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Digital Financial Literacy and Adoption of Cashless Transactions in Rural Tamil Nadu

Mrs.A.Kaleeswari
Assistant Professor Department of Commerce (PA), NMS S.Vellaichamy Nadar College Madurai

***Abstract*—Digital financial literacy has become an important factor in promoting cashless transactions and financial inclusion in rural India. The expansion of mobile banking, Unified Payments Interface (UPI), debit cards, and other digital payment services has created opportunities for rural households to conduct financial transactions conveniently and efficiently. However, limited digital knowledge, security concerns, inadequate internet connectivity, and lack of confidence may influence the adoption of these services. This study aims to examine the level of digital financial literacy and its relationship with the adoption of cashless transactions among rural residents in Tamil Nadu.**

The study proposes a descriptive and analytical research design using primary data collected from 300 respondents through a structured questionnaire. The study considers awareness of digital payment methods, frequency of cashless transactions, perceived benefits, barriers to adoption, and digital financial security practices. Descriptive statistics and association tests will be used to analyse the collected data. The findings are expected to provide insights into the factors influencing cashless transaction adoption and suggest measures to strengthen digital financial education, consumer protection, and inclusive access to digital payment services in rural areas.

***Index Terms*—Digital Financial Literacy, Cashless Transactions, Digital Payments, Rural Tamil Nadu, UPI, Financial Inclusion.**

I. INTRODUCTION

Digital financial literacy refers to the knowledge, skills, and confidence required to understand and use digital financial services safely and effectively. It includes the ability to operate digital payment applications, understand transaction charges and terms, recognise fraudulent activities, protect personal identification numbers and passwords, and resolve payment-related problems. In India, digital payment systems such as UPI, mobile banking, internet banking, and debit cards have expanded the range of financial services available to individuals and small businesses. For rural communities, these technologies may reduce dependence on physical cash, improve transaction convenience, and facilitate access to formal financial services. Nevertheless, access to a

smartphone or bank account does not automatically mean that a person possesses the knowledge and confidence necessary to use digital financial services effectively.

Rural Tamil Nadu provides an important setting for examining the relationship between digital financial literacy and cashless payment adoption. Rural residents, agricultural workers, small traders, self-employed individuals, and members of rural households may differ in their educational attainment, income, occupation, access to digital infrastructure, and familiarity with financial technology. Although cashless transactions can offer benefits such as speed, convenience, and easier transaction records, concerns about online fraud, failed transactions, privacy, language barriers, and unreliable connectivity may discourage their use. Hence, it is important to examine both the advantages and challenges of digital payment systems. The proposed study examines digital financial knowledge, usage patterns, perceived benefits, and barriers among rural residents in Tamil Nadu to identify practical measures for improving safe and inclusive digital payment adoption.

II. REVIEW OF LITERATURE

Digital financial literacy and financial inclusion

Digital financial literacy is an important component of effective participation in the modern financial system. Individuals need more than basic financial knowledge; they must also understand how to use digital platforms, protect sensitive information, evaluate financial risks, and make informed payment decisions. The Reserve Bank of India has continued to emphasise financial literacy and financial inclusion through initiatives designed to improve access to formal financial services and strengthen consumer awareness.

Digital payment adoption in rural India

Research on rural digital payment adoption indicates that perceived usefulness, ease of use, trust, and perceived financial risk can influence consumers' willingness to adopt electronic payment services. A study of rural consumers in India examined digital financial literacy and perceived financial risk alongside the technology acceptance model, highlighting the relevance of both user knowledge and perceptions in understanding e-wallet adoption.

Tandfonline

Research on UPI adoption in rural areas has also considered differences in usage according to demographic and socioeconomic characteristics.

ScienceDirect

These studies indicate that the expansion of digital payment infrastructure should be accompanied by measures that improve users' confidence and ability to transact safely.

III. RESEARCH GAP

Official payment statistics published by the National Payments Corporation of India demonstrate the importance of UPI in India's digital payment ecosystem and provide state-level transaction information, including data for Tamil Nadu.

Aggregate transaction volumes cannot by themselves explain whether rural residents understand transaction procedures, recognise fraud, or use digital payments independently. The present study therefore proposes a focused investigation of digital financial literacy and cashless transaction adoption among rural residents in Tamil Nadu. Its contribution will be to examine the relationship between knowledge, usage frequency, perceived benefits, and barriers within a clearly defined rural sample.

IV. OBJECTIVES OF THE STUDY

1. To assess the level of digital financial literacy among rural residents in Tamil Nadu.
2. To examine the adoption and usage patterns of cashless transactions among rural residents.
3. To identify the major factors and barriers influencing the adoption of cashless transactions in rural Tamil Nadu.

V. STATEMENT OF THE STUDY

The increasing availability of digital payment facilities has created opportunities for rural residents to conduct financial transactions quickly and conveniently. However, the availability of digital services does not necessarily ensure their effective adoption. Differences in digital financial knowledge, education, income, technological access, perceived security, and trust may affect how rural residents use cashless payment methods.

Some people may frequently use digital payment methods, while others may rely mainly on cash due to inadequate digital knowledge or fears of online fraud and unsuccessful transactions. Against this background, the present study proposes to examine digital financial literacy and the adoption of cashless transactions among 300 rural respondents in Tamil Nadu. The study seeks to identify existing usage patterns and the barriers that may need to be addressed through financial education and improved digital payment support.

VI. RESEARCH METHODOLOGY

Research design

The study adopts a descriptive and analytical research design to examine digital financial literacy and cashless transaction adoption among rural residents in Tamil Nadu.

VII. DATA COLLECTION

- Primary data: To be collected through a structured questionnaire administered to rural residents. The questionnaire will cover demographic characteristics, digital financial knowledge, awareness of payment methods, transaction frequency, perceived benefits, and barriers.
- Secondary data: To be obtained from RBI reports, NPCI statistics, government publications, research articles, and relevant academic literature.

Sample size

The proposed sample consists of 300 rural respondents from selected villages in Tamil Nadu. This is a planned sample size rather than a claim that 300 responses have already been collected. Its adequacy should be assessed against the sampling design, expected variability, and intended statistical tests.

Sampling method

A multistage sampling approach is proposed. First, selected districts will be identified. Second, rural blocks and villages within those districts will be selected. Third, eligible adult residents will be recruited using a documented household or respondent selection procedure. If probability sampling is not feasible, the researcher should disclose the use of convenience or purposive sampling and acknowledge its limitations. A sample drawn from a few villages should not automatically be treated as representative of all rural Tamil Nadu.

Tools for data analysis

- Percentage analysis to summarise demographic characteristics and responses.
- Frequency distributions to describe digital payment usage.
- Mean scores, where appropriate, to summarise responses on rating scales.
- Chi-square tests to assess associations between categorical variables, where assumptions are met.
- Logistic regression, if appropriate, to examine predictors of cashless payment adoption while controlling for relevant respondent characteristics.

VIII. DATA ANALYSIS AND INTERPRETATION

The following five tables demonstrate a possible presentation format for a survey of 300 respondents. All figures in these tables are illustrative, not actual survey findings. They should be replaced with verified questionnaire results before the paper is submitted for publication.

Table 1. Demographic profile of respondents

Demographic variable	Category	Respondents	Percentage
Age	18–30 years	90	30.0%

	31–45 years	105	35.0%
	Above 45 years	105	35.0%
Gender	Male	156	52.0%
	Female	144	48.0%
Education	Up to school level	150	50.0%
	College and above	150	50.0%
Total respondents		300	100.0%

Interpretation:

The hypothetical distribution shows that 35% of respondents belong to the 31–45 age group and another 35% are above 45 years. Male respondents account for 52%, while female respondents account for 48%. Educational attainment is equally distributed between the two categories used in this example. These characteristics provide a basic profile of the proposed sample and can help researchers examine whether digital financial literacy varies across demographic groups.

Table 2. Awareness of digital payment methods

Digital payment method	Aware of the method	Percentage
UPI applications	255	85.0%
Mobile banking	210	70.0%
Debit cards	240	80.0%
Internet banking	180	60.0%
Mobile wallets	195	65.0%

Interpretation:

In this hypothetical example, awareness is highest for UPI applications at 85%, followed by debit cards at 80%. Internet banking has the lowest reported awareness at 60%. The pattern illustrates why a survey should distinguish awareness of a payment method from the ability to operate it safely. Because respondents may know more than one payment method, the percentages are not expected to total 100%.

Table 3. Frequency of cashless transaction usage

Usage frequency	Respondents	Percentage
Daily	75	25.0%
Weekly	105	35.0%
Monthly	60	20.0%
Rarely	30	10.0%
Never	30	10.0%
Total	300	100.0%

Interpretation:

The hypothetical results indicate that 35% of respondents use cashless transactions weekly and 25% use them daily. Together, these categories account for 60% of the sample. Meanwhile, 10%

reportedly never use cashless transactions, and another 10% use them rarely. These figures demonstrate how usage frequency can distinguish regular adopters from respondents who may need additional assistance or access to digital payment facilities.

Table 4. Perceived benefits of cashless transactions

Perceived benefit	Respondents agreeing	Percentage
Convenience	255	85.0%
Faster transactions	240	80.0%
Reduced need to carry cash	225	75.0%
Easier transaction records	195	65.0%
Convenience for remote payments	180	60.0%

Interpretation:

In the example, convenience is the most frequently reported benefit, with 85% of respondents agreeing, followed by faster transactions at 80%. Reduced dependence on physical cash is reported by 75%. These results illustrate the importance of measuring perceived usefulness when studying payment adoption. Actual responses would help determine whether convenience and transaction speed are important motivations for rural residents to use digital payment systems.

Table 5. Major barriers to cashless transaction adoption

Barrier	Respondents reporting the barrier	Percentage
Fear of online fraud	180	60.0%
Poor internet connectivity	150	50.0%
Limited technical knowledge	135	45.0%
Difficulty resolving failed transactions	120	40.0%
Preference for cash	105	35.0%

Interpretation:

The hypothetical data identify fear of online fraud as the most frequently reported barrier, at 60%, followed by poor internet connectivity at 50% and limited technical knowledge at 45%. Difficulties resolving failed transactions and a preference for cash are also reported. This example illustrates that digital payment adoption may be affected by a combination of knowledge, infrastructure, trust, and behavioural factors. The actual survey should measure these barriers directly rather than assume that they affect every village equally.

IX. FINDINGS OF THE STUDY

1. Demographic profile: The example contains respondents from different age groups and both genders, allowing potential comparisons of digital financial literacy across demographic categories.
2. Awareness: UPI applications have the highest illustrative awareness level, at 85%, while internet banking has the lowest, at 60%.

3. Usage patterns: The example suggests that 60% of respondents use cashless transactions daily or weekly, while 20% use them rarely or never.
4. Perceived benefits: Convenience and faster transactions are the leading illustrative benefits, reported by 85% and 80% of respondents, respectively.
5. Barriers: Fear of online fraud is the most frequently reported illustrative barrier, followed by internet connectivity problems and limited technical knowledge.

X. SUGGESTIONS

Banks, local government bodies, and financial literacy centres should organise regular digital financial literacy programmes in rural villages. These programmes should provide practical demonstrations of UPI payments, mobile banking, QR-code scanning, transaction verification, and complaint registration in Tamil. Special attention should be given to older adults, women, people with limited formal education, and first-time digital payment users. Banks and payment service providers should strengthen fraud-awareness campaigns and explain safe practices, including never sharing an OTP, PIN, or confidential banking credentials. Improved internet connectivity, accessible customer support, and clear procedures for resolving failed transactions could also strengthen consumer confidence. Collaboration among banks, village-level institutions, self-help groups, and local educational organisations may help ensure that rural residents can use digital financial services safely and independently.

XI. CONCLUSION

Digital financial literacy is an important factor to investigate when assessing the adoption of cashless transactions in rural Tamil Nadu. Awareness of digital payment services, operational knowledge, perceived convenience, security concerns, and access to reliable infrastructure may all influence adoption. The proposed study of 300 rural respondents provides a framework for examining these factors systematically and identifying areas where targeted interventions may be needed. Its final conclusions should be based on the actual survey results and appropriate statistical tests rather than the illustrative figures presented here. By combining financial education, fraud prevention, reliable connectivity, and accessible grievance redressal, relevant stakeholders may be better positioned to promote safe, inclusive, and sustainable digital payment practices in rural communities.

REFERENCES

[1]. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340. https://doi.org/10.2307/249008
[2]. National Payments Corporation of India. (n.d.). Unified Payments Interface (UPI) product statistics. https://www.npci.org.in/product/upi/product-statistics

[3]. Organisation for Economic Co-operation and Development. (2018). G20/OECD INFE policy guidance on digitalisation and financial literacy. OECD. https://www.oecd.org/financial/education/

[4]. Reserve Bank of India. (2025). Annual report 2024–25. https://www.rbi.org.in/scripts/AnnualReportPublications.aspx?Id=1434

[5]. Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. Journal of Economic Literature, 52(1), 5–44. https://doi.org/10.1257/jel.52.1.5

[6]. Consumer intention to adopt e-wallets in rural India: An investigation by extending the technology acceptance model. (2024). Cogent Business & Management. https://doi.org/10.1080/23311975.2024.2428776

[7]. Haque, M. I., Azeez, A. N. P., & Akhtar, S. M. J. (2025). UPI and financial inclusion in rural India: A case study. Digital Economy and Sustainable Development. https://doi.org/10.1016/j.dsef.2025.100056