

UPI TRANSACTIONS- A SURVEY ANALYSIS ON USER PERCEPTIONS AND COMPARISON OF G PAY AND PAYTM.

Project Report

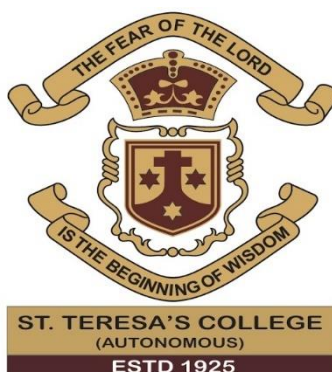
Submitted by

**R SANDRA (Reg. No. AB21COM041)
SUMITHRA B (Reg. No. AB21COM042)
THANUJA M C (Reg. No. AB21COM043)**

Under the guidance of

Ms. ASIYA ABDUL HAKEEM A

*In partial fulfilment of requirements for the award of the degree of
Bachelor of Commerce*



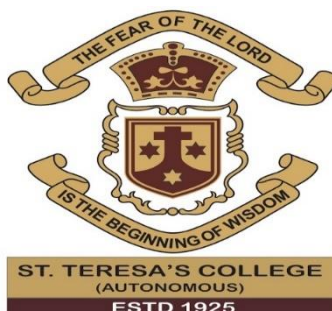
ST. TERESA'S COLLEGE (AUTONOMOUS), ERNAKULAM
COLLEGE WITH POTENTIAL FOR EXCELLENCE
Nationally Re-accredited at "A++" Level (Fourth Cycle)

Affiliated to
MAHATMA GANDHI UNIVERSITY
Kottayam – 686 560

March 2024

ST. TERESA'S COLLEGE (AUTONOMOUS), ERNAKULAM

COLLEGE WITH POTENTIAL FOR EXCELLENCE
Nationally Re-accredited at "A++" Level (Fourth Cycle)

**CERTIFICATE**

This is to certify that the project report titled '**UPI TRANSACTIONS- A SURVEY ANALYSIS ON USER PERCEPTIONS AND COMPARISON OF G PAY AND PAYTM**' submitted by **R Sandra, Sumithra B and Thanuja M C** towards partial fulfilment of the requirements for the award of the degree of **Bachelor of Commerce** is a record of bonafide work carried out by them during the academic year 2023 – 2024.

Supervising Guide

Head of the Department

Ms Asiya Abdul Hakeem A
Assistant Professor
Dept of Commerce (Regular)

Ms Elizabeth Rini K F
Assistant Professor
Dept of Commerce(Regular)

Place: Ernakulam

Date:

DECLARATION

We, **R SANDRA, SUMITHRA B and THANUJA M C** do hereby declare that this dissertation entitled, **‘UPI TRANSACTIONS- A SURVEY ANALYSIS ON USER PERCEPTIONS AND COMPARISON OF G PAY AND PAYTM’**, has been prepared by us under the guidance of **Ms. ASIYA ABDUL HAKEEM A** Assistant Professor, Dept of Commerce (Regular), St. Teresa’s College, Ernakulam.

We also declare that this dissertation has not been submitted by us fully or partly for the award of any Degree, Diploma, Title or Recognition before.

R SANDRA

SUMITHRA B

THANUJA M C

Place: Ernakulam

Date

ACKNOWLEDGEMENT

We wish to acknowledge all those persons who helped us in completing our project on the topic, '**UPI TRANSACTIONS- A SURVEY ANALYSIS ON USER PERCEPTIONS AND COMPARISON OF G PAY AND PAYTM**' .

First of all, we thank God Almighty for his blessings showered upon us in the conduct of the project study. We are also indebted to Ms Asiya Abdul Hakeem A, Assistant Professor, Department of Commerce (Regular), St. Teresa's College, Ernakulam for her guidance and encouragement for proper completion of the study.

We express our sincere thanks to the Provincial Superior and Manager, Rev. Sr. Dr. Vinitha, Director Rev. Sr. Emeline CSST, Principal Dr. Alphonsa Vijaya Joseph and to Ms. Elizabeth Rini K.F., Head of the Department of Commerce (Regular) and all other faculties of the Department of Commerce (Regular), St. Teresa's College, for their support and valuable suggestions.

We would like to express our thanks to all the respondents and colleagues who were associated with this study for their sincere contributions towards the successful completion of the project.

We also extend heartfelt thanks to our family for their constant encouragement without which this project would not be possible.

R SANDRA

SUMITHRA B

THANUJA M C

CONTENTS

SI No	Particulars	Page No
1	List of tables	6
2	List of Figures	7
3	Chapter 1-Introduction	9-11
4	Chapter 2-Review of Literature	12-16
5	Chapter 3-UPI- Evolution in India	17-29
6	Chapter4- GPay and Paytm- A Comparative Outlook	30-35
7	Chapter 5-Data analysis and Interpretation	36-63
8	Chapter 6- Findings , Suggestions and Conclusions	64-67
9	Bibliography	68-69
10	Questionnaire	70-73

LIST OF TABLES

Sl No	Title	Page no
5.1	Classification based on preference of mode of payments	36
5.2	Classification based on knowledge about UPI	38
5.3	Classification based on duration or knowledge of using UPI	39
5.4	Classification based on Number of digital payment apps used	40
5.5	Classification based on apps used by people	41
5.6	Classification based on frequency of usage	43
5.7	Classification based on purpose	44
5.8	Classification based on adoption of online payment over physical payments	45
5.9	Classification based on UPI having wallet option	47
5.10	Classification based on safety of UPI payments	48
5.11	Classification based on level of satisfaction	50
5.12	Classification based on knowledge about transaction limit	51
5.13	Classification based on awareness about UPI apps providing interest	52
5.14	Classification based on tendency in spending or saving	53
5.15	Classification based on Problems faced while using UPI	55
5.16	Classification based on rating on UPI	56
5.17	Comparison of user perception between GPay and Paytm	58
5.18	Perception regarding security	59
5.19	Confidence regarding security of Patm	61
5.20	Better rewards and Cash back incentives	62

LIST OF FIGURES

Sl No	Title	Page no
5.1	Classification based on preference of mode of payments	37
5.2	Classification based on knowledge about UPI	38
5.3	Classification based on duration or knowledge of using UPI	40
5.4	Classification based on apps used by people	42
5.5	Classification based on frequency of usage	43
5.6	Classification based on purpose	45
5.7	Classification based on adoption of online payment over physical payments	46
5.8	Classification based on UPI having wallet option	48
5.9	Classification based on safety of UPI payments	49
5.10	Classification based on level of satisfaction	51
5.11	Classification based on knowledge about transaction limit	52
5.12	Classification based on awareness about UPI apps providing interest	53
5.13	Classification based on tendency in spending or saving	54
5.14	Classification based on Problems faced while using UPI	55
5.15	Classification based on rating on UPI	57
5.16	Comparison of user perception between GPay and Paytm	59
5.17	Perception regarding security	60
5.18	Confidence regarding security of Patm	61
5.19	Perception on Cash back incentives	62

**UPI TRANSACTIONS- A SURVEY ANALYSIS ON USER
PERCEPTIONS AND COMPARISON OF G PAY AND
PAYTM.**

CHAPTER-1

INTRODUCTION

1.1 INTRODUCTION

In this evolution of cashless economy era, information and communication technology (ICT) plays a vital role in making payments using various payment modes. The term “digital payment” refers to using electronic means to pay for products and services online. This is referred to as a cashless economy since it avoids the use of physical money. These digital transactions help to lower transaction costs while also speeding up the process of completing one transaction cycle. It lowers the risk of dealing with cash. The digital payment history may also be readily kept track of. Digital transactions also benefit the government because transactions can be easily recorded, which helps to eliminate black money and so aids economic progress. According to the NPCI, “Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application, merging several banking features, seamless fund routing & merchant payments into one hood. UPI’s overall importance comes from the intense desire and effort made by the RBI and the government to create a cost effective, simple and safe digital payment system that will be used for the large population of the country. The RBI along with the NPCI has made commendable efforts to spread digital payments culture. According to the RBI, a digital payment platform should be simple, safe and efficient while carrying out payments. Various criteria about an ideal payment system was brought out by the RBI in its vision for a future payment system dreaming a digital transaction economy. From this angle, a remarkable feature of the UPI is that it satisfies several criteria put forwarded by RBI’s payment system vision of safe, efficient, interoperable, authorized, accessible, inclusive and compliant with international standards.

We all are used to payment apps like PhonePe, Google Pay, Paytm, etc these apps have become a crucial part of our lives. The transaction on these apps takes place by UPI- The Unified Payment Interface is a single-interface payment system, developed by the National Payment Corporation of India (NPCI). UPI: Unified Payment Interface is a smartphone application that allows users to transfer money between bank account. It is a platform where customers can link bank accounts held by different banks into a single UPI application and use their registered cell phone number to easily trade between them around the clock. The UPI Platform is a UPI system that operates from multiple banks accounts in a single mobile application from participating banks, combining multiple banking features such as seamless

fund routing and merchant payments under one roof. The National Payments Corporation of India (NPCI) developed a single-window mobile payment system (Mobile Payments). There is no need to enter bank details and other sensitive information every time a customer initiates a transaction. UPI has introduced new features such as In-App payments, cross-screen QR codes, the addition of web- based payments, and the extension of the range of services to online payments using UnionPay-powered e-wallets.

1.2 STATEMENT OF THE PROBLEM

As the students of Commerce, we are in finding problems related with UPI transactions and its impact among the various users in the economy. We wish to study and understand about consumer's satisfaction level towards UPI and identify the problems faced by the users with special reference to G Pay and Paytm.

1.3 SCOPE AND SIGNIFICANCE OF THE STUDY

India has experienced a technological revolution in recent years. Unified Payment Interface is one of the recent innovations introduced by National Payments Corporation of India. After the implementation of UPI there is a dramatic change in the payment method. From government services to groceries being delivered at home, everything is accessible online. Hence it is important to know the benefits and drawbacks of UPI services and customer perception towards new innovation adopted by the National Payments Corporation. The study aims to identify the customer preference towards Unified Payment Interface and to know the impact of UPI in the economy. The study also targets a comparison of GPay and Paytm which is quite extensive. Both platforms offer a wide range of services and features that make digital payments and transactions convenient.

1.4 OBJECTIVES OF THE STUDY

1. To find out the most preferred mode and application for digital payments by the people.
2. To find out the frequency of digital payments by different age and income groups.
3. To find out the problems encountered while using UPI.
4. To study the effectiveness of the promotional activities taken by Google Pay and Paytm

1.5 METHODOLOGY OF THE STUDY

The data is based on both primary and secondary source of information. Data Collection Tool for primary data was structured questionnaire with a set of questions. The study is descriptive

in nature. No statistical testing is employed. The questionnaire related to the study was circulated online to gather relevant information and also a direct survey was conducted by approaching users of UPI in various sectors. Convenient sampling method was used on respondents who were surveyed through structured questionnaire. Respondents include people in the region of Ernakulam who use digital payments at various outlets and for inter-bank payments. Certain useful findings were made from Secondary Data collected using previous research study on similar topics and other websites.

1.6 LIMITATIONS

1. Sample size: The study's sample size may be limited, depending on the number of participants who agree to participate in the study. A smaller sample size may not be representative of the entire population, and the findings may not be generalizable.
2. Selection bias: There is a possibility of selection bias as the study may only include participants who are willing to participate or have a pre-existing interest in digital payments, resulting in the exclusion of other groups who may have different perspectives and experiences.
3. Time constraints: The study may be time-limited and conducted during a specific timeframe. Therefore, the results may not reflect the evolution of digital payments, including UPI, and its impact over a more extended period.
4. Geographical limitations: The study may be limited to a particular geographical location (Ernakulam) and may not reflect the differences in UPI adoption and usage across different regions in India.

1.7 CHAPTERISATION

CHAPTER 1- INTRODUCTION

CHAPTER 2 – REVIEW OF LITERATURE

CHAPTER 3 - UPI- EVOLUTION IN INDIA

CHAPTER 4 – G PAY AND PAYTM- A COMPARATIVE OUTLOOK

CHAPTER 5- DATA ANALYSIS AND INTERPRETATION

CHAPTER 6- FINDINGS, SUGGESTIONS AND CONCLUSION

CHAPTER 2

REVIEW OF LITERATURE

In this study the researcher aims to identify the customer preference towards unified payment interface and to know the impact of unified payment interface in customer satisfaction.

1.(Rogers, 2003) This study used DOI (Digital Object Identifier) theory components to explore participants' usage and recommendation intentions toward UPI.

2. Lei-da Chen and Ravi Nath (2008) The results suggested that higher transaction speed, transaction convenience, and compatibility perceptions would lead to high propensity to adopt mPayment while greater security and privacy concerns would lead to lower propensity to adopt mPayment. Among all the constructs, Compatibility has the highest correlation with Intention to Adopt.

3. Sevgi Ozkan, Gayani Bindusara and Ray Hackney (2010) The study revealed that three of the critical factors were necessary (security, advantage, web assurance seals) and three were relatively sufficient (perceived risk, trust and usability) through customer intentions to adopt an e-payment system.

4. Pardhasaradhi Madasu (2015), India did not have a place in the top 16 non-cash markets of the world but China had. In comparison with credit cards, there has been an increase in the usage of debit cards at ATMs. Non-cash services like Immediate Payment Services or MWallet had not made any significant impact

5. Bappaditya Mukhopadhyaya Y (2016), The study revealed that an extremely small correlation exists between cashless payments and education level as well as between cashless payments and income earned. It also revealed that a very high positive correlation exists between the people who collect the payments in their bank accounts and those who are engaged in cashless payments. Prepaid cards and mobile payments showed maximum growth.

6.(Neema & Neema, 2016), In a study on UPI, the researchers have concluded that awareness and confidence are required in rural customers for better adoption of UPI.

7.Somanjoli Mohapatra (2017) In their study reported that the single interface across all NPCI systems besides creating interoperability and superior customer experience. The UPI seeks

to make money transfers easy, quick and hassle free. The proliferation of smartphones, the availability of an online verifiable identity, universal access to banking and the introduction of biometric sensors in phones will proactively encourage electronic payment systems for ushering in a less-cash society in India.

8. Radhika Basavaraj Kakade, Prof. Nupur A. Veshne (2017) In their study reported that the UPI has made digital transactions for individuals as easy as sending text messages. Service is available 24X7, unlike RTGS or NEFT which don't work on holidays or during non banking hours. This will bring enormous efficiency in the system and help India become a truly cashless economy.

9. Roshna Thomas, Dr. Abhijeet Chatterjee (2017) The study reported that UPI is a tool with compatible features that can make monetary transactions easy and affordable to the customers though it is difficult to side-line the challenges. A strong Aadhar platform (UID) combined with statistics for the country pertaining to increased financial inclusion, Smartphone adoption and telecom subscription indicate positive prospects for UPI whereas competition from mobile wallets and possible cases of failure from banks to overcome technical errors especially relating to the front-end platform designed by them may negatively impact the scope of this innovative payment tool.

10. Ravish Rana (2017), In their study reported that adoption of digital payment is influenced by the education level of the customer. If a person has studied beyond matriculation and is internet savvy, he or she will be inclined to use the digital payment mode. It was also found that in the areas/region where education level is high such as Delhi NCR and other metropolitan areas, the possibility of acceptance of digital payment is much higher. The growth of users of Smartphone and internet penetration in such areas also facilitated the adoption of digital payment.

11. Maryam Barkhordari, Zahra Nouroollah, Hoda Mashayekhi, Yoosof Mashayekhi,

Mohammad S. Ahangar (2017) study findings revealed that technical & transaction procedures, and access to security guidelines are significant factors for improving consumers' perceived security, while the most important factors influencing trust are access to security guidelines and security. Finally, consumers' perceived trust also has a positive impact on EPS adoption

12.Dr. M Sumathy and Vipin KP (2017).There found to be no significant difference between level of awareness towards digital payment systems between male and females. Also no relationship existed between education of the respondents and their level of awareness towards digital payment systems.

13.Dr. Shilpa Bhimrao Gaonkar (2018) Study revealed that various new instruments are emerging. Benefits of going cashless increased transparency, efficiency and convenience, easier tracking, etc

14.Dr. N. Rakesh, Dr. K. Suresh Kumar, Dr. S. Satheesh Kumar (2018) observe Electronic transactions have increased. This could happen only with extensive recognition and acceptance of popular instruments such as credit and debit cards, net banking and e-wallets by the Indian population. But surprisingly, UPI came out to be the real distinct advantage.

15.Dinesh, T. M., Kiran Kumar Reddy, and Suhasini, K. (2018). The study revealed that there was a considerable effect of demonetization on digital payments which are more visible in RTGS and mobile transactions.

16.Alaknanda Lonare, Anukriti Yadav, Samiksha Sindhu (2018) find the proportion of users in metropolitan cities are more than tier-2 cities. „Simplicity“ or ease of use turned out to be the only significant variable for e-wallet adoption. Looking at the vendor point of view, the e-wallet adoption is considerably less than what had been expected.

17.Subho Chattopadhyay, Payal Gulati and Indranil Bose (2018) observe no significant difference was found in convenience for cash and cashless modes of transactions. Also the retailers believe that it is easier for them to deal with cash as compared to cashless instruments. Efforts ought to be engaged towards changing behaviour and attitude towards cashless than to scarcely make awareness.

18.Surabhi Agarwal(2018) study observes that the government feels that incentives through the merchants could drive the usage higher than just peer to peer payments. Incentives offered in the scheme include ₹51 cashback on a minimum transaction value of just ₹1 for the first time users and ₹25 cashback per transactions for 20 unique transactions in a month, for consumers, while merchants could receive cashback of up to 10% of a transaction and upto ₹1000 per month.

19. Shruti Arcot Kesavan (2018), This study identifies that with the coming up of UPI 2.0 on August 16, 2018 more a number of merchant transactions will happen which were hitherto restricted mainly to peer-to-peer (P2P). UPI transactions are expected to account for 50% of digital transactions by March, 2023. It is expected to grow at 90% per annum over the next 5 years to \$400-450 Billion a year.

20. Balasubramanian M and Amanullah K.M. (2019) conducted a study on 'Mobile Banking and its Evolution in the UPI Era'. They studied the evolution of the UPI based transactions in India, its impact on the paperless transactions and problems associated with UPI based apps. They found that the UPI is still new in India and developing very rapidly. Google Pay, Paytm and Phone Pe are the major contributors of latest payment methods when compared to government owned BHIM app and stated that UPI is ideal for smaller fund transfer and other modes of online transfer are preferable for higher amounts.

21. Venkata Siva Kumar.S and Ch. Kavya (2020) in their paper, 'Role of Unified Payment Interface in Digital Banking Services – An Empirical Study on User Perceptions', analysed the awareness and perceptions of varied age groups of individuals and occupations towards usage of UPI services. They concluded that UPI users were having dissimilar perceptions in using UPI banking services and users of the various occupations opined that the UPI services are far better than traditional banking services.

22. Nileshkumar L Pate & DR. JAYSHRI S DATTA (2020) reveals that factors influencing the usage of UPI have been identified in this research. The findings revealed that compatibility of application, comparative advantage and threats have a positive impact on the usage of UPI. Perceived risk and customer profile have a negative impact on the usage. Customers demand safety standards for online UPI transactions which must be robust in industry safety grades.

23. Damodhar & Sunitha (2020), studied about digital case and UPI payments, payments are often carried with involvement of third parties; it makes E-payment at any time through the web on to the transfer settlement and E-business surroundings. Electronic payment revolutionised the business process by reducing the work, dealing prices, and labour value. Being user friendly and fewer than manual processes, it helps to expand its market reach/expansion of E-commerce.

24. Sunny Gupta and Dinesh Chand (2021) conducted a study on "Consumers Perception towards Unified Payments Interface". They found that the maximum number of people use

UPI for fund transfer, mobile recharges or cash back, women respondents were rigid in using technologies and cash back alone could not be considered as a factor for motivating consumers to use UPI on a daily basis. The study was concluded that mobiles phones were most used device for transferring and accepting payments and the respondents were having positive

attitude towards UPI transactions.

25. Rishabh Jha & Rohit Kumar (2021), in his study titled “An innovative step for making Digital payment Effective and factors affecting Consumer perception on the use of UPI” Performance expectancy, effort expectancy, facilitating conditions (Mobile specs & Network strength), and Cashbacks & Rewards found to have an impactful relationship with the behavioural intention of the users who prefer to adopt and use UPI payments.

26. Poorna Pushkal C and Pappeswari C (2021), “A Study on Awareness and Customer Satisfaction of Unified Payment Interface (UPI) For Digital Payments with Reference to Ambasamudram Area”, in their paper an attempt was made to identify the level of awareness and satisfaction among people about UPI and the basis on which they select mode of digital payment and the work was done to identify the adoption of UPI in the money transfer system.

27. Parvesh Deepak Oswal & Prof. Hanmant N. Renushe (2021), Impact of COVID-19 on UPI Services. According to their study they say that universal access to banking, and therefore the introduction of biometric sensors in phones can proactively encourage UPI transactions and findings discovered that the respondent has a positive angle towards the UPI dealing with ushering in a less-cash society in the Asian country.

28. Yash Madwanna, Mayur Khadse & B R Chandavarkar (2021). Discussion on offline UPI in an introductory manner, what kind of services it can provide to its user and how a user can access offline UPI is also discussed in this paper, Readers will get enough knowledge and information about UPI by reading this paper.

CHAPTER-3

UPI- EVOLUTION IN INDIA

3.1 UNIFIED PAYMENTS INTERFACE(UPI) : MEANING

Unified payments interface (UPI) is a digital payment platform through which a user can both send and receive through a virtual payment address (VPA).UPI is a system that powers multiple bank account into a single mobile application, merging several banking features, seamless fund routing and merchant payments into one hood. It also caters to the peer to peer collect request which can be scheduled and paid as per requirement and convenience. Uniqueness of UPI includes methods like 24*7 and 365 days availability, easy and convenient to use and secure gateway which attracts customers of the service sector.

3.2 UPI IN INDIA

The unified payment interface (UPI) mechanism has reached another milestone, transactions continued to rise and total monthly transaction amount touched ₹ 18.23 lakh crore, 54 percent year-on-year higher than December 2022. According to a survey conducted by National Payment Corporation of India claims that over the age of 60 preferred cards ,while the younger and middle aged population preferred UPI and mobile wallets. India's UPI is being examined globally as a benchmark for real-time payments, surpassing international counterparts in the realm of digital transactions.India's real-time payments success stems from a coordinated approach to mass adoption nationwide and not being tied to, or heavily invested in traditional, expensive, and relatively inflexible electronic payment infrastructure like its US and European counterparts," says Ankur Saxena, country leader, India and South Asia, ACI Worldwide Payments.

3.3 FEATURES OF UPI

Unified payments interface from NPCI's provide the following features Via a single payment API (Application Program Interface) and a set of supporting APIs.

- 1.Using a personal mobile phone or tablet as the main device, individuals can conduct various payments, encompassing person-to-person, person-to-entity, and entity-to-person transactions.

2.The capability to utilise a personal mobile phone or tablet for both initiating payments (push) and receiving payments (pull) from others is enabled.

3.The unified system allows for the versatile utilisation of Aadhaar numbers, mobile numbers, card numbers, and account numbers. Furthermore, users can make payments and receive funds using “virtual payment addresses,” acting as secure “aliases” linked to restricted payee/amount/time limit.

4.Initiate payments solely by sharing an address with others, eliminating the need to disclose account details or credentials on third-party applications or websites.

5.Users can collect requests to individuals or entities, specifying a “pay by” date. This flexibility allows recipients to defer payment until just before the expiration date without tying up funds in the account until the payer is ready to fulfil the request.

6.UPI has the ability to pre-authorize multiple recurring payments similar to ECS (utilities, school,fees,subscription, etc) with a one time secure authentication process and rule based access.

7.All payment system participants can employ a standardised set of APIs for seamless any-to-any push and pull payments.

8.UPI has the ability to provide PSP mobile applications which allow payments from any account using any number of virtual addresses using credentials such as passwords,PINS,biometrics (on phone)

9.UPI has the ability to use a fully interoperable system across all payment system players without having silos and closed systems.

10.UPI Make payments effortlessly with 1-click 2-factor authentication solely using a personal phone, eliminating the need for acquiring devices or physical tokens.

3.4 IMPORTANCE OF UPI

Utilising the collect payment option facilitates smoother Person to Business (P2B) interactions, contributing to the enhancement of commerce and the overall Indian economy. UPI’s adoption is expected to decrease the reliance on cash, currently constituting 12% of the GDP, leading to a reduction in the annual cost of cash transfers by approximately Rs. 20,000 crores. Notably, UPI services will remain exempt from government fees, as affirmed by the

finance ministry, reinforcing its status as a digital public benefit that fosters convenience and economic growth without any impending charges.

3.5 BENEFITS OF UPI

Enhanced security is ensured as customers share only a virtual address without providing any other critical information, using their bank account as an alias for the “virtual payment address”. When a specific merchant’s account is hacked, your security cannot be compromised because this database will only include a list of virtual addresses. UPI stands out for its superior security compared to other payment methods that transmit sensitive information like credit card numbers, as it exclusively relies on a Virtual Payment Address (VPA). The shift towards digitalization contributes to reducing black money in the market, promoting compliance and increasing tax revenue. The UPI has a very significant impact on both the fintech sector and banks. It helps bank by boarding and offers them a low-cost alternative to cash.

3.6 UNIFIED PAYMENTS INTERFACE : THE EVOLUTION

In 2016, the National Payments Corporation of India (NPCI) published a document titled “Unified Payment Interface Common URL specifications for Deep Linking and Proximity Integration.” According to this document, the average number of non-cash transactions per person is only 6 per year in India. A small fraction of the 10 million-plus retailers in the country possess card payment acceptance infrastructure, currently standing at 0.6 million or 6%. This signifies the untapped potential as smartphone penetration is projected to increase from 150 million to 500 million in the coming years. Against this backdrop, the NPCI, established in April 2009 with the primary goal of consolidating and integrating various systems into a nationwide, uniform business process for all retail payment systems, took on the initiative to implement the Unified Payments Interface (UPI). The Reserve Bank of India (RBI) had highlighted the use of UPI in its Payment System Vision Document (2012-2015) to achieve a “less-cash” society and promote financial inclusion using cutting-edge technology. The NPCI conducted a pilot launch on April 11, 2016, with 21 member banks, inaugurated by Dr. Raghuram G Rajan, the then Governor of RBI, in Mumbai. Although the NPCI initially set a deadline of July 31, 2016, for the UPI rollout, it was deferred due to the time spent in the final testing phase with 23 banks. The operational criteria included a minimum of a thousand pilot customers, five thousand transactions, and a 90% success rate for banks to go live by July 31. Initially, 29 banks had partnered with NPCI for the scheduled

launch. Banks officially began uploading their UPI-enabled apps on Google Play Store from August 25, 2016. The UPI application was officially launched by Raghuram Rajan, then RBI Governor, along with NPCI Chairman Balachandran M and Advisor Nandan Nilekani. The UPI app became operational after receiving clearance from the Reserve Bank of India, allowing banks' UPI applications to go live on Google Play Store. Initially available only on the Android mobile operating system, UPI was expected to be accessible on Apple's iOS platform by October 2016. A day after the launch, the UPI app downloads from the Google Play Store surpassed 10,000. In the initial phase, UPI went live with 21 banks, with State Bank of India and Bank of Baroda expected to join in the subsequent round, possibly in September or October 2016. Users simply needed to download the UPI app from their respective banks, generate a mobile PIN, and confirm payments. Building on the existing Immediate Payment System (IMPS), where funds could be transferred 24x7, the Unified Payments Interface aimed to transform bank accounts into a mobile wallet-like experience.

3.7 NEED FOR DIGITALIZATION

In the current era, the world is undergoing a swift and escalating shift towards digital recording, management, and exchange of money in all transactions. The advent of smartphones has played a pivotal role in facilitating this digitalization, giving rise to E-commerce, M-commerce, and various app-based services, including digital payment options for services like cab aggregators. These technological advancements not only have profound implications for the economic system but also instigate a transformation in the habits of Indian citizens, fostering a widespread adoption of digitalization. Recognizing the significance of this shift, the Digital India program has emerged as a flagship initiative of the Indian government. The program envisions transforming India into a digitally empowered nation and advocates for a “faceless, paperless, and cashless” economy, representing the government's ambitious mission to steer India towards a digital future. The ambition of making the Indian economy cashless received a significant boost with the announcement of demonetization by former Prime Minister Narendra Modi on November 8, 2016. During the demonetization period, Indian citizens were compelled to embrace digital transaction methods to meet their day-to-day payment needs. This shift resulted in people depositing their cash into banks, leading to increased liquidity and creating favourable conditions for the development of the Indian economy. While digital societies have evolved over time, from early barter systems to modern digital currencies like Bitcoin, the prospect of a low-cash transaction economy in India seemed unrealistic in the past. However, the current scenario

reflects a significant deviation towards a digital future in the Indian economy. The announcement of demonetization on the night of November 8, 2016, marked a pivotal moment that accelerated India's trajectory towards a more digitised economic landscape.

3.8 ADVANTAGES OF UPI

- Enable instant money transfers via mobile devices, available 24/7, 365 days a year.
- Access various bank accounts through a single mobile application.
- Utilising a virtual address for Pull & Push transactions enhances security, eliminating the need for customers to enter details such as card numbers, account numbers, or IFSC codes.
- Sharing bills with friends and opportunity to earn reward points.
- Eliminate the inconvenience of Cash on Delivery by avoiding the need to rush to an ATM or provide exact change.
- Make payments for utility bills, over-the-counter transactions, and barcode-based payments (scan and pay) seamlessly.
- Online transactions
- Anticipated to enhance interoperability across all payment systems, UPI eliminates simplicity arbitrage by enabling one-click two-factor authentication.
- It will drive high-volume, cost-effective payments, fostering a new ecosystem that billers may adopt to provide customers with simplified UPI offerings.
- Banks stand to gain significantly from UPI, as the service can be extended to merchants using even basic smartphones. The necessity for installing PoS machines at business locations is entirely eliminated, leading to a reduction in merchant acquisition costs and offering a sustainable solution with long-term benefits.
- Introducing a “collect” feature enhances accessibility, thereby lowering entry barriers for smaller businesses and startups to serve a broader audience.
- As a groundbreaking innovation in mobile payments, UPI will unite key stakeholders merchants, consumers, and banks or financial institutions on a common platform, introducing a range of services previously unheard of in the global payment offering space.

3.9 DISADVANTAGES OF UPI

- UPI excels for smaller fund transfers, while other online transfer modes are preferable for larger amounts.
- Encouraging customers to download the bank application for a single payment interface poses a challenge with UPI, as concerns about online fraud deter many from adopting this approach.
- It is not functional on slow internet connections.
- While UPI is generally a fast and secure medium, there are instances where sending payments can be delayed, especially during periods of server downtime at the bank.
- Payment delays may occur, with the process taking up to 48 hours for the funds to be returned to your bank account.
- As of now, the UPI money transfer limit stands at Rs 100,000, allowing you to send this amount to anyone using the mobile app.
- The UPI PIN comprises only four to six digits, suggesting the need for an extension to enhance security.
- Occasionally, UPI exhibits slowness in processing payments; however, this can be mitigated by utilising faster internet services.

3.10 ACHIEVEMENTS OF UNIFIED PAYMENTS INTERFACE (UPI)

Amid the pandemic year of 2020–2021, digital transactions through UPI experienced remarkable growth, attracting global interest in emulating India's success. NPCI figures reveal that in October 2021, UPI's transaction value exceeded USD 100 billion in a single month, reinforcing its position as India's predominant digital payment system. Projections indicate that by 2025, the Indian digital payments market is anticipated to surge from its present value of Rs. 2,153 trillion (27% CAGR) to Rs. 7,092 trillion. Robust applications in merchant payments, government initiatives such as Jan Dhan Yojana and the personal data protection bill, along with the expansion of MSMEs, the millennial generation, and widespread smartphone usage are poised to fuel growth. Notably, the central banks of India and Singapore are set to link their Unified Payments Interface (UPI) and PayNow fast digital payment systems for instant, cost-effective cross-border fund transfers. UPI transactions continue to rise and total monthly transaction amount touched ₹18.23 lakh crore, 54 percent year-on-year higher than December 2022 and by May 2023 it reached its highest clock.

UPI'S KEY CHARACTERISTICS

- Swift and immediate fund transfers, faster than NEFT.
- UPI is available 24/7 for seamless access.
- Moreover, it remains accessible during holidays.
- Every bank provides a distinct UPI for various mobile operating systems, encompassing Android and iOS.
- It can be used for settling utility bills and making payments to merchants.
- Any complaint can be submitted effortlessly through a mobile app.

3.11 CHALLENGES OF THE UNIFIED PAYMENTS INTERFACE (UPI) Concerns exist among experts about UPI's long-term sustainability without imposing Merchant Discount Rate (MDR) to fund its infrastructure. Presently, neither customers nor merchants incur additional fees. Despite the decline in cash transactions post UPI's introduction, they remain significant. The perceived threat of tax terrorism and the widespread acceptance of cash as a payment method still influence people's preference for using it. Conducting UPI transactions remains challenging, primarily due to a significant portion of the population lacking internet access or smartphones. Limited digital literacy further hinders the utilisation of the UPI system by a majority. Additionally, the lower adoption of UPI apps can be attributed to their predominant use of the English language.

3.12 DEMONETIZATION

Demonetization is the process of invalidating a currency unit as legal tender, often involving the withdrawal of the existing form of money from circulation and its replacement with a new currency. Nations undertake demonetization for various reasons, including combating inflation, facilitating trade, reducing dependence on cash, addressing corruption and crime, and countering counterfeiting, black money, and tax evasion. Initially, the demonetization move garnered support from some bankers and international commentators, but it also faced criticism for being poorly planned and unfair. The government's decision sparked protests, litigation, and strikes in various parts of India, prompting debates in both houses of parliament. The aftermath of demonetization resulted in a prolonged cash shortage, causing disruptions across the economy. People faced challenges exchanging their banknotes, leading to long queues and, unfortunately, several deaths associated with the rush to exchange cash.

The widespread impact of demonetization created a sense of panic, as people found themselves short of cash. However, this situation also prompted a shift towards digital payments and online transactions across various regions of India. The move, while controversial, influenced a significant change in people's payment behaviour, encouraging the adoption of electronic and digital financial transactions.

3.13 DEMONETIZATION IN INDIA

The saga of Demonetization 2016 unfolded abruptly in India, gradually revealing itself to the Indian citizens. On November 8, 2016, the Indian government made the unexpected announcement of demonetizing all Rs 500 and Rs 1000 banknotes from the Mahatma Gandhi series. Simultaneously, the issuance of new banknotes was declared in exchange for the demonetized ones. The government asserted that this move aimed to curtail the shadow economy, reduce the use of illicit and counterfeit cash associated with illegal activities and terrorism. During the announcement, Prime Minister Narendra Modi expressed his belief that the Indian people would support his decision. He had presented various policies aimed at combating black money and reducing corruption. However, in reality, demonetization sparked intense debates in India. While some argued that it did not effectively address the issue of black money, others believed it would prove beneficial for the Indian economy in the long run. The success of demonetization became a complex puzzle, generating conflicting opinions and making it challenging to gauge its impact within a short timeframe.

3.14 IMPACT OF DEMONETISATION ON INDIAN ECONOMY Demonetization, which aimed not only to curb black money but also to propel India toward a cashless economy, has led to significant challenges. The once-thriving economy is now at a standstill, with sales, trader incomes, production, and employment all witnessing a decline. Small producers lacking capital are shutting down, and daily wage workers are struggling to find employers with sufficient cash. The informal financial sector, especially vital in rural areas, has almost collapsed. Stock indices like BSE SENSEX and NIFTY 50 fell over 6 percent immediately after demonetization, causing severe cash shortages and detrimental effects on the economy. The country's GDP and industrial production have suffered, and certain sectors are still grappling with the lack of readily available cash. While electronic payment capabilities have revolutionised grassroots businesses, the transition to new payment methods continues. Demonetization has created a liquidity shock, disrupting economic activities as people face difficulties obtaining popular denominations, especially Rs 500. The intensity of

these effects depends on the duration of liquidity shocks, with the impact potentially lasting several months. This liquidity crunch has adverse effects on consumption, production, employment, and overall growth. The combined impact may lead to deflation, causing pain in sectors like real estate, construction material, and unorganised trade. Despite the good intentions behind demonetization, the majority of black money is not in cash but in assets like land, buildings, or kept abroad. The design of demonetization lacked proper planning, intelligence, and foresight, causing hardships for small farmers, sellers, merchants, daily wage labourers, and traders. The limit on withdrawal and the perceived focus on currency replacement rather than true demonetization have compounded the challenges. The international standing of the Indian economy has taken a hit, and the fundamental flaws in the design are evident. A more effective solution might involve shifting economic decision-making away from the state to firms and consumers, simplifying and rationalising taxes, cutting regulations, eliminating loopholes, and widening the tax net. This approach could foster a more resilient and growth-oriented economic environment.

3.15 DIGITALIZATION IN INDIA

Digital India, launched on July 1, 2015, by the Indian Prime Minister, is a transformative campaign that synergizes with other government initiatives such as Bharat Net, Start-up India, Make in India, and Stand-Up India. With the motto “Power to Empower,” this initiative is geared towards facilitating the effective implementation of various schemes. The primary objective of Digital India is to enhance the accessibility of government services to citizens through improved network infrastructure and widespread internet connectivity. This initiative plays a pivotal role in digitally empowering the country, particularly in rural areas, by promoting high-speed internet networks. Digital India comprises three fundamental components:

Development of secure and robust digital infrastructure.

Digital delivery of government services.

Promoting universal digital literacy.

The mission is supported by nine pillars, focusing on critical growth areas:

Broadband highway.

Universal access to mobile connectivity.

Public access programs.

E-Governance for government reform through technology.

E-Kranti for electronic delivery of services.

Information for all.

Electronic manufacturing.

IT for jobs.

Early harvest programs. Despite India's progress in the economy and technology, challenges persist in providing administrative services to all citizens. Over the years, the government has initiated successful programs to address these challenges, paving the way for digitalization and marking the beginning of the digital revolution. The government continues its commitment to transitioning into a digital economy, further accelerated by the promotion of digital payment transactions, especially after the demonetization move on November 8, 2016.

3.16 RELATIONSHIP BETWEEN DEMONETIZATION AND DIGITALIZATION IN INDIA

On November 8, 2016, during the announcement of demonetization, there was no evident link between demonetization and digitalization. The government had not officially declared demonetization in any government gazettes. However, the narrative quickly shifted towards the digitization of monetary transactions in the aftermath of the demonetization announcement. The morning after the announcement, on November 9, 2016, newspaper headlines featured advertisements promoting the introduction of mobile wallets. Companies operating in the digitalization sector saw demonetization as an opportunity to expand their businesses. They presented alternatives to cash, such as prepaid cards, debit cards, RuPay cards, mobile wallets, and net banking, among others. In a short period, demonetization prompted the widespread adoption of e-wallets, credit cards, and debit cards, particularly in urban areas. The country's journey towards digitalization was significantly facilitated by demonetization, accelerating the timeline to achieve a digital society. The digitalization trend in India had already begun with the emergence of e-commerce startups like Amazon, Flipkart, Jabong, and Snapdeal. According to the Economic Times, a few days after demonetization, transactions in e-wallet companies had surged by over 700%. Digital transactions gained

popularity in India, and people became accustomed to using digital platforms and engaging in online transactions. Within weeks of demonetization, the narrative surrounding its goals shifted from combating black money and fake currency to highlighting the benefits of the digital economy. India experienced a wave of publicity promoting digital transactions, and events like Digi Dhan melas were organised to encourage people to embrace the digital economy. The move towards digitization and digital transactions in India accelerated, marking a significant transformation in the country's economic landscape.

3.17 CASHLESS ECONOMY

In an economy characterised by digital transactions, where various monetary exchanges occur through electronic channels, we refer to it as a digital economy. Digital transactions encompass the use of debit cards, electronic fund transfers, mobile wallets, and emerging payment applications. Instead of relying on physical cash, payments are executed through digital means. In essence, this denotes a shift towards a less cash-dependent economy, where a majority of transactions are conducted by individuals who are digitally literate and technologically adept

3.18 ROLE OF E-COMMERCE

Demonetization proved to be a catalyst for the widespread adoption of digital transactions and the subsequent growth of E-Commerce in India. Although the initial phase posed challenges, particularly in rural areas where digital payment comfort was lacking, the long-term benefits for E-Business were substantial. Major players in the e-commerce sector, including Amazon, Flipkart, and Snapdeal, shifted away from cash on delivery post-demonetization. This change, while posing difficulties in convincing rural populations to embrace online purchases, prompted innovative solutions. Platforms like Paytm emerged as gateways facilitating digital payments for local retailers, bridging the gap between traditional and digital economies. The strategic move to decrease the reliance on cash on delivery also led to a reduction in return frequencies, mitigating expenses for e-commerce companies. The forward-looking perspective for E-commerce in the long run has seen a significant boost, attracting increased foreign investments and contributing to the overall progress of the nation. In essence, E-Commerce played a pivotal role in accelerating online business and steering the country towards a more digitally-driven economy.

3.19 M-COMMERCE AFTER DEMONETIZATION

Following demonetization, the term “M-Commerce” gained widespread popularity across India, surpassing E-Commerce as the preferred method for digital transactions. The momentum of M-Commerce accelerated even further with the increased usage of smartphones, experiencing explosive growth, especially after the entry of new service providers like Jio. This surge in M-Commerce can be attributed to the widespread availability of affordable smartphones and mobile data plans. M-Commerce involves the seamless buying and selling of goods and services through mobile phones, with electronic payments conducted entirely via mobile devices. The services offered by M-Commerce include mobile money transfer, mobile ticketing, mobile coupon vouchers, content purchase and delivery, location-based services, mobile banking, mobile borrowing, in-application mobile phone payments, and mobile marketing and advertising. The convenience and accessibility provided by M-Commerce have played a significant role in shaping the digital transaction landscape in the post-demonetization era.

3.20 MODE OF DIGITAL TRANSACTIONS IN INDIA

During the November 2016 demonetization period in India, the focus extended beyond the elimination of black money to encourage a transition to a cashless economy. The shift aimed to reduce reliance on physical currency and promote digital transactions as an alternative to waiting in ATM queues. Several digital payment methods gained prominence during this time, including:

1. Cheque: Traditional paper-based method for making payments.
2. Demand Draft: A secure and prepaid instrument ordered by the payer.
3. Online Transfer (NEFT or RTGS): Electronic funds transfer methods for online transactions.
4. Plastic Money (Credit or Debit Cards): Payment cards facilitating electronic transactions.
5. E-Wallets: Digital wallets allowing electronic transactions and payments.
6. Mobile Wallets: Similar to e-wallets, mobile wallets enable convenient mobile-based transactions.
7. UPI Apps: Apps supporting the Unified Payments Interface for seamless and instant money transfers.
8. AEPS (Aadhaar Enabled Payment System): Payment system using Aadhaar authentication.
9. Net Banking: Online banking services allowing digital transactions.
10. Bharat QR Code: Quick Response codes facilitating secure and efficient transactions.
11. POS (Point of Sale): Devices allowing electronic card payments at retail locations.
12. Mobile Banking: Banking services accessible through mobile devices.
13. Bharat Interface for Money: An initiative promoting digital transactions in the Indian economy.

This diverse range of digital payment methods provided individuals and businesses with alternatives to cash transactions, contributing to the broader goal of fostering a cashless ecosystem in India.

3.21 FUTURE GROWTH

In 2021, transaction values experienced a remarkable 103% growth. Since its launch in 2016, the Unified Payments Interface (UPI) has surpassed expectations, constituting over 50% of retail payments in India within just five years. While the nation initially embraced digital payment methods post the demonetization of Rs 500 and Rs 1,000 bills in 2016, the pandemic in 2020 played a pivotal role in onboarding a significant number of new users to digital platforms during the nationwide lockdown. In 2021, the second year of the pandemic witnessed an unprecedented surge in digital transactions, especially during the severe second wave of Covid-19. It took four years for monthly UPI transaction values to exceed Rs 3 lakh crore in August 2020. Surprisingly, a mere 14 months later, in October, that figure more than doubled, surpassing the Rs 7 lakh crore milestone. As the habit of online payments became ingrained, many Indians now exclusively rely on digital transactions. QR codes for UPI payments are no longer exclusive to restaurants and larger establishments; they are widespread, even in small roadside stalls. The year commenced with the monthly UPI transaction value at Rs 4 lakh crore. Approaching the end of 2021, this value has nearly doubled to Rs 7.5 lakh crore (over \$100 billion). Paytm recently introduced the UPI Lite payments option, facilitated by the National Payments Corporation of India, allowing users to conduct multiple small-value UPI transactions instantly, thereby enhancing their digital payments experience. In September 2022, the Reserve Bank of India introduced UPI Lite to streamline the UPI transaction process. A circular issued by NPCI in May 2022 highlighted that 50% of total UPI transactions nationwide are valued at Rs 200 or less. As a result in 2022, digital payments experienced a growing adoption, with UPI emerging as the primary driver, as per the report. Popular payment instruments had already recorded digital transactions worth over ₹149.5 trillion by 2022. In 2023, over 11 billion digital payment transactions were done. Experts predict that in 2024 UPI will continue to grow about 60 percent in terms of volume above 2023 UPI transactions. P2M transactions will continue to trend higher than that of P2P transactions. It is estimated that UPI has over 250 million users today and this will continue to increase as smart devices further displace feature phones.

CHAPTER 4

GPAY AND PAYTM -A COMPARATIVE OUTLOOK

4.1 G PAY

Google Pay is a digital wallet platform and online payment system developed by Google. It enables users to make payments with Android phones, tablets or watches. It took over the branding of Google Chrome's autofill feature. Google Pay adopts the features of both Android Pay and Google Wallet through its in-store, peer-to-peer and online payment services.

Google Pay uses Near Field Communication (NFC) to transmit card information, facilitating funds transfer to the retailer. It replaces the credit or debit card chip and pin or magnetic stripe transaction at point-of-sale terminals by allowing the user to upload these in the Google Pay wallet. It is similar to contactless payments already used in many countries, with the addition of two-factor authentication. The service lets Android devices wirelessly communicate with point of sale systems using a near field communication (NFC) antenna, host-based card emulation (HCE), and Android's security. Google Pay takes advantage of physical authentications such as fingerprint ID where available. On devices without fingerprint ID, Google Pay is activated with a passcode. When the user makes a payment to a merchant, Google Pay does not send the credit or debit number with the payment. Instead, it generates a virtual account number representing the user's account information. This service keeps customer payment information private, sending a one-time security code instead of the card or user details.

4.1.1 Advantages of Gpay

- **Wide compatibility** - One of the greatest benefits of Google Pay is that it's widely compatible with both Android and iOS devices, so most customers who have those types of smartphones have access to Google Pay. With Google Pay, users can also make payments online through a website as well as through an app, so it provides a lot of flexibility to both businesses and customers.
- **Layers of security**- Both businesses and customers alike care about security when it comes to online payments, and Google Pay takes security

seriously. Google Pay uses tokenization, which means that a customer's debit or credit card information isn't shared with a business — only an assigned token number is. This prevents data theft as well as fraudulent transactions. Each transaction also has a unique code, making it easy to track and manage

- Additional uses – Customers can use Google Pay to make purchases, but they can also use it for other things, such as holding digital boarding passes or digital tickets. If your business runs events, this is a major bonus because you can make it easier for customers to keep track of event passes without having to fumble with paper tickets.
- Strong recordkeeping – From a business perspective, this is a major bonus: Google Pay tracks incoming and outgoing payments as well as customer invoices, which makes bookkeeping easier and less stressful. Each transaction made in your account is archived and available for review anytime.
- Rewards and Offers: GPay frequently offers rewards, cashback incentives, and discounts for using the platform, providing added value to users for their transactions
- Speed-Transactions with GPay are often faster than traditional payment methods, allowing for quick and efficient payments at checkout.
- Integration with Google Services- GPay seamlessly integrates with other Google services such as Gmail, Google Maps, and Google Assistant, providing a unified experience for users across different platforms.

4.1.2 Disadvantage of G pay

1) Limited availability in certain countries : Depending on where your business is located in the world, you may not be able to accept Google Pay as a payment method. While it does work in dozens of countries, it's still not as widely accepted as some other payment methods, such as PayPal. This can be a downside if your business is in a country that doesn't allow Google Pay or where people and businesses don't use it widely.

2) Limited list of participating banks: Google Pay is only supported by a limited number of banks, so if your bank doesn't use Google Pay, then you can't accept it as a payment method.

Similarly, if your customers' banks don't support Google Pay, they can't use it to make payments at your store. This is a downside for both consumers and businesses.

3) Slow bank account transfers: It can take up to three to five business days for a Google Pay transaction to show up in your bank account depending on the payment method the sender uses (e.g. a bank account vs a debit card). During this time, the transaction shows up as pending until it's complete.

4) NFC technology limitation : When it comes to in-person payments, Google Pay requires near field communication (NFC) technology to work. If your business doesn't have an NFC terminal, then your customers won't be able to make payments using Google Pay in person. Keep in mind that the price of NFC terminals can start around \$50 and go up to hundreds of dollars, depending on quality and features.

5) Transaction Fees : While G Pay typically does not charge users for transactions, there may be fees associated with certain types of transactions or international transfers

6) Privacy Concerns : Some users may have concerns about privacy and data collection practices associated with using GPay and other digital payment platforms, although Google claims to prioritize user privacy and security.

7. Compatibility Issues: GPay may not be compatible with all devices or operating systems, limiting its accessibility for some users.

4.2 PAYTM

In the bustling landscape of digital finance and e-commerce, Paytm stands as a beacon of innovation and empowerment, revolutionizing the way individuals transact and engage with financial services. Founded in 2010 by Vijay Shekhar Sharma, Paytm—short for “Pay Through Mobile”—embodies the ethos of convenience, accessibility, and inclusivity, offering users a comprehensive suite of digital payment solutions, financial services, and e-commerce offerings.

Paytm started the Digital Revolution in India. And went on to become India's leading Payments App. Today, more than 20 Million merchants & businesses are powered by Paytm to Accept Payments digitally. This is because more than 300 million Indians use Paytm to Pay at their stores. And that's not all, Paytm App is used to Pay bills, do Recharges, Send money to friends& family, Book movies & travel tickets.

With innovations to financial services & products in pipeline, this is but one of the milestones achieved towards the mission—To bring 500 million unserved and underserved Indians to the mainstream economy. Paytm is India's largest financial services firm providing an entire range of online payments & financial solutions to customers, online retailers and service partners. The company works towards a vision of introducing at least half a billion Indians into the mainstream economy through payments, trade, finance, recruitment, and financial services.

One 97 Communications Limited, which owns the Paytm brand, was founded by Vijay Shekhar Sharma in the year 2010. It is headquartered in Noida, Uttar Pradesh. Its primary investors include Softbank, AntFinancial, AGH Holdings, SAIF Partners, Berkshire Hathaway, T Rowe Price and Discovery Capital.

4.2.1 Advantages of Paytm

- Eliminating the need for extra things :The Paytm wallet eliminates the need to carry cash, debit cards, credit cards, and other items. The Paytm wallet is sufficient for various transactions, such as utility bill payments, recharge, fuel payments, and more.
- Secure payment mode : Paytm is governed by RBI (Reserve Bank of India) rules. Paytm has divided the use of its wallet based on KYC (Know Your Customer) requirements. Users with maximum KYC can: Pay merchants online and offline. Maintain a balance of up to Rs. 1,00,000 in their Paytm wallet without any restrictions.
- No screenshot or video recording :The user is not allowed to record the screen or take screenshots during a transaction. This protects the user's banking information from misuse by third parties.
- Send money to the bank :Paytm wallet allows users to send money directly to a recipient's bank account. To complete the payment, the sender needs to complete the KYC process and enter the recipient's account details. The money will be transferred from the sender's preferred payment method to the recipient's bank account.
- No PIN need :Paytm wallet users do not need to enter a PIN to complete a transaction.

- Send gift voucher : Paytm wallet users can send gift vouchers to friends and family.
- Automatic add money :The Paytm wallet has a feature that automatically adds money to the wallet when the balance falls below a certain threshold.This can be done using the user's preferred payment method.

4.2.2 Disadvantage of Paytm

- 1) High Interest Charges-There is a very high interest rate applicable on the billed amount using a credit card, which may eventually lead you to high debts. However, this interest is applicable only in case of late payments of the credit amount.
- 2) Potential for Fraud and Scams: Like any digital payment platform, Paytm users may be vulnerable to fraudulent activities such as phishing scams, unauthorized transactions, or account hacking if proper security measures are not in place.
- 3) Cashback and Promotional Offers: While cashback and promotional offers can be a benefit for users, they may also encourage overspending or impulse purchases, leading to financial strain if not managed responsibly.
- 4) Dependency on Internet Connectivity: Paytm transactions require an internet connection to process, which may be a disadvantage in areas with poor connectivity or during network outages.
- 5) Limited Merchant Acceptance: While Paytm is widely accepted at many merchants, its acceptance may be limited in some regions or establishments compared to other payment methods such as cash or cards.
- 6) Privacy Concerns: Some users may have concerns about privacy and data security when using Paytm, particularly regarding the collection and use of personal information for targeted advertising or other purposes.
- 7) Compatibility Issues: Paytm may not be compatible with all devices or operating systems, limiting its accessibility for some users.

4.3 SCOPE OF GPAY AND PAYTM

The scope of G Pay and Paytm is quite extensive. Both platforms offer a wide range of services and features that make digital payments and transactions convenient. Here are some aspects of their scope:

1. Payment Options: Both G Pay and Paytm allow users to make

payments using various methods, including bank accounts, credit/debit cards, and UPI (Unified Payments Interface).2. Utility Bill Payments: You can use both G Pay and Paytm to pay your utility bills, such as electricity, water, and gas bills.3. Online Shopping: Both platforms have integrated online marketplaces where you can shop for a variety of products and make payments seamlessly.

4. Mobile Recharge: G Pay and Paytm enable you to recharge your mobile phone and pay for mobile services.5. Peer-to-Peer Transfers: You can send money to friends, family, or anyone else using G Pay and Paytm, making it easy to split bills or send money quickly.6. Ticket Booking: Both platforms offer ticket booking services for movies, flights, trains, and other events.7. Cashback and Offers: GPay and Paytm often provide cashback offers, discounts, and rewards to users for using their platforms.

These are just some of the areas where GPay and Paytm have a significant scope. They continue to expand their services and features to cater to the evolving needs of their users

CHAPTER 5

DATA ANALYSIS AND INTERPRETATION

The UPI (Unified Payments Interface) survey, conducted through a Google Form, serves as a pivotal tool in gauging user experiences, preferences, and insights within the realm of digital payment systems. The survey is conducted among 100 UPI users. As a rapidly evolving technology that has revolutionised the way transactions are carried out in India, UPI has garnered widespread adoption and interest among consumers, businesses, and policymakers alike. This survey aims to gather comprehensive feedback and data regarding various aspects of UPI usage, including user satisfaction levels, transaction frequency, preferred features, and potential areas for improvement. Through the convenience and accessibility of Google Forms, participants are provided with a seamless platform to contribute their valuable perspectives, thereby aiding in the continuous enhancement and refinement of the UPI ecosystem. A comparison between G Pay and Paytm is also done in the survey regarding customer perception.

5.1 Classification based on preference of mode of payments

Table 5.1 Classification based on preference of mode of payments

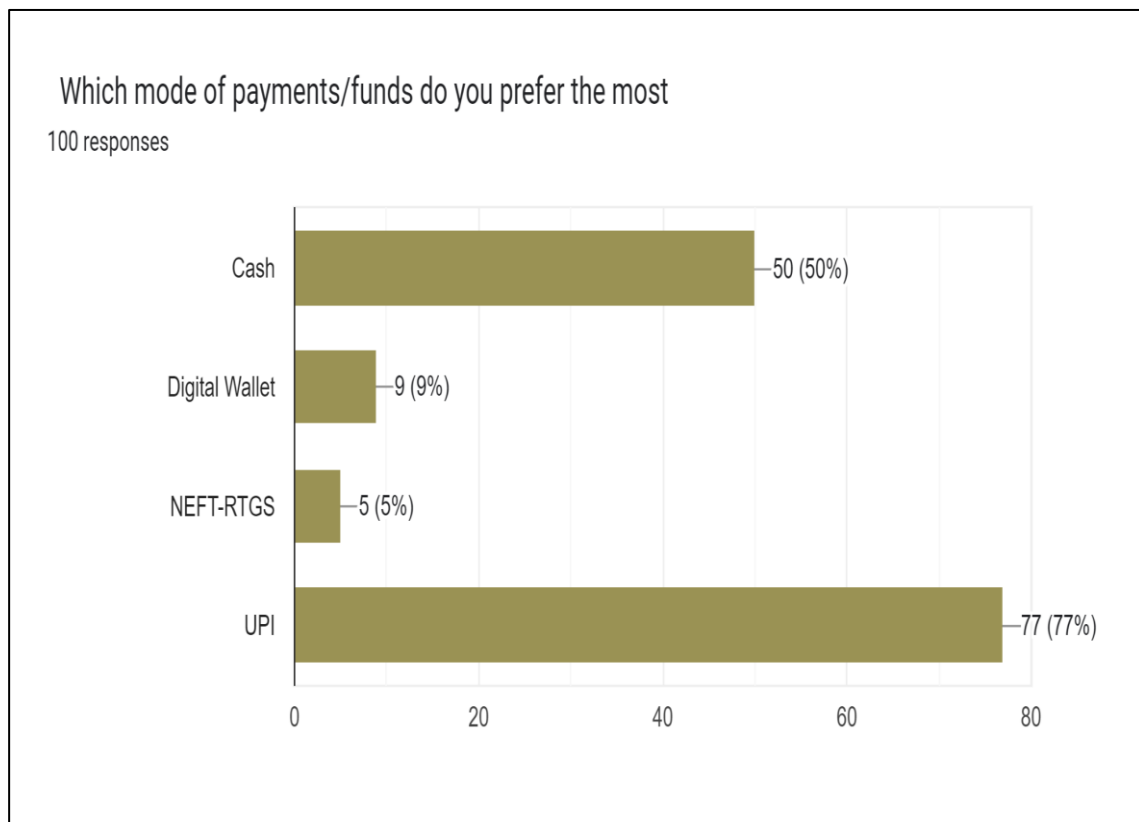
Mode of payments	Number of respondents
Cash	50
Digital Wallet	9
NEFT-RTGS	5
UPI	77

Source: Primary Data

The largest group of respondents, comprising 50 individuals, prefer to use cash as their primary mode of payment. This suggests that despite the availability of digital payment options like UPI, a significant portion of users still relies on physical currency for transactions. A smaller subset of respondents, totaling 9 individuals, prefer using digital wallets for their transactions. Digital wallets are electronic platforms that allow users to store funds and make payments digitally, often via mobile applications. There are 5 respondents who prefer using NEFT (National Electronic Funds Transfer) or RTGS (Real-Time Gross Settlement) for their transactions. These are traditional bank transfer methods used for large-value transactions between bank accounts. The majority of respondents, totaling 77, prefer to use UPI for their transactions. UPI is a real-time payment system that enables users to instantly transfer funds between bank accounts using a mobile phone. Its popularity among respondents suggests a strong preference for fast and convenient digital payment options.

Figure 5.1

Classification based on preference of mode of payments



5.2 Classification based on knowledge about UPI

Table 5.2

Classification based on knowledge about UPI

Knowledge about UPI	Knowledge about UPI
Word of mouth(Friends&Relatives)	35
Advertisement	16
Internet	49
Total	100

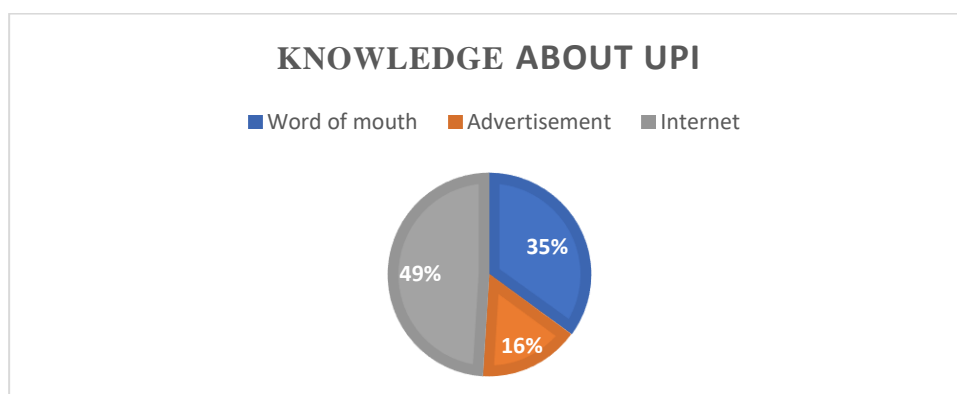
Source : Primary Data

The majority of respondents, totalling 49, acquired knowledge about UPI through the internet. This includes online resources such as websites, blogs, social media platforms, and online forums where information about UPI is readily available. The internet serves as a convenient and accessible source for users to educate themselves about UPI features, benefits, and usage instructions.

The data highlights the diverse sources from which respondents obtained knowledge about UPI. While word of mouth, advertisements, and the internet are prominent channels, it's essential to recognize the role of each in shaping users' understanding and perception of UPI. This underscores the importance of comprehensive communication strategies that leverage multiple channels to effectively disseminate

Figure 5.2

Classification based on knowledge about UPI



5.3 Classification based on duration or knowledge of using UPI

Table 5.3

Classification based on duration or knowledge of UPI

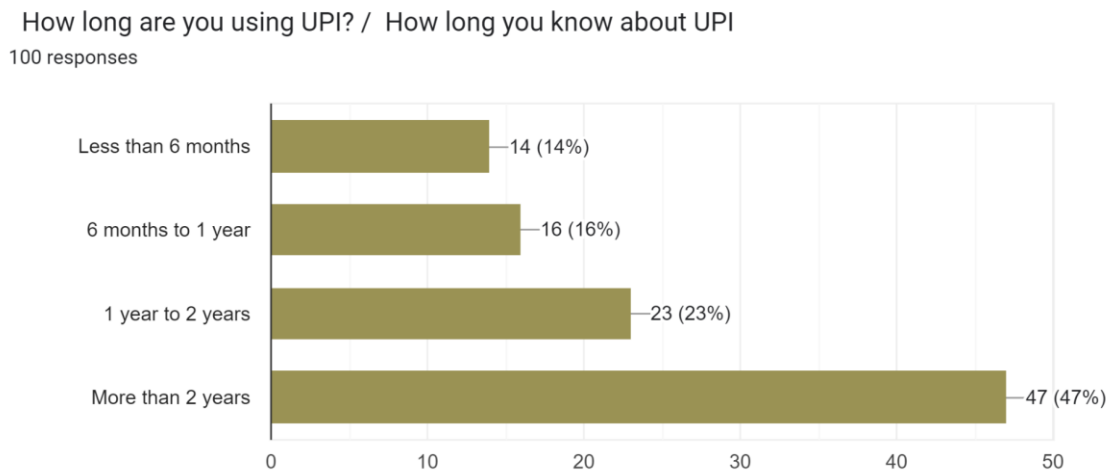
Duration of usage	Number of respondents
Less than 6 months	14
6 months to 1 year	16
1 year to 2 years	23
More than 2 years	47
Total	100

Source : Primary Data

A small group of respondents, comprising 14 individuals, have been using or are familiar with UPI for less than 6 months. There are 16 respondents who have been using or have knowledge of UPI for a duration ranging from 6 months to 1 year. This indicates a relatively steady rate of adoption and retention among users who have transitioned to UPI within the past year. A larger group of respondents, totaling 23 individuals, have been using or are familiar with UPI for a duration spanning between 1 year to 2 years. The majority of respondents, comprising 47 individuals, have been using or have knowledge of UPI for more than 2 years. This indicates a significant base of long-term users who have continued to rely on UPI as a preferred mode of digital payment over time, highlighting its sustained relevance and effectiveness.

Figure 5.3

Classification based on duration or knowledge of UPI



5.4 Classification based on number of digital payment apps used

Table 5.4

Classification based on number of digital payment apps used

Number of Apps	Number of Respondents
1	27
2	28
More than 2	45

Source : Primary Data

The classification provided is based on the number of digital payment Unified Payments Interface (UPI) apps used by respondents. The data categorizes respondents into four groups:

There are 27 respondents who use only one UPI app for their digital payments. 28 respondents utilize two different UPI apps for their digital transactions. This category encompasses 45 respondents who utilize more than two different UPI apps for their digital payments.

5.5 Classification based on apps used by people

Table 5.5

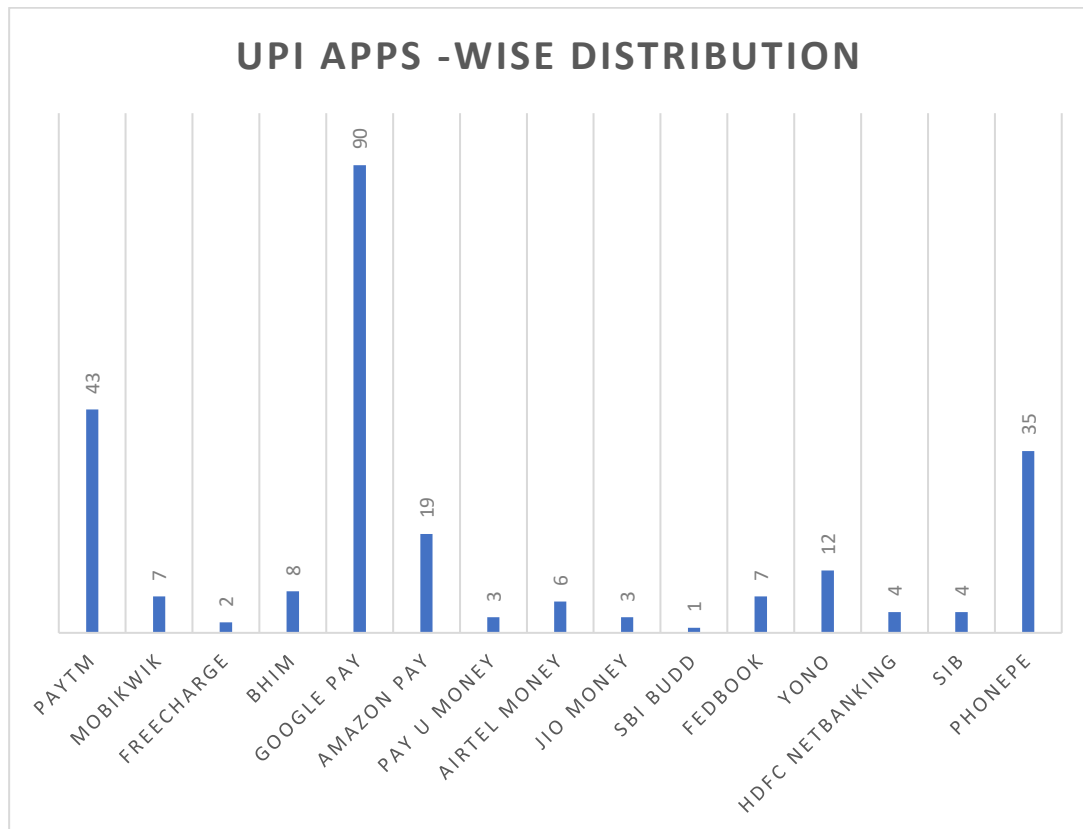
Classification based on apps used by people

Apps	Number of respondents using (out of 100)
Paytm	43
Mobikwik	7
Freecharge	2
BHIM	8
Google Pay	90
Amazon Pay	19
Pay U Money	3
Airtel Money	6
Jio Money	3
SBI Budd	1
Fedbook	7
YONO	12
HDFC Netbanking	4
SIB	4
Phonepe	35

Source : Primary data

This classification table categorizes respondents based on the mobile payment apps they use, along with the number of respondents using each app out of 100. Paytm is a widely used mobile payment and e-commerce platform in India. 43 out of 100 respondents reported using Paytm for their transactions, indicating its popularity among users. Google Pay is a popular UPI-based digital payment app developed by Google. 90 out of 100 respondents reported using Google Pay, making it the most widely used app among the respondents. The data reflects the diverse landscape of mobile payment apps used by respondents, with Google Pay being the most widely used followed by Paytm and Phonepe. Other apps like BHIM, Amazon Pay, and YONO also have notable user bases, while some apps have fewer users or were not reported by the respondents.

Fig 5.4



5.6 Classification based on frequency of usage

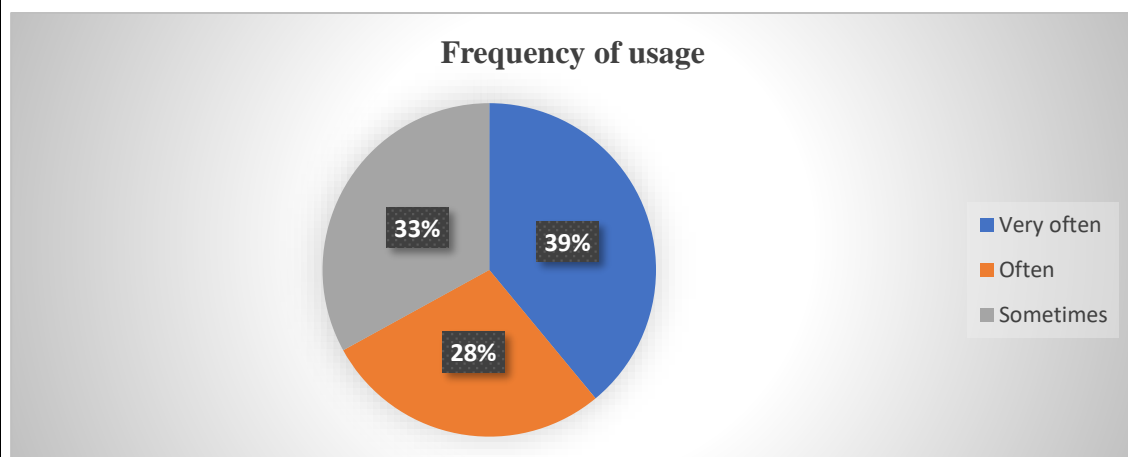
Table 5.6
Classification based on frequency of usage

Usage	No of respondents
Very often	39
Often	28
Sometimes	33
Total	100

Source : Primary data

The classification provided is based on the frequency of usage of Unified Payments Interface (UPI) among respondents. Very often- category includes 39 respondents who use UPI very frequently for their transactions, indicating a high level of usage and dependence on this digital payment method. 28 respondents fall into 'often' category, indicating that they use UPI frequently. There are 33 respondents who use UPI occasionally for their transactions, suggesting a moderate level of usage. This classification provides insights into the distribution of respondents based on their usage patterns of UPI. It highlights the varying degrees of reliance on UPI for digital transactions among the respondents, ranging from very frequent to rare usage.

Figure 5.5
Classification based on frequency of usage



5.7 Classification based on purpose

Table 5.7

Classification based on purpose.

Purpose	Number of respondents
P2P transaction	5
Bill payments/Recharge	7
Shopping	9
All of the above	79
Total	100

Source : Primary data

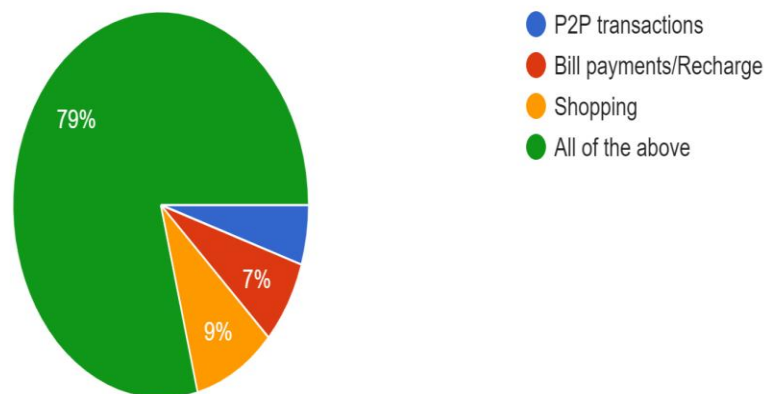
Table 5.7 provides the purpose of Unified Payments Interface (UPI) transactions among respondents. The data categorizes respondents into four groups based on the purposes for which they primarily use UPI. 5 respondents who primarily use UPI for person-to-person (P2P) transactions, such as transferring money to friends or family members. There are 7 respondents who primarily use UPI for paying bills or recharging services, such as mobile phone recharges or utility bill payments. 9 respondents fall into this category, indicating that they primarily use UPI for making purchases while shopping, either online or offline. The majority of respondents, totaling 79, use UPI for all purposes mentioned above, including P2P transactions, bill payments/recharge, and shopping. This suggests that a large portion of respondents utilize UPI as a versatile payment method that caters to various transactional needs.

This classification provides insights into the distribution of respondents based on their primary purposes for using UPI. It indicates the diverse range of applications for which UPI is utilized, including peer-to-peer transactions, bill payments, recharges, and shopping, with a significant portion of respondents leveraging UPI for multiple purposes.

Figure 5.6
Classification based on purpose

For what purpose do you use UPI?

100 responses



5.8 Classification based on adoption of online payment over physical payments

Table 5.8

Classification based on adoption of online payment over physical payments

Benefactions	Number of respondents
Convenient	38
Cashback	9
Multiple payment method	1
All of the above	52
Total	100

Source : Primary data

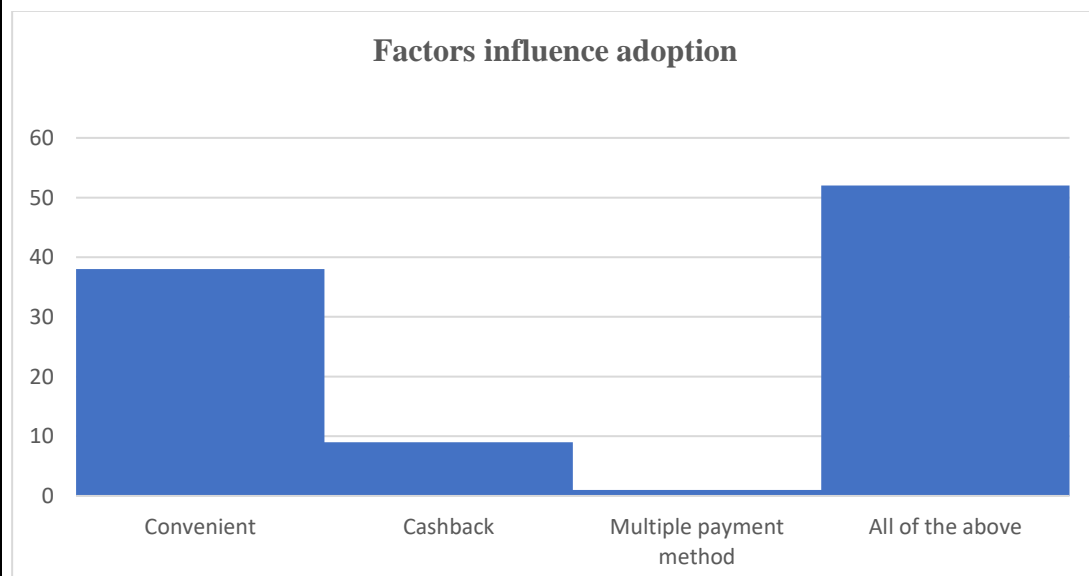
The classification provided is based on the factors that influence the adoption of online Unified Payments Interface (UPI) payments over physical payments among respondents. The data categorizes respondents into four groups based on the perceived benefactions or advantages of using online UPI payments: 38 respondents who find online UPI payments convenient compared to physical payments. Convenience could refer to factors such as ease of use, time-saving, and accessibility. There are 9 respondents who are motivated to use online UPI payments due to the availability of cashback incentives. Cashback offers provide financial incentives that encourage users to opt for online transactions over physical payments.

Only 1 respondent falls into this category, indicating that a minority of respondents value the availability of multiple payment methods when adopting online UPI payments. This could imply a preference for flexibility in payment options.

This classification provides insights into the factors driving the adoption of online UPI payments among respondents. It highlights the varied motivations, including convenience, financial incentives like cashback, and the availability of multiple payment methods, which influence their preference for digital transactions over traditional physical payments.

Figure 5.7

Classification based on adoption of online payment over physical payments



5.9 Classification based on UPI having wallet option

Table 5.9
Classification based on UPI having wallet option

Wallet Option	Number of respondents
Available	44
Unavailable	13
Unaware	43
Total	100

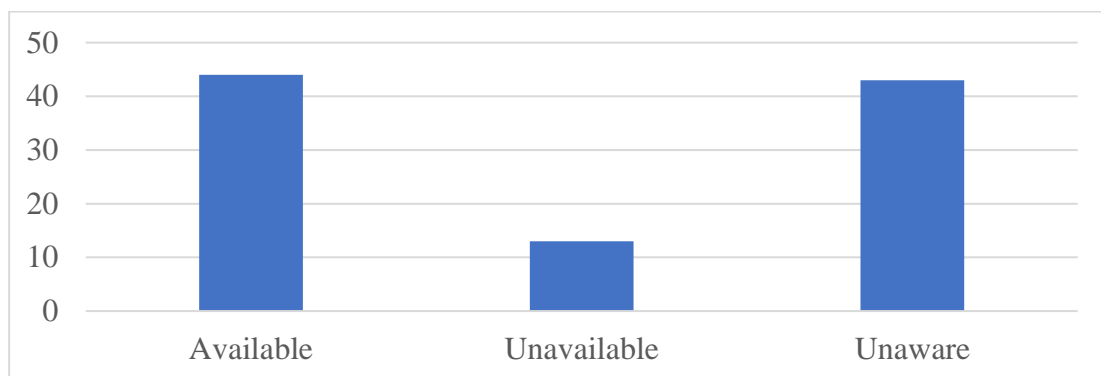
Source : Primary Data

The classification provided is based on respondents' awareness of whether the Unified Payments Interface (UPI) app they use offers a wallet option. The data categorizes respondents into three groups: 44 respondents are aware that their UPI app provides a wallet option for their transactions. Only 13 respondents are aware that their UPI app does not offer a wallet option. A majority of respondents, 43, are unaware of whether their UPI app has a wallet option or not. This classification suggests several insights: A considerable portion of respondents (43%) are unaware of whether their UPI app provides a wallet option or not. This indicates a potential gap in communication or marketing efforts by UPI service providers regarding the features and functionalities of their apps. Among those who are aware, a significant number (44 respondents) use UPI apps that offer a wallet option. This suggests that having a wallet feature could be a preferred or desirable aspect for users, possibly due to added convenience or functionality.

With only 13 respondents explicitly mentioning that their UPI app does not have a wallet option, there might be opportunities for UPI service providers to enhance their communication strategies to ensure users are well-informed about the features available in their apps.

Figure 5.8

Classification based on UPI having wallet option.



5.10 Classification based on safety of UPI payments

Table 5.10

Classification based on safety of UPI payments

Safety concerns	Number of respondents
Safe	70
Unsafe	3
Don't know	27
Total	100

Source : Primary data

Table 5.10 reveals 70 respondents perceive UPI payments as safe and secure. Only 3 respondents consider UPI payments to be unsafe. A significant portion of respondents, totaling 27, express uncertainty about the safety of UPI payments. The majority of respondents (70%) feel that UPI payments are safe. This suggests a level of trust in the

security measures implemented within the UPI system by banks and payment service providers.

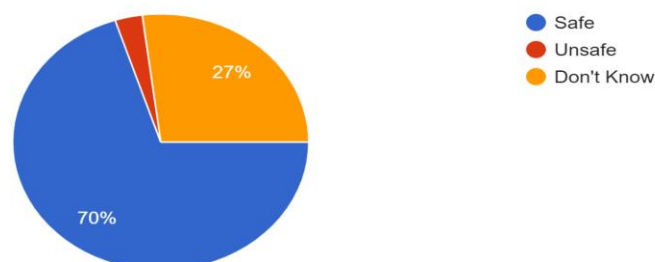
The fact that only 3 respondents perceive UPI payments as unsafe indicates that concerns regarding the safety of UPI transactions are relatively low among the surveyed individuals. This could be attributed to the robust encryption and authentication protocols employed by UPI systems. A considerable portion of respondents (27%) are unsure about the safety of UPI payments. This indicates a potential lack of awareness or understanding regarding the security features of UPI platforms. There is an opportunity for education and awareness campaigns to address these uncertainties and enhance consumer confidence in UPI transactions.

Despite the overwhelmingly positive perception of UPI safety, it's crucial for UPI service providers and regulators to continuously enhance security measures and educate users about best practices for secure transactions. This proactive approach can help maintain trust and confidence in UPI systems amid evolving cybersecurity threats. The discussion highlights the importance of addressing safety concerns, providing clear information about security measures, and continuously improving UPI systems to ensure the safety and security of digital transactions.

Figure 5.9

Classification based on safety of UPI payments

Do you think UPI payments are safe?
100 responses



5.11 Classification based on level of satisfaction

Table 5.11
Classification based on level of satisfaction

Level of satisfaction	Number of respondents
Highly satisfied	20
Satisfied	75
Dissatisfied	5
Total	100

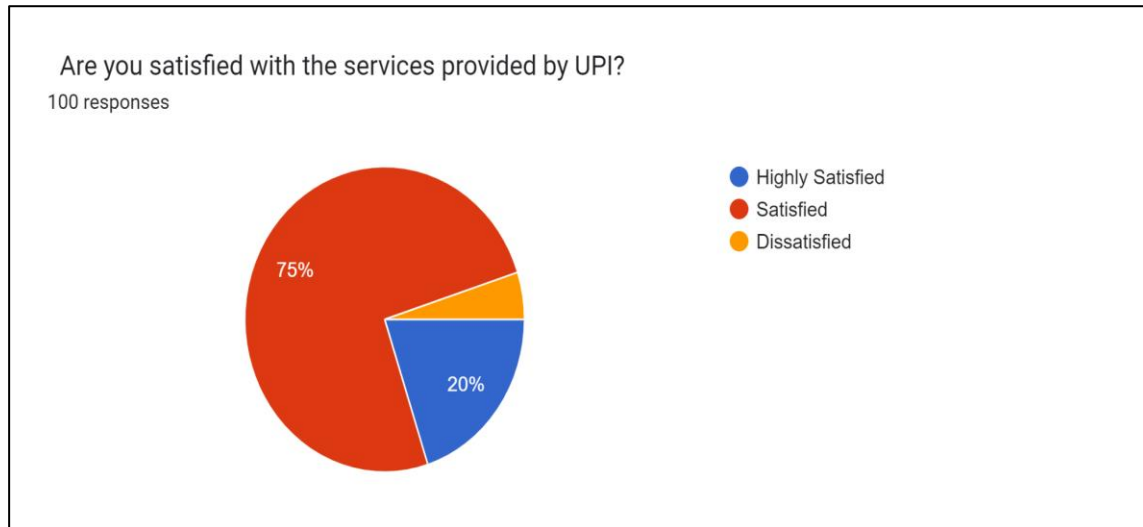
Source : Primary data

Table 5.11 highlights 20 respondents express a high level of satisfaction with UPI transactions, indicating that they are extremely pleased with their experiences using UPI for digital payments. The majority of respondents, totaling 75, indicate that they are satisfied with UPI transactions. This suggests that a significant portion of users find UPI to be a reliable and satisfactory payment method. Only 5 respondents report being dissatisfied with UPI transactions, indicating that a small minority of users have negative experiences or encounters with UPI payments.

This classification provides insights into the overall satisfaction levels among respondents regarding their experiences with UPI transactions.

Figure 5.10

Classification based on level of satisfaction



5.12 Classification based on knowledge about transaction limit (1 lakh)

Table 5.12

Classification based on knowledge about transaction limit (1 lakh)

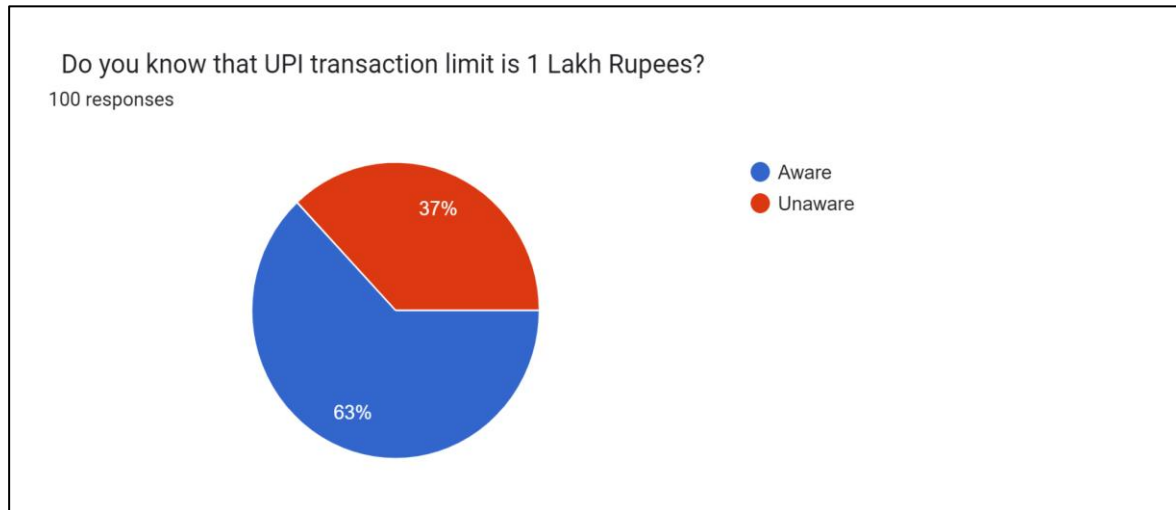
Knowledge about transaction limit	Number of respondents
Aware	63
Unaware	37
Total	100

Source : Primary data

The above table shows awareness of people about the UPI transaction limit and it shows that 63% of people are aware of transaction limits ,and 37% of people are unaware of the limits.

Figure 5.11

Classification based on knowledge about transaction limit (1 lakh)



5.13 Classification based on awareness about UPI apps providing interest rate

Table 5.13

Classification based on UPI apps providing interest rate.

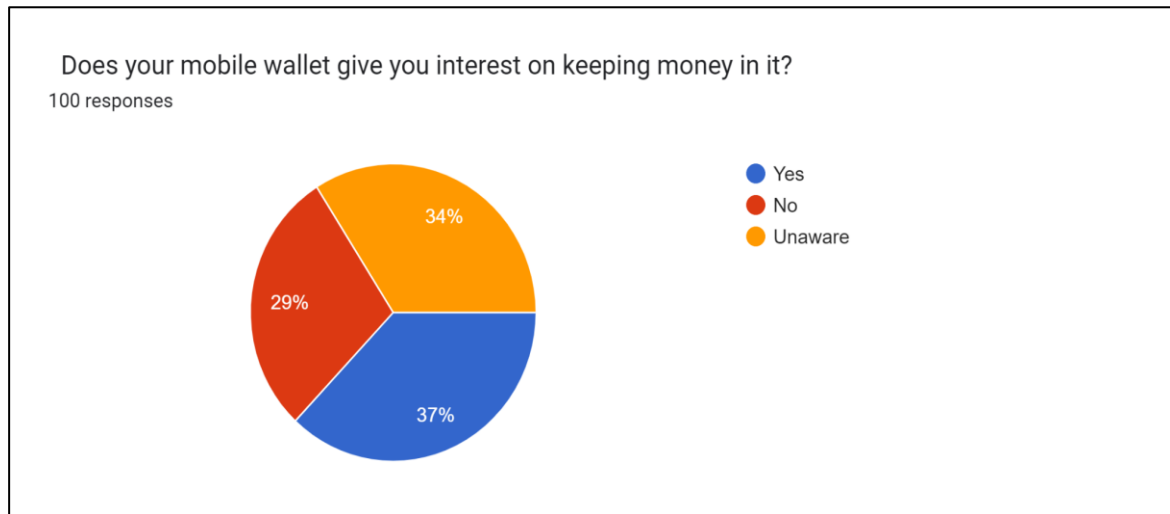
Interest rate	Number of respondents
Yes	37
No	29
Unaware	34
Total	100

Source : Primary data

The above table shows whether the mobile wallet provides interest in keeping money in it and it shows that 37% of people are interested, 29% aren't interested, 34% are unaware.

Figure 5.12

Classification based on UPI apps providing interest rate



5.14 Classification based on tendency in spending or saving of money

Table 5.14

Classification based on tendency in spending or saving of money

Trends (increase in)	Number of respondents
Spending	63
Savings	15
No change	22
Total	100

Source : Primary data

The Table 5.14 is based on respondents' tendencies in spending or saving money regarding Unified Payments Interface (UPI) transactions. The data categorizes respondents into three groups based on their observed trends. The majority of respondents, totaling 63, report an increase in spending when using UPI for transactions. 15 respondents indicate that they have

observed an increase in savings while utilizing UPI for their transactions. 22 respondents state that there has been no significant change in their spending or saving habits regarding UPI transactions.

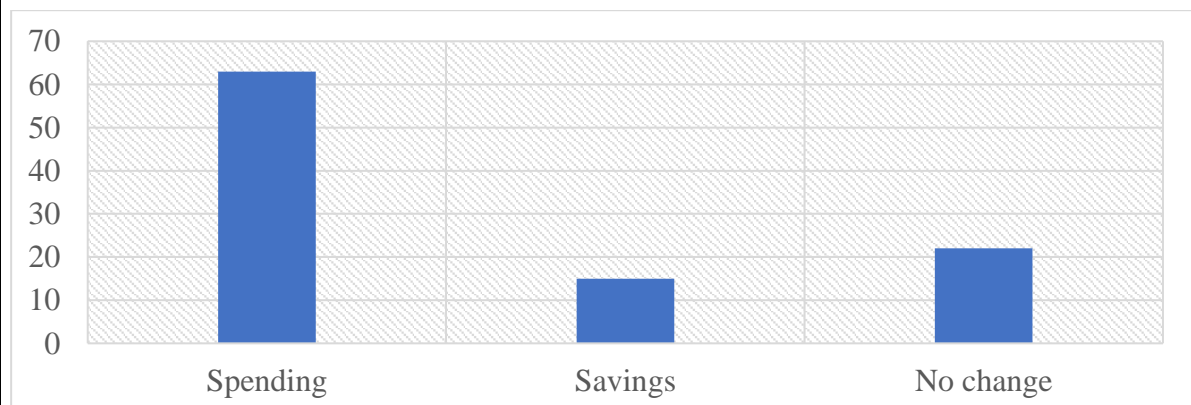
The fact that a significant majority of respondents (63%) report an increase in spending suggests that UPI transactions may facilitate easier and more frequent purchases. The convenience and accessibility of UPI payments might lead to impulsive buying behavior or increased spending on goods and services.

Although fewer in number, 15 respondents mention an increase in savings with the use of UPI transactions. This could be attributed to features such as instant transfers and real-time tracking of expenses offered by UPI apps, enabling users to have better control over their finances and allocate savings more efficiently.

A notable portion of respondents (22%) report no significant change in their spending or saving habits with UPI transactions. This could imply that while UPI offers convenience and efficiency in payments, it may not necessarily influence individuals' overall spending or saving behaviors. The observed trends highlight the importance of financial literacy and responsible spending habits among UPI users. While UPI transactions provide convenience and flexibility, users should also be mindful of their spending habits and strive to maintain a balance between spending and saving. UPI service providers could leverage these trends to offer additional features and tools within their apps to promote responsible spending and saving habits. Providing users with insights into their spending patterns and offering budgeting tools could empower them to make informed financial decisions.

Figure 5.13

Classification based on tendency in spending or saving of money.



5.15 Classification based on problems faced while using UPI

Table 5.15

Classification based on problems faced while using UPI

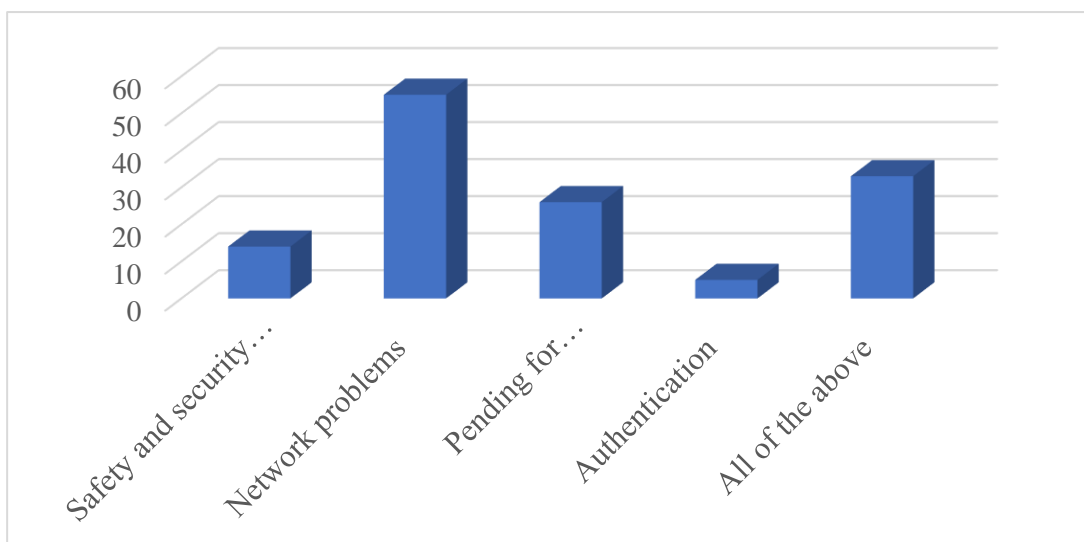
Problems faced	Number of respondents
Safety and security authentications	14
Network problems	55
Pending for verification	26
Authentication	5
All of the above	33
Total	100

Source : Primary data

This classification Table 5.15 represents the problems faced by users while using UPI (Unified Payments Interface), along with the number of respondents who encountered each specific issue. These respondents (14) experienced issues related to safety and security measures while using UPI. This could include concerns about the authentication process, such as OTP (one-time password) verification or biometric authentication.

Figure 5.14

Classification based on problems faced while using UPI



The largest group of respondents (55) faced network-related issues. This indicates problems with internet connectivity or server issues that affected their ability to complete transactions or access UPI services. The respondents (26) encountered delays or issues related to the verification process for their UPI transactions might involve transactions stuck in a pending state due to verification failures or delays from the bank's end. A smaller subset of respondents (5) specifically faced issues related to authentication. This could include difficulties in verifying their identity or accessing their UPI accounts due to authentication failures.

Some respondents (33) reported facing multiple issues simultaneously. This category includes those who encountered a combination of safety and security authentication problems, network issues, pending verification, and authentication challenges. Generally, network problems appear to be the most common issue faced by UPI users, followed by pending verification and safety/security authentication concerns. While authentication issues and facing all the mentioned problems were less prevalent, they still affected a notable portion of the respondents. Addressing these issues could help improve the user experience and reliability of UPI transactions.

5.16 Classifications based on rating on UPI

Table 5.16

Classifications based on rating on UPI

Ratings	Number of respondents
1	10
2	7
3	30
4	39
5	14
Total	100

Source : Primary source

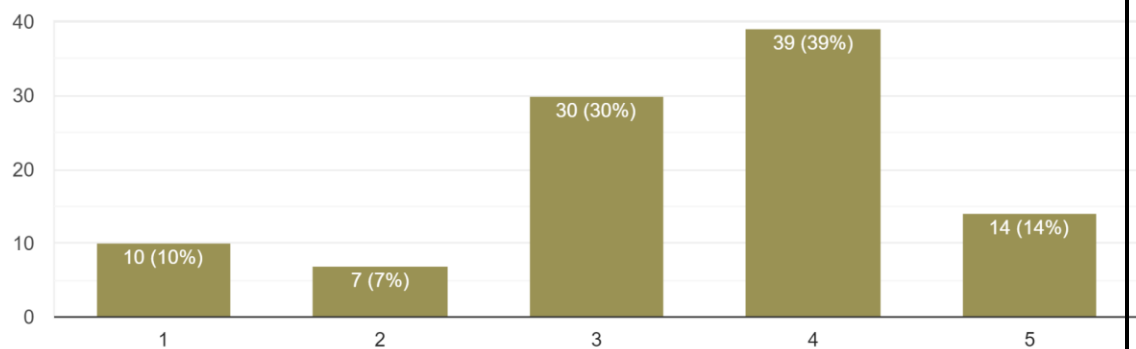
The classification provided is based on respondents' ratings of Unified Payments Interface (UPI) services. Respondents were asked to rate UPI services on a scale of 1 to 5, with 1 being the lowest rating and 5 being the highest. Here's the breakdown of responses: 10 respondents gave the lowest rating possible for UPI services. 7 respondents rated UPI services slightly higher than the lowest rating. 30 respondents gave a moderate rating to UPI services. The majority of respondents, totaling 39, rated UPI services quite positively. 14 respondents gave the highest possible rating for UPI services. The majority of respondents (53%) rated UPI services with a rating of 4 or 5, indicating a high level of satisfaction with the platform. This suggests that UPI is generally perceived positively by users for its convenience, accessibility, and reliability in facilitating digital transactions.

A significant portion of respondents (30%) provided a rating of 3, indicating a moderate level of satisfaction with UPI services. While these respondents may have some concerns or areas for improvement, they still generally view UPI as an effective payment solution.

Figure 5.15

Classifications based on rating on UPI

UPI provides flexibility and easy tracking of spending (Rate This)
100 responses



The presence of respondents giving lower ratings (10% for rating 1 and 7% for rating 2) suggests that there are areas where UPI services can be improved. These respondents may have encountered issues such as transaction failures, security concerns, or usability issues that have impacted their overall satisfaction with UPI. It's crucial for UPI service providers to gather feedback from users who have provided lower ratings to identify pain points and areas for improvement. Addressing these concerns can help enhance the overall user experience.

and satisfaction with UPI services. Despite the generally positive ratings, there is always room for improvement. UPI service providers should continue to invest in technology, security measures, and user experience enhancements to ensure that UPI remains a preferred choice for digital payments among users.

Overall, the discussion highlights the varying levels of satisfaction among respondents regarding UPI services and emphasizes the importance of addressing user feedback to drive continuous improvement in the platform.

5.17 Comparison of user perception between GPay and Paytm

Table 5.17

Comparison of easiness of transaction

<u>Platform</u>	<u>Number</u>
<u>G Pay</u>	<u>22</u>
<u>Paytm</u>	<u>16</u>
<u>Total</u>	<u>38</u>

With a reported number of 22 transactions, it suggests that users find G Pay relatively easy to use for transactions. G Pay, being a digital wallet and online payment system developed by Google, is designed to offer a seamless and convenient payment experience. It allows users to link their bank accounts, credit or debit cards to make payments both online and at physical stores, as well as for peer-to-peer transfers. The higher number of transactions could indicate that users find it convenient, reliable, and widely accepted at various merchants.

With 16 transactions, Paytm seems to also offer a fairly smooth transaction experience, although the number is slightly lower than that of G Pay. Paytm is one of India's leading digital payment platforms, offering a range of services including mobile recharges, bill payments, and online shopping, besides peer-to-peer transfers. Users can load money into their Paytm wallet and use it for various transactions, including offline payments via QR codes. While it's widely popular and accepted across India, the slightly lower number of transactions might suggest a slightly lesser usage compared to G Pay.

In summary, while both G Pay and Paytm offer convenient transaction experiences, the slightly higher number of transactions for G Pay might indicate a slightly greater ease of use or preference among users. However, it's essential to consider various factors such as regional

popularity, user preferences, and merchant acceptance when comparing the ease of transactions between different payment platforms.

Fig 5.16

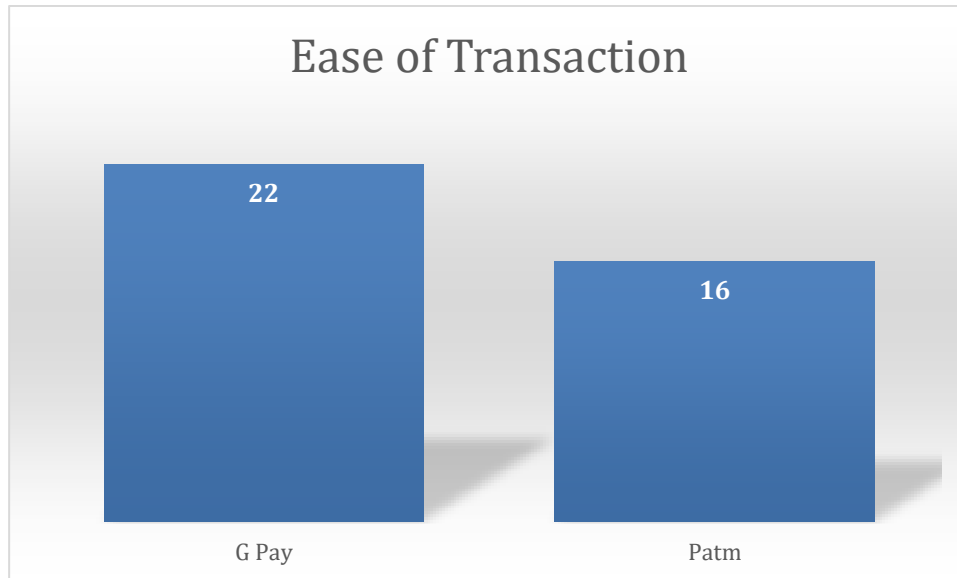


Table 5.18

Perception regarding Security

Platform	Number
G Pay is more secure	8
Paytm Paytm is more secure	6
Both are equal	24
Total	38

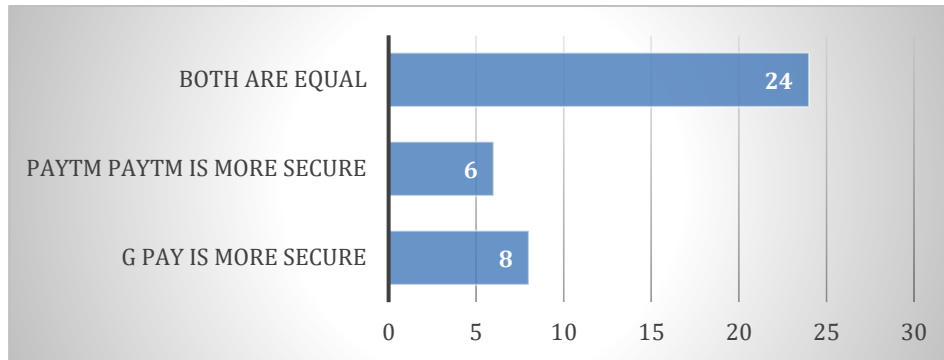
Source-Primary data

Out of the total respondents, 8 individuals believe that G Pay offers superior security compared to Paytm. This indicates that a subset of users perceives G Pay as a more secure option for their transactions. Conversely, 6 respondents feel that Paytm provides better security features compared to G Pay. Interestingly, the majority of respondents (24 individuals) perceive both G Pay and Paytm as equally secure. This suggests that a significant portion of users either finds the security features offered by both platforms to be comparable or they are not significantly influenced by security considerations when choosing between

the two. This suggests that both G Pay and Paytm have implemented effective security measures to instill confidence in their users regarding the safety of their transactions.

Fig5.17

Comparison of Security perception



The Table5.19 reveals 6 individuals express a very high level of confidence in Paytm transactions. This suggests that there is a subset of users who have complete trust and faith in the security, reliability, and effectiveness of Paytm as a digital payment platform. The majority of respondents (16 individuals) indicate a moderate level of confidence in Paytm transactions. While they may have some concerns or reservations, they still feel comfortable using Paytm for their transactions. 11 respondents express a neutral stance regarding their confidence in Paytm transactions. This group neither strongly trusts nor distrusts Paytm and may have a relatively indifferent attitude towards using the platform. They may not have formed a strong opinion based on their experiences or may not use Paytm frequently enough to have a clear perspective. 8 individuals indicate a low level of confidence in Paytm transactions. This suggests that there are users who have significant doubts or concerns about the security or reliability of the platform. They may have had negative experiences or heard about issues related to Paytm transactions that have influenced their confidence negatively. 2 respondents express the lowest level of confidence in Paytm transactions, indicating a complete lack of trust in the platform's security or reliability. These users may have experienced significant issues or security breaches with Paytm transactions, leading to a complete loss of confidence in the platform.

Table 5.19
Confidence regarding security of Paytm

Confidence level	Number
Very Confident	6
Somewhat confident	16
Neutral	11
Not very Confident	8
Not confident at all	2
Total	43

In short, while there is a significant portion of users who express confidence in Paytm transactions, there are also individuals with varying degrees of skepticism or uncertainty. This suggests that Paytm may need to address concerns related to security, reliability, or user experience to enhance trust and confidence among users across the board.

Fig 5.18
Confidence on security

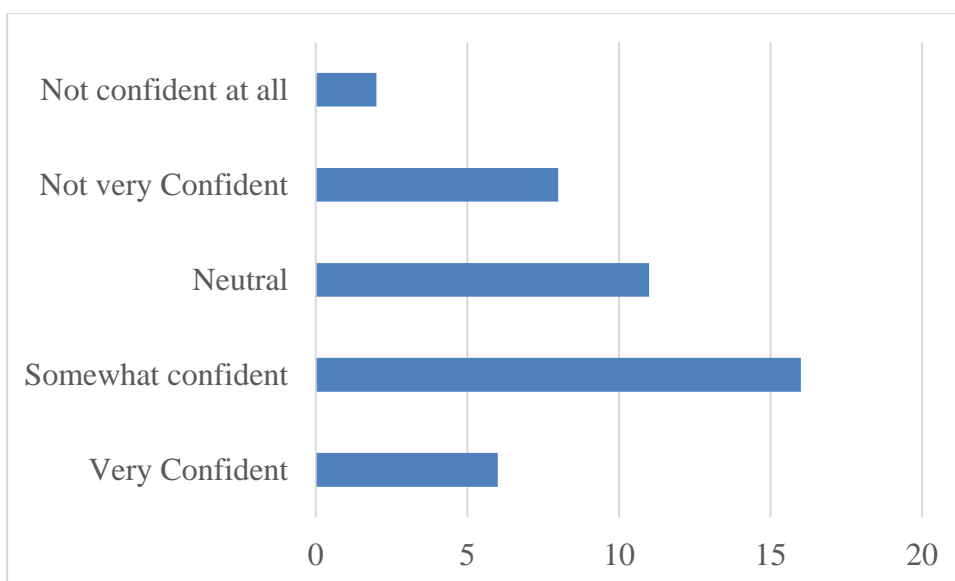


Table 5.20

Better rewards and cashback incentives

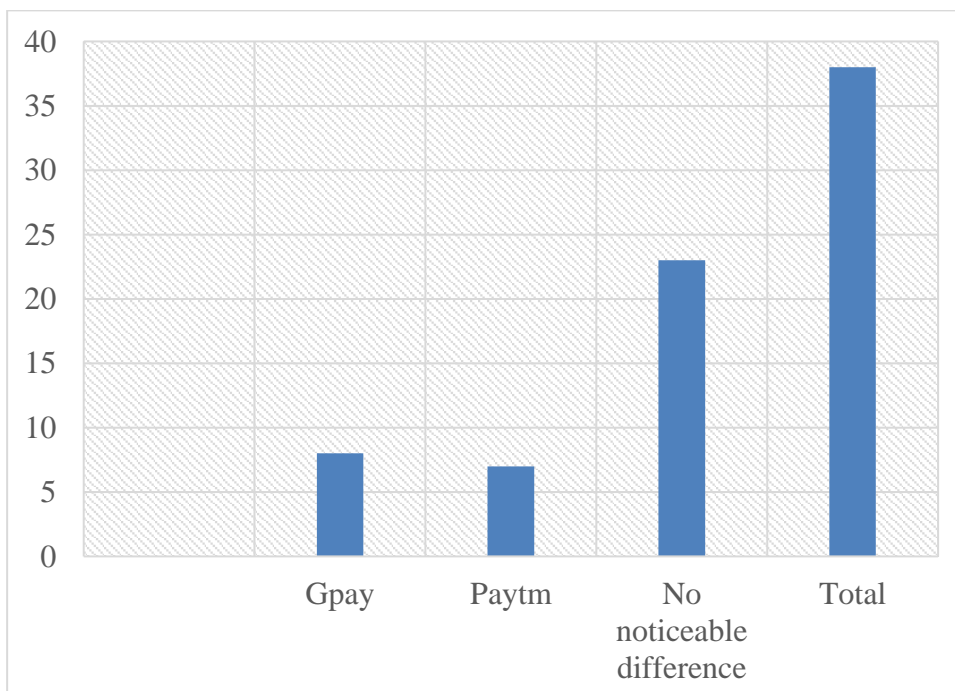
Better rewards and cashback incentives	Number of respondents
Gpay	8
Paytm	7
No noticeable difference	23
Total	38

Source.. Primary Data

8 respondents believe that G Pay offers better rewards and cashback incentives compared to Paytm. This suggests that there is a segment of users who find G Pay's rewards program more attractive, either due to the types of rewards offered, the frequency of cashback opportunities, or the overall value proposition presented by G Pay's incentives. On the other hand, 7 respondents perceive Paytm as providing superior rewards and cashback incentives compared to G Pay.

Fig 5.19

Perception on cash backs.



The majority of respondents (23 individuals) do not perceive a significant difference in rewards and cashback incentives between G Pay and Paytm. This suggests that for a considerable portion of users, the rewards programs offered by both platforms are perceived as relatively similar in terms of value and benefits. They may not find one platform's incentives substantially better than the other or may not prioritize rewards when choosing between the two platforms. This suggests that both G Pay and Paytm may need to continuously innovate and improve their rewards programs to differentiate themselves and attract users seeking attractive incentives for their transactions.

CHAPTER – 6

FINDINGS, SUGGESTIONS AND CONCLUSION

6.1 FINDINGS

1. The survey indicates that UPI is the preferred mode of payment among the respondents, followed by cash, digital wallets, and NEFT-RTGS. This reflects the growing acceptance and adoption of digital payment solutions like UPI in India, driven by factors such as convenience, speed, and security.
2. The majority of respondents, totalling 49, acquired knowledge about UPI through the internet.
3. The data reflects a diverse distribution of respondents across different durations of UPI usage or knowledge. While there is a notable presence of both new and long-term users, the substantial proportion of respondents who have been using UPI for more than 2 years underscores its established position in the digital payment arena. This suggests that UPI has successfully gained traction and retained users over time, indicating its effectiveness and appeal as a convenient and reliable payment solution.
4. This study categorizes respondents based on the mobile payment apps they use, along with the number of respondents using each app out of 100. Paytm is a widely used mobile payment and e-commerce platform in India. 43 out of 100 respondents reported using Paytm for their transactions, indicating its popularity among users. Google Pay is a popular UPI-based digital payment app developed by Google. 90 out of 100 respondents reported using Google Pay, making it the most widely used app among the respondents.
5. The majority of respondents, totalling 52, consider all mentioned benefactions, including convenience, cashback incentives, and multiple payment methods, when adopting online UPI payments. This suggests that a significant portion of respondents are motivated by a combination of factors when choosing online UPI payments over physical payments.
6. The survey highlights the importance of awareness and communication regarding the features offered by UPI apps, particularly the presence or absence of wallet options, to better meet the needs and preferences of users.
7. A significant portion of respondents, totalling 27, express uncertainty about the safety of UPI payments. The majority of respondents (70%) feel that UPI payments are safe. This

suggests a level of trust in the security measures implemented within the UPI system by banks and payment service providers.

8. The high percentage of satisfied respondents suggests that UPI is generally perceived positively as an efficient and effective payment method. However, the presence of dissatisfied respondents indicates that there may still be areas for improvement in terms of user experience or service quality within the UPI domain.

9. The fact that a significant majority of respondents (63%) report an increase in spending suggests that UPI transactions may facilitate easier and more frequent purchases. The convenience and accessibility of UPI payments might lead to impulsive buying behavior or increased spending on goods and services.

10. The largest group of respondents (55) faced network-related issues. This indicates problems with internet connectivity or server issues that affected their ability to complete transactions or access UPI services. The respondents (26) encountered delays or issues related to the verification process for their UPI transactions might involve transactions stuck in a pending state due to verification failures or delays from the bank's end.

11. Both G Pay and Paytm offer convenient transaction experiences, the slightly higher number of transactions for G Pay might indicate a slightly greater ease of use or preference among users. However, it's essential to consider various factors such as regional popularity, user preferences, and merchant acceptance when comparing the ease of transactions between different payment platforms.

12. Out of the total 38 respondents (using both G Pay and Paytm), 8 individuals believe that G Pay offers superior security compared to Paytm. This indicates that a subset of users perceives G Pay as a more secure option for their transactions. Conversely, 6 respondents feel that Paytm provides better security features compared to G Pay. Interestingly, the majority of respondents (24 individuals) perceive both G Pay and Paytm as equally secure.

13. This study identifies a significant portion of users who express confidence in Paytm transactions, there are also individuals with varying degrees of skepticism or uncertainty. This

suggests that Paytm may need to address concerns related to security, reliability, or user experience to enhance trust and confidence among users across the board.

14. The majority of respondents (23 individuals) do not perceive a significant difference in rewards and cashback incentives between G Pay and Paytm.

6.2 SUGGESTIONS

- ✓ Several critical factors impact the performance of online payment applications, including issues such as non-crediting of funds and payment delays stemming from network glitches, as well as challenges related to bank infrastructure and smartphone functionality.
- ✓ Security emerges as a paramount concern among consumers, representing a pivotal factor influencing the adoption of UPI transactions. Addressing security apprehensions is crucial for fostering widespread acceptance of UPI payments.
- ✓ Digital and technological illiteracy among the Indian population is identified as a major obstacle to the transition to a cashless economy. To overcome this hurdle, the government should proactively undertake initiatives to educate people on digital transactions and enhance technological literacy.
- ✓ A prevailing sentiment among many respondents is that the perception of cashless transactions being unsafe hinders widespread adoption. Therefore, the government is urged to fortify the electronic payments infrastructure, ensuring it is robust, secure, and capable of minimising fraud and theft.
- ✓ Given that a significant portion of the population resides in rural areas, it is imperative to implement comprehensive education programs on cashless transactions and e-wallet usage. These programs should target rural communities to raise awareness and familiarity with digital payment methods.

6.3 CONCLUSION

The evolution of India's payment system, progressing from barter to cash, cards, and now digital payment modes, underscores the fundamental principles of convenience, security, and speed. Despite the rapid rise in digital transactions, India remains predominantly a cash-centric society. A significant obstacle to the widespread adoption of Unified Payments Interface (UPI) is the prevailing lack of awareness regarding security and data privacy among

the populace. This lack of awareness has led many to perceive traditional payment methods, such as cards or cash, as safer alternatives to UPI applications.

In the landscape of digital payments, the security aspect emerges as a pivotal factor influencing consumers' decisions. The UPI faces competition from other digital payment modes, and the challenge lies in dispelling misconceptions and instilling confidence in users about the safety of UPI transactions. Recognizing that customers prioritise a seamless and convenient payment experience, UPI is positioned as a robust solution for meeting these expectations.

This study seeks to delve into customers' perceptions of both unified payment services and traditional methods, shedding light on the impact of UPI services on customer satisfaction. The findings reveal a positive attitude among customers towards UPI services. Moreover, there is a discernible relationship between the educational background of respondents and their adoption of UPI services, indicating that educated individuals are more inclined to use UPI.

The growth in smartphone users and internet penetration further facilitates the acceptance of UPI services, especially in areas where these technologies are becoming increasingly prevalent. However, the study also identifies challenges faced by customers in using UPI services, emphasising the need for addressing these issues to enhance the overall user experience.

To bridge the awareness gap and promote the benefits of UPI services, the government is encouraged to conduct extensive awareness programs targeting online and banking customers. These programs should specifically focus on educating users about the array of services offered by the National Payments Corporation of India (NPCI), thereby fostering a more informed and confident user base in the digital payments system.

BIBLIOGRAPHY

ARTICLES

Somanjoli Mohapatra (2017) Unified Payment Interface (Upi): A Cashless Indian E-Transaction Process. New Delhi Publishers. 5, 2, 29 – 42, June

Radhika Basavaraj Kakade and Prof. Nupur A. Veshne (2017) Unified Payment Interface (UPI) - A Way Towards Cashless Economy. International Research Journal of Engineering And Technology (Iret). 4, 11, 762 – 766, Nov

Roshna Thomasa and Dr. Abhijeet Chatterjee (2017) Unified Payment Interface (UPI): A Catalyst Tool Supporting Digitalization – Utility, Prospects & Issues. International Journal Of Innovative Research And Advanced Studies (Ijiras) Volume 4 Issue 2, February 2017. 4, 2, 192 – 195, Feb

Shamsher Singh (2017) Study Of Consumer Perception Of Digital Payment Mode. Journal Of Internet Banking And Commerce. 22, 3, 1-13, Dec

Gupta, S. & Kumar, D, "UPI-An Innovative Step For Making Digital Payment Effective And Consumer Perception On Unified Payment Interface", The International Journal of analytical and experimental modal analysis, Vol. 12 No. 1, pp. 2482-2491, 2020.
<http://ijaema.com/gallery/284-january-3313.pdf>

M.Angel Jasmine Shirley, Special Issue Published in International Journal of Trend in Research and Development (IJTRD) - Impact of Demonetization in India

National Conference on Impact of Indian 500 & 1000 Rupee Note Demonetisation (NCIRD-17), Organised by PG and Research Department of Commerce, Joseph Arts and Science College, Thirunavalur, Villupuram Dt, TamilNadu on 11th Feb 2017

Panse, Venkata Mrudula Bhimavarapu, (2021) Universal Journal of Accounting and Finance 9 (3), 518-530

Radhika Basavaraj Kakadel, Nupur A Veshne (2017) International Research Journal of Engineering and Technology 4 (11), 762-766

Shailesh Rastogi, Arpita Sharma, Chetan Panse, Venkata Mrudula Bhimavarapu
 Universal Journal of Accounting and Finance 9 (3), 518- 530, 2021

UNIFIED PAYMENT INTERFACE: UPI, Vishal Verma Digital Payments in India: Background, Trends and Opportunities, Jaspal Singh

Electronic Payment Systems: Law and Emerging Technology, Edward Allen Morse
Rahul Gochhwal American Journal of Industrial and Business Management 7 (10),
1174-1191, 2017

K K Pathak E-payment System of E-commerce in India”Int J Eng Res Appl2015527987
Z Bezhovski The Future of Mobile Payments as Electronic Payment SystemEur J
Business Manag20168812732

Mobile Wallet: Present and the Future”Int J Multidiscip Acad Res201653139
R Gochhwal Unified Payment Interface-An Advancement in Payment SystemsAm J
Indus Business2017710117491

J Joseph K V Shriram L R Lawlyn A O Rodrigues K Mathew An Empirical Study on
Consumer Adoption of Mobile Application in IndiaArthshastra Indian J Econ Res
201893/436375

S Priyanka An empirical study of wallets in IndiaOnline J Multidiscip sub20186651

WEBSITES

<https://www.npci.org.in/what-we-do/upi/product-overview>

<https://www.livemint.com/Money/A1bTvyBsfMmZeNu6oSfozJ/4-reasons-why-UPImay-overtake-mobile-wallets-soon.html>

<https://www.researchgate.net/publication/320661583>.

Unified Payment Interface-An Advancement in Payment Systems

<https://www.irjet.net/archives/V4/11/IRJET-V4I11136.pdf>

<https://acadpubl.eu/hub/2018-119-15/3/546.pdf>

<http://ndpublisher.in/admin/issues/IJASEV5N1e.pdf>

<https://www.scirp.org/journal/PaperInformation.aspx?PaperID-79879&>

www.rbi.org.in www.traigoxin.com www.npci.org.in

www.cashlessindia.gov.in/upi.html

https://iaeme.com/MasterAdmin/Journal_uploads/IJM/VOLUME_14_ISSUE_2/IJM_14_02_001.pdf

QUESTIONNAIRE

1. Which mode of money payments do you prefer the most?

- * Cash
- * Digital Wallet
- * NEFT-RTGS
- * UPI

2. How did you get to know about UPI?

- * Word of mouth
- * Advertisement
- * Internet
- * family and friends

3. How long are you using UPI?

- * Less than 6 months
- * 6 months to 1 year
- * 1 year to 2 years
- * More than 2 years

4. what is your preferred UPI?

- * GPAY
- * PAYTM
- * AMAZON PAY
- * PHONE PE

5. Are you satisfied with the services provided by UPI?

- * Highly Satisfied
- * Satisfied
- * Dissatisfied

6. Do you know that UPI transaction limit is 1 Lakh Rupees?

- * Aware
- * Unaware

7. What are the problems faced while using UPI Transactions?

- * Safety and Security

- * Authentication

- *Network Problems

- *Pending for verification

8. Why would you adopt online payment over physical payment?

- * Convenient

- *Cashback

- *Multiple payment method

- *All of the above

9. How often do you use digital payments?

- * Very often

- *Often

- *Sometimes

- *Rarely Never

10. Does your UPI have a wallet option?

- *Available

- *Unavailable

- * Unaware

11. For what purpose do you use UPI?

- *P2P transactions

- *Bill payments/Recharge

- *Shopping

- * Others

12. Have you experienced any issues with transaction processing times or delays while using Paytm or GPay?

- *yes

- *no

13. How frequently do you use GPay and Paytm for digital transactions?

- *Daily

- *Weekly

- *Monthly

*Rarely

*Never

14. Have you encountered any limitations or challenges while using paytm for transactions?

*Transaction failures or errors

*Slow transaction processing times

*Limited availability of merchant acceptance

*Security concerns

*Incompatibility with certain devices or operating systems

*Lack of customer support

*Others

15. What are the main factors that influence your decision to use GPay or Paytm over the other?

*User interface and ease of use

*Availability of features and services

*Security measures

*Rewards and cashback offers

*Brand reputation and trustworthiness

*Others

16. How do you perceive the transaction fees or charges associated with GPay and Paytm compared to other digital payment platforms?

*Reasonable

*Expensive

*Unsure

17. Do you face any challenges or limitations in accessing customer support or resolving issues with GPay or Paytm?

*Yes

*No

18. Overall, how likely are you to recommend GPay and Paytm to others based on your experiences?

*Very likely

*Likely

*Neutral

*Unlikely

*Very unlikely

19. Are there any specific features or services that you wish Paytm offered but currently does not?

*International Transactions

*Cryptocurrency Support

*Charity and Donation Options

*Integration with Digital Wallets

*Personal Finance Tools

*Offline Transactions

20. How do you perceive the transaction fees or charges associated with Paytm compared to other digital payment platforms?

*Reasonable, similar to other platforms

*Expensive, higher than other platforms

*Unsure, I'm not familiar with fees on other platforms

21. Have you experienced any security concerns or privacy issues while using Paytm?

*Yes, I'm concerned about security and privacy

*No, I trust Paytm's security measures

*Unsure, I haven't encountered any issues