

A STUDY ON DIGITAL PAYMENTS & CONSUMERS UPI USAGE AWARENESS AND BARRIERS

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ABSTRACT

Digital payments have transformed the financial ecosystem by enabling fast, secure, and convenient transactions without the use of physical cash. In India, the introduction of the Unified Payments Interface (UPI), developed by the National Payments Corporation of India, has significantly accelerated the adoption of digital payment systems. UPI provides a real-time payment platform that allows users to transfer money instantly through mobile applications such as Google Pay, PhonePe, and Paytm.

This study examines the growth, adoption, and impact of digital payments with special reference to UPI usage. It highlights how digital payment systems enhance financial inclusion, reduce transaction costs, and improve transparency in financial activities. The research also explores the factors influencing UPI adoption, including ease of use, security features, government initiatives, and increasing smartphone penetration.

Furthermore, the study discusses the challenges associated with digital payments, such as cybersecurity risks, technical issues, and lack of digital literacy among certain user groups. Overall, the research concludes that UPI has played a crucial role in strengthening India's digital economy and promoting a cashless society, while continuous technological improvements and awareness programs are necessary to ensure sustainable growth and secure digital transactions.

Keywords: *Unified Payments Interface (UPI), Digital Payments, Cashless Economy, Financial Technology, (FinTech), Consumer Awareness, Adoption of Digital Payment Systems, Security and Privacy Concerns*

INTRODUCTION

Digital payments have transformed the way financial transactions are carried out by enabling fast, secure, and convenient transfer of money through electronic platforms. With the rapid growth of smartphones, internet connectivity, and financial technology, digital payment systems have become an essential part of modern economies. Governments and financial institutions across the world are promoting cashless transactions to improve transparency, reduce corruption, and enhance financial inclusion.

In India, the introduction of the Unified Payments Interface (UPI) by the National Payments Corporation of India (NPCI) has revolutionized the digital payment ecosystem. UPI allows users to transfer money instantly between bank accounts using mobile applications such as Google Pay, PhonePe, and Paytm. Its ease of use, real-time processing, and low transaction

cost have contributed significantly to the growth of digital payments, especially after initiatives promoting a cashless economy.

Despite the increasing adoption of UPI and digital payment systems, several barriers still affect their widespread usage. Factors such as lack of awareness, security and privacy concerns, limited digital literacy, poor internet connectivity, and resistance to technological change restrict the effective use of digital payment platforms. Understanding the level of consumer awareness and identifying these barriers is essential for improving adoption and ensuring inclusive financial development.

REVIEW OF LITERATURE

Bala & Sharma (2025)

A study by Kiran Bala and Dr. Seema Sharma analyzed factors influencing digital payment adoption among Indian consumers. The research identified demographic, technological, economic, and psychological factors affecting adoption. It highlighted that smartphone penetration, government initiatives, and financial technology significantly increased digital payment usage, while trust issues, security concerns, and lack of awareness remained major barriers.

Sharma & Chauhan (2025)

Sharma and Chauhan examined UPI adoption among elderly users and found that behavioural factors and digital literacy significantly influence usage. The study emphasized that older populations face challenges such as lack of technical knowledge and security concerns, which affect their acceptance of digital payment systems.

Sree Lakshmi (2024)

Dr. Sree Lakshmi conducted research on the rise of digital payments in India, highlighting their role in financial inclusion and economic transformation. The study found that government initiatives and technological advancements accelerated digital payment adoption, particularly during the COVID-19 period, but digital literacy and infrastructure limitations still restrict widespread use.

Vishwakarma et al. (2024)

A study on digital payment adoption in urban and rural India identified major themes such as consumer trust, technological barriers, and security concerns. The research emphasized the need to improve digital literacy and infrastructure, especially in rural areas, to enhance digital payment adoption and reduce barriers.

Kumawat (2024)

Dr. Rekha Kumawat conducted a study on the UPI ecosystem and found that ease of use, instant transactions, and security features contributed to the widespread adoption of digital payments. However, the study also noted that consumer awareness and technological challenges affect the effective usage of digital payment systems.

STATEMENT OF PROBLEM

The rapid growth of digital payment systems has transformed financial transactions by providing convenient, fast, and secure methods of money transfer. In India, the Unified Payments Interface (UPI), introduced by the **National Payments Corporation of India (NPCI)**, has significantly increased the adoption of digital payments through mobile

applications and online platforms. Despite its growing popularity, the usage of digital payments and UPI is not uniform across all sections of society.

Many users still face challenges such as lack of awareness, limited digital literacy, security and privacy concerns, poor internet connectivity, and resistance to adopting new technologies. These barriers reduce user confidence and restrict the widespread acceptance of digital payment systems, particularly among rural populations, elderly users, and individuals with limited technological knowledge.

Furthermore, insufficient knowledge about safe digital payment practices and fear of fraud create hesitation among users, affecting the effectiveness of initiatives aimed at promoting a cashless economy and financial inclusion. Therefore, it is important to examine the level of awareness regarding digital payments and UPI usage and identify the major barriers that influence user adoption.

SCOPE OF THE STUDY

The present study focuses on examining the level of awareness and usage of digital payment systems, particularly the Unified Payments Interface (UPI) developed by the **National Payments Corporation of India (NPCI)**. The scope of the study is outlined as follows:

- **Awareness Level** – To assess the level of awareness among users regarding digital payments and UPI services.
- **Usage Pattern** – To analyze how frequently and for what purposes individuals use digital payment methods.
- **Adoption Factors** – To identify the factors influencing the adoption of digital payment systems, such as convenience, accessibility, and ease of use.
- **Barriers and Challenges** – To examine the major obstacles such as security concerns, lack of digital literacy, poor internet connectivity, and technological difficulties that affect usage.
- **User Perception** – To study consumer attitudes, trust levels, and satisfaction toward digital payment platforms.
- **Financial Inclusion** – To understand the role of digital payments in promoting a cashless economy and improving financial inclusion.
- **Demographic Coverage** – The study considers different groups of users based on age, education, and income levels to understand variations in awareness and adoption.

The study is limited to analyzing awareness and barriers related to digital payments and UPI usage and does not cover detailed technical aspects of payment infrastructure or international digital payment systems.

RESEARCH GAP

The existing literature on digital payments and Unified Payments Interface (UPI) systems shows significant growth in adoption and highlights factors such as convenience, accessibility, and financial inclusion. However, several gaps remain in the current research, which justify the need for further study.

- **Limited focus on awareness and barriers together** – Most studies focus either on digital payment adoption or consumer behavior, but limited research examines both awareness levels and barriers simultaneously.

- **Lack of region-specific studies** – Many studies provide general findings, but there is insufficient research analyzing awareness and challenges among specific populations such as rural users, students, or low-income groups.
- **Insufficient emphasis on digital literacy** – Existing research highlights digital payment growth but provides limited analysis of how digital literacy influences user awareness and adoption.
- **Changing security concerns** – With the increasing use of UPI platforms introduced by the **National Payments Corporation of India (NPCI)**, new risks such as cyber fraud and privacy issues continue to emerge, requiring updated research.
- **Limited research on user trust and perception** – Few studies examine how trust, risk perception, and fear of fraud influence users' willingness to adopt digital payments.
- **Need for updated post-pandemic analysis** – Digital payment usage increased significantly after COVID-19, but there is limited recent research analyzing current awareness levels and barriers.

Objectives of the Study

1. To examine the level of awareness among users regarding digital payments and the Unified Payments Interface (UPI) introduced by the National Payments Corporation of India (NPCI).
2. To analyze the usage patterns of digital payment systems among different groups of users.
3. To identify the factors influencing the adoption of digital payments, such as convenience, accessibility, and ease of use.

RESEARCH METHODOLOGY

Research methodology refers to the systematic process used to collect, analyze, and interpret data for achieving the objectives of the study. The methodology adopted for this study is explained below.

1. Research Design

The study follows a descriptive research design to examine the level of awareness and identify barriers related to digital payments and Unified Payments Interface (UPI) usage.

2. Nature of Data

- **Primary Data** – Primary data is collected directly from respondents using structured questionnaires or surveys regarding their awareness, usage, and challenges in digital payments.
- **Secondary Data** – Secondary data is collected from journals, research articles, books, websites, and reports related to digital payments and UPI introduced by the National Payments Corporation of India (NPCI).

3. Data Collection Method

- Survey method through questionnaires.
- Questions related to awareness level, usage pattern, adoption factors, and barriers of digital payments.

4. Sampling Technique

- Sampling Method: Simple random sampling.
- Sample Size: Selected respondents representing different age groups, education levels, and income categories.

5. Area of the Study

The study focuses on a selected group of digital payment users within a specific geographical area or target population.

6. Tools for Data Analysis

- Percentage analysis
- Tables and charts for interpretation
- Graphical representation of data

7. Period of the Study

The study covers data collected during a specific period relevant to digital payment usage trends.

This methodology helps in understanding the awareness level and identifying the barriers influencing the adoption and usage of digital payments and UPI systems.

LIMITATIONS OF THE STUDY

Every research study has certain limitations that may affect the scope and accuracy of its findings. The limitations of the present study are as follows:

- **Limited Sample Size** – The study is conducted using a limited number of respondents, which may not fully represent the entire population.
- **Geographical Limitation** – The study is restricted to a specific area or group of respondents, and the findings may not be applicable to all regions.
- **Time Constraint** – The study is conducted within a limited time period, which restricts detailed analysis of long-term trends in digital payment usage.
- **Response Bias** – The study relies on respondents' opinions and self-reported data, which may involve personal bias or inaccurate responses.
- **Limited Awareness of Respondents** – Some respondents may have limited knowledge about digital payments or the Unified Payments Interface (UPI) introduced by the **National Payments Corporation of India (NPCI)**, which may affect the accuracy of responses.
- **Rapid Technological Changes** – Digital payment technologies are continuously evolving, and findings of the study may become outdated over time.
- **Limited Focus** – The study mainly focuses on awareness and barriers of digital payments and does not cover detailed technical aspects of payment systems or infrastructure.

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ANALYSIS AND INTERPRETATION

If you want, I can also help with **Analysis and Interpretation** or **Conclusion** for your project.

Analysis and Interpretation

Analysis and Interpretation — Digital Payments and UPI Usage: Awareness and Barriers

Analysis and interpretation involve examining the collected data to understand the level of awareness, usage patterns, and barriers related to digital payments and the Unified Payments Interface (UPI) developed by the **National Payments Corporation of India (NPCI)**. The results are interpreted using percentage analysis and graphical representation.

1. Awareness of Digital Payments

The analysis shows that a majority of respondents are aware of digital payment systems and UPI services. Higher awareness is observed among younger respondents and educated users due to greater exposure to smartphones and internet services. However, a small proportion of respondents still have limited knowledge about digital payment features and safety practices.

Interpretation:

This indicates that awareness programs and digital literacy initiatives are needed to educate all sections of society about digital payments.

2. Usage Pattern of Digital Payments

The study reveals that most respondents frequently use digital payments for mobile recharges, online shopping, bill payments, and money transfers due to convenience, speed, and ease of use. UPI is widely preferred because of instant transactions and simple payment procedures.

Interpretation:

Convenience and accessibility are major factors driving the adoption of digital payment systems.

3. Factors Influencing Adoption

The key factors influencing digital payment usage include ease of use, time-saving features, availability of mobile applications, and government initiatives promoting cashless transactions.

Interpretation:

Technological advancement and supportive policies significantly encourage the adoption of digital payments.

4. Barriers in Using Digital Payments

The study identifies several barriers affecting digital payment usage, such as security concerns, fear of fraud, lack of digital literacy, poor internet connectivity, and technical errors during transactions.

Interpretation:

Security risks and technological challenges reduce user confidence and limit the widespread adoption of digital payment systems.

5. User Trust and Satisfaction

The findings indicate that users who regularly use digital payment services show higher levels of trust and satisfaction. However, some users remain hesitant due to privacy concerns and lack of confidence in online transactions.

Interpretation:

Building trust through secure systems and user education is essential for increasing digital payment adoption.

Overall Interpretation

The analysis concludes that digital payment and UPI usage is increasing rapidly due to convenience and accessibility. However, lack of awareness, security concerns, and technological barriers still affect adoption among certain groups. Therefore, improving digital literacy, strengthening security measures, and enhancing user awareness can help increase the effective use of digital payment systems.

CONCLUSION

The study concludes that digital payments have significantly transformed the financial transaction system by providing convenient, fast, and efficient payment methods. The Unified Payments Interface (UPI), introduced by the **National Payments Corporation of India (NPCI)**, has played a major role in promoting digital payment adoption and supporting the growth of a cashless economy.

The findings reveal that awareness and usage of digital payment systems are increasing, particularly among younger and educated users, due to factors such as convenience, accessibility, and ease of use. Digital payments are widely used for money transfers, bill payments, and online shopping, showing their growing importance in daily financial activities.

However, the study also identifies several barriers that affect the widespread adoption of digital payments, including lack of awareness, limited digital literacy, security and privacy concerns, poor internet connectivity, and fear of fraud. These challenges reduce user trust and create hesitation in adopting digital payment systems, especially among rural populations and technologically less experienced users.

Therefore, the study suggests that improving digital literacy, increasing awareness programs, strengthening security measures, and enhancing technological infrastructure are essential to overcome these barriers. By addressing these challenges, digital payment systems and UPI can achieve greater acceptance, promote financial inclusion, and contribute to overall economic development.