



A Study of Financial Determinant of Digital Payment Adoption in Pune: Financial Motivation and Barrier Analysis

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Abstract – The rapid expansion of digital payment systems in India has transformed financial transactions, driven by technological advancements and government initiatives such as Digital India. This study examines the adoption of digital payment systems in Pune, focusing on consumer usage behavior and key influencing factors. Primary data was collected from 100 respondents using a structured questionnaire. Statistical tools such as percentage analysis and Chi-square tests were applied. The findings reveal high adoption levels, with ease of use, perceived usefulness, and financial literacy significantly influencing usage. However, concerns related to security, transaction costs, and cyber fraud persist. The study concludes that digital payments are widely accepted, with strong potential for future growth, provided challenges are addressed.

Keywords – Digital Payment Systems, Consumer Behavior, Digital India, Financial Technology, UPI, Online Transactions, Mobile Wallets, Cashless Economy, Financial Literacy, Cyber Security, Consumer Adoption, E-Payments, Digital Transactions, Pune City, Payment Apps.

I. INTRODUCTION

The rapid advancement of technology has significantly transformed the way financial transactions are conducted, leading to the widespread adoption of digital payment systems. In India, initiatives such as Digital India and the growth of platforms like Unified Payments Interface (UPI) have accelerated the shift from cash-based transactions to digital modes. Digital payments—including mobile wallets, debit and credit cards, and net banking—offer advantages such as convenience, speed, and accessibility, making them an integral part of modern financial systems.

In recent years, urban centers have witnessed a substantial increase in the use of digital payments due to improved internet connectivity, smartphone penetration, and increasing financial awareness. Pune, being a prominent educational and IT hub, represents a diverse population of students, salaried professionals, and business individuals, making it an ideal location to study consumer behavior toward digital payments.

Despite the growing popularity of digital payment systems, several challenges continue to influence their adoption. Factors such as perceived ease of use, perceived usefulness, financial literacy, and security concerns play a crucial role in shaping user behavior. Issues related to cyber fraud, transaction costs, and system reliability can affect user trust and limit the full potential of digital payments.

Therefore, this study aims to analyze the adoption and usage behavior of digital payment systems in Pune, focusing on the key factors influencing adoption, benefits perceived by users, and challenges faced. The study also examines how digital payments impact financial behavior and evaluates their future growth potential.

Objectives of the Study

- To study the adoption of digital payment systems in Pune
- To identify factors influencing adoption
- To analyze benefits of digital payments
- To examine challenges faced by users

II. LITERATURE REVIEW

The adoption of digital payment systems is largely explained by the Technology Acceptance Model (TAM), which highlights perceived usefulness and perceived ease of use as key determinants of technology acceptance. Users are more likely to adopt digital payments when they find them beneficial and easy to operate. (Davis, 1989)

The Unified Theory of Acceptance and Use of Technology (UTAUT) further expands this by including social influence and facilitating conditions, suggesting that external factors such as infrastructure and peer influence also affect adoption behavior. (Venkatesh et al., 2003)

In the Indian context, the growth of digital payments, especially UPI, has been driven by convenience, speed, and accessibility. Real-time transactions and smartphone penetration have significantly increased user adoption. (Sharma & Singh, 2022)

Financial literacy and demographic factors also play an important role in adoption. Studies show that individuals with higher financial knowledge and better education are more likely to use digital payment systems confidently.

(Kiran & Sailaja, 2025; Jani, Upadhyay, & Bhavsar, 2026) However, security concerns, fear of cyber fraud, and transaction costs remain major barriers. Issues such as data



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privacy, system failures, and hidden charges reduce user trust and affect adoption levels. (Sharma & Singh, 2022; Kiran & Sailaja, 2025)

Overall, the literature indicates that while ease of use, usefulness, and financial literacy drive adoption, challenges related to security, trust, and cost continue to limit the full acceptance of digital payment systems. (Esakki, 2026)

III. RESEARCH METHODOLOGY

● Research Design

The study adopts a descriptive and analytical research design to examine the adoption of digital payment systems and analyze the factors influencing consumer behavior. A quantitative approach has been used to ensure objective measurement and statistical analysis of data.

● Data Collection

The study is based on primary data, collected through a structured questionnaire designed to capture respondents' perceptions and usage patterns of digital payment systems. The questionnaire includes both demographic and Likert-scale questions.

Sample Size: 100 respondents

Area of Study: Pune

Sampling Technique: Convenience sampling

● Variables of the Study

Independent Variables:

- Perceived Ease of Use
- Perceived Usefulness
- Security and Privacy Concerns
- Financial Literacy
- Demographic Factors (income, age, occupation)

Dependent Variable:

- Adoption of Digital Payment Systems

IV. DATA ANALYSIS & RESULTS

● Adoption of Digital Payments

Out of 100 respondents, 92% reported using digital payment systems, indicating a high level of adoption in Pune. Only 8% of respondents do not use digital payments, suggesting minimal resistance toward digital transactions.

● Perception of Ease of Use

A majority of respondents rated digital payment apps highly in terms of ease of use, with 44 respondents selecting rating 4 and 29 selecting rating 5. This indicates that most users find digital payment applications user-friendly and easy to operate.

Similarly, for learning simplicity, 43 respondents strongly agreed (rating 5) and 29 agreed (rating 4), confirming that digital payment systems are easy to learn.

● Efficiency and Time-Saving Benefits

The results show strong agreement that digital payments save time and improve efficiency. For time-saving benefits, 38 respondents selected rating 4 and 33 selected rating 5, indicating widespread recognition of speed and convenience.

Additionally, most respondents agreed that transactions can be completed quickly and that digital payments improve efficiency in managing financial activities.

● Convenience and User Preference

Digital payments are widely perceived as more convenient than cash. A majority of respondents selected ratings 4 and 5, showing a clear preference for digital payment methods over traditional cash transactions.

Furthermore, 38 respondents agreed and 27 strongly agreed that they prefer digital payments, indicating a strong behavioral shift toward digital modes.

● Financial Behavior Impact

The study reveals mixed effects of digital payments on financial behavior.

37% of respondents reported increased spending

25% reported better expense tracking

24% observed improved financial discipline

This suggests that while digital payments enhance financial management, they may also encourage higher spending due to ease of transactions.

● Security Concerns and Risk Perception

Security remains a significant concern among users. The majority of respondents expressed concern about fraud, with 30 selecting rating 4 and 29 selecting rating 5, indicating high levels of perceived risk.

Among different risks, liquidity risk (system downtime) was the most prominent (34%), followed by market risk (29%) and cybersecurity risk (21%).

Although many respondents believe their data is secure, a considerable proportion still shows hesitation, reflecting partial trust in digital payment systems.

● Transparency and Trust

The results indicate relatively low confidence in the transparency of digital payment systems regulated by authorities. Most respondents selected lower ratings, suggesting moderate to low trust in system transparency.

Additionally, fear of cyber fraud significantly affects usage, with a majority agreeing that it influences their decision to use digital payments.

● Future Usage Intention

The findings show a strong intention to continue using digital payments in the future. Most respondents selected ratings 4 and 5, indicating long-term acceptance and sustainability of digital payment systems.



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● Recommendation Behavior

A large proportion of respondents are willing to recommend digital payment systems to others, with 40% selecting “Definitely Yes” and 36% selecting “Probably Yes.” This reflects high satisfaction and positive user experience.

● Customer Support Perception

Customer support is viewed as moderately important, with most respondents selecting mid-level ratings. This suggests that while support services are necessary, they are not the primary factor influencing adoption decisions.

V. CONCLUSION

The study concludes that digital payment systems are widely adopted in Pune, with a majority of users actively using them for daily transactions. Factors such as ease of use, perceived usefulness, and financial literacy play a significant role in driving adoption, making digital payments a convenient and efficient alternative to cash.

The findings also highlight that digital payments offer speed, convenience, and improved financial management, contributing to their growing popularity among users. However, challenges such as security concerns, fear of cyber fraud, and transaction costs continue to affect user trust and limit full adoption.

Despite these challenges, the overall attitude toward digital payment systems is positive, with most respondents expressing their intention to continue using them in the future. This indicates strong potential for sustained growth and expansion of digital payment systems.

In conclusion, while digital payments have become an integral part of financial transactions, addressing issues related to security, transparency, and cost efficiency is essential to further enhance user confidence and promote wider adoption.

VI. FINDINGS

The study reveals a high level of adoption of digital payment systems among respondents in Pune, with most users actively using platforms such as UPI, debit cards, and net banking.

Ease of use and perceived usefulness are identified as major factors influencing adoption, as most respondents find digital payment apps simple, user-friendly, and efficient.

Digital payments are widely appreciated for their speed, convenience, and time-saving benefits, making them a preferred alternative to cash transactions.

Financial literacy plays a significant role in increasing user confidence and adoption, indicating that knowledgeable users are more likely to use digital payment systems.

However, security concerns and fear of cyber fraud remain major challenges, affecting user trust and usage behavior.

Transaction costs and system-related risks such as downtime also influence user preferences and satisfaction levels.

The study also finds that digital payments have a mixed impact on financial behavior, leading to better expense tracking and discipline for some users, while encouraging increased spending for others.

Finally, most respondents show a positive attitude toward future usage, indicating strong potential for continued growth and adoption of digital payment systems.

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