Major Research Project

On

"Financial Analysis of UPI Adoption Patterns in India"

Submitted by:

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2K23/UMBA/15

Under the Guidance

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Certificate

This is to certify that Anchal Gugnani (2K23/UMBA/15) has submitted the Major Project Report titled “Financial Analysis of UPI Adoption Patterns in India” in partial fulfilment of the requirements for the award of the degree of Master of Business Administration (MBA) from Delhi School of Management, Delhi Technological University, New Delhi during the academic year 2024- 2025.

Mr. Manobhav Verma
Assistant Professor

Declaration

I, Anchal Gugnani student of Delhi School of Management, Delhi Technological University hereby declare that the major research project on "Financial Analysis of UPI Adoption Patterns in India" submitted in partial fulfilment of the requirements for the award of the degree of Master of Business Administration (MBA) under the guidance of Mr. Manobhav Verma is the original work conducted by me. I also confirm that neither I nor any other person has submitted this project report to any other institution or university for any other degree or diploma. I further declare that the information collected from various sources has been duly acknowledged in this project.

Anchal Gugnani

2K23/UMBA/15

Acknowledgement

It is a great pleasure to acknowledge the help and guidance received during the research work. The project provided me with an excellent opportunity to explore the area of UPI and customer behavior. I am highly indebted to Delhi School of Management, Delhi Technological University for giving me this opportunity to work on this project.

I would like to express my gratitude to all the users/customers of UPI for helping me during my research and giving specific valuable inputs.

I would like to express our gratitude to all those who gave me the strength and possibility to complete this innovative work. I would particularly like to thank my faculty mentor, Mr. Manobhav Verma, Professor, Delhi School of Management, Delhi Technological University, for the project and for giving me the freedom to work unbounded and innovatively.

At the end, I would extend my gratitude to the almighty for giving me this opportunity. The moral support of my friends and family has been great for making this report in its present form.

Anchal Gugnani

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Executive Summary

This research examines the awareness and use of the Unified Payments Interface (UPI) electronic payment system among population. One of the most popular FinTech products in India is UPI, which facilitates merchant and peer-to-peer (P2P) transactions. This segment is known to be one of the earliest adopters of technology. The research examines how they use UPI and what drives their experience. The study population embraced UPI extensively, as can be seen from the findings, with the majority of respondents employing it extensively. Advertisements, word of mouth through friends and relatives, and social media have now emerged as the primary sources through which people get information about UPI. For UPI transactions, Paytm and Google Pay were the most preferred choices. Even though some consumers faced issues such as failed transactions, delayed processing, and security issues, as a whole, consumers believed that UPI was an easier interface compared to other electronic payment channels. Consumers continued to overwhelmingly favor UPI in spite of issues. On a scale of 1 to 5, UPI suggestions were mostly between 2 and 4, indicative of mixed feelings.

This stresses the importance of solving customer problems in order to improve satisfaction and drive stronger recommendations. The study offers valuable insights for practitioners who are working towards promoting the use of UPI and improving its user experience. Recommended steps include were to develop targeted campaigns to minimize errors and failed transactions. In order to ensure smooth transactions, pay extra attention to server capacity and app stability. Promote secure user action and implement additional security features. Customer service and the user interface took centre stage: speed up customer service and usability test.

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Chapter-1

Introduction

1.1 Background and Industry

The rapid evolution of India's financial ecosystem has been largely driven by digital transformation initiatives, with Unified Payments Interface (UPI) emerging as a key enabler of real-time, seamless, and low-cost digital transactions. UPI, developed by the National Payments Corporation of India (NPCI) and launched in 2016, is a mobile-based payment system that enables inter-bank peer-to-peer (P2P) and person-to-merchant (P2M) transfers. It is widely considered a cornerstone of India's fintech revolution and a global model for inclusive and efficient payment infrastructure.

UPI forms a central part of India's broader Digital India mission, aiming to bring millions into the formal financial system by offering a simple, accessible, and interoperable payment mechanism. Unlike traditional digital payment systems that rely on debit/credit cards or mobile wallets, UPI links directly to users' bank accounts, allowing instant transfers through virtual payment addresses (VPAs), QR codes, or mobile numbers. It integrates over 300 banks and financial institutions, and supports platforms including Google Pay, PhonePe, Paytm, Amazon Pay, and BHIM (Bharat Interface for Money), the government-promoted UPI app.

India's digital payment industry has experienced exponential growth in the last decade, with UPI driving the transition from cash-centric transactions to digital-first behavior. According to NPCI data, UPI transactions grew from 21 million in August 2017 to over 12 billion in March 2024, reflecting its ubiquity and trust among consumers and businesses alike. This growth is further fueled by the availability of smartphones, low-cost internet, regulatory support, and increasing digital literacy.

The UPI ecosystem has democratized financial access by empowering small merchants, rural users, and micro-enterprises with affordable, secure, and scalable digital payment tools. Government-led initiatives, such as Jan Dhan Yojana, Aadhaar-based identity systems, and Direct Benefit Transfers (DBT), have laid the groundwork for UPI's widespread adoption. Furthermore, policies like zero MDR (Merchant Discount Rate) for small-ticket transactions have made it cost-effective for merchants to embrace UPI.

Use Cases and Growth Drivers:

UPI is used for:

- P2P transfers (sending money to friends/family)
- P2M transactions (bill payments, retail purchases)
- Utility and subscription payments
- Loan repayments, ticket bookings, and e-commerce transactions

Its growth has been fueled by:

- Ease of integration with mobile applications
- Rise of on-demand services and gig economy platforms
- Increasing smartphone penetration (over 750 million users)
- Push for financial inclusion in Tier II/III cities and rural areas

Revenue Model:

While UPI itself is a zero-cost public infrastructure, the business models around UPI involve monetization through:

- Value-added services (e.g., credit lines, insurance, wealth management)
- Merchant onboarding and analytics
- Data-driven customer engagement
- Integration with lending platforms and Buy Now, Pay Later (BNPL) models

Challenges and Regulatory Landscape:

Despite its success, UPI faces key challenges:

- Infrastructure scalability due to massive volumes
- Fraud and cybersecurity threats with increasing adoption
- Lack of direct monetization model for service providers
- Regulatory uncertainty around transaction fees and data usage
- The Reserve Bank of India (RBI) and NPCI continue to play a central role in ensuring fair competition, consumer protection, and infrastructure upgrades. Proposals around interoperability, recurring mandates, and UPI-linked credit systems are shaping the next phase of its evolution.

Future Outlook:

The future of UPI is likely to involve:

- Global expansion (cross-border UPI linkages with countries like Singapore, UAE, Bhutan)
- Integration with digital rupee (CBDC)
- AI-driven fraud detection and transaction analytics
- Deep integration with e-commerce, fintech lending, and micro-credit services

As UPI adoption continues to grow, analyzing its financial impact and usage patterns becomes crucial for stakeholders, including fintech startups, regulators, traditional banks, and consumers. A financial analysis of UPI adoption offers insights into transaction trends, consumer behavior, regional adoption rates, merchant ecosystem dynamics, and potential monetization strategies.

SWOT Analysis of UPI Adoption in India

Strengths

- Widespread Mobile Penetration: India’s massive smartphone user base has accelerated UPI's adoption, especially in urban and semi-urban areas, enabling real-time digital transactions with minimal technical know-how.
- Government-Backed Ecosystem: UPI is backed by the Reserve Bank of India (RBI) and developed by the National Payments Corporation of India (NPCI), giving it institutional credibility and national-scale reach.
- Interoperability and Integration: UPI enables seamless transactions across banks, merchants, apps, and payment service providers (PSPs), thus offering an open and interoperable payment platform that encourages collaboration.
- Zero-Cost Transfers: UPI transactions up to a certain limit are free for users, fostering mass-scale adoption, particularly for small-value payments and micro-transactions.
- Promoting Financial Inclusion: By offering instant access to banking facilities via mobile, UPI helps bring unbanked and underbanked populations into the formal financial system, especially in remote and rural areas.

Example: Google Pay and PhonePe allow users from tier-2 and tier-3 cities to perform transactions without even opening a traditional banking app, thus removing several layers of complexity.

Weaknesses

- Digital Literacy Gaps: A significant portion of the Indian population, especially in rural areas, lacks digital literacy, limiting their comfort and confidence in using UPI applications.
- Infrastructure Disparity: Despite rising internet penetration, inconsistent connectivity and power outages in non-urban areas hinder seamless transaction experiences.
- Cybersecurity Risks: The digital nature of UPI makes it susceptible to phishing attacks, SIM swapping, and other forms of cyber fraud, raising consumer apprehension.
- Fraud Resolution Delays: While NPCI provides guidelines for dispute resolution, users often face delayed redressal and lack of customer support from PSPs.
- Dependence on Third-Party Apps: The dominance of third-party UPI apps (TPAPs) like PhonePe, Paytm, and Google Pay sometimes creates concerns over data privacy, vendor lock-in, and platform monopolization.

  Example: Instances of fake UPI apps mimicking genuine platforms have led to financial losses, underscoring the need for greater regulatory oversight.

Opportunities

- Cross-Border Payments: Expansion of UPI to international markets offers an opportunity for Indian fintechs to cater to the diaspora and global merchants, as demonstrated by UPI acceptance in UAE, Singapore, and Nepal.
- Integration with New-Age Technologies: The integration of UPI with AI for fraud detection, blockchain for secure ledgering, and machine learning for predictive analytics can enhance performance, safety, and personalization.
- Microfinance and Credit Innovation: UPI can become a gateway to broader financial products—like microloans, digital insurance, or investment tools—targeted toward low-income and informal sector users.
- Merchant Empowerment: UPI-based solutions like UPI Lite and Credit on UPI can empower small retailers and MSMEs to digitize their cash flows and credit cycles efficiently.
- Gamification and Reward Programs: Incorporating reward-based engagement and cashback models can boost retention and consistent usage.

  Example: PhonePe's scratch card rewards and cashback campaigns have significantly increased user engagement in both rural and urban settings.

Threats

- Monopolistic Competition: Dominance of a few players could reduce healthy competition, limit innovation, and pose systemic risks if one major app experiences downtime or data breaches.
- Overdependence on Smartphones and Internet: Users without smartphones or with limited digital connectivity are excluded from accessing UPI, leading to digital inequality.
- Changing Regulatory Landscape: RBI's evolving stance on data localization, third-party limits, and interoperability might create compliance burdens for service providers.
- Economic Fluctuations: Recessionary trends or rising inflation may reduce discretionary digital spending, affecting the frequency and value of UPI transactions.
- Global Tech Disruption: Emergence of alternative payment ecosystems (e.g., Central Bank Digital Currencies, or BigTech banking platforms) could challenge UPI's relevance and adoption.

  Example: RBI's introduction of the Digital Rupee may either complement UPI or create overlapping systems that compete for user mindshare.

Figure 2: Fintech services examples in digital era

1.1.1 National Payments Corporation of India (NPCI)

The NPCI, formed under the guidance of the RBI and the Indian Banks' Association (IBA), is the backbone of India's retail payments infrastructure. NPCI's mission is to consolidate and integrate payment systems across the country to bring efficiency, accessibility, and interoperability.

Key roles of NPCI include:

- Standardizing retail payment systems across India.
- Promoting innovative payment platforms like UPI, Bharat QR, RuPay, etc.

- Ensuring scalability and security of digital transactions.

NPCI's initiatives include:

- UPI
- Immediate Payment Service (IMPS)
- National Automated Clearing House (NACH)
- Bharat BillPay (BBPS)
- Aadhaar Enabled Payment System (AePS)
- Digital Rupee (CBDC)
- RuPay Card Network

Subsidiary: NPCI International Payments Ltd. (NIPL) focuses on taking UPI and RuPay global, enhancing the reach of Indian payment infrastructure.

Source- Mykhel.com

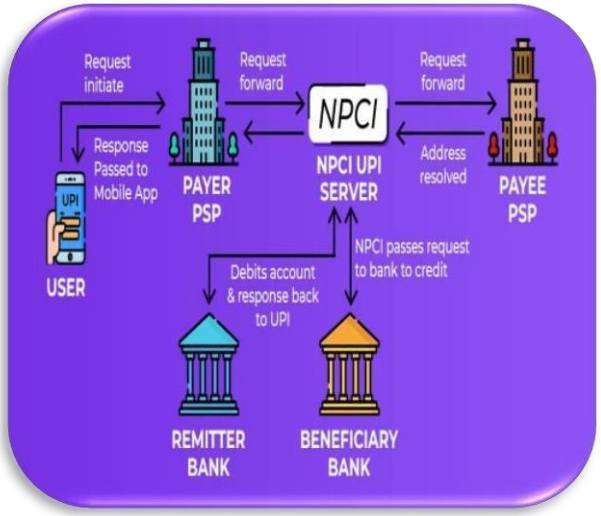
1.1.2 UPI – Unified Payments Interface

UPI is a real-time payment system developed by NPCI that facilitates inter-bank transactions by instantly transferring funds between two bank accounts using a mobile platform.

Key Functionalities:

- Peer-to-Peer (P2P) and Peer-to-Merchant (P2M) transactions.
- Supported through apps like BHIM, PhonePe, Google Pay, Paytm, etc.
- One mobile app for accessing multiple bank accounts.
- Instant transfer using UPI ID, mobile number, QR code, Aadhaar, or account+IFSC.

Figure 3: The working of UPI.



Souce: Geeksforgeeks

UPI's Advantages:

- 24x7x365 real-time transactions.
- Two-factor authentication for secure payments.
- No need to remember IFSC, account number, etc.
- Seamless utility bill payment and merchant transactions.
- No-cost or low-cost transaction model.
- Scalable infrastructure supporting over 12 billion transactions monthly (as of 2024).

BHIM App: Launched by NPCI, it allows secure UPI transactions and is designed to promote financial inclusion and government-backed cashless initiatives.

1.2 Problem Statement

I. UPI transactions in India are increasing in popularity, but most of the population is reluctant to embrace this digital payment system, holding it back from its true potential.

II. This study seeks to identify consumer adoption of UPI payments in the target country through an analysis of usage and non-usage motivations, gaining insights into customer behavior and preferences.

III. This study intends to investigate the factors that encourage and deter consumers from using UPI payments, such as perceived advantages and disadvantages, demographic factors such as age, income, education, and place, technology and security issues, and the role of social factors and trust in technology and financial institutions. It also aims to know how these factors affect the adoption of UPI payments and how trust in these institutions affects user behavior.

1.3 Objectives of the Study

I. The study seeks to determine factors that drive UPI payment adoption, such as awareness, trust, simplicity of use, security, and privacy issues.

II. The study seeks to learn about the preferred customer habits and preferences on UPI payments, such as top use cases (bill payments, online purchases, peer-to-peer transactions), accepted modes of payment, and customer experience.

III. The objective is to promote the use of UPI payments by providing recommendations to improve user experience, increase awareness, and address security and privacy concerns

1.4 Scope of the Study

The study will explore the reasons consumers choose UPI payments, including perceived benefits like convenience, speed, and security, social influence, and alignment with personal financial management practices.

It will also examine why some consumers remain hesitant, including security concerns and lack of awareness, and existing payment method preferences.
The research findings can guide policy decisions aimed at promoting wider UPI usage and enhancing the digital financial ecosystem's inclusivity.

The research provides valuable insights for fintech companies to create user-friendly UPI applications and functionalities that address consumer concerns.

Chapter 2

Literature Review:

Financial Analysis of UPI Adoption Patterns in India Fahad & Mohammad (2022) in their study *"Exploring the determinants of adoption of Unified Payment Interface (UPI) in India"* analyzed factors affecting UPI usage in emerging markets. Their empirical findings emphasized user satisfaction as a key driver of adoption intent, highlighting the limited yet growing body of literature addressing UPI from a financial perspective rather than solely operational or technological standpoints.

Oliveira et al. (2016) conducted a study titled *"Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology"*, revealing that performance expectancy, compatibility, social influence, and user innovativeness are core predictors for adopting mobile-based financial technologies. This framework aligns with the behavioral patterns seen in UPI users.

Dr. Ger et al. (2023) examined *"The Impact of Behavioural Biases on Digital Financial Product Adoption"*. Their work introduced cognitive dissonance, loss aversion, and habitual behaviors as influential factors. Trust was a strong mediating variable, reinforcing the psychological dimensions of financial decision-making in UPI use.

Mallat (2007), in his qualitative work *"Exploring consumer adoption of mobile payments,"* observed situational influences such as urgency, convenience, and lack of alternatives as decisive factors. While cost, complexity, and security concerns posed barriers, these findings mirrored challenges initially faced by UPI in India.

Patnaik et al. (2021) explored *"User Acceptance of Digital Payments in India"* via an extended Technology Acceptance Model (TAM). The study stressed the necessity of financial literacy and digital trust in accelerating UPI adoption across demographic segments.

Dev, Gupta, & Kumar (2024) in *"From Cash to Cashless: UPI's Impact on Spending Behaviour among Indian Users"* analysed survey data revealing 75% of users increased spending post-UPI adoption. Their study emphasized financial behaviour analysis and recommended better digital financial education and transparency to encourage informed consumption.

Anjali & Suresh (2019) studied *"Customer Satisfaction of Bharat Interface for Money (BHIM)"*, a major UPI app. They found transaction speed, ease of use, and app security as significant influencers of user satisfaction—a crucial financial performance metric.

Mahesh & Bhat (2022) offered a comprehensive *"Systematic Review on UPI and Digital Payments,"* identifying key trends like convenience, speed, financial inclusion, and cost-effectiveness as factors that contribute to platform success and user retention.

Nair & Dr. Kannan (2019) in their study *"Unlocking the Future of Digital Payments"* assessed UPI's transformative role in India's digital finance evolution. It highlighted the platform's growth trajectory and integration with Aadhaar and mobile networks as strategic levers for financial inclusion.

Dhamija & Dhamija (2017) in *"Technological Advancements in Payments"* examined UPI's adoption through the lens of perceived usefulness and social influence, identifying mobile technology penetration as a critical catalyst in bridging the digital divide.

Venkatesh & Davis (2000-2022), with their development of the UTAUT and TAM models, provided theoretical grounding for understanding user acceptance. Their frameworks are widely applied to analyse the behavioural intent and ease of use regarding UPI adoption.

Rogers (2018), through the Diffusion of Innovations Theory, categorized adopters (innovators to laggards), offering a valuable segmentation model to understand UPI's market penetration and speed of adoption across strata.

Martin & Icek (2017) with the Theory of Reasoned Action (TRA) emphasized how attitudes and subjective norms influence technology adoption, relevant to understanding how peer networks affect UPI engagement.

Singh & Sharma (2017) and Rao & Kumar (2019) both analysed UPI adoption based on trust, compatibility, and perceived risk. Their studies focused on user-centric financial trustworthiness and system integration with existing banking systems.

Baheti (2024) in *"The Global Evolution of UPI"* explored how India's UPI system acts as a model for global real-time payment networks. He emphasized scalability, interoperability, and inclusive finance, with detailed projections on global adoption trajectories.

Pandey & Jain (2018) and Gupta & Patel focused on UPI consumer behaviour. Their insights revealed that convenience, reliability, and accessibility are key motivators in repeated usage—essential for financial analysis and sustainability of UPI platforms.

Kaur & Arora (2022) conducted a comparative demographic study on UPI usage, while Yadav & Gupta (2023) employed a longitudinal method to evaluate the evolving role of trust, reinforcing its compounding effect on financial usage over time.

Jaiswal et al. (2023) in their segmentation-based analysis, identified distinct user profiles (e.g., Fintech Dubious, Cash Conservatives). These typologies help forecast transaction behaviours and offer granular insights for financial modelling.

Bansiya (2023) in *"Trends and Implications of Digital Transactions"* analysed multi-year UPI transaction volumes and values, drawing correlations with government policy, technological uptake, and user convenience. His findings indicate a systemic shift towards digital-first finance.

Samwani & Khanna (2024) provided a robust econometric analysis in *"The Growth of Digital Payments in India: A Case Study of UPI,"* identifying macroeconomic variables (PFCE, GDP, etc.) impacting UPI volume. They also studied business and technical declines influencing bank performance due to UPI load.

George, Dr. Baskar & Martin (2023) provided a holistic view on UPI's benefits and risks. They focused on digital awareness and cybersecurity issues as critical hurdles to financial trust and stability in the digital payments space.

Waykar & Waykar (2016) highlighted UPI's integration with banks and the increasing susceptibility to fraud as adoption surged. Their study calls for robust digital hygiene and user education to ensure financial security.

Laxmidhar (2023) projected exponential growth in UPI transactions, forecasting volumes beyond 110,000 million by FY2024-25. These projections form a quantitative baseline for financial impact studies.

Chanda et al. (2022) linked UPI adoption with the India Stack framework, showcasing how government-backed infrastructure initiatives—like Aadhaar, UPI, and DigiLocker—have jointly boosted financial inclusion and digital finance in a nation with over a billion users

Chapter 3

Research Methodology

Research Design- Descriptive research methodology has been utilized in this project. Descriptive research design is a research approach that attempts to describe the features of a population or phenomenon under investigation. Descriptive research design is applied to answer questions on the who, what, when, where, and how of a specific phenomenon. Descriptive study talks and investigates a phenomenon without trying to manipulate or control.

In order to understand something about the user experience in making payments via UPI and what gets them to move toward other means of payment.

Sample Size **- 67 Respondents**

Data Collection Method-The primary data is gathered through an online questionnaire from a sample population of 67 individuals. Questionnaire is a combination of Quantitative and qualitative data and contains closed as well as open ended questions.
In addition, the hypotheses are evaluated using the Chi-Square and 2-way Anova test. The chi-square value measures the difference between observed frequencies (how often something happened in the data) and expected frequencies (how often we'd hope something to happen based on a hypothesis). The greater the difference, the higher the value of the chi-square.

The p-value, which is presented together with the chi-square statistic, informs you of the probability of getting such a large difference if there were actually no differences between the observed and expected data (null hypothesis). In other words, it informs you of how probable it is that the observed pattern is caused by chance. A low p-value (often less than 0.05) indicates that the observed difference is statistically significant. This means it's unlikely due to chance, and there's evidence to reject the null hypothesis of no difference. A high p-value (greater than 0.05) indicates that the observed difference is likely due to random chance, and we fail to reject the null hypothesis. ANOVA, which stands for Analysis of Variance, is a statistical method to compare the means of two or more groups.

It assists in establishing if there exists a statistical difference between the means of these groups or not. ANOVA produces an F-statistic, which is the ratio of explained variance (between groups) to unexplained variance (within groups).The associated p-value with the F-statistic informs you about the probability of seeing such a high F-statistic in case there were actually no differences among the group means (null hypothesis). Low p-value (usually < 0.05): This shows a statistically significant difference between group means. We can reject the null hypothesis and say that the independent variable probably has an effect on the dependent variable (the variable you're measuring). High p-value (usually > 0.05): This implies the

differences between group means that we observed are probably due to random chance. We cannot reject the null hypothesis and cannot say there is a significant effect of the independent variable.

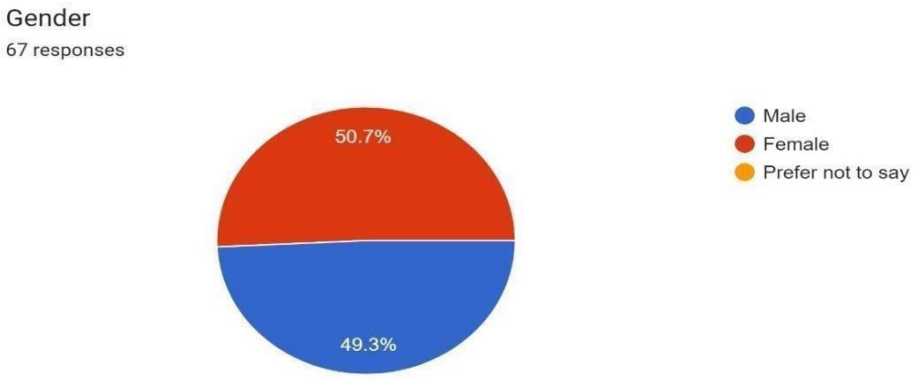
The research approach will entail gathering data through in person focus group interviews and online surveys, data analysis to establish trends and themes, and drawing conclusions based on the findings. This aligns with the descriptive research approach.

Chapter 4

Data Analysis and Interpretation

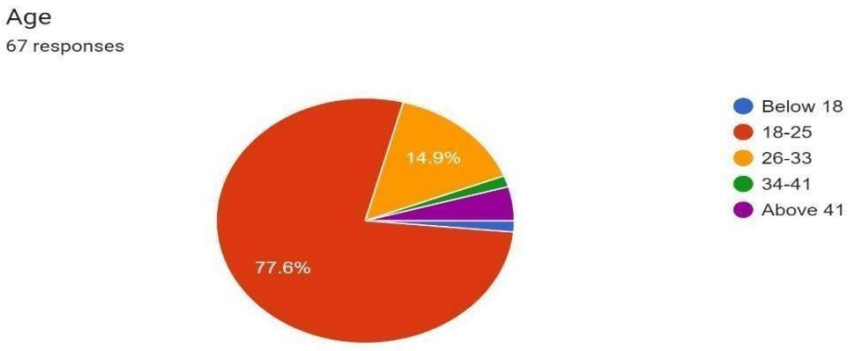
Graphical Representation of qualitative data and Demographics

Gender Distribution in the research



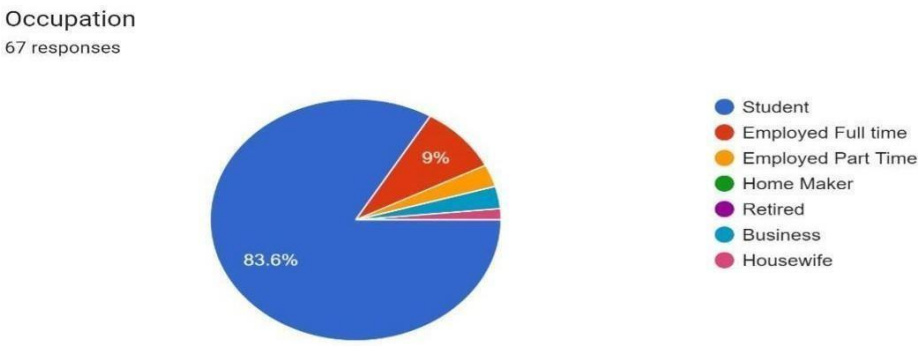
Pie chart depicts gender distribution among the respondents where 50.7% are females and 49.3% are males.

Age Distribution among respondents in the



The chart shows that 77.6% i.e highest number of respondents are between 18-25 years of age.

Profession of the respondents in the research



The pie-chart depicts that most of the respondents are students and few are employed.

The Chi-square test is a statistical method used to determine the significant association between two categorical variables by comparing observed frequencies within different categories to expected frequencies.

The Chi-square test produces a p-value, indicating a significant association between variables. A p-value below 0.05 rejects the null hypothesis, while a p-value above 0.05 indicates insufficient evidence to reject the null hypothesis.

Occupation and how frequently do you use UPI as digital Payments?

Hypothesis-

Ho- There is no significant relationship between Occupation and How frequently they use UPI Payment.

H_1- There is a significant relationship between Occupation and How frequently they use UPI Payment.

Crosstabs

[DataSet1] C:\Users\Muskaan\Desktop\BRM PPT\BRM PROJECT.sav

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Occupation * HowfrequentlydoyouuseUPIformakingdigitalpayments	166	100.0%	0	0.0%	166	100.0%

Occupation * HowfrequentlydoyouuseUPIformakingdigitalpayments Crosstabulation

Count

		HowfrequentlydoyouuseUPIformakingdigitalpayments				
			Frequently	Never	Occasionally	Total
Occupation		100	0	0	0	100
	Business	0	1	0	1	2
	Employed Full time	0	5	0	0	5
	Employed Part Time	0	1	0	1	2
	Housewife	0	0	1	0	1
	Student	0	42	3	11	56
Total		100	49	4	13	166

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	215.570[a]	15	.000
Likelihood Ratio	233.894	15	.000
N of Valid Cases	166		

Inference- Chi-Square Value: 215.570 (with 15 degrees of freedom)

Asymptotic Significance (p-value): 0.000

The Chi-Square value (215.570) is quite high. The p-value (0.000) is less than the significance level (usually 0.05).

Since both the Chi-Square value is high and the p-value is very low, we can reject the null hypothesis. This means there is a statistically significant relationship between Occupation and how frequently people use UPI payments.

Issues faced by respondents and its impact on the Preference of UPI Over other payment Methods.

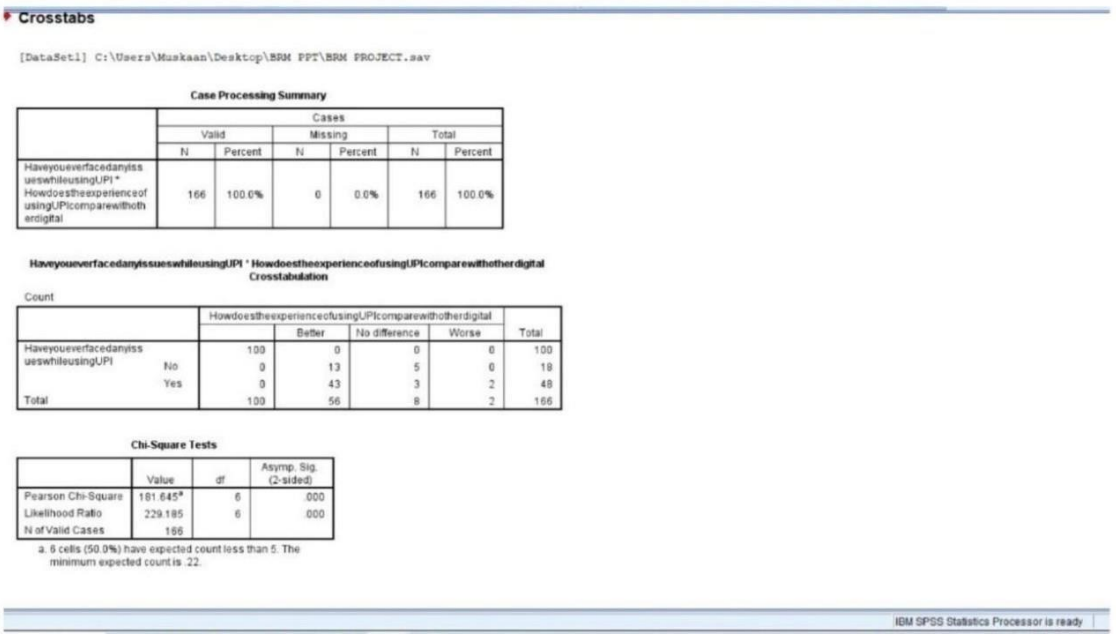
Hypothesis-

Ho= There is no significant Impact of the issues faced by respondents on their preference of choosing UPI over Other Payment methods**.**

H1= There is a significant Impact of the issues faced by respondents on their preference of choosing UPI over Other Payment methods**.**

Inference - Ho will be accepted, H1 rejected. Thus, there is no significant Impact of the issues faced by respondents on their preference of choosing UPI over Other Payment methods.

A two-way ANOVA is a statistical test used to examine the impact of two independent categorical variables on one continuous dependent variable.



Crosstabs

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Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Haveyoueverfacedanyissueswhileusing UPI * Howdoestheexperienceofusing UPIcomparewithotherdigital	166	100.0%	0	0.0%	166	100.0%

Haveyoueverfacedanyissueswhileusing UPI * Howdoestheexperienceofusing UPIcomparewithotherdigital Crosstabulation

Count

		Howdoestheexperienceofusing UPIcomparewithotherdigital				
			Better	No difference	Worse	Total
Haveyoueverfacedanyissueswhileusing UPI	No	100	0	0	0	100
		0	13	5	0	18
	Yes	0	43	3	2	48
Total		100	56	8	2	166

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	181.645[a]	6	.000
Likelihood Ratio	229.185	6	.000
N of Valid Cases	166		

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is .22.

IBM SPSS Statistics Processor is ready

A p-value below a predetermined level < (0.05) indicates a significant effect of at least one independent variable on the dependent variable or a significant interaction effect, suggesting differences between groups unlikely to occur by random chance alone.

A p-value above the level i.e > (0.05) indicates insufficient evidence to reject the null hypothesis, suggesting no significant effects of the independent variables or interaction effect on the dependent variable.

2-way Anova test for- Security and satisfaction* Recommendation

Hypothesis-

Ho- there is no significant Relationship Between security and satisfaction with their recommendations.

H1- there is a significant Relationship Between security and satisfaction with their recommendations.

Between-Subjects Factors

		N
satisfaction	Neutral	15
	Somewhat dissatisfied	3
	Somewhat satisfied	34
	Very dissatisfied	1
	Very satisfied	13
Secure	1.0	7
	2.0	19
	3.0	18
	4.0	18
	5.0	4

Tests of Between-Subjects Effects

Dependent Variable: Onascaleof1Showlikelyareyoutorecommend UPItoothers

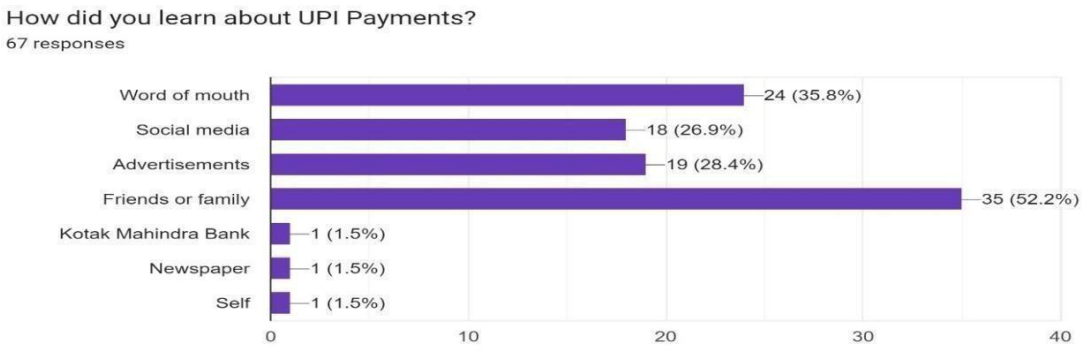
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	53.534[a]	14	3.824	3.645	.000
Intercept	171.084	1	171.084	163.101	.000
satisfaction	4.526	4	1.131	1.079	.377
Secure	26.989	4	6.747	6.432	.000
satisfaction * Secure	3.314	6	.552	.527	.785
Error	53.496	51	1.049		
Total	620.000	66			
Corrected Total	107.030	65			

a. R Squared = .500 (Adjusted R Squared = .363)

Inference:

The study suggests a significant correlation between security and satisfaction with recommendations, rejecting the null hypothesis (Ho**).**

The table indicates a significant interaction between security and satisfaction with recommendations, with an F-value of 36.454 and a Sig value of 0.000. The ANOVA tests yield a high F-value of 36.454, indicating a strong interaction effect, while a p-value of 0.000, less than the 0.05 significance level, suggests the observed interaction effect is unlikely due to chance.



Inference-

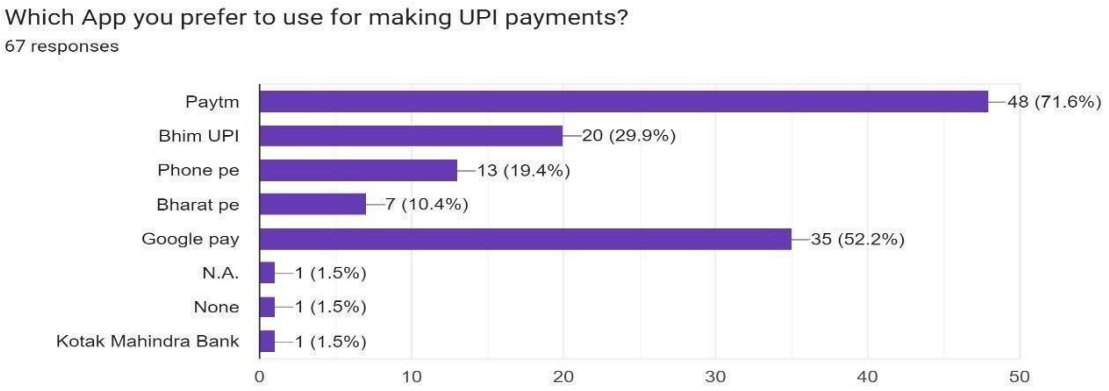
Social media is a popular method for learning about UPI payments, with 26.9% of respondents responding.

Word-of-mouth is also a significant factor, with 35.8% of respondents learning about UPI through this channel.

Advertisements and friends or family also contribute to UPI information.

Newspapers and individual research are the least popular methods, with only 1.5% each**.**

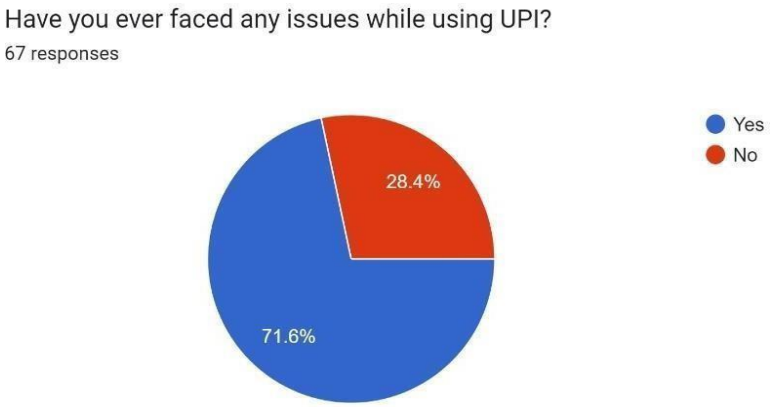
Most of the respondents got to know about UPI through friends and family i.e 52.2% after that through word of mouth indicates social influence.

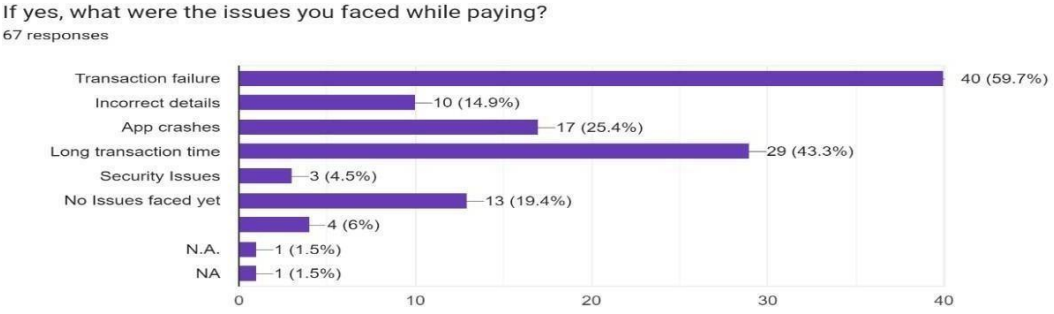


Inference-

Most of the respondents prefer Paytm for making UPI payments which is 71%, indicates paytm's penetration is high. Google pay is also a popular choice**.**

It is important to note that a significant portion (21.6% or 14 out of 67) selected "Not Sure/Don't Use" for any app. This suggests that while many are aware of the apps, not **everyone actively uses it for UPI paytm .**





Inference-

Most respondents (67%), or 40 out of 60, have experienced transaction failures while using UPI. The most common reason is incorrect details, accounting for 25% of the cases.

Technical glitches, such as app crashes or server issues, affect 17% of the respondents.

Long transaction times are a concern for 13%, possibly due to slow internet connectivity or overloaded servers. Security issues are less frequent, affecting only 5% of the respondents.

Chapter- 5

Conclusion and Recommendations

The present research explored how individuals, predominantly students in the age group of 18 to 25 years, viewed and employed UPI digital payments. The findings indicate that UPI is a broadly accepted payment medium within this population, with a majority of the respondents having used it on a routine basis. Advertising, word of mouth, and social media have emerged as the primary channels for promoting awareness of UPI.

For UPI payments, Paytm and Google Pay were the most preferred. Although some users experienced issues like failed transactions, slow processing times, app crashes, and incorrect information, overall, customers perceived UPI as an easier option compared to other digital payment systems. The respondents expressed a level of satisfaction with the current interface; however, they expressed a desire for improvements in terms of transaction speed, security measures, and customer care. Interestingly, respondents did not report a shift in preference away from UPI even after encountering issues. On a scale of 1 to 5, their recommendation scores were mostly 2 and 4, meaning that they had mixed feelings regarding the whole experience. This highlights how important it is to attend to user complaints in order to increase user satisfaction and encourage stronger suggestions.

UPI's user-friendliness and convenience are the primary explanations for why UPI is so popular among the youth. Additional improvements in order to further raise the bar in terms of experience for users as well as how UPI can be considered a default digital payments choice should extend to transaction efficiency, security offerings, customer care, and maybe even the UI.

Recommendations

The conclusions of the study present valuable information to those interested in promoting UPI usage and improving the user experience. Based on the conclusions you provided, some key recommendations are as follows:

1. Enhance User Education and Awareness: Develop targeted education programs (social media, short films, etc.) to educate users on proper UPI transaction procedures and minimize errors leading to failures (inaccurate details).

2. Improve Technical Infrastructure: To minimize app crashes and ensure effective processing of transactions, focus on improving application stability and server capacity. Invest in solutions that will enable faster processing times for transactions to better the user experience.

3. Enhance Security Features: To enhance the confidence of users in the security of the platform, introduce additional security features (e.g., two-factor authentication and transaction notices). Make users aware of secure UPI transaction practices, e.g., handling their passwords carefully and shunning suspicious connections.

4. Provide User Interface and Customer Support Highest Priority: To identify areas where the UPI interface should be enhanced, conduct usability testing and gather user feedback. Streamline the customer service process to ensure that consumer queries and issues are addressed promptly and efficiently.

5. Leverage Positive User Experiences: To encourage and promote UPI usage, use positive user testimonials and success stories. Analyze the factors (e.g., user-friendliness) influencing user satisfaction and recommendations. Utilize these factors in your marketing strategies.

Limitations

1. Limited Information Access

The study might involve a small number of people, and the issues might come occasionally. This implies that you need to overhaul and redo your work. The access to information was limited since only two projects were provided to work on which had limited entities.

2. Limited Time

The timeliness they need to adhere to constrains all researchers. The time constraints at times might undermine the academic success. The ideal thing is to recognize the condition and state that more study is needed to explore the research issue more comprehensively.

3. Data trustworthiness

The integrity of the conclusions of any study largely hinges on the quality of the data that was gathered. The data can be compromised by a range of issues, including biased interviewers, representative samples, and loaded questions. To avoid bad decisions and mistakes, the study will cost more due to steps being taken to ensure the data is reliable, the samples are representative, and the interviewers are unbiased.

4. Lack of Database Access

Not able to access paid data base databases

5. Sample Prejudice

The students in the study ranged in age from 18 to 25. Because different age groups and demographics may have varied experiences with or preferences for UPI, this restricts generalizability to a larger community.

6. Lack of Comparability

The research focused on the UPI user experience; however, it is not a direct comparison with the other digital payment options. Comparison of user experiences with alternative options might help us understand the strengths and weaknesses of UPI better.

These constraints can be resolved in future studies by:

• Selecting a sample population that is more diverse by age, occupation, and geography.

•Doubling the sample sizes will enhance the generalizability of the results.

• Utilizing techniques like transaction data collection or observation of user behavior in combination with self-reported data.

•Including a comparison studywith other online payment methods to provide a more complete perspective.

• Subsequent studies can offer a more complete understanding of UPI adoption and user experience by acknowledging and addressing these limitations.

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Annexure

Survey on Investigating Behavioural Dimensions in Adoption of UPI-A Developing Country Perspective.

The Questionnaire is made as a part of our research for Investigating Behavioural Dimensions in adopting UPI. The responses of this research are confidential.

* Indicates required question

1. Name

2. Age *

Mark only one oval.

- Below 18
- 18-25
- 26-33
- 34-41
- Above 41

3. Gender *

Mark only one oval.

- Male
- Female
- Prefer not to say

4. Occupation *

Mark only one oval.

- ◯ Student
- ◯ Employed Full time
- ◯ Employed Part Time
- ◯ Home Maker
- ◯ Retired
- ◯ Business Other:
- ◯ _____

5. How frequently do you use UPI for making digital payments? *

Mark only one oval.

- ◯ Frequently
- ◯ Occasionally
- ◯ Never

6. How did you learn about UPI Payments? *

Check all that apply.

- ☐ Word of mouth
- ☐ Social media
- ☐ Advertisements Friends or family
- ☐ Other:
- ☐ _____

7. Which App you prefer to use for making UPI payments? *

Check all that apply.

- [ ] Paytm
- [ ] Bhim UPI
- [ ] Phone pe
- [ ] Bharat pe Google pay Other:
- [ ] _____
- [ ]

8. Have you ever faced any issues while using UPI? * *Mark only one oval.*

Yes
No

9. If yes, what were the issues you faced while paying? *

Check all that apply.

- [ ] Transaction failure
- [ ] Incorrect details
- [ ] App crashes
- [ ] Long transaction time
- [ ] Security Issues No Issues faced yet
- [ ] Other:
- [ ] _____

10. How does the experience of using UPI compare with other digital payment * methods such as credit/debit cards, e-wallets, etc.?

Mark only one oval.

Better
Worse
No difference

11. How secure you feel while paying through UPI ? *

Mark only one oval.

1 2 3 4 5

Very ◯ ◯ ◯ ◯ ◯ Not at all secured

12. Do you believe that security concerns are the cause of consumers not choosing * UPI payment?

Mark only one oval.

◯ Strongly Agree
Agree ◯
◯ Neutral
◯ Disagree
◯ Strongly Disagree

13. Do you think UPI's availability as a payment method is limited? *

Mark only one oval.

◯ Strongly Agree
Agree ◯
◯ Neutral
◯ Disagree
◯ Strongly Disagree

14. How satisfied are you with UPI's user interface? *

Mark only one oval.

Very ◯ satisfied
◯ Somewhat satisfied
◯ Neutral
◯ Somewhat dissatisfied
Very ◯ dissatisfied

15. What features or improvements would you like to see in UPI that would * encourage you to use it more frequently?

Check all that apply.

- [ ] Improved user interface
- [ ] Faster transaction processing
- [ ] Better customer support Enhanced security features
- [ ] Other: _____

16. On a scale of 1-5, how likely are you to recommend UPI to others? *

Mark only one oval.

1 2 3 4 5

I will de nitely recommend UPI ◯ ◯ ◯ ◯ ◯ I will not recommend UPI

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