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A Study on Customer Perception towards Unified Payments Interface and Their Challenges

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ABSTRACT

The analysis concentrates on examining user reception of Unified Payments Interface (UPI) together with the obstacles customers encounter when operating with this platform. Unified Payments Interface (UPI) brought a game-changing solution to Indian digital payments through its fast and easy system accompanied by strong reliability. The convenience of UPI depends on its continuous operation and its capability to synchronize with mobile platforms and its capability to send money without using cash. Users choose UPI because it provides bank connections and secure transactions while they experience problems such as transaction failures together with system delays and errors which leads to diminished trust. People are becoming concerned about security risks such as unauthorized access and phishing together with the threat of financial fraud. Users in remote locations and people from older populations do not fully grasp digital capabilities because of their insufficient knowledge and skills about them. Some users face difficulties using specific UPI-based applications thus leading them to reduce their frequency of interaction with those platforms. The research interviewed 100 Vizianagaram residents through questionnaire-based assessments. The study applies chi-square tests combined with factor analysis for data analysis through SPSS software that organizes the results in tabular format. Research evidence indicates the necessity for UPI to create robust security protocols especially for authenticating transactions and provide enhanced digital literacy programs throughout the population. App design improvements in combination with more widespread education about UPI will drive more people toward its adoption. Resolving these current problems will enable UPI to expand and boost the growth of India's digital economy.

Keywords: Customer perception, Digital literacy, Unified payments

Introduction

A research study known as "Customer Perception Towards Unified Payments Interface and Their Challenges" investigates the experiences and advantages and drawbacks of UPI regarding digital transactions in India's payment landscape. Money transfers through UPI have become simpler since the system enables users to add various bank accounts into one app without needing specific details like account numbers or IFSC codes. The combination of widespread usability along with interconnection capabilities drives UPI's acceptance throughout both metropolitan and countryside locations. Developing knowledge about consumer viewpoints and problems is necessary to enhance the UPI service quality. The study examines trust levels and how easy UPI transactions are to complete alongside security levels and the reliability of transactions as well as customer support quality. The research analyzes demographic data points including age range and educational level and geographical locations to track adoption patterns. The research design incorporates quantitative surveys which measure satisfaction levels while qualifying the findings through interviews and focus groups. Technical glitches and payment delays together with transaction failures and security risks constitute essential challenges. The problems diminish user trust as well as their confidence levels. The user perception of UPI depends heavily on how reliable and secure the transactions are and how well customers get helped by support services. The findings deliver strategic business recommendations to improve UPI services by handling user obstacles while promoting digital payment platform sustainability and user satisfaction. The analysis enables stakeholders to build a UPI platform which is both reliable and user-centric and more secure.

Significance of the Study

The research generates vital understandings about how Indian users use and experience UPI which represents a fundamental digitized payment approach in the country. The evaluation of UPI's performance in enhancing trust and satisfaction depends heavily on knowing how customers perceive

this technological solution. The research investigates UPI's obstacles such as transaction breakdowns and security vulnerabilities together with limited support services which may slow down its user confidence growth and market expansion. The research explores how specific groups of people adopt technology through analyzing fundamental age-related characteristics in combination with educational qualifications and residential zone data. This research delivers essential findings that will help stakeholders to develop UPI through increased usability while improving security and customer support so users enjoy a more customer-focused method for digital payment advancement. The advancement strengthens both India's digital economy while improving its financial inclusion systems.

Statement of the Problem

This study is based on "A STUDY ON CUSTOMER PERCEPTION TOWARDS UNIFIED PAYMENTS INTERFACE AND THEIR CHALLENGES". The main focus of the study is to analyze the attitude of customers toward UPI services and what are the difficulties faced by the customer while using UPI services. The defendants of the study are about the customers of the banks consuming numerous e-banking services with ATM/Debit card, credit card, online banking, mobile banking and Tele banking.

- To understand the concept of Customer perception towards UPI Services.
- To find where the problem arises and the difficulties faced by the customers while using Mobile banking services.
- To analyze the steps taken by the bank to reduce this problem.

Theoretical Framework

The Unified Payments Interface (UPI) represents a transformative development in the realm of digital payments and financial technology (fintech). It grounded in concepts related to technology adoption, consumer behavior, and trust in digital platforms. The technology allows scientists to understand user acceptance by employing both the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT). The framework integrates the Unified Theory of Acceptance and Use of Technology (UTAUT) together with its dimension of performance expectancy and effort expectancy and social influence along with facilitating conditions to examine technology adoption. Customer confidence and perception in UPI develops through trust theory that maintains security measures and privacy standards together with system reliability. The framework unites four established theories to study demographic elements as well as user attitudes and satisfaction degrees while it addresses failure cases and security concerns that shape UPI system-user relationships.

UPI stands as one of the best modernized cost-effective innovations introduced by the National Payment Corporation of India that can transform the Indian economy through its digitalization initiatives. (PHILIP, 2019) Payment systems in India have undergone rapid changes during the past few years. The adoptions of mobile and card payment systems are two key components of this initiative. 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. The researcher used Mean, F-Test, ANOVA and Regression analysis for analysing and interpreting the data. In this study reviled that there is a positive impact or perception by the customers towards unified payment interface. (Shah, 2021) This research was conducted to gather data and understand the perception what the Indian population holds when it comes to using UPI payment method. To do so, a survey was designed using the UTAUT model and was circulated by the means of google forms. A wide range of parameters were considered to avail the maximum possible accuracy for the data collected. Parameters like, the ease of using this payment method, short term and long-term benefits, monetary benefits, social benefits were considered. All of these parameters were supposed to be answered on a scale of 5. After collecting all the data, the results were analysed and evaluated using which the hypothesis made were proved. (Varma, 2023) This research paper is based on user opinion by using Google Pay as a Net Banking Transactions among the residents of Panvel Region. Researchers have tried to analyze various variables that attract customers to use Google Pay, which is further tested by using Reliability analysis and Chi - square Test through SPSS. Further it is found that the majority of respondents use 'Google Pay' and are highly aware about the Epayment facility which is made available through Google Pay. (ESWARAN, 2019) The demonetization resulted in unprecedented growth in digital payment. By February this year, digital wallet companies had shown a growth of 271 percent for a total value of US\$2.8 billion (Rs. 191 crores), Indian government and private sector companies such as Paytm, Free charge and Mobi Kwik had been aggressively pushing several digital payment applications, including the Aadhaar Payment app, the UPI app, and the National Payments Corporation of India (NPCI) developed the Bharat Interface for Money (BHIM) app. Digital transfers using apps has brought behavioural change and helped in the adoption of digital payment. This has resulted in ease of transfer of money in rural areas which was not touched earlier by the digital payment method. (Reddy, 2024) Electronic transactions and payments are vital in today's environment. From the time e-transactions were first launched until their demonization, their use has increased dramatically. Following demonetization, the digital payment system was implemented in India. To ease the shift to digital payments, the payment system has lately undergone a number of improvements, including the addition of digital wallets, UPI, AEPS, QR codes, and BHIM apps. This study looks at a customer's opinion of digital payments. The study used structured questionnaires as the research method to understand customers' views on digital payments. The research used primary together with secondary data to maximize its convenience. The original data collection process was handled by participants from Hyderabad.

Research Gap

UPI brought a fundamental change to Indian digital transactions through its introducation of an advanced security system which delivers fast and effortless payments thereby supporting both cashless initiative and financial accessibility for all users. The tool functions as an essential application which provides instant payment options and QR code-powered transfers in addition to bank interconnectivity features and manages to bridge urban and rural usage gaps. Security problems also require critical consideration. The expanding popularity of UPI service increases the number of cybersecurity threats that target users through phishing attacks and data breaches and unauthorized account incursions. Demographic differences in UPI usage present additional research gaps. Users located in urban areas adopted UPI quickly because they possess higher comfort with technology and better digital knowledge although rural communities encounter distinctive obstacles when employing this platform. Users encounter issues with UPI adoption because they have inadequate internet service while many people lack smartphones and they remain uninformed about UPI's capabilities.

Objectives of the Study

An investigation measures customer reactions to Unified Payments Interface (UPI) services by exploring ease of use along with reliability
and security aspects and their impact on total satisfaction and trust.

Hypothesis

H0:Occupation and satisfaction with UPI security features are not significantly associated.

H0: Confirming that the correlation matrix has significant relationships among variables and factor analysis cannot be conducted.

Research Methodology

The research methodology for studying customer perception towards Unified Payments Interface (UPI) and their challenges involves gathering information directly from UPI users. A questionnaire with straightforward questions is prepared to collect details about user experiences, preferences, and issues they face while using UPI. Apart from primary data collection, secondary sources like research articles, reports, and statistical data are also reviewed to understand UPI trends and usage patterns. The study uses a descriptive approach to explain the current situation and challenges related to UPI adoption. A sample of users, chosen based on factors like age, income, or location, ensures that the findings represent a variety of customer perspectives. The analysis of obtained data utilizes straightforward methods including percentage calculations as well as chart-based approaches to identify recurring patterns and common challenges which might involve technical issues and security concerns or knowledge gaps. All procedures adhere to ethical standards which protect participant confidentiality as well as gain consent. This research approach delivers specific customer feedback which leads to development solutions for UPI quality improvements.

Description of the Study Area

The research area concentrates on UPI users who maintain routine transactions in towns along with cities which have high smartphone adoption rates. This analysis explores UPI perceptions from groups that include individuals across multiple age brackets together with individuals from either employers or employees and different economic background points. The study analyzes regions where UPI has become a common payment method including retail, service and internet commerce domains. The research examines UPI's favored features and the technical difficulties and security worries as well as knowledge gaps people experience.

Sources of Data

The study uses both primary and secondary data. Primary data is collected through surveys, interviews, and focus groups, while secondary data is gathered from existing reports, articles, and government records. It covers customer experiences, transaction reliability, security issues, satisfaction levels, and adoption challenges. The research also explores demographic differences and the effectiveness of incentives.

Sample Area

Location: Vizianagaram City; Which is varying internet penetration rates and levels of digital literacy are selected to capture diverse experiences.

Sample Techniques

Convenience sampling is a method adopted by researcher where they collect market research data from a conveniently available pool of respondents. It is the most commonly used sampling technique as it's incredibly prompt, uncomplicated, and economical.

Sample Size

A statistically significant 100 of respondents is selected to ensure the results are reliable and generalizable with proportional representation from urban and rural areas, as well as different age and income groups.

Analytical Tools Employed

- Quantitative data is analysed using tools like SPSS or Microsoft Excel to calculate percentages, means, and correlations.
- Qualitative data is examined through thematic analysis to identify patterns in user feedback and challenges.

Tabular Analysis

Data is presented in tables for better visualization and understanding for instance, a table might compare user satisfaction levels across urban and rural areas or display the frequency of incentives used by different age groups. Tabular analysis facilitates easy comparison and interpretation of data trends.

Limitations Of the Study

- The study focuses primarily on UPI users and may overlook the perspectives of non-users or individuals hesitant to adopt UPI due to barriers such as digital literacy or trust issues.
- Sampling constraints might limit the representation of certain demographic groups, such as individuals in remote regions with little or no
 access to UPI services, potentially skewing findings.
- External factors, such as variations in internet connectivity, smartphone penetration, and regional infrastructure quality, may influence customer perceptions but are difficult to isolate and control within the research framework.

Data Analysis

Table: 01 Occupation and Satisfaction with UPI SecurityFeatures

Occupation	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied	Total
Student	5	10	5	3	2	25
Salaried Employee	8	15	5	6	1	35
Businessperson	4	8	2	3	3	20
Self-employed	3	5	3	4	2	17
Homemaker	2	3	3	2	3	13
Student	22	41	18	18	11	100

Source: Primary Data

Test StatisticValue

Pearson Chi-Square8.57

Degrees of Freedom (df)16

p-value 0.38

The Chi-Square statistic (χ^2) = 8.57, with 16 degrees of freedom. The p-value = 0.38, which is greater than 0.05., Since p > 0.05, we fail to reject the null hypothesis (H₀). There is no significant association between occupation and satisfaction with UPI security features. This means that people from different occupations do not show significantly different levels of satisfaction with UPI security features.

What factors influence your preference for UPI transactions?

Table: 02 KMO and Bartlett's Test

Measure	Value
Kaiser-Meyer-Olkin (KMO)	0.78
Bartlett's Test of Sphericity	Chi-Square = 432.56, df = 55, p < 0.001

Kaiser-Meyer-Olkin (KMO) Measure = 0.78

This value indicates good sampling adequacy. It suggests that the proportion of variance in your variables might be caused by underlying factors, and the dataset is appropriate for factor analysis.

Bartlett's Test of Sphericity: χ^2 =432.56, df=55, p< 0.001

The significance of the Bartlett's test shows that the correlation matrix is not an identity matrix, meaning that the variables are sufficiently correlated to justify the use of factor analysis.

Table: 03 Correlation Matrix (Excerpt)

	1	2	3	4	5
1. Convenience	1	.64	.62	.45	.40
2. Security	.64	1	.58	.36	.33
3. Transaction Speed	.62	.58	1	.42	.38
4. Cashback & Rewards	.45	.36	.42	1	.50
5. No Additional Charges	.40	.33	.38	.50	1

Most variables have moderate correlations with others (above 0.3), supporting factorability. The correlation matrix reveals that most variables have moderate to strong positive correlations with others (r > 0.3).

Convenience and Transaction Speed = 0.62 Security and Convenience = 0.64 Cashback & Rewards and No Additional Charges = 0.50

Table: 04 Communalities

Factor	Initial	Extracted
Convenience	1.000	0.722
Security	1.000	0.688
Transaction Speed	1.000	0.713
Cashback & Rewards	1.000	0.604
No Additional Charges	1.000	0.576
Wide Acceptability	1.000	0.657
User-Friendly Apps	1.000	0.689
24/7 Availability	1.000	0.621
Linked to Multiple Bank Accounts	1.000	0.579
Government Support & Trust	1.000	0.605
Peer Influence	1.000	0.493

Communality represents the amount of variance in each variable that is explained by the extracted factors. Most values are above 0.6, showing that the variables are well-represented by the extracted factors.

Table: 05 Eigenvalues and Variance Explained

Component	Eigenvalue	% of Variance	Cumulative %
1	3.75	34.1%	34.1%
2	2.10	19.1%	53.2%
3	1.42	12.9%	66.1%
4	0.84	7.6%	73.7%

The first three components have eigenvalues greater than 1 and together explain 66.1% of the total variance. This indicates a strong structure, where three latent factors account for a substantial portion of the information in the data.

Screen Plot

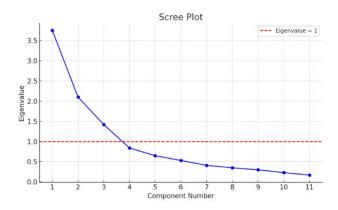


Figure No-02

The elbow point in the Screen Plot appears after the third component, confirming the decision to retain three factors for further analysis.

Table: 06 Rotated Component Matrix (Varimax)

Variable	Factor 1	Factor 2	Factor 3
Convenience	0.81	0.29	0.10
Transaction Speed	0.77	0.32	0.15
24/7 Availability	0.70	0.31	0.12
Security	0.38	0.76	0.26
Government Support & Trust	0.32	0.70	0.21
No Additional Charges	0.21	0.68	0.17
Cashback & Rewards	0.28	0.25	0.78
Peer Influence	0.22	0.29	0.71
User-Friendly Apps	0.64	0.31	0.38
Wide Acceptability	0.69	0.36	0.41
Linked to Multiple Bank Accounts	0.63	0.33	0.42

Factor 1 (Ease and Accessibility): High loadings on Convenience, Transaction Speed, User-Friendly Apps, 24/7 Availability, and Wide Acceptability. This factor reflects the overall usability and practicality of UPI systems.

Factor 2 (Security and Trust): High loadings on Security, Government Trust, and No Additional Charges, highlighting concerns around safety, transparency, and regulation.

Factor 3 (Incentives and Social Influence): Dominated by Cashback & Rewards and Peer Influence, representing motivational incentives and social pressure in choosing UPI. This factor analysis reveals three distinct dimensions influencing user preferences for UPI transactions:

- 1. Ease and Accessibility
- 2. Security and Trust
- 3. Incentives and Social Influence

These insights can guide app developers, banks, and policymakers in tailoring features, communications, and marketing strategies around what truly drives adoption.

Findings

- Most respondents are young adults aged 18-25 (39.2%), showing a strong representation of this age group.
- A large number of people surveyed have higher education, with many holding Master's Degrees (33.3%) and Bachelor's Degrees (32.4%).
- ➤ Most respondents are salaried employees (35.3%), while students are the second-largest group (31.4%).
- ▶ PhonePe is the most popular UPI app, used by 37.3% of respondents, followed by Paytm (27.5%) and Google Pay (25.5%).
- > UPI is widely used every day by most respondents (64.7%), making it an essential payment method.
- Many people (36.3%) use UPI for shopping, both online and offline, as it's quick and easy.
- > Speed is the main reason why people prefer UPI; 34.3% choose it for faster transactions.
- > Over half (52.0%) of respondents trust UPI for big payments, while 31.4% trust it but are cautious.
- Many respondents (44.1%) are very satisfied with UPI's security, and 39.2% are satisfied overall.
- > Transaction failures are common; 52.9% face occasional issues, and 33.3% experience them often.
- > Almost half of the respondents (47.1%) say failed transactions are the main problem they face with UPI.
- ➤ UPI customer support is well-received; 34.3% are satisfied, and another 34.3% are very satisfied.
- Data privacy is a big concern, with 39.2% worried about their personal and financial information.
- Most respondents (66.7%) take several safety steps, like using strong passwords, enabling two-factor authentication, and avoiding suspicious payment requests.
- Many people (67.6%) recommend UPI to others, showing strong satisfaction and trust in it.
- > Most of people requested to improvement in UPI services is More cashback/reward offers, making these features highly desirable.

Suggestion

- "A Study on Customer Perception Towards Unified Payments Interface and Their Challenges" presents an opportunity to explore various dimensions of UPI usage and customer experiences.
- The overall experience index from the study reveals that the banks are giving awareness to the customers and they are solving the challenges faced by the customers while using Unified Payments Interface.
- Some of the customers have mostly complained about the Data privacy issues and Phishing & frauds. Therefore, this is the area which I recommended to focus a little bit more. It needs to resolve and develop better Data privacy issues and Phishing & frauds.
- > Some of the customers have also complained about the customer care service of Mobile Applications. Even though the complaints are minor, the customer care service of mobile apps needs to resolve the customer issues& quarries with the service to achieve good customer experience& satisfaction.
- Mostly every customer is using UPI for faster transaction for fastest payment, so while using UPIwe have to look on technical glitches, delayed payments and server issues. Easily rectify of this issue is better to resolve these kinds of complaints.

- In the Literature Review, explore existing studies on UPI adoption, usage patterns, and comparisons with other payment systems. Examine theoretical frameworks related to technology adoption and consumer behavior that align with your topic. This review will provide the foundation for identifying gaps in research and setting the context for your study.
- > To enhance user experience by proposing solutions like better security measures, faster dispute resolution processes, improved customer support, and incentive-driven models (e.g., cashback offers). Address the steps that UPI platforms and service providers can take to build trust and promote wider adoption.

Conclusion

Unified Payments Interface (UPI) operates as a digital payment revolution that enables Indian users to execute easy money transfers through a convenient system. The user experience of UPI stands out to customers through its quick performance and trustworthy system together with easy-to-use interface which reduces transaction complexities. The service grants continuous operation throughout 24 hours including official holidays making itself easily accessible for all types of users because of mobile device integration.

Technical system breakdowns along with transaction failures and processing delays negatively affect user trust and create frustration among users of the platform. Users face security risks combined with their worry about account intrusion through unauthorized access and fraud and phishing attacks. A lack of awareness and digital literacy among certain demographics, particularly in rural areas and older age groups, limits the widespread adoption of UPI. A limited number of UPI users struggle with complex app interfaces that motivates them to stop using the platform frequently. UPI's financial transformation needs to resolve fundamental obstacles to increase its platform usage.

The development of UPI toward India's digital economy depends on accomplishing greater reliability standards while maintaining security practices and expanding inclusive access for all users. This evaluation shows why understanding what customers think and encounter helps make ongoing UPI adaptations effective for reaching wider population benefits.

Further Study

The examination of customer perception regarding Unified Payments Interface (UPI) and its problems requires more in-depth investigation of consumer trust elements as well as security and technological preparedness aspects. Research should study financial literacy effects as well as educational factors that develop consumer trust in digital payment systems. Additionally marketing strategies and awareness initiatives need investigation. Research evaluations determine government initiatives success rates together with promotional efforts to close knowledge gaps especially in rural and semi-urban areas. By observing how UPI functions with contemporary technologies like blockchain for better security together with artificial intelligence systems for customer prediction and service utilization researchers gain insights that lead to barrier elimination. Innovative persistent development combined with customer-focused solutions will ensure continued UPI adoption within India's expanding digital economic sector. Research findings will direct initiatives that aim to boost user trust coupled with satisfaction improvement and solve present challenges.

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