

A Study on Customer Adoption of UPI Payments in India

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ABSTRACT: This paper analyzes the aspects of customer adoption of UPI payments in India, considering the main variables as perceived ease of use, security and trust, and awareness and knowledge. As the digital payment systems rapidly grow, UPI has become a popular platform since it is convenient and efficient. The research design used in the study is descriptive research design and quantitative research design where primary data was gathered using a structured questionnaire on 120 respondents. Secondary data is collected through journals, reports and other relevant publications to help in the analysis. The data obtained is statistically analyzed through statistical tools like percentage analysis, correlation and regression to find out the relationship between the variables. The results show that the ease of use, high level of security, and sufficient level of customer awareness are key factors in influencing the adoption of UPI payments by customers. The research finds that the adoption rates can still be improved by improving the user experience and providing security to transactions and creating awareness. This knowledge can be applied by policymakers, banks and digital payment services providers to facilitate a cashless economy and enhance digital financial inclusion in India.

KEYWORDS: customer adoption, UPI payment, ease of use, customer trust

I. INTRODUCTION

The fast development of the digital technology has radically changed the Indian financial environment, especially in the field of digital payments. The Unified Payments Interface (UPI) by the National Payments Corporation of India has transformed how financial transactions are carried out in that money transfer is instant, secure and seamless. UPI can combine various bank accounts into one mobile application enabling users to conduct transactions at any time and place. As the penetration level of smart phones, the internet, and favourable government policies that support the idea of a cashless economy have risen, UPI has become one of the most favoured digital payment systems in India.

Although it has been adopted by many, there are various factors that determine the level of acceptance of UPI payments by customers. The perceived ease of use, security and trust, and awareness and knowledge are the variables that are very important in influencing customer behaviour towards the adoption of UPI services. As the users would be able to use the system easily, have a sense of security of the transactions and have sufficient knowledge of the features contained in the system, chances of adoption would be high. Therefore, this study aims to examine the impact of these factors on customer adoption of UPI payments, providing insights into user preferences and helping stakeholders enhance the effectiveness and reach of digital payment systems.

Objectives of the study

- To test the effects of Perceived Ease of Use on Customer Adoption of UPI Payments.
- To examine the effects of Security and Trust on Customer Adoption of UPI Payments.
- To assess the impact of Awareness and Knowledge on Customer Adoption of UPI Payments.
- To determine the Customer Adoption of UPI Payments of the users.

II. REVIEW OF LITERATURE

Venkatesh V et al. (2003) to analyze the factors affecting the technology acceptance. The research found the perceived ease of use and trust to be important predictors of user adoption behaviour. The results emphasized that systems that are user-friendly and those that are perceived to be secure are those that are most likely to be adopted by the users. This model is extensively used in the research on digital payment, such as UPI adoption.

Patil P (2020) examined the customer adoption of UPI services in India based on their awareness, ease of use, and security concerns. The researchers discovered that awareness and knowledge can play a major role in the adoption rate with perceived security playing a key role in creating user trust. The study found out that the awareness creation and provision of secure platforms can increase UPI use.

Singh N and Rana (2017) studied the adoption of mobile payment services in India and emphasized the importance of trust and ease of use in influencing customer behaviour. The findings showed that perceived risk and unawareness are some of the impediments, and user-friendly interfaces and secure systems enhance adoption. The analysis helps to prove the importance of significant variables on UPI adoption.

III. RESEARCH METHODOLOGY

The study approach used in the research on Customer Adoption of UPI Payments in India descriptive in nature and is quantitative based. The data is gathered using a structured questionnaire that is created based on a Likert scale, with the aim of measuring the variables of perceived ease of use, security and trust, awareness and knowledge, and customer adoption of UPI payments. The sample size of the study is 120 respondents, who are chosen based on convenience sampling. Secondary data is collected using journals, articles and official reports concerning the subject of digital payments. Statistical tools which include percentage analysis, correlation and regression are used to analyze the collected data in order to determine the relationship between the variables and make meaningful conclusions.

IV. DATA ANALYSIS AND INTERPRETATION

Table No. 1 Perceived Ease of Use

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
UPI applications are simple to learn and operate.	35 (29.2%)	45 (37.5%)	20 (16.7%)	12 (10%)	8 (6.6%)	120 (100%)
The process of making payments through UPI is clear and understandable.	40 (33.3%)	50 (41.7%)	15 (12.5%)	10 (8.3%)	5 (4.2%)	120 (100%)
UPI transactions can be completed quickly without complications.	30 (25%)	48 (40%)	22 (18.3%)	12 (10%)	8 (6.7%)	120 (100%)
Navigation within UPI applications is user-friendly.	38 (31.7%)	52 (43.3%)	14 (11.7%)	10 (8.3%)	6 (5%)	120 (100%)
Minimal effort is required to perform transactions using UPI.	42 (35%)	46 (38.3%)	16 (13.3%)	10 (8.3%)	6 (5%)	120(100 %)

Source: Primary data

Interpretation

Respondents indicate that 29.2% strongly agree and 37.5% agree that UPI applications are simple to learn and operate, while 16.7% are neutral, 10% disagree, and 6.6% strongly disagree. Regarding the clarity of the payment process, 33.3% strongly agree and 41.7% agree that making payments through UPI is clear and understandable, with 12.5% neutral, 8.3% disagree, and 4.2% strongly disagree. For the speed of transactions, 25% strongly agree and 40% agree that UPI transactions can be completed quickly without complications, while 18.3% are neutral, 10% disagree, and

6.7% strongly disagree. In terms of navigation within UPI applications, 31.7% strongly agree and 43.3% agree that it is user-friendly, with 11.7% neutral, 8.3% disagree, and 5% strongly disagree. Concerning the effort required to perform transactions, 35% strongly agree and 38.3% agree that minimal effort is needed, while 13.3% are neutral, 8.3% disagree, and 5% strongly disagree. Overall, the majority of respondents express positive perceptions toward the ease of use of UPI payments, indicating that simplicity, clarity, speed, and user-friendly features significantly influence the adoption of UPI in India.

Table No. 2 Security and Trust

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
UPI payment systems provide secure transaction processes.	38 (31.7%)	50 (41.7%)	16 (13.3%)	10 (8.3%)	6 (5%)	120 (100%)
Personal and financial information is well protected in UPI platforms.	40 (33.3%)	48 (40%)	18 (15%)	8 (6.7%)	6 (5%)	120 (100%)
UPI applications are reliable for conducting financial transactions.	36 (30%)	52 (43.3%)	14 (11.7%)	10 (8.3%)	8 (6.7%)	120 (100%)
Authentication methods in UPI enhance transaction safety.	42 (35%)	46 (38.3%)	16 (13.3%)	8 (6.7%)	8 (6.7%)	120 (100%)
Confidence exists in the overall security framework of UPI systems.	34 (28.3%)	50 (41.7%)	18 (15%)	10 (8.3%)	8 (6.7%)	120 (100%)

Source: Primary data

Interpretation

Respondents indicate that 31.7% strongly agree and 41.7% agree that UPI payment systems provide secure transaction processes, while 13.3% are neutral, 8.3% disagree, and 5% strongly disagree. Regarding the protection of personal and financial information, 33.3% strongly agree and 40% agree that UPI platforms ensure adequate security, with 15% neutral, 6.7% disagree, and 5% strongly disagree. For reliability in conducting financial transactions, 30% strongly agree and 43.3% agree that UPI applications are dependable, while 11.7% are neutral, 8.3% disagree, and 6.7% strongly disagree. In terms of authentication methods, 35% strongly agree and 38.3% agree that they enhance transaction safety, with 13.3% neutral, 6.7% disagree, and 6.7% strongly disagree. Concerning overall confidence in the security framework of UPI systems, 28.3% strongly agree and 41.7% agree, while 15% are neutral, 8.3% disagree, and 6.7% strongly disagree. Overall, the majority of respondents express positive perceptions toward the security and reliability of UPI systems, indicating that trust, data protection, and safe authentication mechanisms play a crucial role in the adoption of UPI payments in India.

Table No.3 Customer Adoption of UPI Payments

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
UPI is frequently used for daily financial transactions.	36 (30%)	50 (41.7%)	18 (15%)	10 (8.3%)	6 (5%)	120 (100%)
UPI is preferred over other digital payment methods.	38 (31.7%)	48 (40%)	16 (13.3%)	10 (8.3%)	8 (6.7%)	120 (100%)

Usage of UPI has increased over time.	34 (28.3%)	52 (43.3%)	18 (15%)	10 (8.3%)	6 (5%)	120 (100%)
UPI is considered a convenient mode of payment.	40 (33.3%)	46 (38.3%)	18 (15%)	8 (6.7%)	8 (6.7%)	120 (100%)
Continued use of UPI is likely for future transactions.	37 (30.8%)	49 (40.8%)	17 (14.2%)	9 (7.5%)	8 (6.7%)	120 (100%)

Source: Primary data

Interpretation

Respondents indicate that 30% strongly agree and 41.7% agree that UPI is frequently used for daily financial transactions, while 15% are neutral, 8.3% disagree, and 5% strongly disagree. Regarding preference over other digital payment methods, 31.7% strongly agree and 40% agree that UPI is their preferred choice, with 13.3% neutral, 8.3% disagree, and 6.7% strongly disagree. For the increase in usage over time, 28.3% strongly agree and 43.3% agree that their use of UPI has grown, while 15% are neutral, 8.3% disagree, and 5% strongly disagree. In terms of convenience, 33.3% strongly agree and 38.3% agree that UPI is a convenient mode of payment, with 15% neutral, 6.7% disagree, and 6.7% strongly disagree. Concerning the likelihood of continued usage, 30.8% strongly agree and 40.8% agree that they will continue using UPI for future transactions, while 14.2% are neutral, 7.5% disagree, and 6.7% strongly disagree. Overall, the majority of respondents express positive perceptions toward the usage and preference of UPI, indicating that frequent usage, convenience, and increasing reliance contribute significantly to the continued adoption of UPI payments in India.

IV. CHI-SQUARE ANALYSIS: RELATIONSHI BETWEEN PERCEIVED EASE OF USE AND CUSTOMER ADOPTION OF UPI PAYMENTS

HYPOTHESIS TESTING

Null hypothesis (H01): There is no significant relationship between Perceived Ease of Use and Customer Adoption of UPI Payments

Alternative hypothesis (H02): There is some significant relationship between Perceived Ease of Use and Customer Adoption of UPI Payments

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	164.077 ^a	168	0.571
Likelihood Ratio	156.736	168	0.723
Linear-by-Linear Association	0.052	1	0.82
N of Valid Cases	120		

a. 195 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

INTERPRETATION:

As per the above table, it is inferred that the P value is 0.571; it is not significant to 5% (0.05) significant level. The minimum expected count is 1.03. Thus null hypothesis is accepted and it is found that there is no significant difference between Perceived Ease of Use and Customer Adoption of UPI Payments.

V. CORRELATION ANALYSIS: RELATIONSHIP BETWEEN SECURITY AND TRUST AND CUSTOMER ADOPTION OF UPI PAYMENTS

HYPOTHESIS TESTING

Null hypothesis (H01): There is no significant relationship between Security and Trust and Customer Adoption of UPI Payments

Alternative hypothesis (H02): There is some significant relationship between Security and Trust and Customer Adoption of UPI Payments

Correlations			
		SECURITY AND TRUST	CUSTOMER ADOPTION OF UPI PAYMENTS
SECURITY AND TRUST	Pearson Correlation	1	.603**
	Sig. (2-tailed)		0
	N	120	120
CUSTOMER ADOPTION OF UPI PAYMENTS	Pearson Correlation	.603**	1
	Sig. (2-tailed)	0	
	N	120	120

** . Correlation is significant at the 0.01 level (2-tailed).

INTERPRETATION

The above table indicates that, co-efficient of correlation between Security and Trust and Customer Adoption of UPI Payments is 0.603** It is below 1. So there is positive relationship between Security and Trust and Customer Adoption of UPI Payments.

VI. SUGGESTIONS

- The ease of use of UPI applications should be enhanced by making interfaces easy to use and minimizing steps to complete transactions.
- More stringent security protocols like more sophisticated authentication and fraud detection systems ought to be put in place to improve user confidence.
- There should be awareness campaigns and programs to create awareness on UPI features and benefits to the users.
- Service providers and financial institutions need to concentrate on informing users on the safe usage practices to minimize security issues.
- Technical support and customer care should be offered to help users deal with transaction related problems in the shortest time possible.
- The UPI applications must be very reliable, with limited downtime to provide a consistent user experience.
- Promotions like cash back and incentives may be offered to promote more frequent use of UPI payments.
- Banks, government, and digital platforms should work hand-in-hand to increase the reach and use of UPI services.

VII. CONCLUSION

The conclusion is that perceived ease of use, security and trust, and awareness and knowledge are the factors that greatly impact customer adoption of UPI payments in India. The ease of use interface and easy transaction process makes it more readily accepted by the users, and high levels of security and trust in the system increase the confidence of the system users. Also, the awareness and adequate knowledge of UPI services is crucial in facilitating its use. Thus, enhancing these crucial factors may result in increased adoption and long-term growth of UPI payments, which should help to build a cashless economy in India. It is also concluded that financial institutions, service providers, and policymakers should work tirelessly to enhance the adoption of UPI payments. To a great extent, the user satisfaction and trust can be enhanced by improving digital literacy, ensuring security concerns, and providing smooth transactions experiences. With the ongoing development of digital payment systems, customer-centric approaches and technological innovations should be prioritized to facilitate the long-term adoption. Therefore, an integrated strategy towards

enhancing usability, awareness and security will be instrumental in increasing the use of UPI payments among various categories of users in India.

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