

Customer Perception and Usage of UPI-Based Mobile Payment Applications: A Study in Kurukshetra

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ABSTRACT

The rapid growth of digital payment systems has significantly transformed India's payment landscape. This study reviews the perceptions and adoption of the mobile payment applications based on UPI in Indian context focusing on major factors such as security, trust, and convenience that influence the usage of digital payment applications. Data is collected from the 46 respondents using structured questionnaires. IBM SPSS Statistics software was used to analyse the data. The findings show that convenience, security & trust are crucial in the usage of UPI apps. The findings also indicate that digital payments option UPI is now a popular and preferred choice in India.

Keywords: Digital Payment System, Mobile Payment Application, UPI, IBM, SPSS, Statistics Software.

Introduction

The rise of ICT has revolutionized banking & payment system all over the world. The era of cash, cheque, and card-based payments is gradually changing as digital payment systems become increasingly prevalent. People are increasingly relying on smartphones, the internet, and mobile applications to make payments, transfer money, and manage their financial transactions. This has led to a desire for quick, easy and convenient payment methods from customers. Mobile payments are an emerging technology in the financial world. They enable users to make transactions at anytime, anywhere. Mobile Payment Systems are those that are used to carry out a financial transaction using a mobile device, typically a smartphone or tablet. These system and other banking activities using mobile app. Online payment services are becoming very popular across globe with the surge of cashless payments. Indian online payment system transformed significantly by introduction of the Unified Payments Interface (UPI) enabled payment systems. UPI enables instant fund transfer from one bank account to another through various mobile applications. It has made the payment process easier and now consumers can make a secure payment by providing a mobile number, QR code or UPI ID. UPI has been one of the popular and accepted digital payment solutions in India since its launch. Google Pay, PhonePe and BHIM are a few mobile payment apps that have become popular among the users. These apps provide various advantages, such as quick fund transfers, ease of use, cashback opportunities, and the ability to pay bills anytime. The introduction of innovations such as QR code payments and the push towards digital transactions from government bodies has further driven the growth of UPI in India. Overall, customer perception has a vital role in acceptance of mobile payment systems. This encompasses users' opinions, beliefs and attitudes regarding the usefulness, convenience, security and reliability of a service. Users are more likely to use and stay loyal to a mobile payment app if they are easy, secure and reliable to use. But, the fear of fraud, privacy, transaction failure, user awareness and technical issues may result in hesitation among the users. There are Several factors that affect the

adoption of mobile payment apps based on UPI. The main driver for mobile payments is the ease in which they are made without having to carry cash. Security is also key; users should feel safe that their funds and information stay secure. Further, the confidence in the mobile service provider and the payment process influences the frequency of mobile payment application use. An understanding of the customer's use of digital payments can support banks, fintech providers & policymakers to enhance the quality of digital payments. It also helps to pinpoint obstacles encountered by users and potential improvements to customer satisfaction. An improved knowledge of these factors can help India become a digitally empowered nation and pursuant financial inclusion. This study highlights on Customer Perception and Adoption of UPI enabled digital payment systems in India. It will contrast the convenience, security, and trust of the customers and how the perception of these impacts the adoption of mobile payment apps using UPI. The results may prove useful for financial institutions, service providers & government authorities to ensure better efficiency and usage of digital payment options in India.

Review of Literature

Ashish Baghla (2018) The study found that convenience, cashback offers, quick transactions, and transparency are the major factors encouraging people to adopt digital payment systems and some challenges like lack of awareness, security concerns, hacking risks & poor internet connectivity as barriers to digital payment adoption. The researcher concluded that digital payments have strong future potential in India, provided that digital literacy and secure payment infrastructure are improved.

Dr. V. Yuvarani & Dr. A. Vanitha (2019) examined customer satisfaction towards UPI applications, particularly Google Pay and PhonePe, in Salem City. The study found that convenience, trust, security, user-friendly features, and quick transactions significantly influence customer satisfaction and adoption of UPI applications. The authors observed that Google Pay was more preferred by users due to better service quality, cashback offers, and ease of use.

Dr. Virshree Tungare (2019) The study found that convenience, quick transactions, cashback rewards, flexibility, and secure payment feature significantly influence the adoption of UPI services among customers. The author also observed that younger consumers and service sector employees show a more positive attitude toward UPI-based transactions.

Radhika Arora (2020) The findings revealed that respondents considered UPI more secure, convenient, and easier to use than other digital payment modes, while poor internet connectivity and lack of technical knowledge were major challenges.

Dr. Arpita Srivastava et al. (2022) examined consumer perception and attitude towards UPI payment applications. Researcher found that the adoption of digital payment systems is significantly influence by convenience, ease of use, faster transactions, whereas security concerns act as a major barrier.

Kuhu Bose and Bujunuru Mrunalini (2023) examined the awareness and satisfaction level of students towards UPI payment systems. The study found that most students frequently use UPI payments due to convenience, ease of use, and secure transactions, with PhonePe being the most preferred application.

A.K. Sahu (2023) examined the performance of public and private sector banks in UPI transactions. study found that UPI has significantly strengthened cashless transactions through convenience, seamless fund transfer, and technological advancement. The authors also observed that UPI has strong international growth potential, although challenges such as digital illiteracy, technical issues, and global competition still exist

R. Saranya & M. Vasantha (2025) conducted a study on UPI payment system & consumer perception in Tiruchirappalli. The findings revealed that time-saving, easy access, cashback offers, and convenience significantly influenced consumer perception, while security concerns and non-credit issues remained major challenges in UPI adoption.

Senapathi Harikadevi et al. (2025) examined customer perception towards UPI and challenges faced by users in Vizianagaram City. The result show that convenience, transaction speed, security, and trust positively influenced UPI usage, while transaction failures, phishing risks, and data privacy concerns were major challenges faced by users.

Research Gap

The ongoing studies on digital payment systems and UPI apps have mainly focused on the adoption of the technology, customer satisfaction, and trends in the use of these payments. However, there are few studies that have specifically examined the perception of the customer, but have incorporated the convenient, secure, trusted and adopted aspects of the customer perception into a single study. These previous studies usually took place in larger urban populations, and were not well-equipped to incorporate the perspective of the general users, through primary data collection. Furthermore, as technology evolves, the attitude of customers towards digital transactions is continually changing. The majority of existing studies have also been done on the overall digital payments sector and not on UPI based mobile applications. Moreover, few recent studies have explored the perceptions of safety and reliability of UPI platforms by users. In view of this, the present study seeks to address this research gap by examining customers' perceptions and adoption of UPI-based mobile payment applications in India.

Need of the Study

The use of UPI is growing quickly in India. In most of the cases, users pay for their purchases and services and transfer the money into apps such as Google pay, BHIM, and PhonePe. So, it is essential to understand the perception of these applications by the customers. The study aims to determine factors to be considered in the adoption, including convenience, security and trust. It also identifies problems accessing the service, such as transaction failures, risk of being scammed, and privacy concerns. The outcomes will assist service providers in developing applications with improved functionality and robust security measures. Secondly, it will help create trust for banks and fintech companies with their customers. This study also offers policy implications to encourage a cashless economy and financial inclusion. Therefore, this study has a high relevance to the new system of digital payment.

Hypothesis

- H₀:** Customers show no significant perception regarding the convenience, usability & security of UPI-based payment applications.
- H₁:** Customers show significant perception regarding the convenience, usability & security of UPI-based mobile applications.
- H₀:** Customers show no significant trust and adoption regarding UPI-based mobile payment applications.
- H₁:** Customers show significant trust and adoption regarding UPI-based mobile payment applications.

Research Methodology

In present study, to measure customer perception and adoption of UPI-based mobile payment applications a structured questionnaire is used to collect the primary data from 46 respondents of district Kurukshetra, Haryana. The questionnaire has been divided into two parts demographic details and used of UPI-based mobile payment apps. Further, to check the reliability of the questionnaire the Cronbach's alpha test has been used. Online surveys are carried out using google forms or other survey tools to reach a wider audience. Apart secondary data is also collected for the synthesis purpose from various published research papers, websites, government publications. The collected data were analysed using statistical tools and techniques.

Data Analysis and Interpretation

Reliability Statistics	
Cronbach's Alpha	N of Items
.933	15

Interpretation

The questionnaire reliability was tested using Cronbach's Alpha in IBM SPSS Statistics. The obtained value is 0.933 for 15 items, which indicates a high level of internal consistency among the questionnaire items.

Table 1: Gender Distribution

Gender	Frequency	Percent
Male	35	76.1
Female	11	23.9
Total	46	100.0

Interpretation

Table shows that majority of respondents were male, indicating higher participation of male users in UPI transactions.

Table 2: Age Distribution

Age Group	Frequency	Percent
Below 20	3	6.5
20-30	14	30.4
31-40	26	56.5
Above 50	3	6.5
Total	46	100.0

Interpretation

Table show that user of UPI Application from 31-40 age group are more active

Table 3: Convenience and Usability

Statement	Mean	SD
UPI apps are convenient for transactions	1.3043	0.46522
UPI apps help in quick payments	1.3043	0.46522
UPI apps are easy to use	1.3913	0.49344
UPI apps save time	1.3478	0.52567

Interpretation

The table indicates that respondents agreed with the statements related to convenience and usability of UPI applications. The mean scores reflect that respondents perceive UPI applications as convenient, quick, easy to use & time-saving for financial transactions. This shows that UPI based mobile payments Apps are influenced by Convenience and usability.

Analysis of Security

Statement	Mean	SD
UPI apps provide secure transactions	1.7174	0.75020
My personal information is safe in UPI apps	1.9130	0.72499
PIN/OTP improves transaction security	1.6522	0.73688
I feel safe while using UPI apps	1.8261	0.73950

Interpretation

The table indicates that respondents believe UPI applications are secure. Users feel their personal information is protected and during transactions PIN and OTP enhance confidence between users.

Analysis of Trust

Statement	Mean	SD
I trust UPI apps for transactions	1.6957	0.55255
UPI apps are reliable	1.7826	0.72765
UPI payment process is trustworthy	1.7391	0.57483
I feel confident while transferring money	1.7826	0.55430

Interpretation

The findings presented in the table reveal that respondent trust UPI apps and consider them reliable for financial transactions. The results reflect a high level of confidence among users.

Table 4: Analysis of Adoption and Usage

Statement	Mean	SD
I frequently use UPI apps	1.6304	0.57189
I prefer UPI over cash/cards	1.6304	0.53161
I will continue using UPI apps in future	1.5217	0.62322

Interpretation

The table show that UPI applications are actively used by respondents. Many customers prefer UPI over traditional payment methods & intend to continue using these services in the future.

Hypothesis Testing

(One-Sample t-test, Test Value = 3)

Table 5: Hypothesis Testing Results

Hypothesis	t-value	Sig. Value	Decision
H ₀₁	-24.721	0.000	Rejected
H ₀₂	-16.242	0.000	Rejected

Interpretation**Hypothesis 1**

H₀₁: Customers show no significant perception regarding convenience, usability, and security of UPI-based mobile payment applications

The null hypothesis is rejected, confirming that customers significantly perceive UPI applications as convenient, easy to use, and secure.

Hypothesis 2

H₀₂: Customers show no significant trust and adoption regarding UPI-based mobile payment applications.

The null hypothesis is rejected. This indicates that customers significantly trust and adopt UPI applications.

Findings of the Study

- Respondents agreed that UPI applications are convenient, easy to use, quick, and time-saving.
- The study found that users perceive UPI applications as secure for financial transactions.
- Security measures such as Personal Identification Numbers (PINs) and One-Time Passwords (OTPs) enhance users' confidence and provide greater security while making digital payments.
- Respondents trust UPI applications and consider them reliable for money transfers.
- Customers frequently use UPI applications and prefer them over traditional payment methods like cash and cards.
- Users showed willingness to continue using UPI applications in the future.
- The One-Sample t-test results confirmed that customers significantly perceive UPI applications as convenient, secure, trustworthy, and widely adopted

Suggestions of the Study

The study suggests that the service providers of UPI should keep updating user interface to make applications more user friendly and convenient. Improve the security to minimize the risk of fraud and strengthen customer faith in digital payments. There is a need for banks to offer fast solutions to transaction failures, refund related problems to enhance customer satisfaction. Educational awareness programs should be organized on the safe use of UPI (app) with the dissemination of information among people, particularly among the rural masses and old age groups. More cashback offers and reward programs can also be rolled out to incentivize more to use digital payments. Apart from that, if internet connectivity and digital infrastructure are improved, then it will help to make UPI services like Google Pay and PhonePe more accessible and easier to use, like BHIM.

Limitations of the Study

1. The result may not accurately represent the perceptions of all UPI users due to limited sample of 46 respondents.
2. Convenience sampling was used, which limits the generalization of the findings.
3. Data was collected through Google Forms, which may exclude people who are not active internet users.
4. The study considered only few factor such as convenience, security, trust, and adoption.

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