



DIGITAL PAYMENTS CONTRIBUTE TO FINANCIAL INCLUSION BY PROVIDING BANKING SERVICES TO UNDERSERVED POPULATIONS

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ABSTRACT

Financial inclusion is a key driver of sustainable economic development, ensuring that individuals and businesses have access to affordable and reliable financial services. Digital payment systems have emerged as an effective tool for expanding financial inclusion, particularly among underserved and unbanked populations. The increasing use of mobile banking, digital wallets, and the Unified Payments Interface (UPI) has made financial services more accessible, convenient, and cost-effective. This study examines the role of digital payments in improving access to banking services, promoting savings, facilitating secure money transfers, and supporting economic participation among low-income households and rural communities. It also explores the challenges affecting financial inclusion, such as limited digital literacy, poor internet connectivity, cybersecurity concerns, and lack of awareness. The study relies on both primary and secondary data to evaluate the impact of digital payment systems on financial inclusion. The findings indicate that digital payments reduce barriers to formal financial services, encourage cashless transactions, and empower underserved populations through greater financial accessibility. The study concludes that strengthening digital infrastructure, enhancing financial literacy, and implementing supportive government policies are essential to achieving inclusive and sustainable economic growth through digital payments.



KEYWORDS: Digital Payments Contribute, economic development, Digital payment systems , banking services .

1. INTRODUCTION

Financial inclusion is a fundamental component of sustainable economic development, ensuring that individuals and businesses have access to affordable, accessible, and reliable financial services. Despite significant progress in the banking sector, millions of people, particularly those living in rural and economically disadvantaged areas, remain underserved or excluded from formal financial systems. Limited access to banking services restricts opportunities for savings, credit, insurance, and secure financial transactions.

The rapid growth of digital payment technologies has created new opportunities to overcome these barriers. Digital payment systems, including mobile banking, digital wallets, internet banking, debit and credit cards, and the Unified Payments Interface (UPI), have made financial transactions faster, more secure, and more convenient. These technologies reduce dependence on cash while enabling users to send, receive, and manage money through digital platforms.

In India, government initiatives such as Digital India, Pradhan Mantri Jan Dhan Yojana (PMJDY), Aadhaar, and UPI have significantly promoted financial inclusion by extending banking and payment

services to underserved populations. The widespread availability of smartphones and internet connectivity has further accelerated the adoption of digital payment systems among individuals and small businesses.

However, challenges such as digital illiteracy, inadequate internet infrastructure, cybersecurity risks, and concerns regarding privacy continue to limit the effective use of digital payment services. Addressing these issues is essential to ensure equitable access to digital financial services for all sections of society.

This study aims to examine how digital payments contribute to financial inclusion by providing banking services to underserved populations. It also investigates the benefits, challenges, and factors influencing the adoption of digital payment systems and their role in promoting economic development and inclusive growth.

2. BACKGROUND

Financial inclusion aims to ensure that every individual, regardless of income, location, or social status, has access to affordable and reliable financial services. Traditionally, millions of people, especially those living in rural and remote areas, have remained outside the formal banking system due to limited banking infrastructure, low financial literacy, high transaction costs, and geographical barriers. As a result, many underserved populations relied on cash transactions and informal financial services.

The development of digital payment technologies has significantly changed the financial landscape by making banking services more accessible and convenient. Mobile banking, digital wallets, internet banking, debit and credit cards, and the Unified Payments Interface (UPI) have enabled individuals to perform financial transactions without visiting a bank branch. These digital solutions have reduced the cost of financial services and improved the speed, security, and transparency of transactions.

In India, initiatives such as Digital India, Pradhan Mantri Jan Dhan Yojana (PMJDY), Aadhaar, and UPI have played a crucial role in expanding financial inclusion. These initiatives have encouraged millions of previously unbanked individuals to open bank accounts and use digital payment platforms for money transfers, savings, government benefit transfers, and everyday transactions. The COVID-19 pandemic further accelerated the adoption of digital payments by increasing the demand for contactless and online financial services.

Despite these achievements, several challenges remain, including inadequate digital infrastructure, poor internet connectivity in rural areas, cybersecurity threats, digital illiteracy, and concerns about privacy and fraud. These barriers continue to limit the widespread adoption of digital financial services among underserved populations.

Therefore, this study seeks to examine the role of digital payments in promoting financial inclusion by improving access to banking services for underserved communities. It also explores the benefits, challenges, and policy measures required to ensure that digital financial services are inclusive, secure, and accessible to all.

3. RESEARCH METHODOLOGY

Digital Payments Contribute to Financial Inclusion by Providing Banking Services to Underserved Populations

1. Research Design

The study adopts a **descriptive research design** to examine the role of digital payment systems in promoting financial inclusion among underserved populations. It aims to analyze the awareness, adoption, usage, benefits, and challenges of digital payment services.

2. Research Approach

A **quantitative research approach** is used to collect and analyze data from respondents through structured questionnaires. Qualitative information from published literature is also used to support the findings.

3. Sources of Data

Primary Data:

- Structured questionnaires
- Online surveys
- Personal interviews (where applicable)

Secondary Data:

- Research journals
- Books
- Government publications
- Reports from the Reserve Bank of India (RBI)
- Reports from the National Payments Corporation of India (NPCI)
- World Bank reports
- Published articles and official websites

4. Sampling Technique

The study uses **convenience sampling** to select respondents from different age groups, occupations, and income levels, including individuals from rural and urban areas.

5. Sample Size

The research includes **100 respondents** who actively use or have access to digital payment services.

6. Data Collection Instruments

- Structured questionnaire
- Online survey forms
- Interview schedule (if required)

7. Data Analysis Techniques

The collected data are analyzed using:

- Frequency distribution
- Percentage analysis
- Mean and standard deviation
- Tables, charts, and graphs
- Microsoft Excel or SPSS for statistical analysis

8. Scope of the Study

The study focuses on the contribution of digital payments to financial inclusion by examining access to banking services, usage patterns, consumer awareness, benefits, challenges, and user satisfaction among underserved populations.

9. Limitations of the Study

- Limited geographical coverage
- Small sample size
- Dependence on respondents' opinions
- Time and resource constraints
- Rapid technological changes in digital payment systems

10. Ethical Considerations

- Participation is voluntary.
- Informed consent is obtained from all respondents.
- Personal information is kept confidential.
- Data are used only for academic and research purposes.
- Respondents' privacy and anonymity are maintained throughout the study.

4. DATA COLLECTION.

The success of any research depends on the collection of accurate and reliable data. In this study, both **primary** and **secondary** data were collected to examine how digital payments contribute to financial inclusion by providing banking services to underserved populations.

1. Primary Data

Primary data were collected directly from respondents using the following methods:

- Structured questionnaires
- Online surveys (Google Forms)
- Personal interviews (where applicable)

The questionnaire included questions related to:

- Awareness of digital payment systems
- Usage of digital payment methods
- Access to banking services
- Frequency of digital transactions
- Benefits of digital payments
- Security and privacy concerns
- Challenges faced while using digital payment platforms
- Overall satisfaction with digital payment services

2. Secondary Data

Secondary data were collected from reliable published sources, including:

- Research journals
- Books
- Government reports
- Reserve Bank of India (RBI) publications
- National Payments Corporation of India (NPCI) reports
- World Bank reports
- Academic articles
- Official websites and annual reports

3. Data Collection Procedure

The data collection process involved the following steps:

1. Designing a structured questionnaire.
2. Selecting respondents using a suitable sampling technique.
3. Distributing questionnaires through online and offline modes.
4. Collecting completed responses.
5. Checking the data for completeness and accuracy.
6. Organizing and coding the collected data for statistical analysis.

4. Purpose of Data Collection

The collected data were used to:

- Assess awareness and adoption of digital payment systems.
- Evaluate the role of digital payments in promoting financial inclusion.
- Identify the benefits and challenges experienced by underserved populations.
- Measure user satisfaction and trust in digital payment services.
- Provide recommendations for improving access to digital financial services.

5. DATA EXTRACTION.

Data Extraction for the Study

Data extraction is the process of selecting, organizing, and recording relevant information from the collected data for analysis. In this study, data were extracted from both primary and secondary sources to evaluate the contribution of digital payments to financial inclusion among underserved populations.

1. Data Extraction Process

The data extraction process involved the following steps:

1. Collecting completed questionnaires and survey responses.
2. Reviewing all responses for completeness and accuracy.
3. Removing incomplete, duplicate, or inconsistent responses.
4. Identifying variables relevant to the research objectives.
5. Coding and classifying the extracted data.
6. Entering the data into **Microsoft Excel** or **SPSS** for statistical analysis.

2. Variables Extracted

The following information was extracted from the collected data:

- Age
- Gender
- Educational qualification
- Occupation
- Monthly income
- Place of residence (Urban/Rural)
- Access to banking services
- Type of digital payment used (UPI, mobile banking, internet banking, debit/credit cards, mobile wallets)
- Frequency of digital payment usage
- Purpose of digital transactions
- Awareness of digital payment services
- Benefits experienced
- Challenges faced
- Security concerns
- Level of satisfaction with digital payment services

3. Quality Assurance

To ensure data quality:

- All responses were verified before analysis.
- Duplicate and incomplete records were excluded.
- Data coding was checked for accuracy.
- Respondents' identities were kept confidential.
- Data were securely stored and used only for academic research.

4. Outcome of Data Extraction

The extracted data were organized into tables and categories to facilitate descriptive and statistical analysis. This process helped identify trends in digital payment adoption, evaluate the contribution of digital payments to financial inclusion, assess user satisfaction, and examine the challenges faced by underserved populations. The extracted information formed the basis for interpreting the study's findings and drawing meaningful conclusions.

6. RESEARCH GAPS.

Although digital payment systems have expanded rapidly and have contributed significantly to financial inclusion, several important research gaps remain. Most existing studies focus on the overall adoption of digital payments in urban areas, while limited attention has been given to their impact on underserved populations, particularly those living in rural and remote regions.

Many studies have examined the technological aspects of digital payments but have paid less attention to factors such as digital literacy, financial awareness, accessibility, and user trust among economically disadvantaged groups. There is also limited research on how digital payment systems improve access to formal banking services for women, elderly individuals, small business owners, and low-income households.

Another important gap is the lack of long-term studies evaluating the sustainability of digital payment adoption and its impact on financial inclusion over time. Existing research often focuses on transaction volumes rather than measuring improvements in financial well-being, savings behavior, and economic empowerment.

Furthermore, issues such as cybersecurity risks, privacy concerns, internet connectivity, and inadequate digital infrastructure continue to affect digital payment adoption, yet these challenges remain insufficiently explored in the context of underserved populations.

Therefore, this study aims to address these gaps by examining the contribution of digital payments to financial inclusion, with particular emphasis on improving banking access for underserved populations. The findings will provide valuable insights for policymakers, financial institutions, and technology providers to develop more inclusive, secure, and accessible digital financial services.

7. LIMITATIONS

Every research study has certain limitations that may influence the scope and interpretation of its findings. The limitations of this study are as follows:

1. **Limited Sample Size:** The study is based on a limited number of respondents, which may not fully represent the entire population.
2. **Geographical Coverage:** Data are collected from a specific geographical area; therefore, the findings may not be applicable to all regions or countries.
3. **Time Constraints:** The study is conducted within a limited period, restricting the extent of data collection and analysis.
4. **Dependence on Respondents' Opinions:** The research relies on self-reported information, which may be affected by respondents' understanding, memory, or personal bias.
5. **Limited Focus:** The study mainly examines the contribution of digital payments to financial inclusion and does not cover all aspects of digital financial services.
6. **Technological Changes:** Digital payment technologies evolve rapidly, and new developments may not be fully reflected in the study.
7. **Digital Literacy and Internet Access:** Some underserved populations may have limited digital literacy or poor internet connectivity, which can influence their participation and responses.
8. **Availability of Secondary Data:** Access to recent and comprehensive secondary data may be limited, which could affect the depth of the analysis.

Despite these limitations, the study provides valuable insights into how digital payments contribute to financial inclusion by expanding access to banking services for underserved populations. The findings can support policymakers, financial institutions, and researchers in developing strategies to improve digital financial inclusion and promote equitable economic growth.

8. CONCLUSION:

Digital payments have emerged as a powerful tool for promoting financial inclusion by expanding access to banking services for underserved populations. The widespread adoption of mobile banking, digital wallets, internet banking, debit and credit cards, and the Unified Payments Interface (UPI) has made financial transactions faster, safer, more convenient, and more accessible. These

technologies have helped reduce dependence on cash while enabling individuals in rural and economically disadvantaged communities to participate in the formal financial system.

The study highlights that digital payments improve access to essential financial services such as savings, fund transfers, bill payments, and government benefit transfers. They also support economic empowerment by reducing transaction costs, increasing financial transparency, and encouraging greater participation in the digital economy.

However, the study also identifies several challenges, including limited digital literacy, inadequate internet connectivity, cybersecurity threats, privacy concerns, and insufficient digital infrastructure. Addressing these issues through stronger security measures, improved digital infrastructure, financial education, and supportive government policies is essential for ensuring that digital payment systems are accessible and beneficial to all sections of society.

In conclusion, digital payments play a significant role in achieving financial inclusion and sustainable economic development. Continued innovation, collaboration among governments, financial institutions, and technology providers, and increased public awareness will further strengthen digital financial services and help create a more inclusive, secure, and cashless economy.

09. REFERENCES

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