International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

# A Bibliographic Review of Digital Financial Literacy, Transaction Adoption, and Rural Financial Inclusion

**Vishnu Sharma D D[1], Dr. K. Shivashankar Bhat[2]**

[1]Research Scholar, Dept of Commerce and Management Srinivas University, Mangalore, Karnataka, India – 575001,
[2]Research Professor, Institute of Management Studies and Commerce, Srinivas University, Mangalore, Karnataka, India-575001

**Abstract:**
In the last ten years, the way formal financial services reach rural economies has been transformed by branchless banking and mobile payments. And yet, a smartphone or a banking agent in the vicinity is seldom a necessary condition for meaningful economic participation. This paper is a synthesis of peer reviewed literature from 2017-2026 exploring how digital financial literacy (DFL) and the everyday habit of transacting digitally shape financial inclusion in rural communities. Drawing on a thematic bibliographic review of empirical and conceptual work across South Asia, Sub-Saharan Africa and Southeast Asia, the findings indicate a clear sequence: digital infrastructure provides the entry point, while DFL acts as the practical bridge that transforms dormant accounts into active usage. At the same time, daily impediments—confusing app menus, language barriers, gendered domestic roles, and fear of online scams—persist in hindering deeper inclusion. The paper concludes with identification of key gaps for future longitudinal and mixed method research.

**Keywords:** digital financial literacy, digital payment adoption, rural financial inclusion, mobile money, fintech divide, bibliographic review

## 1. Introduction

Geography was the number one reason rural families were outside the formal banking system for decades. Maintaining brick-and-mortar branches in scattered farming villages is just too expensive, leaving millions dependent on local moneylenders, informal savings clubs or cash stashed at home. With the introduction of mobile money wallets, Unified Payments Interface (UPI) rails and biometric banking correspondents, the old cost equation was inverted almost overnight (Gabor & Brooks, 2017; Ozili, 2018). In the early days, many policy-makers and development economists saw mobile connectivity as a silver bullet. Give a villager a basic phone and a zero-balance bank account, and financial inclusion would naturally follow. Out in the field, new evidence is pointing to a much messier story. In developing economies, there remains a stubborn gap between opening an account and using it. Many rural bank accounts lie dormant after cashing in government welfare payments. As research attention shifted from building supply-side infrastructure to understanding how people actually behave, researchers began to highlight digital financial literacy (DFL) as the missing link (Morgan & Trinh, 2019; Kass-Hanna et al.,

2022). Basic budgeting skills or an understanding of how interest works aren't enough when using a mobile banking app; a user has to navigate through touchscreen menus, verify authentication steps and be able to spot phishing traps or unexpected deductions. The paper adopts a bibliographic approach to show how the current literature has defined and studied the relationships between DFL, digital transaction adoption and real financial inclusion in rural areas. Instead of the usual listing of isolated statistical findings, the review traces the maturation of the concept, organizes empirical insights around core themes and takes a close look at the practical friction points that prevent rural residents from getting full value out of digital finance. 2. Methodology and Scope of the Review To map how scholarship in this space has evolved, we conducted a structured bibliographic review across peer-reviewed journal articles, working papers and institutional reports published mainly between 2017 and 2026. The relevant studies were collected from Scopus, Web of Science, ScienceDirect and RePEc by using the combined search terms of “digital financial literacy”, “digital payments”, “mobile banking”, “financial inclusion” and “rural households”. Studies were selected by means of three simple criteria: 1. They treated DFL as a separate competency and did not assume that traditional paper-based financial knowledge would automatically transfer to digital screens. 2. They focused on rural, farming, or low-income communities in developing economies. 3. They viewed active transaction behavior — peer-to-peer transfers, merchant QR scans, or digital borrowing — as an indicator of financial inclusion, not just account registrations. The papers selected were then grouped thematically to explore conceptual definitions, adoption trajectories, demographic disparities, and persistent systemic barriers. 3. Understanding Digital Financial Literacy in Rural Context Early studies were inclined to examine digital skills and financial knowledge in separate silos. But when mobile phones became the primary gateway into banking, researchers knew that if either one of them falters, users were exposed. One of the earliest formal definitions of DFL was proposed by Morgan and Trinh (2019) and it was divided into four practical parts, including awareness of digital financial products, awareness of online financial risks, awareness of how to protect against online financial risks, and awareness of consumer rights and complaint mechanisms. Building on this work, Lyons and Kass-Hanna (2021) argue that conventional financial literacy tests fail to capture the day-to-day realities of branchless banking. They proposed a more holistic framework that integrates basic financial numeracy with technical competence, practical know-how, constructive financial attitudes and self-protection habits. In the villages, the difference is a real one. A smallholder farmer might survive by working out seasonal crop budgets in his head, but still feel excluded from mobile banking because the app menus are in English, PIN resets are intimidating, or undoing a mistaken transfer is a Herculean task. More recent studies highlight that DFL is not a static personal trait; it grows—or stalls—within a person's immediate social circle (Setiawan et al., 2022; Kumar et al., 2023). Urban consumers often learn about new apps through trial and error, but rural residents are more likely to adopt digital payment habits on the advice of relatives, neighborhood shopkeepers, or local banking agents. Trusted intermediaries can help people get started, but can also create risks when users give their phone or PIN to others. 4. Literature synthesis by themes

4.1 From Literacy to Transaction Adoption: TheMediating Pathway One of the most evident patterns from empirical studies is that DFL does not usually result in financial inclusion directly but through the habit of making routine digital transactions. Researchers show that a higher DFL makes mobile interfaces less intimidating and more useful, motivating people to actually transact based on the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) . Kass-Hanna et al. (2022) found that rural households in South Asia and Sub-Saharan Africa

that have financial knowledge and digital skills together are much more likely to save formally, borrow, and manage risk, helping families absorb unexpected shocks to income (Kass-Hanna et al., 2022). The literature on rural micro-enterprises points to a similar stepwise chain: DFL provides small shopkeepers with the confidence to accept regular digital payments, these payments generate an auditable transaction trail, and the digital record helps them qualify for formal working-capital loans (Hasan et al., 2022; Pandey et al., 2022). Literacy without regular transaction use is underused.

4.2 Infrastructure as Enabling Moderator DFL provides user readiness, but scholars caution against neglecting physical and technical infrastructure. Reliable mobile data, interoperable payment networks and local merchants accepting digital payments are important determinants of the actual cashless experience of literate rural users. Weak network signals cause payments to time out or leave debited money stuck for days, forcing buyers and sellers to revert to physical cash, and user confidence drops quickly. Our field evidence from rural India suggests that local digital infrastructure partially mediates the translation of DFL to broader economic participation, and fully mediates basic service access. In plain language, user skills can't make up for broken payment rails, and fast networks can't replace user confidence. 4.3 Social-demographic asymmetries and the gendered divide The literature makes clear that rural villages are not homogenous communities. DFL development and digital transactions vary by age, education, income stability, and gender. Younger adults and rural wage earners are much more likely to use mobile wallets and QR codes than older agricultural workers. The most clearly defined line of difference in the studies reviewed is gender. In many parts of South Asia and Sub-Saharan Africa, rural women encounter multiple barriers, such as a lower likelihood of owning a personal smartphone, travel restrictions outside the village, and household norms that often assign money management to men (Hasan et al., 2021; Rani, 2021). Even where women have bank accounts to receive government transfers, low DFL often means that women hand over their debit cards or mobile phones to their male relatives, limiting their independent control over household funds.

4.4 Cybersecurity Anxiety, Trust and Friction Costs Qualitative interviews and quantitative surveys alike show that concern about losing money is a major reason rural residents are reluctant to use digital payments on a regular basis. Families living hand to mouth on a seasonal budget can't afford to lose any money, even from mistyped phone numbers or scam calls. Research suggests that basic awareness may prompt people to download an app, but self-protection skills such as checking that the recipient's name is correct before making a payment, keeping one-time passwords to yourself and knowing how to report failed transfers, will keep them around. Hidden service fees, apps that do not support the local language, and slow customer complaint desks, also encourage a preference for physical cash, where each rupee or shilling is tangible in hand.

| Thematic Dimension | Core Mechanism Identified in Literature | Representative Scholarship |
|---|---|---|
| Conceptual Definition | Combines financial numeracy, practical digital skills, and fraud awareness into a single functional capability. | Morgan & Trinh (2019); Lyons & Kass-Hanna (2021) |
| Behavioural Mediation | DFL lowers perceived complexity and fear of errors, turning dormant accounts into active payment habits. | Patil et al. (2020); Kass-Hanna et al. (2022) |
| Infrastructure | Stable mobile networks and local merchant | Gabor & Brooks (2017); Ozili |

| | | |
|---|---|---|
| Interplay | acceptance determine whether literate users stay digital. | (2018) |
| Demographic Disparities | Phone ownership, age, and household gender norms create uneven inclusion outcomes within villages. | Hasan et al. (2021); Hasan et al. (2022) |
| Trust & Redress | Fear of scams, failed transfers, and language barriers push rural users back toward cash. | Gupta & Arora (2020); Yue et al. (2022) |

5. Gaps and Future Directions in Research A review of the studies highlights four practical gaps that future researchers should address: 1. Lack of a common DFL scale: while conventional financial literacy is measured with widely used benchmark questions, DFL is measured inconsistently across studies. That inconsistency makes cross-regional comparisons difficult. Future work should focus on the development and validation of simple and culturally adaptable DFL scales for rural respondents with little formal education . 2. Heavy Reliance on One-Off Surveys: Most empirical papers rely on cross-sectional surveys, gathered at a single point in time, which often measure stated intentions rather than enduring habits. Multi-year panel data studies are needed to see if rural users continue transacting digitally even after the expiry of promotional cashback offers or welfare programs. 3. Limited Evidence on Digital Credit and Voice Interfaces: Peer-to-peer and merchant payments are receiving a lot of attention, but we know much less about how rural DFL is impacting borrowing through automated lending apps, micro-insurance sign-ups, or voice-assisted tools for regional languages. 4. Neglecting Intra-Household Dynamics: Treating a rural household as a single financial unit hides important power differentials. Mixed-methods and qualitative studies should carefully consider how digital skills and phone access are shared or limited among family members within the same household. 6. Conclusion 5. Physical distance between rural communities and formal banking institutions has been clearly reduced by digital financial tools. Nonetheless, the bibliographic evidence reviewed here suggests that mobile coverage and zero-balance accounts are only a starting point. To achieve meaningful financial inclusion, with regular saving, safe daily payments, protection from shocks, and fair access to credit, rural residents need to build the digital financial literacy they need to use electronic services safely on their own. What is needed to close the remaining gap is practical coordination. Fintech designers need to create simpler, local-language, fraud-proof apps, and policy makers and grass-roots educators need to go beyond one-day awareness workshops, to provide steady, hands-on support that is grounded in the realities of daily rural commerce.

**References**

1. Gabor, D., & Brooks, S. (2017). The digital revolution in financial inclusion: International development in the fintech era. New Political Economy, 22(4), 423–436. https://doi.org/10.1080/13563467.2017.1259298
2. Gupta, S., & Arora, N. (2020). Investigating consumer intention to accept mobile payment systems through unified theory of acceptance model: An Indian perspective. South Asian Journal of Business Studies, 9(1), 88–114. https://doi.org/10.1108/SAJBS-03-2019-0037
3. Hasan, M., Le, T., & Hoque, A. (2021). How does financial literacy impact on inclusive finance? Financial Innovation, 7(1), Article 40. https://doi.org/10.1186/s40854-021-00259-9

4. Hasan, M., Noor, T., Gao, J., Usman, M., & Abedin, M. Z. (2022). Rural consumers' financial literacy and access to FinTech services. Journal of the Knowledge Economy, 14(2), 780–804. https://doi.org/10.1007/s13132-022-00936-9
5. Kass-Hanna, J., Lyons, A. C., & Liu, F. (2022). Building financial resilience through financial and digital literacy in South Asia and Sub-Saharan Africa. Emerging Markets Review, 51, Article 100846. https://doi.org/10.1016/j.ememar.2021.100846
6. Kumar, P., Pillai, R., Kumar, N., & Tabash, M. I. (2023). The interplay of skills, digital financial literacy, capability, and autonomy in financial decision making and well-being. Borsa Istanbul Review, 23(1), 169–183. https://doi.org/10.1016/j.bir.2022.09.012
7. Lyons, A. C., & Kass-Hanna, J. (2021). A methodological overview to defining and measuring "digital" financial literacy. Financial Planning Review, 4(2), Article e1113. https://doi.org/10.1002/cfp2.1113
8. Morgan, P. J., & Trinh, L. Q. (2019). Fintech and financial literacy in the LAO PDR (ADBI Working Paper Series No. 933). Asian Development Bank Institute. https://www.adb.org/publications/fintech-and-financial-literacy-lao-pdr
9. Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. Borsa Istanbul Review, 18(4), 329–340. https://doi.org/10.1016/j.bir.2017.12.003
10. Pandey, A., Kiran, R., & Sharma, R. K. (2022). Investigating the impact of financial inclusion drivers, financial literacy and financial initiatives in fostering sustainable growth in North India. Sustainability, 14(17), Article 11061. https://doi.org/10.3390/su141711061
11. Patil, P., Tamilmani, K., Rana, N. P., & Raghavan, V. (2020). Understanding consumer adoption of mobile payment in India: Extending Meta-UTAUT model with personal innovativeness, anxiety, trust, and grievance redressal. International Journal of Information Management, 54, Article 102144. https://doi.org/10.1016/j.ijinfomgt.2020.102144
12. Setiawan, M., Effendi, N., Santoso, T., Dewi, V. I., & Sapulette, M. S. (2022). Digital financial literacy, current behavior of saving and spending and its future foresight. Economics of Innovation and New Technology, 31(4), 320–338. https://doi.org/10.1080/10438599.2020.1799142
13. Yue, P., Korkmaz, A. G., Yin, Z., & Zhou, H. (2022). The rise of digital finance: Financial inclusion or debt trap? Finance Research Letters, 47, Article 102604. https://doi.org/10.1016/j.frl.2021.102604