error	95percent Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Strongly Agree	1	1.00	.	.	.	.	1	1
Agree	40	1.83	.501	.079	1.66	1.99	1	3
Neutral	70	3.04	.204	.024	2.99	3.09	3	4
Disagree	35	4.11	.323	.055	4.00	4.23	4	5
Strongly Disagree	4	5.00	.000	.000	5.00	5.00	5	5
Total	150	3.01	.952	.078	2.85	3.16	1	5

The Connectivity Problem Affects UPI Payments			
Levene Statistic	df1	df2	Sig.
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 UPI PAYMENTS.					
<b>ANOVA</b>					
<b>THE CONNECTIVITY PROBLEM AFFECTS UPI PAYMENTS</b>					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	118.804	4	29.701	266.018	.000
Within Groups	16.189	145	.112		
Total	134.993	149			

Calculated value = 145

Tabulated value = 3.37

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

Hence, the Alternate hypothesis [H1] is accepted.

**Inference:**

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 UPI payments and merchant acceptance is the problem for UPI 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 UPI payments is safe and UPI payment methods help to save time.

**Alternate hypothesis (H1):**

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

<b>Correlations</b>			
		UPI PAYMENTS ARE SAFE	UPI PAYMENT METHODS HELP TO SAVE TIME
UPI PAYMENTS ARE SAFE	Pearson Correlation	1	.807**
	Sig. (2-tailed)		.000
	N	150	150

UPI PAYMENT METHODS HELP TO SAVE TIME	Pearson Correlation	.807**	1
	Sig. (2-tailed)	.000	
	N	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

### Inference

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

### Findings

Therefore, large number of the responded UPI payment mode users are private consumer.

Therefore, large number of the responded UPI payment mode users are male.

Therefore, large number of the responded UPI payment mode users are single.

Therefore, large number of the responded UPI payment mode users earning below 2 Lakhs.

Therefore, large number of the responded UPI payment mode users used 1 to 3 years.

### Suggestions

1. Many government departments or institutions like electricity department are charging additional amount as service charge on card payments. In one way, government wants to improve digital transactions and in another way they are discouraging with additional charges. So the service charge for digital transactions has to be removed.
2. More awareness programme need to be conducted among the public to improve the UPI payment mode. Even the illiterates need to be encouraged to go for UPI payment mode through free training programmes.
3. Offline UPI payment feature can be made feasible. This will attract the internet less mobile users to use the UPI payment mode.
4. Every national banks can make their own digital wallet brands rather than relying on private companies for digital banking solutions.

### 4. Conclusion

UPI is an electronic payment method that eliminates the need for physical checks or currency. The popularity of online banking and shopping has led to an increase in electronic payments over the past few decades. This study was conducted to better understand the technological preferences of UPI payment providers' customers about the UPI payment channel. For this objective, responses from UPI payment companies' customers were gathered and analyzed. Based on the outcomes of the research, a few useful suggestions have been offered to improve the technological elements of UPI payment option.

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