Digital Payments as a Catalyst for Financial Literacy and Inclusion: Pathways to Sustainable Growth

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Abstract. The enlargement of digital payment ecosystems in India has accelerated monetary transactions and created opportunities for broader financial inclusion. However, the effective utilisation of these systems among vulnerable populations, particularly migrant women workers in informal employment, remains uneven due to variances in financial literacy and digital confidence. This study examines financial quotient towards digital payment usage among migrant women workers in Bengaluru and explores its implications for financial inclusion. Interaction with 100 respondents using a structured questionnaire, employing interval analysis and percentage analysis**.** Results indicate that FinTech platforms enhance transactional convenience and access; however, limited financial awareness, fears of digital fraud, poor understanding of transaction procedures, and reliance on external assistance limit independent use. Additionally, adoption appears to be driven mainly by necessity rather than by informed financial decision-making. The results underscore the need for targeted financial education, localised awareness campaigns, and user-centred digital support mechanisms to bolster financial capability and inclusive participation. This study contributes to existing literature by identifying financial literacy as a pivotal link between digital payment uptake and sustainable fiscal integration for gig female workers.

Keywords: Digital payments; financial literacy; Migrant women workers.

1. Introduction

The digital transformation of financial services has significantly altered patterns of economic participation, enabling faster, lower-cost, and more accessible transactions through technology-enabled platforms. In India, the growth of digi-tech, including infrastructure such as the UPI, mobile wallets, and app-based banking systems, has accelerated the transition toward digital access to proper fintech existence. Developing signs suggest that FinTech systems have contributed to improving financial participation by reducing recurring expenses and expanding access among underserved populations. Chopra et al. (2026) observed that digital public infrastructure, particularly digital identity and payment systems, has strengthened financial inclusion by refining access to banking and transaction networks. The Economic Survey narrates that the rapid expansion of the UPI has strengthened financial inclusion and improved access to formal credit systems in India. At the same time, the availability of digital Fintech does not guarantee their effective adoption or meaningful usage among individuals. Although access to technology forms an essential foundation, people also need the necessary

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knowledge, confidence, and practical ability to use digital financial platforms efficiently. In this context, financial knowledge fiancé extends beyond simple awareness of financial products and includes the capacity to understand financial information, evaluate different options, and exercise sound judgment while handling while managing digital transactions. Existing studies show that stronger digital financial literacy encourages greater acceptance of digital financial services and promotes safer, more independent financial participation, especially among socially and economically vulnerable groups within society. Widyastuti et al. (2024) find that financial literacy together with demographic characteristics shape outcomes of digital payment, underscoring behavioural capability as a major factor influencing effective engagement. Migrant women employed in the working in urban informal employment commonly experience several barriers that influence both their financial literacy and use of fintech systems. Irregular income, limited educational opportunities, and weak institutional support frequently keep them dependent on cash payment methods and informal borrowing practices. These conditions reduce confidence in using fintech platforms and increase vulnerability to transaction errors, fraud, and misinformation. Existing studies on women's financial inclusion show that lack of financial awareness, low trust, and security concerns continue to restrict participation in formal digital finance. Scholarly evidence additionally shows that technology access alone is insufficient, and meaningful financial inclusion requires stronger financial knowledge, confidence, and trust-building support mechanisms. Chopra et al. (2026) observed that concerns related to privacy, trust, and financial literacy continue to influence the long-term effectiveness of financial inclusion initiatives. Digital payment usage among migrant women workers in Bengaluru's informal sector. The present study investigates the extent to which migrant women workers adopt digital payment methods, the barriers faced while accessing these services and their larger contribution to financial inclusion and socio-economic empowerment. By concentrating on migrant women employed in the informal urban economy, the research addresses a population that remains insufficiently examined in existing literature. Discourse on inclusive digital finance understanding the important of user capability in transforming the availability of digital financial transaction into meaningful financial participation

2. LITERATURE REVIEW

2.1 Digital Payments and Financial Inclusion

Research on digital public infrastructure indicates that payment ecosystems reduce transaction barriers and enhance convenience, yet deficiencies in digital competencies continue to influence adoption patterns. Chopra et al. (2026) similarly argue that progress ought not to be measured solely by account ownership or platform deployment, but rather by whether users engage with services consistently and autonomously. Collectively, these perspectives underscore an enduring challenge in financial inclusion:

technological implementation can broaden access without addressing inequalities rooted in capability limitations

2.2 Financial Literacy and Digital Financial Behaviour

Financial literacy today extends beyond basic knowledge of saving and budgeting and has become increasingly important in the digital financial environment. It includes understanding digital transactions, using financial applications effectively, identifying online security risks, and making informed financial decisions. Research indicates that individuals with better financial understanding tend to demonstrate greater confidence in adopting digital payment systems and carrying out transactions independently. In contrast, limited financial understanding often creates hesitation, even when digital services are easily available. Recent research shows that financial literacy acts as a link between access to technology and its practical use in everyday financial activities. Essential for ensuring wider participation, meaningful financial inclusion, and sustainable engagement in the rapidly growing digital financial system

2.3 Migrant Women Workers and Financial Vulnerability

Migrant women working in the informal sector experience financial challenges which are not similar to those faced by the general workforce. Factors such as restricted mobility, irregular income, limited education, and social dependence significantly influence their economic conditions and financial decisions; commonly, these decisions are driven more by daily necessities and practical limitations than by personal financial independence. Existing research on women's financial empowerment establishes that simple access to financial services is insufficient to does not automatically lead to greater autonomy or improved decision-making ability. Meaningful participation in formal financial systems depends on financial awareness, knowledge, confidence, and the ability to understand available financial tools. Although studies have increasingly focused on women and finance, migrant women engaged in urban informal employment continue to remain an underexplored group, with limited research on their financial behaviour and use of digital payment systems

2.4 Research Gap

Despite expanding examine on digi payments, financial literacy, and inclusion, significant gaps remain. First, few empirical studies focus specifically on migrant women working in urban informal settings, while these groups are increasingly engaging with digital financial systems. Second, much of the existing research emphasises adoption rates and access indicators while paying insufficient attention to users' confidence, trust, and continued independent usage of these services. Third, the roles of perceived fraud risk, security awareness, and dependence on intermediaries in shaping migrant women's digital financial behaviour remain insufficiently explored

The recent study addresses these limitations by investigating how financial literacy shapes digital payment usage among migrant women workers in Bengaluru and by examining the contribution to financial participation and economic growth and economic participation. In doing so, the study extends the discussion beyond access-oriented perspectives toward a capability-centred understanding of inclusion

2.5 Conceptual Framework

The conceptual framework illustrates the connotation between financial literacy and digital payment adoption, and how this interaction influences financial inclusion and empowerment among migrant women workers in Bengaluru's informal sector. Financial literacy is treated as the independent variable, digital payment usage as the mediating variable, while financial inclusion and empowerment serve as the dependent outcomes. Additionally, security awareness and conviction in digital systems act as a controlling variable, which can strengthen or weaken the association among the variables.

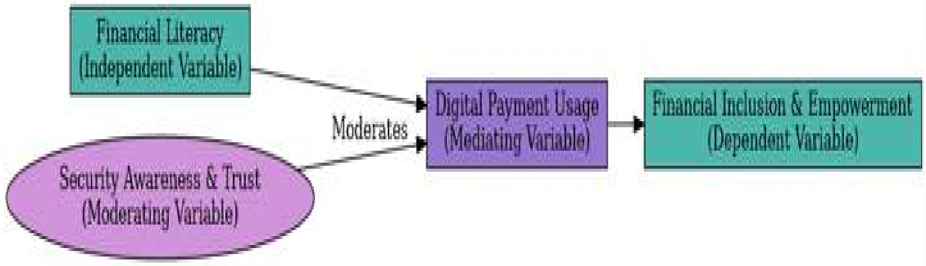

Figure 1: Conceptual Framework Diagram

2.6 Research Questions

1. How far does financial literacy contribute to the acceptance and practice of digital payment schemes among migrant women workers in Bengaluru's informal sector?
2. What challenges and barriers do migrant women workers face in effectively using fintech systems for their day-to-day financial activities?

2.7 Research Objectives

1. To examine the level of financial literacy among migrant women workers in Bengaluru's informal sector and its association with digital payment adoption.
2. Investigate the challenges that negatively influence and hinder effective and confident usage of digital payment platforms among migrant women workers.

3 Methodology

3.1 Research Design

The study adopts a descriptive cross-sectional research design to examine patterns of digital payment usage among migrant women workers and to discover the importance of fintech in shaping digital financial behaviour. the principal barriers that reduce the effectiveness of digital payment adoption. The study employed a descriptive design as it aimed to out manipulating study conditions. The investigation is respondents within their socio-economic context. relies on empirical analysis, with primary information sourced directly from respondents belonging to

3.2 Research Area and Population under Study

This research was conducted in Bengaluru, a major urban centre characterized by a large migrant workforce predominantly employed in informal sectors. The research primarily focused on migrant workers engaged in occupations such as domestic work, housekeeping services, garment production, small-scale retail establishments, and other service-related activities. These occupational groups were increasingly exposed to growth and were identified for the study because they offer the use of digital financial services, while at the same time continuing to concern related to a lack of financial and unequal access to formal financial systems

3.3 Sampling Technique and Sample Size

As there is no well-defined or comprehensive sampling framework available for identifying migrant women engaged in informal employment, the respondents were chosen based on specific conditions, especially those belongs to the study relied on purposive and convenience sampling procedures while selecting the migrant population, be employed in informal sector occupations and possessed at least some level of exposure to digital payment methods. A total of 100 migrant women workers were included in the study. It offers meaningful and context-based understanding of their level of financial literacy, patterns of digital payment usage, and the practical difficulties encountered by this often overlooked and underrepresented section of the workforce

3.4 Data Collection Instrument and Procedure

A structured and simple for collecting information related to the so A survey questionnaire functioned as the principal tool for collecting information related to the socio-economic background of migrant women workers, their level of financial awareness, and their use of digital payment systems. The questionnaire included questions covering demographic details, knowledge of digital financial services, saving behaviour, and the challenges experienced while using online payment methods. Before conducting the main study, the questionnaire was pilot tested with a small group of respondents to confirm that the language, wording, and overall format were clear and easily understandable. The final data collection process was carried out through direct face-to-face interactions, which made it easier for participants from different educational and literacy backgrounds to understand the questions and respond comfortably

3.5 Variables Considered in the Study

The study conceptualises financial literacy as the explanatory factor influencing awareness and assurance in digital financial practices. Digital payment usage reflects behavioural adoption, while financial inclusion and empowerment represent broader outcomes associated with participation in formal financial systems. Additionally, perceptions relating to faith and security awareness are recognised as contextual influences affecting usage behaviour.

3.6 Analytical Techniques

The collected responses were analysed using descriptive statistical methods to identify observable trends and response patterns. Analytical techniques included:

- Frequency distribution, to determine the prevalence of specific responses;
- Percentage analysis, to compare awareness levels, usage patterns, and reported challenges; and
- Tabular and graphical representation, to improve interpretation and presentation of findings.

The application of descriptive analysis was considered suitable for the exploratory purpose of examining behavioural patterns instead of determining cause-and-effect relationships or predictive associations.

3.7 Methodological Considerations

The study focuses on a population that may experience mobility constraints, irregular employment schedules, and varying literacy levels. Therefore, direct interaction during data collection was considered important for obtaining responses reflective of lived experiences. While the methodological approach provides practical insights into digital financial behaviour among migrant women workers, findings should be interpreted within the setting of the selected sample and geographical setting.

4 Results and Findings

This section presents observations obtained from responses collected from 100 migrant women workers employed in Bengaluru's informal sector. The analysis explores demographic characteristics, financial literacy indicators, patterns of digital payment usage, and barriers influencing adoption. Findings are interpreted using descriptive statistical measures to identify recurring trends associated with digital financial participation.

4.1 Demographic Characteristics of Respondents

The respondent profile reflects the socio-economic background of migrant women workers participating in the research.

Table 1. Demographic Composition of the Survey Participants

Variable	Category	Frequency (%)
Age	Below 25 years	22
	25–35 years	48
	Above 35 years	30
Education	No formal education	18
	Primary/Secondary education	57
	Above secondary education	25
Occupation	Domestic work	34
	Garment sector	28
	Housekeeping	22
	Street vending/others	16

Source: Primary data

As per the table 1, the highest response was received from this age group 25**–35 years** category, indicating active participation in income-generating activities during economically productive years. Educational attainment remained comparatively limited, with most respondents reporting only primary or secondary education. Occupational distribution further reflects dependence on informal employment sectors characterised by unstable income patterns and restricted access to institutional support systems. These characteristics provide contextual understanding of financial behaviour and possible constraints affecting digital engagement

4.2 Financial Literacy Indicators

Financial literacy was evaluated through awareness of digital transactions, understanding of security practices, familiarity with savings instruments, and knowledge of transaction-related costs.

Table 2: Financial Literacy

Indicator	Aware (%)	Unaware (%)

UPI and QR payment methods	76	24
Fraud prevention and security practices	45	55
Savings instruments	52	48
Transaction charges and deductions	38	62

Source: Primary data

The findings reveal (table 2) uneven capability across financial literacy dimensions. Although awareness of digital payment tools appears relatively widespread, understanding of security mechanisms and transaction-related charges remains comparatively weak. The disparity suggests that operational usage does not necessarily indicate deeper financial understanding.

4.3 Frequency and Purpose of Digital Payment Application

Patterns of electronic payment usage indicate varying levels of engagement among respondents.

Table 3. Extent of Digital Payment Transaction Usage

Usage Frequency	Percentage (%)
Daily	28
Weekly	47
Occasionally	25

Source: Primary data

Digital transactions were primarily used for:

- Sending money to family members;
- Grocery and household purchases;
- Routine payments and small expenditures.

The predominance of weekly usage suggests regular interaction with digital payment systems. However, usage appears associated largely with practical necessity and convenience rather than long-term financial planning behaviour.

4.4 Challenges Allied with Digital Payment Usage

Respondents reported several constraints affecting independent engagement with digital payment platforms.

Table 4. Reported Barriers to Digital Payment Usage

Challenge Percentage	(%)
Fear of financial loss/fraud	**36**
Dependence on others for transactions	**32**
Network/connectivity issues	**18**
Confusion regarding charges/deductions	**14**

Fear associated with financial loss emerged as the most frequently reported concern. Dependence on family members or intermediaries also remained significant, indicating limited confidence in independent usage. Technical barriers and uncertainty regarding transaction costs further influenced perceptions toward digital systems.

These observations indicate that accessibility alone may not eliminate behavioural and informational barriers affecting meaningful financial participation.

4.5 Interpretation of Findings

The outcomes demonstrate increasing addition of digital payment systems into everyday financial activities among migrant women workers. Nonetheless, regular usage co-exists with limitations in financial awareness, security understanding, and independent decision-making.

The observed gap between exposure to digital tools and capability for informed utilisation highlights an important distinction between digital access and effective financial inclusion. Respondents frequently adopted digital payment mechanisms for immediate transactional purposes, while concerns regarding fraud, dependence, and uncertainty continued to shape usage behaviour. The results therefore suggest that expansion of digital payment infrastructure alone may not ensure inclusive participation unless accompanied by practical financial education and confidence-building measures.

4.6 Summary of Results

The descriptive analysis indicates:

- Digital payment arrangements are extensively used for routine transactions among migrant women workers;
- Awareness of digital tools exceeds understanding of financial security and transaction processes;
- Dependence on intermediaries remains common despite increased exposure to digital platforms;
- Fear of fraud and limited confidence continue to affect independent usage.

These findings reinforce the importance of strengthening context-specific financial literacy initiatives to support safer and more informed participation in digital financial ecosystems.

5. Discussion and Conclusion

5.1 Discussion

The findings indicate increasing reliance on digital payment systems among migrant women workers for routine financial activities, including household purchases, remittance transfers, and small-value transactions The findings therefore suggest that access to digital payment infrastructure alone may not ensure meaningful inclusion among economically vulnerable groups.

Another important observation concerns the association between financial awareness and confidence in digital transactions. Respondents demonstrating greater familiarity with digital financial practices appeared comparatively more comfortable using payment systems independently and reported stronger attention to security-related behaviours. This pattern highlights the relevance of financial literacy in supporting safer appointment with digital financial environments.

Overall, the findings reinforce the distinction between digital access and effective participation, indicating that sustained inclusion requires behavioural capability alongside technological adoption.

5.2 Practical Implications

The study highlights several considerations relevant for institutions seeking to reinforce digital financial contribution among migrant women workers. Financial literacy initiatives may be more effective when delivered through practical demonstrations, local-language communication, and context-specific examples rather than exclusively theoretical approaches.

Awareness programmes focusing on fraud prevention, transaction security, and safe digital practices may help decrease ambiguity related with digital payments. In addition, simplified learning materials designed for populations with varied educational backgrounds could support greater confidence in independent usage.

Community-based networks, employers, and local organisations may also serve as important channels for improving awareness and facilitating safe engagement with digital financial systems.

These comments suggest that technology adoption strategies require complementary educational and support mechanisms to promote inclusive participation

5.3 Conclusion

The study examined patterns of digital payment usage among migrant women workers in Bengaluru and explored associated dimensions of financial literacy. The findings indicate widespread contact to digital payment systems; however, independent utilisation remains constrained by limited awareness of security practices, uncertainty regarding transaction processes, and reliance on intermediaries. Although digital financial services offer opportunities for improving convenience and expanding participation in formal financial systems, meaningful inclusion appears dependent upon users' capability to engage confidently and safely with available technologies. Strengthening practical financial literacy may therefore contribute to improved financial awareness, greater transactional autonomy, and reduced vulnerability within digital financial environments.

The study contributes to ongoing discussions on inclusive digital finance by drawing attention to migrant women workers, a comparatively underexplored group within existing works on digital financial participation.

This study has limitations: the small sample size and non-probability sampling mean findings may not represent all migrant women workers beyond this specific context. Future research should include larger, more diverse groups and use longitudinal designs to track how digital financial behavior changes over time. Comparative studies across different informal worker categories could reveal occupation-specific patterns in digital payment use and financial literacy

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