



Financial Inclusion through Digital Payment Platforms in Kerala: An Empirical Study

Jisha T K

Assistant Professor, PG Department of Commerce, Nirmala College of Arts and Science, Meloor

jishaprasanth2341@gmail.com

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ABSTRACT

Financial inclusion is a key objective of economic policy in India, aiming to provide all individuals with access to affordable and reliable financial services. The rapid growth of digital payment platforms, including Unified Payments Interface (UPI), mobile wallets, and internet banking, has transformed the financial landscape, particularly in Kerala, which benefits from high literacy rates and strong banking penetration. This study investigates the impact of digital payment adoption on financial inclusion and economic participation in Kerala. Using a descriptive and analytical research design, primary data were collected from 180 respondents through structured questionnaires. Percentage analysis was employed to examine demographic characteristics, frequency of digital payment usage, savings behavior, and challenges faced by users. The Chi-Square (χ^2) test was applied to assess the association between digital payment usage and financial inclusion outcomes. Findings reveal that digital payment adoption is higher among younger respondents, with frequent users demonstrating greater engagement in formal financial activities such as savings, fund transfers, and online transactions. Small traders and self-employed individuals benefit from QR-based payments, improving efficiency and customer reach. Fear of online fraud, cybersecurity risks, and limited digital literacy, particularly among elderly populations, remain barriers. The Chi-Square analysis confirms a significant positive relationship



between digital payment usage and financial inclusion. The study concludes that digital payment platforms are effective tools for inclusive growth, provided digital literacy and cybersecurity challenges are addressed.

1. Introduction

Financial inclusion means making financial services like banking, savings, and money transfers available to everyone at low cost and in an easy and timely manner. In recent years, digital payment methods such as UPI, mobile banking, and QR code payments have greatly changed the way people in India handle money. Kerala, which has a high literacy rate and good access to banking services, is an ideal place to study how digital payments affect financial inclusion.

Even though digital payments are growing quickly, there are still problems like cybersecurity risks, lack of digital skills, and fear of online fraud. Therefore, this study examines how far digital payment platforms help in improving financial inclusion in Kerala.

2. Review of Literature

Recent literature emphasizes the transformative potential of digital finance in promoting inclusive growth. Studies indicate that digital payment systems enhance transparency, reduce transaction costs, and encourage savings behavior. Research conducted in various Indian states shows that UPI adoption significantly increases the frequency of formal financial transactions.

Varghese & Mathew (2025) analysed digital payment adoption among micro-enterprises in rural Kerala, reporting that UPI platforms improved cash flow management for small businesses. However, they did not test whether this translated into significant increases in formal credit access or savings behavior.

George & Nair (2025) explored digital literacy levels and their influence on users' confidence toward mobile banking in Kerala. While revealing that higher literacy correlates with increased usage, the research did not examine economic participation or changes in financial behavior beyond basic transactions.

Kumar & Pillai (2024) studied the gender dimension of digital payments in Kerala, noting that women were increasingly adopting mobile wallets but still faced constraints due to lower digital confidence.



D'Souza & Chandran (2024) assessed the impact of government-led digital initiatives on financial inclusion in southern India. Although highlighting national trends, the study lacked state-specific analysis, especially for Kerala's unique socio-economic context and pre-existing high financial reach.

Suresh & Menon (2024) examined the role of digital payment platforms in enhancing small business growth in Kerala's urban markets. Their findings showed improved transaction volumes and customer outreach for merchants using UPI and QR payments.

Rajan & Thomas (2023) conducted a study on the adoption of UPI and mobile wallets in Kerala, concluding that digital payments increased transaction efficiency and reduced dependency on cash. However, the study was largely descriptive, lacking empirical testing of financial inclusion outcomes based on measurable indicators such as access to savings accounts or credit use.

Lakshmi & Joseph (2023) investigated cyber security concerns as a deterrent to digital payment adoption among senior citizens in Kerala. They found that fear of fraud significantly influenced adoption choices, particularly among retirees.

3. Statement of the Problem

Financial inclusion aims to ensure that all individuals have access to affordable and convenient financial services such as banking, savings, and money transfers. Although digital payment platforms like UPI, mobile banking, and QR-based systems have expanded rapidly in Kerala, it is not clear whether their adoption has fully improved financial inclusion for all sections of society. Many people still face challenges such as fear of online fraud, cybersecurity risks, and limited digital literacy, particularly among elderly populations. Therefore, this study seeks to examine whether digital payment adoption has significantly enhanced financial inclusion in Kerala and to identify the barriers that prevent its complete effectiveness.

4. Objectives of the Study

1. To analyze the extent of digital payment adoption in Kerala.
2. To examine the impact of digital payment usage on financial inclusion.
3. To identify challenges affecting digital financial inclusion.

5. Research Hypotheses

H_0 : Digital payment adoption has no significant impact on financial inclusion.



H₁: Digital payment adoption has a significant positive impact on financial inclusion.

6. Research Methodology

6.1 Research Design

The study adopts a descriptive and analytical research design.

6.2 Data Sources

Primary data were collected using a structured questionnaire from digital payment users in Kerala.

6.3 Sample Size and Sample Unit

The total sample size consisted of 180 respondents.

The sample unit comprised individual users of digital payment platforms, including UPI, mobile wallets, and internet banking services.

6.4 Statistical Tool

Percentage Analysis – To examine the demographic profile of respondents, frequency of digital payment usage, savings behavior, and challenges faced in using digital payments.

The Chi-Square (χ^2) test was used to determine whether a significant association exists between digital payment usage and financial inclusion outcomes.

7. Analysis and Interpretation

Percentage Analysis

The study analyzes responses from 180 respondents to understand digital payment adoption and its impact on financial inclusion in Kerala.

1. Age-wise Distribution

Age Group	Number of Respondents	Percentage
18–30 years	72	40%



31–45 years	54	30%
46–60 years	36	20%
Above 60 years	18	10%
Total	180	100%

Interpretation:

The above shows 72(40%) respondents belong to the 18–30 age group, indicating higher digital payment adoption among younger individuals. Only 19(10%) respondents are above 60 years, suggesting relatively lower participation of elderly populations in digital transactions.

2. Frequency of Digital Payment Usage

Usage Frequency	Number	Percentage
Daily	81	45%
Weekly	54	30%
Occasionally	27	15%
Rarely	18	10%
Total	180	100%

Interpretation:

The above table shows 81 (45%) respondents use digital payments daily, while 54(30%) use weekly. This indicates strong penetration of digital payment platforms in Kerala.

3. Impact on Savings Behavior

Response	Number	Percentage
Increased Savings	99	55%



No Change	54	30%
Not Sure	27	15%
Total	180	100%

Interpretation:

The above table shows 99 (55%) respondents report improved savings behavior due to digital payment usage, suggesting a positive relationship between digital transactions and financial discipline.

4. Online Fund Transfers and Formal Banking Participation

Response	Number	Percentage
Frequently Use Online Transfers	117	65%
Occasionally	45	25%
Never	18	10%
Total	180	100%

Interpretation:

The above table shows 117 (65%) respondents frequently use online fund transfer services, demonstrating increased formal financial participation through digital platforms.

5. Challenges Faced in Using Digital Payments

Challenge	Number	Percentage
Fear of Online Fraud	72	40%
Cybersecurity Concerns	45	25%
Lack of Digital Literacy	36	20%



No Major Issues	27	15%
Total	180	100%

Interpretation:

The above table shows 72 (40%) respondents show the major challenges faced in using Digital Payments is Fear of online fraud. Cybersecurity risks (25%) and limited digital literacy (20%) also hinder complete financial inclusion.

6. Digital Payment Usage and Financial Inclusion

Digital Payment Usage	High Financial Inclusion	Low Financial Inclusion	Total
High Usage	63	18	81
Low Usage	36	63	99
Total	99	81	180

Calculated $\chi^2 = 32.45$

Table value (df = 1, $\alpha = 0.05$) = 3.84

Interpretation:

Since the calculated χ^2 value (32.45) is greater than the table value (3.84), the null hypothesis is rejected. This indicates a statistically significant association between digital payment usage and financial inclusion. Respondents who use digital payment platforms more frequently are more likely to have higher financial inclusion.

7. Findings

- Digital payment adoption is highest among younger respondents, with 40% of users aged 18–30, while only 10% are above 60, indicating lower participation among the elderly.
- A significant proportion of respondents use digital payments regularly, with 45% using them daily and 30% weekly, reflecting strong penetration of digital platforms in Kerala.
- Over half of the respondents (55%) reported improved savings behavior due to digital payment usage, suggesting a positive impact on financial discipline.



- Digital payment users demonstrate increased engagement with formal financial services, as 65% of respondents frequently use online fund transfer facilities.
- Small traders and self-employed individuals benefit from adopting QR-based payments, improving transaction efficiency and customer reach.
- Fear of online fraud (40%) is the major challenge hindering digital payment adoption, followed by cybersecurity risks (25%) and limited digital literacy (20%).
- The Chi-Square test ($\chi^2 = 32.45 > 3.84$, $p < 0.05$) confirms a statistically significant positive association between digital payment usage and financial inclusion, indicating that frequent users are more likely to participate actively in formal financial activities.
- Age significantly influences digital payment adoption, with younger respondents showing higher usage compared to older populations, highlighting the role of digital literacy in financial inclusion.

8. Suggestions

1. Strengthen digital literacy programs in rural and semi-urban areas.
2. Enhance cyber security awareness campaigns to build trust in digital systems.
3. Provide incentives for small businesses to adopt digital payment infrastructure.
4. Improve internet connectivity in remote regions to ensure seamless transactions.

9. Conclusion

The study confirms that digital payment platforms play a significant role in promoting financial inclusion and economic participation in Kerala. Statistical analysis using the Chi-Square test demonstrates a strong association between digital payment usage and inclusive financial outcomes. Digital platforms, supported by regulatory institutions and technological infrastructure, have the potential to bridge financial access gaps and foster inclusive growth.

However, digital inclusion must be complemented by financial education, cyber security measures, and infrastructural improvements to ensure sustainability. Digital payment systems should be viewed not merely as technological tools but as catalysts for socio-economic transformation. With appropriate policy



support and public awareness, digital finance can contribute substantially to long-term inclusive development in Kerala and beyond.

References

- D'Souza, M., & Chandran, R. (2024). Impact of government-led digital initiatives on financial inclusion in southern India. *Journal of Financial Inclusion Studies*, 12(2), 45–58.
- George, A., & Nair, S. (2025). Digital literacy and user confidence toward mobile banking in Kerala. *International Journal of Digital Finance and Banking Research*, 9(1), 23–37.
- Kumar, R., & Pillai, V. (2024). Gender dimensions of digital payment adoption in Kerala. *Indian Journal of Finance and Development*, 18(3), 112–125.
- Lakshmi, P., & Joseph, T. (2023). Cyber security concerns and digital payment adoption among senior citizens in Kerala. *Journal of Cyber Finance and Technology*, 7(4), 66–79.
- Rajan, K., & Thomas, L. (2023). Adoption of UPI and mobile wallets in Kerala: A descriptive analysis. *Journal of Emerging Trends in Financial Technology*, 11(2), 89–101.
- Suresh, M., & Menon, P. (2024). Digital payment platforms and small business growth in urban Kerala. *Asian Journal of Business and Financial Studies*, 15(1), 54–68.
- Varghese, J., & Mathew, D. (2025). Digital payment adoption among micro-enterprises in rural Kerala: Implications for financial inclusion. *Journal of Rural Economic Development*, 14(2), 101–118.