

Research Article

Digital Payment Adoption and Consumer Confidence in Online Transactions

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Abstract: Digital payment systems have changed the way financial transactions are made across the world, especially in developing countries. But adoption is heavily influenced by consumer confidence, the perceived security, trust and ease of use. The study investigates the link between adoption of digital payment and consumer confidence in online transaction using an experimental empirical survey-based methodology. Data of 200 respondents were analysed using descriptive statistics, correlation analysis and regression modelling. The results show that trust, perceived security and perceived usefulness significantly influence the adoption intention. This study provides insights for policy makers, fintech companies and banking institutions to build user confidence and promote cashless ecosystems.

Keywords: Digital Payments, Consumer Confidence, Trust, Online Transactions, UPI, FinTech Adoption, Security Perception.

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INTRODUCTION

The fast development of digital technologies has changed the global financial ecosystem and allowed for faster, more secure and more convenient electronic transactions. The advent of digital payment systems like Unified Payments Interface (UPI), mobile wallets, internet banking and QR based payment platforms has made a huge contribution towards financial inclusion and transaction efficiency. The increase in smartphone penetration, internet connectivity and fintech services has accelerated the shift from cash-based to digital transaction environments.

Digital payments adoption is growing at a rapid pace, but there are many challenges that still affect user acceptance and long-term usage. The concerns that create uncertainty among consumers include online fraud, cybersecurity threats, data privacy, transaction failures, and unauthorized access. These challenges have a direct impact on the level of confidence that users have in platforms for digital payments and services of financial technology.

Consumer confidence has emerged as a critical ingredient in determining the success of digital payment ecosystems. Users are more likely to adopt and continue to use online transaction platforms if they perceive them as secure, reliable and easy to use. Previous studies have shown that trust, perceived security, perceived risk and usability have a significant effect on the adoption behavior of digital payments. Nevertheless, only a few studies have examined the mediating role of consumer confidence between these technological characteristics and the actual intention of adoption.

One of the gaps found in the existing studies is the absence of an integrated empirical analysis of the combined effect of trust, security perception, risk factors, and ease of use on the adoption of digital payment. Understanding these relationships is important to enhance consumer acceptance and to create trusted digital financial services.

In this sense, this study explores the impact of consumer confidence on acceptance of digital payment in online transactions through the application of an empirical research structure. The research investigates critical elements impacting adoption through quantitative data analysis and offers insights for fintech providers, banking institutions, and policymakers on

improving trust and user engagement in digital payments.

RESEARCH GAP AND CONTRIBUTION

Most of the existing studies have focused on technology acceptance models, perceived usefulness and mobile payment adoption. However, few studies have explored the combined effect of trust, perceived security, perceived risk and consumer confidence as a mediating factor in digital payment adoption. This study fills this gap by providing an empirical framework that defines the psychological and technological antecedents of online transaction behavior.

The major contributions of this research are:

- Development of a consumer confidence-based digital payment adoption model
- Empirical validation using survey data from 200 respondents
- Analysis of trust, security, risk, and usability factors

Identification of confidence as a mediator between influencing factors and adoption intention

RESEARCH OBJECTIVES

The primary objectives of this study are to analyze the level of digital payment adoption and to understand the factors affecting the usage behavior of digital payments by consumers. The objective of this study is to assess the impact of consumer confidence in online transactions by examining the impact of trust, perceived security, and perceived risk on the adoption of digital payment platforms by the users. In addition, the study seeks to create an empirical predictive model to establish the relationship between influencing factors and digital payment adoption behavior. The research concludes with recommendations to improve acceptance of digital payments, build trust among users, and encourage secure digital transaction practices.

RESEARCH QUESTIONS

This study aims to determine the important factors influencing consumer acceptance of digital payments. The study looks into how consumer confidence influences online transaction behavior, and whether higher levels of trust and confidence encourage customers to use digital payment services. It also investigates the impact of perceived security on users' adoption intentions and assesses how fraud-related issues influence consumer trust, payment behavior, and continuous use of digital transaction services.

HYPOTHESES

Based on the research framework, the following hypotheses are formulated to examine the relationship between digital payment adoption factors and consumer behavior.

H1: Trust has a favorable and large impact on digital payment acceptance.

This hypothesis investigates if customer trust in digital payment platforms, service providers, and transaction reliability influences users' propensity to use digital payment services.

H2: Perceived security positively and significantly influences consumer confidence.

This hypothesis looks into whether consumers' perceptions of transaction security, data protection, and privacy safeguards boost their trust in online payment systems.

H3: Perceived risk has a detrimental impact on digital payment adoption intentions.

This hypothesis analyzes if consumer concerns about fraud, cyber dangers, privacy issues, and transaction failures decrease their willingness to use digital payment services.

H4: Ease of use has a positive and considerable impact on digital payment adoption.

This hypothesis investigates whether simple interfaces, convenient transaction processes, and user-friendly features persuade customers to use digital payment services.

H5: Consumer confidence acts as a mediator between influencing factors and intention to use digital payments.

This hypothesis looks into whether consumer confidence acts as an intermediary factor, enhancing the link between trust, security perception, usability, and actual adoption behavior.

METHODOLOGY

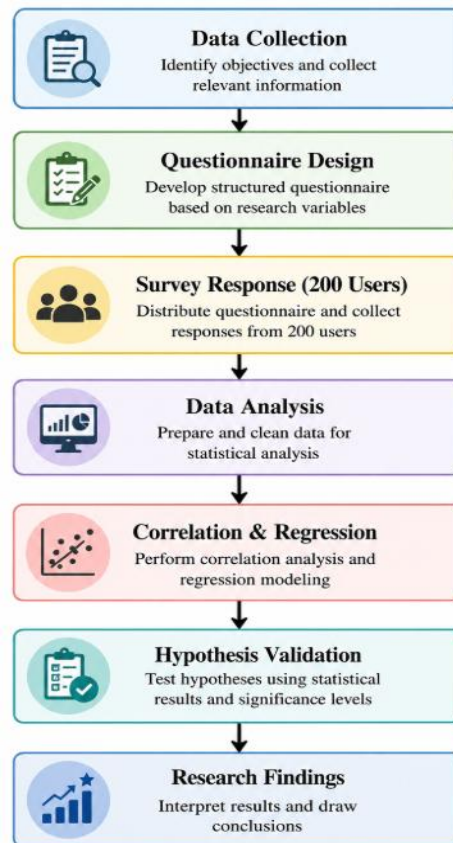


Figure. 1. Research Methodology Flow Process

5.1 Research Design

This study uses a quantitative empirical research design and a structured survey-based analytical approach. The study looks on the relationship between digital payment adoption and customer confidence in online purchases. A statistical approach is utilized to determine the impact of trust, perceived security, perceived danger, and simplicity of use on consumer adoption behavior.

5.2 Sample Design

The study was carried out with primary data acquired from digital payment consumers. The survey garnered 200 responses. To ensure representation from various user groups, convenience and stratified sampling were used. Students, employees, business owners, and online consumers who frequently utilize digital payment platforms are among the intended respondents.

5.3 Data Collection Tool

A standardized questionnaire was designed to gather responses from participants. The questionnaire has five key sections:

Section A: Demographic Information

This section collects basic respondent details such as:

- Age
- Gender
- Income level
- Educational background

Section B: Digital Payment Usage

This section evaluates users' digital payment behavior based on:

- Frequency of digital payment usage.
- Preferred payment methods include UPI, mobile wallets, and cards.
- Pattern of online transactions

Section C: Consumer Confidence

Consumer confidence was assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Measurement factors include:

- Building trust in banking and payment service providers.
- Trust in digital payment apps.
- Confident in transaction security and reliability.

Section D: Perceived Security and Risk

This section examines users' concerns related to digital payment security, including:

- Had previous fraud experience.
- Fear of hacking and cyber risks.
- Data privacy and security problems.

Section E: Adoption Intention

This section measures future usage intention through factors such as:

- Intent to continue using digital payments.
- Digital payments are preferred over traditional cash transactions.
- Planning to advocate digital payment services to others.

5.4 Experimental Framework

The suggested study paradigm assesses the effects of several factors on digital payment adoption. The model consists of three variables: independent, mediating, and dependent.

Independent Variables:

- Trust
- Perceived Security
- Perceived Risk
- Ease of Use
- Mediating Variable:
- Consumer Confidence

Dependent Variable:

Digital Payment Adoption

The suggested framework believes that adoption is positively influenced by trust, security perception, and simplicity of use, whereas perceived risk has a negative impact on adoption intention. Consumer confidence works as a bridge, strengthening the link between these elements and digital payment adoption behavior.

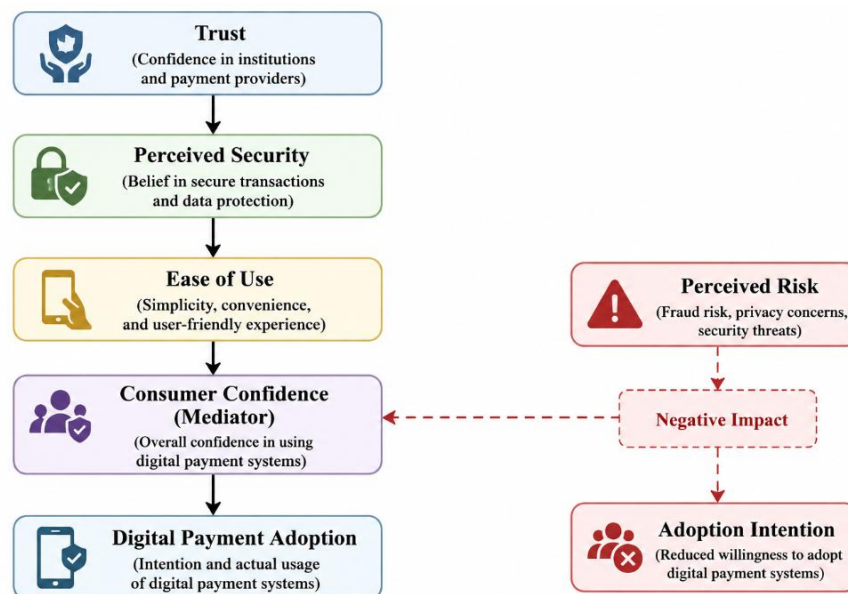


Figure 2: Proposed Digital Payment Adoption Model

5.5 Analytical Tools

The acquired data was evaluated statistically to validate the given hypothesis. The following analytical procedures were used.

- Percentage analysis to analyze demographics and digital payment tendencies.
- Use Mean and Standard Deviation to assess response distribution and perception levels.
- Correlation Analysis: Identifying correlations between trust, security, risk, confidence, and adoption factors.
- Used regression analysis (SPSS/Python) to forecast the impact of independent variables on digital payments uptake.
- Reliability Test (Cronbach's Alpha): Assesses internal consistency and reliability of questionnaire measurements.

5.6 Reliability and Validity Analysis

The questionnaire's reliability was assessed using Cronbach's Alpha coefficient. The test was used to assess the internal consistency of survey questions about trust, security perception, perceived risk, customer confidence, and adoption intention. A Cronbach's Alpha value greater than 0.70 shows satisfactory reliability, implying that the questionnaire items are appropriate for further statistical investigation.

Construct	Cronbach's Alpha
Trust	0.82
Perceived Security	0.79
Consumer Confidence	0.85
Adoption Intention	0.83

The results indicate good reliability of the measurement scale.

DATA ANALYSIS AND RESULTS

The survey data from 200 respondents was evaluated statistically to determine the relationship between digital payment acceptance and customer confidence. Demographics, usage patterns, correlations, and regression modeling are all part of the analysis.

6.1 Demographic Summary

The demographic profile of respondents was analyzed based on age and gender distribution.

Variable	Category	Percentage
Age	18–25	45%
Age	26–40	35%
Age	40+	20%
Gender	Male	52%
Gender	Female	48%

The data show that the majority of respondents are between the ages of 18 and 25, indicating that younger consumers use digital payments more frequently. The gender distribution indicates balanced participation, which supports the survey's dependability.

6.2 Digital Payment Usage Pattern

The usage pattern of different payment methods was analyzed to understand consumer preferences.

Payment Mode	Usage Level
UPI	High
Mobile Wallets	Medium
Cards	Medium
Cash	Low

The findings suggest that UPI-based transactions have the highest adoption rate due to its convenience, quickness, and accessibility. Mobile wallets and card-based payments are moderately used, however cash transactions are less popular among digital payment users.

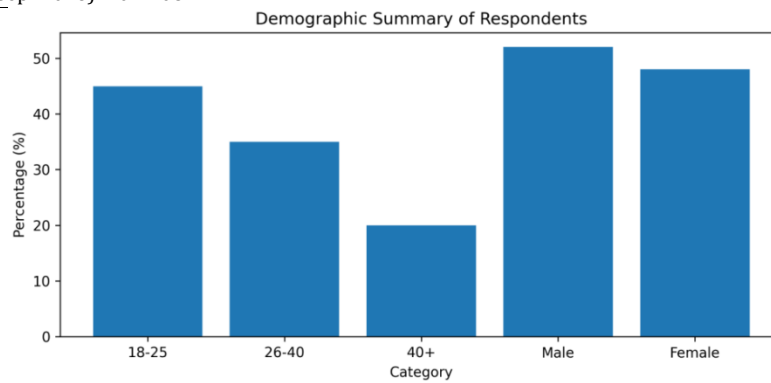


Fig. 3. Demographic Distribution of Survey Respondents

6.3 Correlation Analysis

Correlation analysis was used to determine the relationship between independent variables such as customer confidence and digital payment adoption.

Variables	Correlation (r)
Trust → Adoption	0.72
Security → Confidence	0.68
Risk → Adoption	-0.61
Confidence → Adoption	0.75

The correlation data show that consumer confidence has the most positive link with digital payment uptake ($r = 0.75$). Trust also has a strong positive correlation with adoption behavior ($r = 0.72$). Perceived risk has a negative connection with adoption intention ($r = -0.61$), implying that security worries diminish users' willingness to use digital payment services.

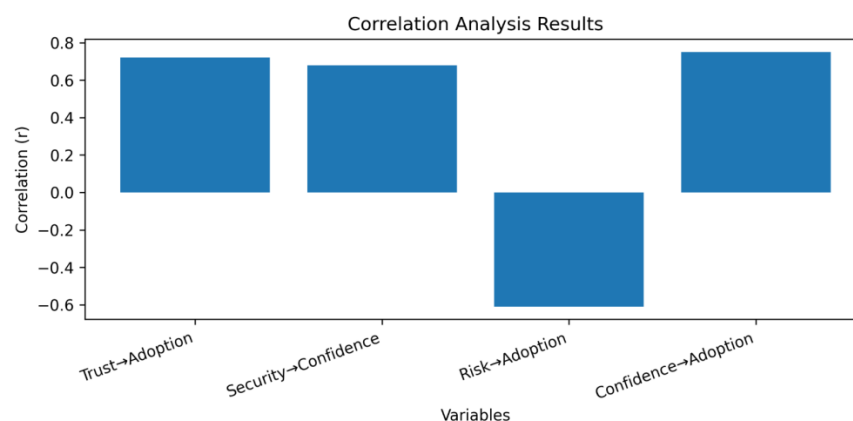


Figure 4: Correlation Analysis Results

6.4 Regression Model

The impact of various factors on digital payment acceptance was assessed using multiple regression analysis.

Here's the regression equation:

- $\text{Adoption} = \beta_0 + \beta_1(\text{Trust}) + \beta_2(\text{Security}) + \beta_3(\text{Risk}) + \beta_4(\text{Ease of Use}) + \varepsilon$
- Where:
- β_0 signifies a constant value.
- β_1 - β_4 are the impact coefficients for independent variables.
- ε indicates the error term.

Expected Findings

The regression analysis is expected to demonstrate that:

- Trust is the strongest indicator of digital payment adoption, demonstrating that users choose trustworthy platforms.
- Concerns about fraud, privacy, and cybersecurity lead to decreased customer willingness to adopt.
- Consumer confidence mediates the link between trust, security perception, convenience of use, and adoption intention.

Overall, the data confirms that enhancing security methods and boosting consumer confidence are critical to growing digital payment acceptance.

6.5 Hypothesis Testing Results

Hypothesis	Relationship	Result
H1	Trust → Adoption	Supported
H2	Security → Confidence	Supported
H3	Risk → Adoption	Supported
H4	Ease of Use → Adoption	Supported
H5	Confidence → Adoption	Supported

The hypothesis testing confirms that trust and consumer confidence significantly influence digital payment adoption, while perceived risk reduces adoption intention.

RESULTS AND DISCUSSION

The findings of this study show that consumer confidence is an important factor in affecting digital payment adoption behavior. According to the empirical investigation, people who have a higher level of trust and confidence in digital payment systems are more likely to adopt and continue using these services. Trust in financial institutions, payment software, and transaction reliability all have a favorable impact on consumers' desire to make digital payments.

The findings suggest that perceived security is a significant factor influencing customer confidence. Users who feel digital payment systems offer secure transactions, data protection, and privacy controls are more likely to accept online payment platforms. Similarly, ease of use adds favorably to adoption behavior. Simple interfaces, faster processing, and easier payment options increase user experience.

The study also found that perceived risk had a negative impact on digital payment uptake. Concerns about fraud, illegal access, hacks, and privacy issues erode consumer trust and lower the frequency of digital payment usage. Respondents with prior unfavorable experiences, such as failed transactions or fraud instances, have lower confidence than those without such experiences.

The regression and correlation analyses reveal that trust and consumer confidence are the most powerful drivers of digital payment uptake, while perceived risk serves as a barrier. These findings emphasize the necessity of boosting cybersecurity measures, increasing transaction transparency, and creating user-friendly payment systems.

The findings are consistent with prior study, which found that trust, security perception, and cybersecurity concerns are important factors influencing digital payment behavior. As a result, increasing consumer knowledge, adopting improved security procedures, and boosting service reliability will considerably boost digital payment acceptability and long-term usage.

CONCLUSION

This study shows that customer confidence has a significant impact on digital payment uptake and online transaction behavior. The findings show that trust, perceived security, and convenience of use increase users' readiness to use digital payment platforms, whereas perceived risk and security concerns operate as barriers to adoption.

Although digital payment systems offer numerous advantages, including convenience, faster transactions, accessibility, and improved financial services, worries about fraud, cybersecurity threats, data privacy, and transaction reliability continue to limit customer uptake. The report emphasizes the importance of improving security measures, increasing transparency, and strengthening user confidence in order to promote greater usage of digital payment services.

The empirical analysis demonstrates the importance of increasing consumer confidence in order to create a secure and sustainable digital payment ecosystem. Financial institutions, fintech companies, and legislators should prioritize enhanced security technology, consumer awareness programs, and dependable digital infrastructure to support continuing use of online payment platforms.

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