



## UNDERSTANDING DIGITAL PAYMENT BEHAVIOUR:FINTECH ADOPTION METHODS, PREFERENCES AND CONSUMER SATISFACTION STUDY

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### **Abstract:**

This research analyzes changing patterns in Indian consumer behavior toward digital payment systems, examining key adoption drivers, barriers, user demographics, technology platforms, and satisfaction levels post-demonetization. Data were collected from 50 respondents via structured questionnaires, employing descriptive and inferential statistics for analysis. Results highlight significant preferences for platforms like Google Pay and PhonePe, with security, convenience, and technical reliability as dominant factors in adoption and continued use. The study concludes with recommendations for improving digital payment ecosystems, addressing both policy and practice.

### **INTRODUCTION**

Transferring money from one payment account to another through a digital device or channel is known as an electronic funds transfer, or digital payment. Bank transfers, mobile money transfers, QR code payments, and credit, debit, and prepaid card payments are all considered forms of digital payments. Through a mobile application, users can send and receive money from bank accounts using the UPI (Unified Payments Interface) technology. The National Payments Corporation of India created UPI technology in 2016. Across India, the Unified Payment Interface program is utilized by a significant number of people. Finding out how and which UPI applications people utilize, as well as their opinions about the unified payment interface, is the aim of this study.

The UPI system eliminates the necessity of using traditional methods of money transfer like cash and cheques since it is possible to transfer money directly between individual bank accounts rapidly. The UPI applications are very popular with customers by reason of their ease and ease of use and have become a popular mode of payment. However, customers find it difficult to choose the best UPI application for their requirements as there are so many in the market. Also, the public requirement for digital payments and UPI applications may be affected by security, technical and other issues such as failed payments.

Hence the present study is directed to examine the reasons for the preference of digital payments and UPI applications and the factors affecting their choice.

### **1.1 Background of Study**

The digital payment landscape in India has seen a remarkable evolution over the last 10 years due to the introduction of newer and newer platforms and technologies. One of the most innovative of them is the Unified Payments interface (UPI), which provides a platform for Fast, Simple and Safe money transfer between banks. This financial transaction aimed at maximizing opportunities for both buyers and sellers, has brought it possible since its launch in 2016 by the National payments Corporation of India (NPCI), to achieve this goal, along with the trend for a cashless society.

To enhance user satisfaction and to address these skills, a good understanding of the perception of consumers and their continued advantage and improvement of the UPI applications, will be issued by the legislature, banks and application developers. Earlier it was possible for us to provide a proper Graphical discussion of the effects of the UPI applications on the ecosystem of digital payments in India, as user preferences and perceptions along with the Views were analyzed.

### **1.2 Statement of the Problem**

Financial transactions in India have seen a significant transformation due to the growing usage of digital payment systems, especially those built on Unified Payments Interface (UPI) apps. Despite widespread acceptance and government-sponsored initiatives to promote cashless transactions, consumer views regarding digital payment systems vary and are influenced by a number of factors. Even while many users value the accessibility, speed, and ease of use of UPI programs like Google Pay, PhonePe, and Paytm, concerns about fraud, technical issues, and data and privacy security continue to be significant obstacles to the widespread adoption of these systems.

### 1.3 Objectives of the Study

1. To evaluate the awareness of clients for the understanding on digital payment systems on the basis of UPI.
2. To understand the security and privacy problems in case of transactions made on the basis of UPI.
3. To evaluate the problems faced by users while making use of UPI related applications to make digital payments.
4. To evaluate the level of satisfaction of users in respect of the services provided through UPI applications.

### 1.4 Scope of the Study

The purpose of the study is to ascertain how consumers see digital payment systems in general and Unified Payments Interface (UPI) apps in particular, such as Google Pay, PhonePe Paytm, BHIM, Amazon Pay, and others. The objective of this study is to conduct a comprehensive analysis of consumer perceptions and their impact on the potential for expansion and advancement of digital payment systems in India.

### 1.5 Hypothesis of the Study

H1: The consumer accepting UPI apps are seen as safe and efficient payer tools. H2: The ease of use of the apps is thus also responsible for satisfaction with the apps among consumers.

H3: Technical problems affect consumer trust and optimism concerning use.

### 1.6 Research Methodology

The technique for investigating how users see digital payments in UPI applications includes a methodical process for data collecting, analysis, and interpretation in order to address the research issues. The following are the key components of the research methodology:

#### 1.6.1 Research Design

A descriptive research design is utilized in this study to investigate and characterize user preferences, perceptions, and challenges related to UPI apps. The research investigates trends and patterns and attempts to offer insights into the variables that influence the consumer behavior.

#### 1.6.2. Data Collection Methods

##### a) Primary Data

The direct collection of data from users of UPI apps will be done by preparing structured questionnaires. The survey will contain closed-ended and open-ended questions for the collection of quantitative and qualitative data.

##### b) Secondary Data

The existing literature, reports, articles, and case studies dealing with digital payments and UPI systems will throw light on the theories analyzed and the subject revealed.

#### 1.6.3. Sampling Method Target Population:

The study targets users of UPI apps across various demographic categories (age, gender, income, education, and occupation).

#### Sample Size:

A sample size of around 50 respondents will be selected to ensure representativeness and statistical validity.

#### Sampling Technique:

The study will use a mixture of convenience sampling and stratified sampling. The convenience sampling will aid in gathering the information rapidly while the stratified sampling will assure that all demographic groups are adequately represented.

#### 1.6.4. Research Instruments Questionnaire:

A structured questionnaire will be designed, covering aspects such as ease of use, security, trust, convenience, and challenges faced by UPI app users.

#### Data Analysis Techniques

To analyze the data collected for the study on consumer perception towards digital payment system in UPI apps,

- Percentages Analysis
- Chi-square tests
- Anova

### 1.7 Limitations of the Study

The study aims to provide useful insights into the perceptions of users of digital payment systems in UPI apps, insights that would help in drafting successful marketing plans and improving overall customer experience.

## REVIEW OF LITERATURE

Musa, Khan, Alshare (2015), "Factors influencing consumers adoption of mobile payment devices in Qatar" The elements impacting Qatari customers' inclination to employ mobile payment devices (MPD) technology are shown by this study. The study's foundation is the unified theory of acceptance and use of technology (UTAUT) model, which used many behavioural characteristics to identify the elements influencing technology adoption. The perceived value that comes from MPD improves transaction propriety, which has a big impact on adoption intention. "Acceptance of mobile banking in Pakistan" By Arshian Sharif and Sahar Afshan (2016), Through a thorough knowledge of the purpose and acceptance of mobile banking, this study connects the behavioural, environmental, and technological variables impacting its adoption. An integrated model for understanding the choice factors impacting the adoption of mobile banking was proposed by the study.

A Brief review concerning digital payment" By S. Sahayaselvi (2017) The significance of digital payment systems in India's economic transition was emphasized in this study. This study also looked at how digital payment methods have changed as a result of information technology. Every author has agreed that digital payment systems are critical to India's economy.

"Factor contributing to users' acceptance of digital payment system" By M. Dadhich, M.S. Pahwa, and S.S. Rao (2018) This study sheds light on user behaviour, adoption factors, and challenges associated with digital payments in India. This study will offer a chance to investigate user trends and behaviour in India's digital payment market.

"Utilisation of Mobile Banking by Saudi Arabian Consumers: Towards an Integrated Model" published in 2019 by Baabdullah, Alalwan, Rana, Kizgin and Patil. This study, which was developed using a convenience sample of Saudi Arabian bank customers, demonstrates the key elements that significantly impact usage behaviour, including performance expectancy, price value, facilitating conditions, hedonic motivation, habit, system quality, and service quality. This study also demonstrates the advantages that banks stand to gain from such a system in terms of sustained business and satisfied customers.

"Digital payment in India" by Chandrasekaran and Narayanan (2019). This study described the rapid growth of digital payments and their increasing acceptance in India. The authors discuss the fact that the digital payments system has become a necessary tool or mechanism for online transactions, mainly due to the technological development in information technology and its increasing penetration in marketing. The authors also highlight the driving factors which bring about the change to digital payment systems, these being Convenience, time saving and methods, including Cost savings for companies. The growing taste for digital payments amongst Consumers also highlights the same as they eliminate the physical handling of cash and time spent in long queues in banks or ATMs. "An overview of the Brazilian digital payment system: Legal, Business, Technological Aspects" by Novaes and Hartmann (2020). By concentrating on the particular instance of the Brazilian digital payment system, this study aims to close the gap between academic research and market realities. The article summarizes new research on the digital payment system in Brazil, highlighting aspects that influence the adoption of mobile payments, such as attitude, perceived value, individual ICT innovativeness, and security concept.

"The growth of the digital payment sector and its prospects in India" by Panday, Chheda, Kaur and Vartak (2021). The study is an enquiry into the magnitude of digital payment acceptance, an assessment of growth trends from demonetisation to the corridor, predicting probable growth trends in the future. It also seeks to compare the various digital payment systems to try to assess the one which has attained the greatest popularity, and to explore whether cashback incentives and convenience had been prime movers in this expansion.

"Electronic payments: A metamorphosis in payment option and its growth in India" by Drs. Ashima Pahwa and Tilak Raj (2022). The author describes how the e payment option features such as convenience, cashbacks, discounts and EMS of such payment modes as UPI, debit and credit cards and mobile wallets have helped in their increased popularity. UPI for instance recorded in 2020, the figure of 18.85 billion transactions, which points to its phenomenal growth. India based payment modes such as BHIM UPI are being adopted by countries such as Bhutan, and are internationally favoured. Likewise, The Rupay card network introduced in 2012 by NPCI has enhanced its market share and attained international recognition. "An Inquiry into the Adoption of Digital Payments in Asia" by Susanto, Sohkin, and Purnomo (2022). The study examines the systems of digital payment (like electronic payments, QR codes, internet banking and mobile money) available in Asia. This research indicates that there exist certain factors of usefulness, such as trust, perceived risks, satisfaction, assurance, social influences and facilitating conditions including internal and external variables which have been identified by respondents in their adoption of digital payments. It is observable that some of the factors comprised by the people, by the product and also by the variations of research work.

"Meta-Analysis evaluation of the Satisfaction of the clients and Experience of the clients in the Involvement of Digital Payments" by Agarwal, Malik and Gautam (2023). The paper discusses digital payments used for improving client experience while mentioning the importance of digital payments in the contemporary banking sector. Furthermore, it brings out certain important factors which have enormous influence on client satisfaction in the said Digital Payments system i.e. perceived value, trust and quality services so that the people especially in remote areas are gaining access to the system of services and are benefitted thereby, getting simple banking facilities also.

"Consumer satisfaction and awareness towards Digital Wallet Payments with reference to Paytm" by Dr. Badhusha MHN (2023). The study is conducted with reference to Tiruchirappalli District in which important aspect regarding satisfaction of Customer towards paytm (Digital Wallet and UPI application) is brought out here. Paytm has developed itself to be a multi-Purpose online payment gateway for payment of bills, for recharges money transfers, for online purchases and for booking tickets. The objective is to evaluate how the Perceptions of users regarding PAYTM, its utility for the users and their preferences towards the payments of utilities in the same.

"Identifying app challenges in digital payment adoption in India" prepared by Hemant Trivedi and shasi ranchiher (2023) which shows the use of Mobile payment through wireless communication technologies for convenience, security, and flexibility in paying for transport services and other uses, has been immensely popular in India. However, there are number of hindrances to the overhauling of the system in India. Locality wise failure of awareness and knowledge is most prevalent in rural areas about the popular mobile payment systems.

"Revolution of Digital payment in India" by Shubham Badak, Vaibhav kolte, Mamta agarwal and Soniya Gupta (2023). The Paper points out the way UPI has made a phenomenal increase in cashless transaction in India and more than one billion these digital payments has been transacted in financial year 2023. Changing consumer behaviour in purchasing is being analysed as well as the social and economic benefits they with hold especially in rural areas, while certainly the challenges like Cyber rules, hacking etc. are also analysed through this study. The Paper carries welcome hints about the attempt of the Reserve Bank of India (RBI) relating to digital transactions and its main role thereof. The attempts of RBI for Monthly transactions of digital finance and how the probable currency can be introduced in future thus hinting about the future prospects has also been explained in the Paper.

Bachri, Ekaputra (2024), "Impact of digital payment on Banking Stability" The study found that, even though digital payments can lead to finance stability, there are risks relative to banks' stability. This is particularly true because financial markets around the world are adept at fast digitisation. It notes that there must be a balance to create policies that foster both innovation and safety in digital payments.

Arjita Mishra, Gautam Kumar Jha and Nidhi Gupta (2004), "Unroll digital payments: A study on QR codes in India's Digital Payment revolution" The study looks at Quick Response Codes and how they affect digital payment usage in India. QR codes have been essential to the digital payment system since the Indian government started its campaign on digital payments in 2016. Through data analysis and interviews, the study aims to fully comprehend the significance of QR codes in the context of digital payments research.

Jiayi Wen (2024) - "The impact of digital payment on the Financial Services industry" The paper points out the worldwide spread of digital payment and its many faceted effects. In its exposition, it shows how this type of payment systems affects the economy, consumer habits, and the vagaries of the financial institution. It also shows how consumer habits can lead to improvement in the performance of digital payments. Notwithstanding the issues confronting research on these questions, it can be noted that digital payments have not been c oppressed in many areas.

Kiran.s (2024) "A study on public's preferences on digital payments and UPI apps" The paper points out that the rapid advance of technology has influenced digital payments and made them more efficient, but secure, for consumers, in transactions with businesses. The objective of the paper is to ascertain the public's preferences in respect of UPI apps and digital payments and the factors that influenced their preferences. The study will also deal with various UPI apps, their features and advantages in respect of online payments.

Hemamalini. E and Dr.G. Nedumaran (2004) "An analysis of Consumer preferences and usage patterns of Digital payment Apps" - The study points out the incentives, to mention a few, government proclivities under the payment plan called "Digital India" the introduction of the UPI and Intel's acceptance of cashless payments from local merchants. The research perspectives of this study has been based on the survey of 50 customers and it adopts the descriptive research design and the analysis of date has been achieved through the method of chi-square. It shows that customers are favourably impressed by the convenience and efficiency of the Digital payment Blue apps and that the urban consumer has embraced the UPI system while not, as yet, being enjoyed in rural areas.

Rawat, Josyula, Kataria and Landge (2004) "Consumer Perception on and Adoption of Digital Payment Methods:





A Study on Trust and Security Concerns.” The paper deals, critically, with the problems posed by consumer acceptance of the digital processes that many consumers perceive to be involved, Trust and Security and throws interesting light on the impact of these incentives on consumer behaviour. It also deals with alternative processes adopted by Indian Suppliers of Digital apps, notably UPI, but not restricted, using the advantages inherent in real time processing and usage of secure channels.

#### AN OVERVIEW OF THE STUDY

People all around India utilize the Unified Payment Interface (UPI) application in large quantities. Following the demonetization phase (2016), the UPI Payment apps experienced a sharp increase in usage. In addition to attempting to determine the usage and choice of UPI apps among college students, this article aims to investigate how consumers perceive a unified payment interface. This study also aims to determine the degree of consumer satisfaction in and around Chennai. Simple percentage analysis was one of the statistical tools used to analyze the data. Numerous bank accounts are combined into a single mobile application of any participating bank by a technology called a Unified Payments Interface (UPI), which combines merchant payments, money routing, and other bank operations under one roof. It also fulfills peer-to-peer requests that can be scheduled and paid for. NPCI began a pilot program with 21 participating banks on April 11, 2016. Banks started to upload their UPI-capable apps to the Google Play store on August 25, 2016. These days, a lot of people in India use the Unified Payment Interface (UPI) program. The use of the UPI Payment apps skyrocketed after the demonetization process in 2016. To satisfy the growing demand for online payments, NPCI (National Payments Corporation India) released BHIM (Bharath Interface for Money), an application that makes use of the Unified Payment Interface (UPI), in December 2016. Prime Minister Mr. Narendra Modi encouraged the usage of cashless transactions as part of government reforms. The utilization of various digital payment methods underwent a major shift in just two years.

#### GOOGLE PAY

Google Pay is a mobile wallet and payment system for sending money to other people, paying for things in stores or online using your computer, smartphone, tablet, etc. It offers the advantages of speed, ease and security by keeping payment types available digitally. It uses the principles of tokenization and Near Field Communication (NFC) for maximum safety.

#### PAYTM

Paytm, a Hindi term meaning "Pay Through Mobile," is an Indian financial technology and digital payment corporation. The Paytm allows users to engage in several activities including shopping, paying bills, transferring funds, recharging cell phones, and making payments in shops via QR code. Paytm Payments Bank also offers banking, financial options and ticket ticketing. Paytm offers a wide range of payment types such as Unified Payments Interface (UPI), wallets, credit / debit cards and net banking thus completing the ecosystem for digital financial transactions.

#### PHONEPAY

PhonePe is an Indian fintech service and digital payments app that lets customers carry out payments simply and safely. It offers services like money transfers, payments of bills, recharge of mobile phones, purchases made at a shop or online using QR codes. PhonePe platform is based on the Unified payments Interface (UPI). PhonePe accepts credit/debit cards and wallets in addition to UPI for payments. The app is a flexible digital money management platform as it also features mutual funds, insurance and investment options.

#### AMAZON PAY

Users can modify their payment methods within their Amazon accounts thanks to Amazon Pay, a digital payments system developed by Amazon, Inc. Customers can use the functionality to buy products and services from retailers outside of Amazon using the payment methods they have on file with Amazon. Additionally, it can help local consumers with fund transfers, utility payments, and recharges. The service is intended to expand and simplify payment options to increase the ability to facilitate fast checkouts, usability and safety through the integration into Amazon's ecosystem.



## BHIM

For quick, secure, and easy transactions via the Unified Payments Interface (UPI) system, the National Payments Corporation of India (NPCI) created the digital payment software BHIM (Bharat Interface for Money). Transactions can be made directly from the user's bank account for bill payments, purchases, money transfers, etc., without the need for a wallet. Payment through QR codes, transaction history, linking the users account etc. are some of the facilities provided. Financial inclusion and cashless transaction mode are the objectives of BHIM.

## DATA ANALYSIS AND INTERPRETATION

Data analysis means collecting and organizing data in order to discover its patterns and trends. Data interpretation concerns itself with understanding the meanings and significance of these facts in order to come to a valid conclusion and to make sound judgment.

This chapter deals with the analysis and interpretations of sample of fifty respondents "Consumer perception towards digital payment mechanism in UPI apps". The thoughts and necessary data of the respondents were collected through a questionnaire containing both the study and personal variables. The collected data were classified, tabulated and supplemented wherever necessary as per the objectives of the study through the following statistical methods.

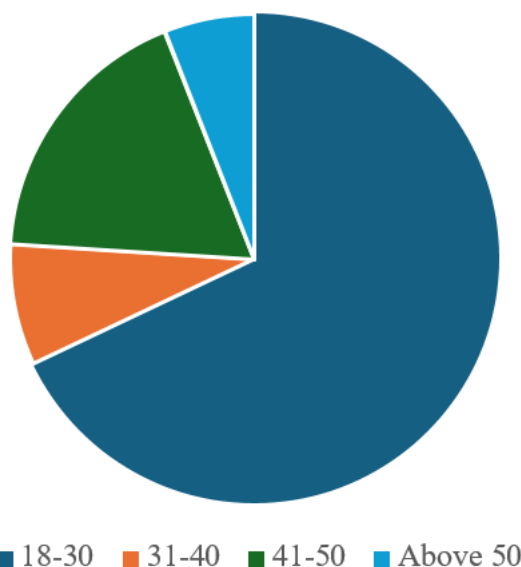
### PERCENTAGE ANALYSIS:

The process of determining the relation of different data series with one another by the use of percentages is termed percentage analysis. The symbol "%" is used to denote percentages, or numbers or ratios that may be expressed as fractions of 100. It is a particular kind of ratio. Percentages are used in comparing two or more data series in order to ascertain the relation of the series to one another; if comparisons of data are available, by the use of percentages is made easier to determine the relative differences.

**Table no. 4.1**  
**Age group of the respondents**

Age group	Number of respondents	Percentage
18-30	34	68
31-40	4	8
41-50	9	18
Above 50	3	6
Total	50	100

(Source : Primary data)



**Chart no. 4.1: Age group of the respondents**

### INTERPRETATION

According to the data, 68% of all respondents are between the ages of 18 and 30; 8% of responses were from respondents between the ages of 31 and 40; 18% came from respondents between the ages of 41 and 50; and 6% came from respondents over the age of 50.

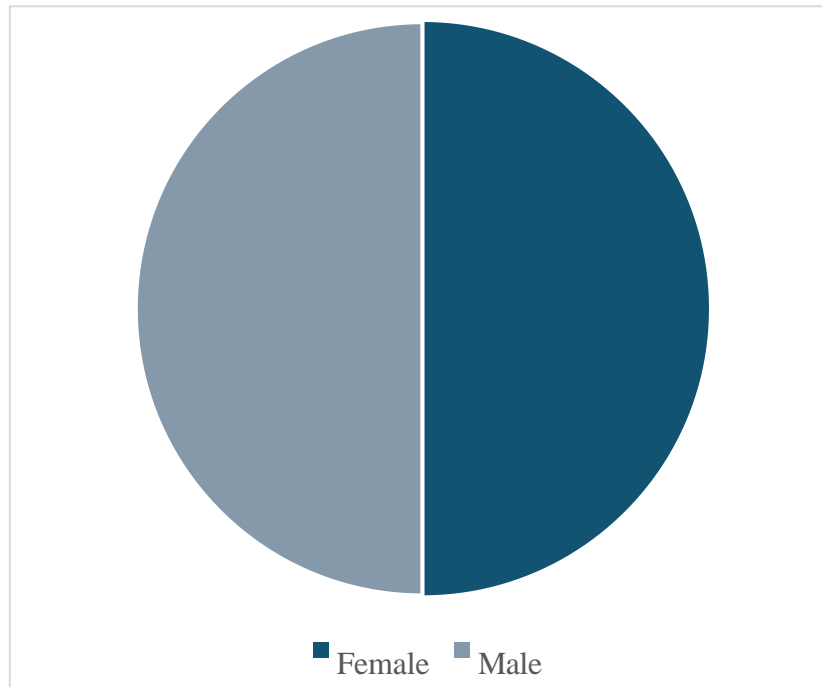
The majority of the respondents were 18-30 (68%).

**Table no. 4.2 Gender of the respondents**

Gender	Number of respondents	Percentage
Female	25	50
Male	25	50
Total	50	100

(Source : Primary data)

**Chart no. 4.2 Gender of the respondents**



### INTERPRETATION

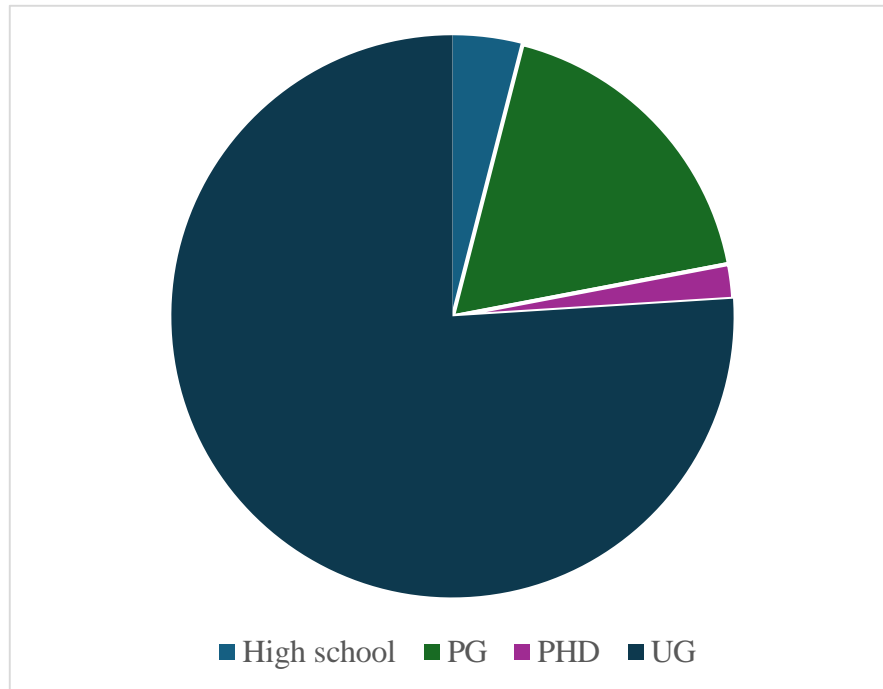
The data shows that 50-50 split between female and male. It shows equal responses from both female and male.

**Table no. 4.3**  
**Education qualification of the respondents**

Education qualification	Number of respondents	Percentage
High school	2	4
PG	9	18
PhD	1	2
UG	38	76
Total	50	100

( Source : Primary data )

**Chart no. 4.3**  
**Education qualification of the respondents**



#### *INTERPRETATION*

We can deduct from the preceding data that 76% of the responders are undergraduates. Postgraduates make up 18% of the replies, high school graduates make up 4%, and PHDs make up 2%.  
The majority of the respondents were Under Graduates (76%).

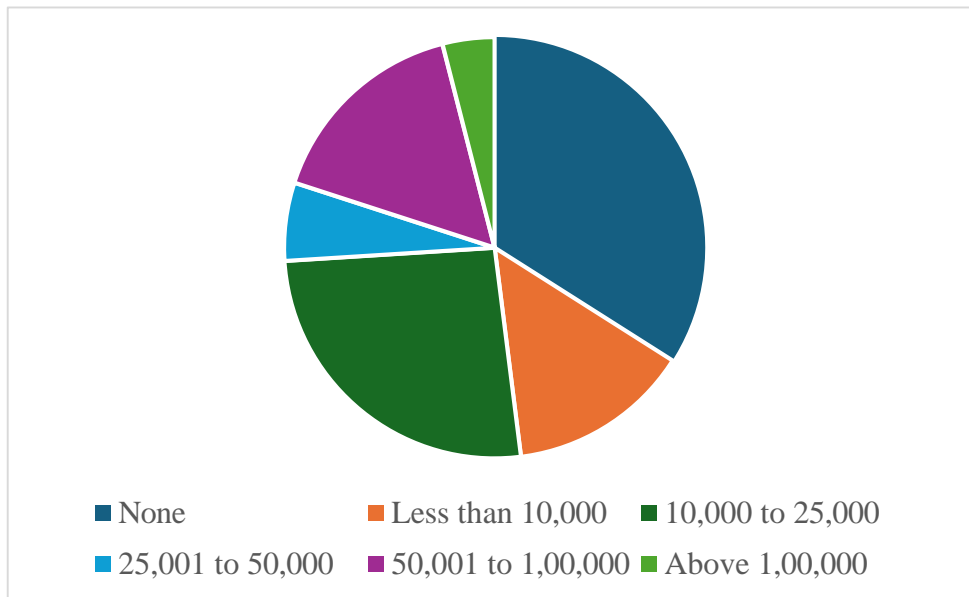
**Table no. 4.4**  
**Monthly Income of the respondents**

Monthly income	Number of respondents	Percentage
None	17	34
Less than 10,000	7	14
10,000 to 25,000	13	26
25,001 to 50,000	3	6
50,001 to 1,00,000	8	16
Above 1,00,000	2	4
Total	50	100

(Source : Primary data)



**Chart no. 4.4**  
**Monthly Income of the respondents**



#### *INTERPRETATION*

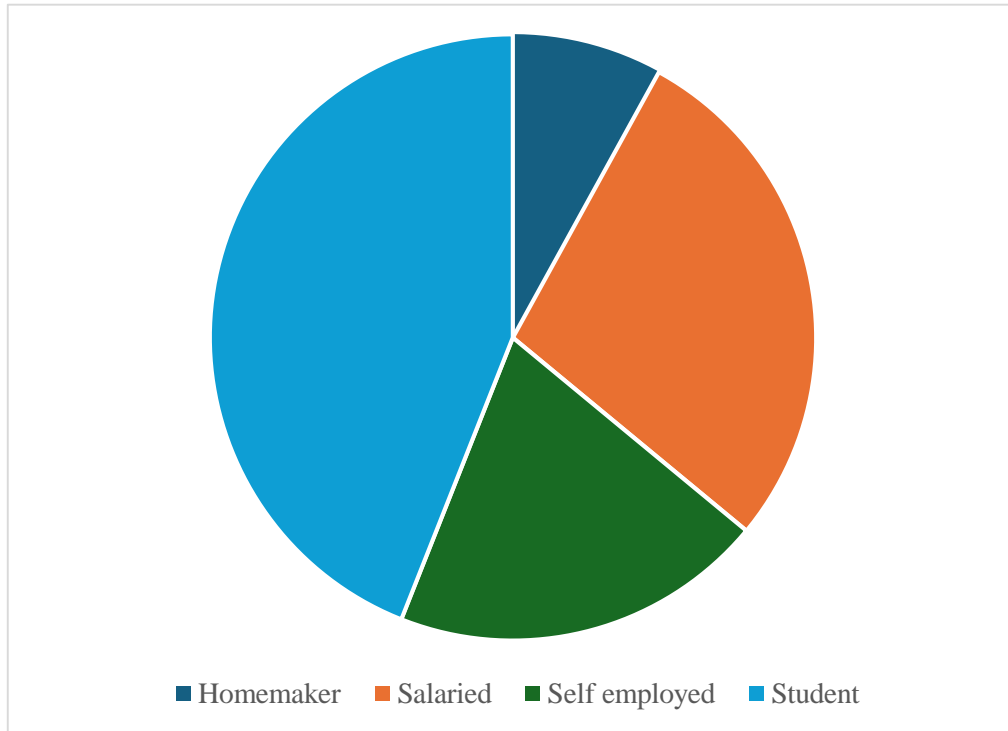
According to the data, 34% of the respondents are students and do not receive a salary, 14% receive less than \$10,000, 26% receive between \$10,000 and \$25,000, 6% receive between \$25,001 and \$50,000, 16% receive between \$50,000 and \$1,00,000, and 4% receive a salary above \$1,00,000. The majority of the respondents were Students (34%).

**Table no. 4.5**  
**Occupation of the respondents**

Occupation	Number of respondents	Percentage
Homemaker	4	8
Salaried	14	28
Self employed	10	20
Student	22	44
Total	50	100

( Source : Primary data)

**Chart no. 4.5**  
**Occupation of the respondents**



#### *INTERPRETATION*

The aforementioned data indicates that 44% of the respondents are students, 8% are stay-at-home moms, 28% are salaried, and 20% are self-employed.

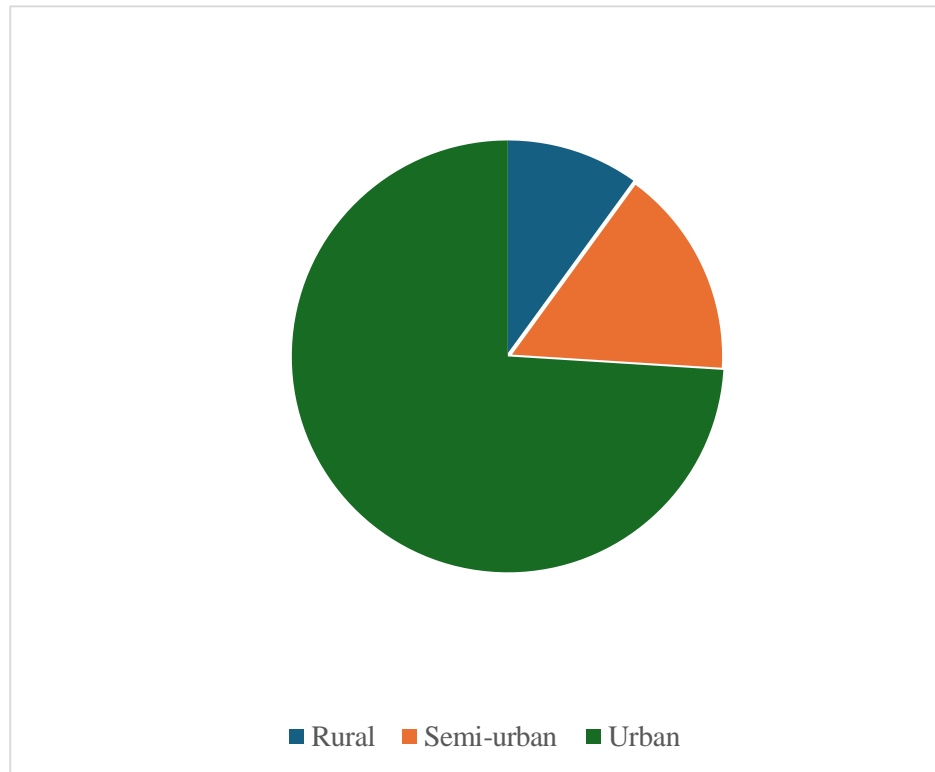
The majority of the respondents were students (44%).

**Table no. 4.6**  
**Residential area of the respondents**

Residential area	Number of respondents	Percent
Rural	5	10
Semi-urban	8	16
Urban	37	74
Total	50	100

( Source : Primary data)

**Chart no. 4.6**  
**Residential area of the respondents**



**INTERPRETATION**

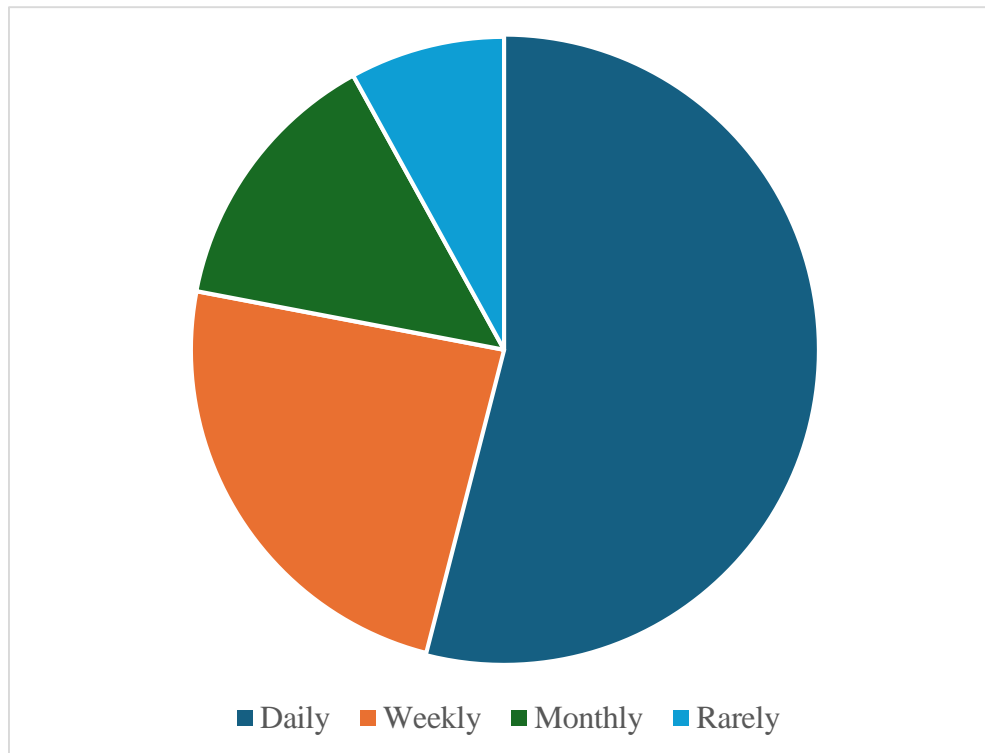
From the above data, 74% of the respondents are Urban area peoples, 10% of the respondents are Rural peoples and 16% of the respondents are Semi-urban peoples.  
The majority of the respondents were Urban (74%).

**Table no. 4.7**  
**Frequency of UPI app usage of the respondents**

	Number of respondents	Percent
Daily	27	54
Weekly	12	24
Monthly	7	14
Rarely	4	8
Total	50	100

(Source : Primary data)

**Chart no. 4.7**  
**Frequency of UPI app usage of the respondents**



#### *INTERPRETATION*

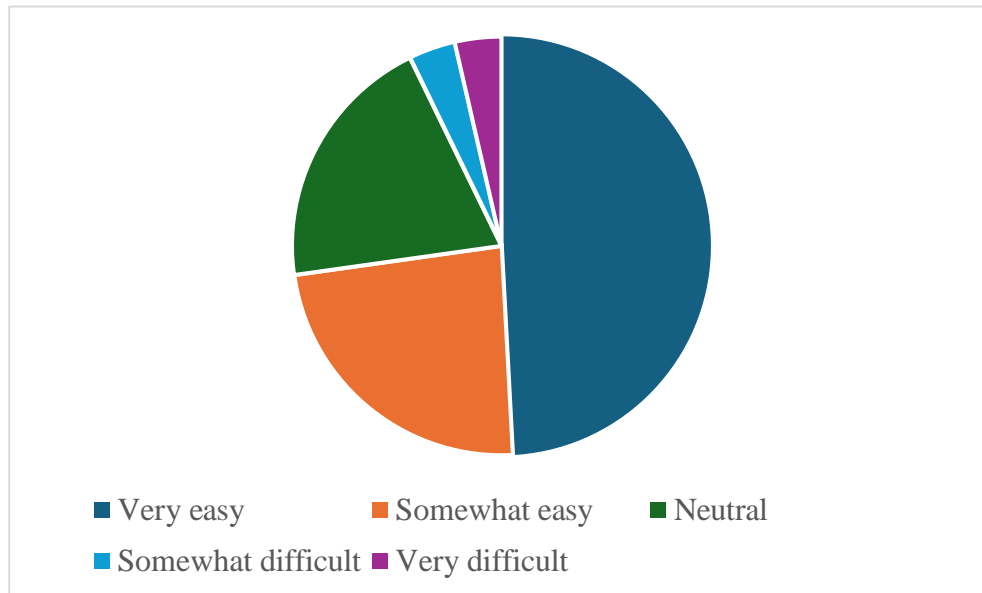
From the above data, 54% of respondents are using Daily, 24% of respondents are using Weekly, 14% of respondents are using Monthly and 8% of respondents are using Rarely.  
The majority of the respondents were Daily users ( 54% ).

**Table no. 4.8**  
**Ease of using UPI apps for transaction**

Satisfaction	No. of respondents	Percentage
Very easy	27	49.10
Somewhat easy	13	23.60
Neutral	11	20
Somewhat difficult	2	3.60
Very difficult	2	3.60
Total	55	100

(Source : Primary data)

**Chart no. 4.8**  
**Ease of using UPI apps for transaction**



**INTERPRETATION**

From the above data, 49.1% of respondents found it very easy, 23.6% of respondents found it somewhat easy, 20% of respondents found it neutral, 3.6% of respondents found it somewhat difficult and 3.6% of respondents found it somewhat very difficult.

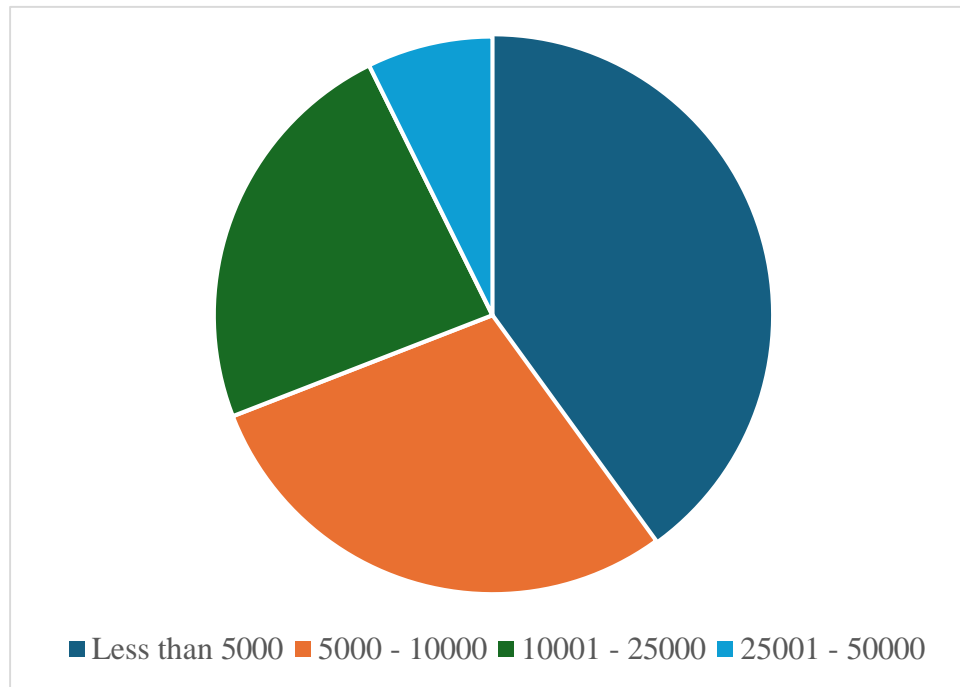
The majority of the respondents found it very easy (23.6%).

**Table no. 4.9**  
**Average monthly spending through UPI apps**

Monthly Income	No. of respondents	Percentage
10001 - 25000	13	23.6
25001 - 50000	4	7.3
5000 - 10000	16	29.1
Less than 5000	22	40
Total	55	100



**Chart no. 4.9**  
**Average monthly spending through UPI apps**



#### *INTERPRETATION*

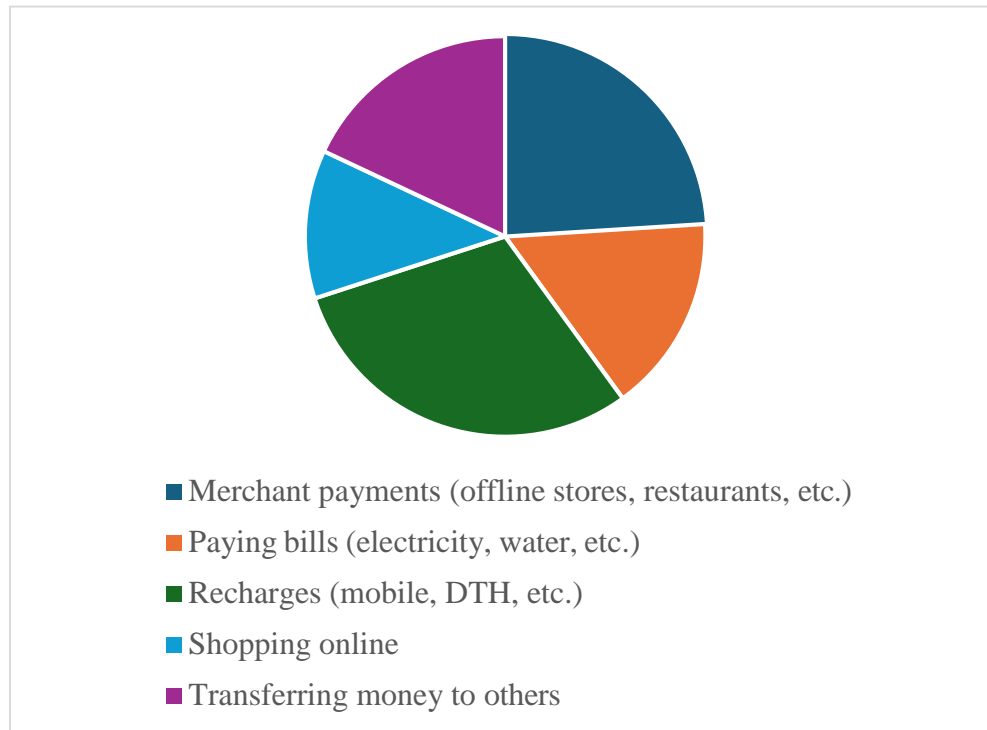
From the above data, the average monthly spending through UPI apps reveals that 40% of respondents spend less than ₹5000, 29.1% of respondents spend between ₹5000 and ₹10000, 23.6% of respondents spend between ₹10001 and ₹25000, and 7.3% of respondents spend between ₹25001 and ₹50000.

The majority of the respondents average monthly spending through UPI apps reveals that 40% of respondents spend less than ₹5000.

**Table no. 4.10**  
**Activities of UPI payment system**

Activities	No. of respondents	Percentage
Merchant payments (offline stores, restaurants, etc.)	12	24
Paying bills (electricity, water, etc.)	8	16
Recharges (mobile, DTH, etc.)	15	30
Shopping online	6	12
Transferring money to others	9	18
Total	50	100

**Chart no. 4.10**  
**Activities of UPI payment system**



#### *INTERPRETATION*

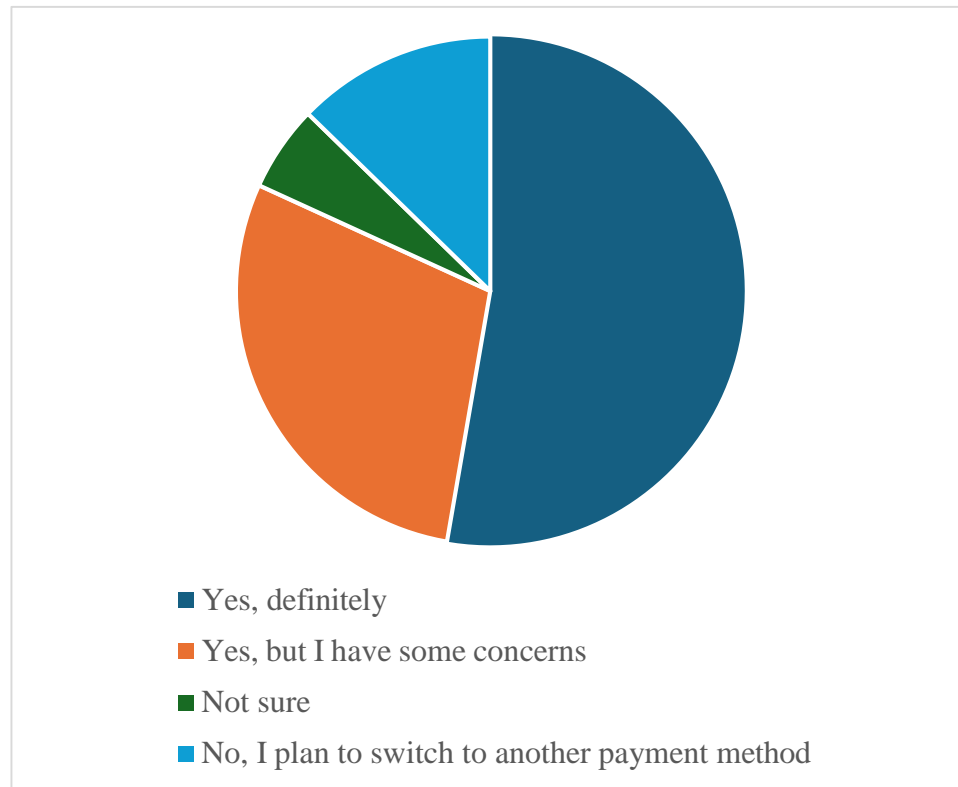
The provided data illustrates the activities of UPI payment system users. Recharges (mobile, DTH, etc.) are 30% of transactions, merchant payments (offline stores, restaurants, etc.) are 24%, transferring money to others represents 18% of the activities, while paying bills (electricity, water, etc.) and shopping online account for 16% and 12% respectively.

The majority of 30% of the respondents are using UPI for Recharges (mobile, DTH, etc.).

**Table no. 4.11**  
**Future usage plans for UPI apps**

Customer's plan	No. of respondents	Percentage
Yes, definitely	29	52
Yes, but I have some concerns	16	29
Not sure	3	5
No, I plan to switch to another payment method	7	12
Total	55	100

**Chart no. 4.11**  
**Future usage plans for UPI apps**



#### *INTERPRETATION*

From the above data, 52% of respondents plan to continue using UPI definitely, 29% of respondents intend to use UPI but have some concerns, 5% of respondents are unsure about their future usage, and 12% of respondents plan to switch to another payment method. The majority of 52% of the respondents are plan to continue using UPI definitely.

#### *CHI-SQUARE ANALYSIS*

The Chi-Square test is a statistical technique for determining the difference between observed and expected data. Additionally, it can be used to see if it matches the categorical variables in our data. It is helpful to determine whether a difference between two category variables is due to chance or a relationship. Null hypothesis (H<sub>0</sub>): The respondents' most utilized UPI app and age do not significantly correlate. Alternative Hypothesis (H<sub>1</sub>): Age and the respondents' most popular UPI app are significantly correlated.

**Table no. 4.12**

**Age \* Most used UPI app of the respondents**

Age	Google Pay	Paytm	PhonePe	Amazon Pay	BHIM	Total
18-30	29	2	2	1	0	34
31-40	2	2	0	0	0	4
41-50	3	0	3	3	0	9
Above 50	1	0	1	0	1	3
Total	35	4	6	4	1	50

( Source : Primary data)

**Table no. 4.13 Chi-Square Test**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	44.383 <sup>a</sup>	16	0.000
Likelihood Ratio	28.113	16	0.031
N of Valid Cases	50		
a. 23 cells (92.0%) have expected count less than 5. The minimum expected count is .02.			

( Source : Computed)

#### INTERPRETATION

The Chi-Square Test has a significance threshold of less than 0.05. Consequently, the alternative hypothesis is accepted and the null hypothesis is rejected. The data indicates that the percentage of UPI apps that respondents use the most is significantly correlated with their age.

**Table no. 4.14**  
**Monthly income \* usage of UPI for digital payments**

Monthly income	Daily	Monthly	Rarely	Weekly	Total
10,000 to 25,000	7	2	0	4	13
25,001 to 50,000	2	1	0	0	3
50,001 to 1,00,000	6	2	0	0	8
Above 1,00,000	0	0	1	1	2
Less than 10,000	2	2	1	2	7
None	10	0	2	5	17
Total	27	7	4	12	50

**Table no. 4.15 Chi-Square Test**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	18.663 <sup>a</sup>	15	0.229
Likelihood Ratio	23.749	15	0.069
N of Valid Cases	50		
a. 22 cells (91.7%) have expected count less than 5. The minimum expected count is .16.			

### INTERPRETATION

The Chi-Square Test has a significance threshold of less than 0.05. Consequently, the alternative hypothesis is accepted and the null hypothesis is rejected. The data indicates that respondents' monthly income and their use of UPI for digital payments are significantly correlated.

**Table no. 4.16**  
**Gender \* Satisfaction of rewards and incentives offered by UPI apps**

Gender	Neutral	Satisfied	Unsatisfied	Very satisfied	Very unsatisfied	Total
Female	13	7	3	2	0	25
Male	7	9	2	4	3	25
Total	20	16	5	6	3	50

**Table no. 4.17 Chi-Square Test**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.917a	4	0.205
Likelihood Ratio	7.119	4	0.130
N of Valid Cases	50		
a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is 1.50.			

### INTERPRETATION

The Chi-Square Test has a significance threshold of less than 0.05. Consequently, the alternative hypothesis is accepted and the null hypothesis is rejected. The data indicates that satisfaction with the rewards and incentives offered by UPI apps is significantly correlated with gender.

### RANK ANALYSIS

Rank analysis, in a general sense, involves ordering data points or items to establish a hierarchy or priority, assigning numerical values (ranks) to reflect their relative positions. This can be done with numerical or ordinal data, and various statistical tests can be used to compare ranked data.

**Table no. 4.18**

**Rank analysis of the respondents**

UPI Apps/Ranks	1	2	3	4	5	Score
Google Pay	37	2	2	0	9	92
PhonePe	2	33	6	9	0	152
Paytm	8	3	0	1	38	139
Amazon Pay	0	9	3	36	2	364
BHIM	3	3	39	4	38	375

( Source : Computed)



### INTERPRETATION

From the above table it can be inferred that the most frequently used UPI app by the respondents are Google Pay users as it has a score of 92 (Rank 1). Few other UPI apps which are frequently used by the respondents are Paytm users as it has a score of 139 (Rank 2), Phonepe users as it has a score of 152 (Rank 3), Amazon Pay users as it has a score of 364 (Rank 4). The least used UPI app by the respondents is BHIM users as it has a score of 375 (Rank 5). Most of the respondents were Google Pay users as it has a score of 92 (Rank 1).

### ANOVA TEST

ANOVA (Analysis of Variance) test, with the goal of comparing means across different groups for various factors.

**Table no. 4.19**  
**Gender \* Satisfaction on rewards of the respondents**

Gender	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.988	4	0.247	0.971	0.432
Within Groups	12.721	50	0.254		
Total	13.709	54			

### INTERPRETATION

The table value at 1% level of significance and the calculated F Ratio 0.971. Hence, there is significant variance between gender and Satisfaction on rewards of the respondents. Therefore, it is clear H1 accepted hypothesis between gender and Satisfaction on rewards of the respondents.

**Table no. 4.20**

**Age \* Satisfaction of customer support provided by UPI**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.053	4	2.263	2.796	0.036
Within Groups	40.475	50	0.809		
Total	49.527	54			

### INTERPRETATION

The table value at 1% level of significance and the calculated F Ratio 2.796. Hence, there is significant variance between Age and Satisfaction of customer support provided by UPI. Therefore, it is clear H1 accepted hypothesis between Age and Satisfaction of customer support provided by UPI by the respondents.

### FINDINGS, SUGGESTIONS AND CONCLUSION

In the section the findings, suggestions and conclusion of “challenges and opportunities faced by UPI users” based on a sample of 50 respondents.

#### 5.1 FINDINGS

##### Percentage analysis :

1. The majority of 68% of the respondents belong to the age group of 18-30 years.
2. The data shows that 50-50 split between female and male. It shows equal responses from both female and male.

3. The majority 76% of the respondents are Under graduates.
4. The majority of 34% of the respondents are students.
5. The majority of 74% of the respondents are from urban areas.
6. The majority of 54% of the respondents are daily users of UPI payment system.
7. The majority of 23.6% of the respondents found it very easy for Ease of using UPI apps for transaction.
8. The majority of the respondents average monthly spending through UPI apps reveals that 40% of respondents spend less than ₹5000.
9. The majority of 30% of the respondents are using UPI for Recharges (mobile, DTH, etc.).
10. The majority of 52% of the respondents are plan to continue using UPI definitely.

**Chi – square test :**

11. There is a significance relationship between the Age and Percentage of most used UPI apps by the respondents.
12. There is a significance relationship between the Monthly income and usage of UPI for digital payments by the respondents.
13. There is a significance relationship between the Gender and Satisfaction of rewards and incentives offered by UPI apps.

**Rank analysis :**

14. Most of the respondents were Google Pay users as it has score of 92 ( Rank 1 ).

**Anova Test :**

15. There is significant variance between gender and Satisfaction on rewards of the respondents.
16. There is significant variance between Age and Satisfaction of customer support provided by UPI

## 5.2 SUGGESTIONS

1. Enhance Data Visualization: The document contains tables and charts, but including brief descriptions or insights alongside charts would improve readability.
2. Explain Statistical Results: More detailed explanations of implications for digital payments should follow the Chi-Square and ANOVA tests.
3. Smooth Out Flow and Transitions: The several analyses would benefit from smoother transitions connecting the different analyses. A summary of important points before introducing the following analysis would help as well.
4. Discuss Limitations: A section commenting on possible biases (e.g. small sample, lack of diversity in demographic make-up) would be useful.
5. Actionable Insights: Each statistical analysis should end with a section on practical takeaways for corporations or policy makers.

## 5.3 CONCLUSION

The research provides an effective analysis of consumer perception regarding UPI based digital payments utilizing a sample of 50 respondents as the sample. The data shows that digital mode of payments is used by the residents of different age groups like youth, urban population and students. In this it is found that Maximum number of respondents preferred ‘Google Payment’ app. The Chi-Square test finds very significant relationship between the age and the favorite app used. ANOVA also shows the difference in satisfaction towards rewards based on gender. In total this study highlights the dependence of the population on UPI apps, especially that of the youth class. The Findings are noteworthy and useful for the businesses and authorities to enhance the usage of digital payments and improve on the satisfaction of customers from the usage of the modern means of payment and design suitable incentives to the customers for making them use the digital payment options. Future researchers may utilize a greater number of respondents in their analysis and seek qualitative feedback to assimilate better understanding in the UPI based digital payment transactions.



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