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DIGITAL FINANCIAL LITERACY AND ITS IMPACT ON CONSUMER FINANCIAL BEHAVIOUR IN URBAN INDIA: A MODERATED MEDIATION MODEL

[1]Dr M. R. Jeyakumar and [2]Dr A. Kumar
[1]Principal, Study world College of Arts and Science, Coimbatore
[2]Associate Professor, Department of Commerce, Yuvaguru College of Arts and Science, Coimbatore

ABSTRACT

Digital financial literacy (DFL) has become a crucial enabler of informed financial decision-making in India's rapidly evolving fintech ecosystem. With the expansion of UPI, mobile wallets, digital lending, and app-based investment platforms, consumer financial behavior has undergone significant transformation. However, disparities persist in consumers' ability to understand digital tools, evaluate financial risks, and apply secure online practices. This 2025 study tests a moderated mediation model in which financial self-efficacy mediates the effect of DFL on consumer financial behavior, while perceived digital trust moderates the self-efficacy–behavior relationship.

Data were collected from 320 digital finance users across Delhi, Mumbai, Bengaluru, Chennai, and Hyderabad between February and September 2025 using a structured questionnaire. Structural Equation Modelling and PROCESS Macro (Model 7; 5,000 bootstraps) confirmed that DFL significantly improves responsible financial behavior ($\beta = 0.42$, $p < .001$). Financial self-efficacy partially mediates this effect (indirect effect = 0.20; 95% CI [0.12, 0.30]). Perceived digital trust significantly strengthens the self-efficacy → behavior link (interaction $\beta = 0.23$, $p = .002$), producing a significant moderated mediation effect (index = 0.08; 95% CI [0.03, 0.15]).

The findings emphasize the joint role of literacy, confidence, and trust in driving positive digital financial outcomes. Policy implications include targeted literacy programs, trust-enhancing fintech design, and confidence-building interventions.

Keywords: *Digital Financial Literacy, Financial Self-Efficacy, Consumer Financial Behavior, Digital Trust, Moderated Mediation Model*

INTRODUCTION

Digital transformation has significantly reshaped India's financial services landscape, enabling immediate payments, digital lending, online investment platforms, and AI-driven financial advisory systems. Supported by high smartphone penetration, affordable internet access, and government initiatives such as the Digital India programme, urban India has rapidly become a hub of fintech adoption. As financial services increasingly migrate to digital channels, digital financial literacy (DFL) has emerged as a critical enabler for understanding financial choices, assessing risks, and ensuring secure financial behavior.

However, despite growing adoption, a substantial proportion of consumers still lack adequate literacy to navigate digital platforms with confidence. Misinterpretation of financial information, vulnerability to online fraud, impulsive digital spending, and ineffective management of digital accounts highlight that mere access to technology does not guarantee responsible or informed financial behavior.

In response to these challenges, the present study examines how DFL shapes consumer financial behavior, with a specific focus on financial self-efficacy as a mediating psychological mechanism. Recognizing rising concerns over cyber security, data privacy, and platform credibility, the study also investigates whether perceived digital trust strengthens the influence of self-efficacy on positive financial behavior.

By proposing and empirically validating a moderated mediation model, this research offers valuable insights for policymakers, fintech providers, and academic researchers aiming to enhance consumer financial well-being in India's rapidly expanding digital economy.

STATEMENT OF THE PROBLEM

Despite the rapid adoption of digital financial services in urban India, positive financial outcomes among consumers remain inconsistent. Many individuals engage with digital platforms without sufficient knowledge to compare financial products, understand associated charges, manage digital accounts effectively, or recognize potential fraud risks. As a result, digital usage does not always translate into informed or responsible financial behavior.

Existing research has not adequately explained how digital financial literacy (DFL) influences actual financial behavior, particularly through psychological mechanisms such as financial self-efficacy, which determines an individual's confidence in managing financial tasks. Furthermore, digital trust—a critical contextual factor influencing consumers' willingness to transact and share sensitive information online remains insufficiently explored in relation to financial behavior outcomes.

Without understanding these underlying mechanisms and boundary conditions, literacy initiatives, fintech interface designs, and consumer protection policies may fail to achieve their intended impact. To address these gaps, this study proposes and empirically tests a moderated mediation model linking DFL, financial self-efficacy, digital trust, and consumer financial behavior within the context of India's evolving digital economy.

LITERATURE REVIEW

Digital Financial Literacy (DFL)

Digital Financial Literacy (DFL) is increasingly recognized as a multidimensional construct that integrates foundational financial knowledge with digital competencies required for navigating online banking, mobile wallets, and fintech platforms. Recent empirical studies conceptualize DFL as comprising interrelated dimensions such as digital financial knowledge, risk awareness, transactional control, and secure financial behavior. Validated instruments developed for Indian consumers between 2023 and 2025 provide strong psychometric support and capture the unique characteristics of digital financial engagement within urban populations.

Evidence from emerging economies consistently shows that higher levels of DFL enable individuals to evaluate online financial products more effectively, compare associated fees, interpret digital information accurately, and identify fraudulent schemes. In the Indian context, DFL has been found to contribute positively to saving and investment behavior, reduce vulnerability to cybercrime, and promote responsible use of digital wallets, UPI-based payments, and online investment platforms. These insights are particularly relevant to major metropolitan centers such as Delhi, Mumbai, Bengaluru, Chennai, and Hyderabad, where fintech adoption is rapidly expanding and financial choices are increasingly shaped by digital interfaces.

Financial Self-Efficacy

Financial self-efficacy refers to an individual's belief in their ability to perform financial tasks, manage personal finances, and make informed decisions. Grounded in Social Cognitive Theory, self-efficacy shapes whether individuals convert knowledge into behavioral action and how they respond to financial challenges. Empirical research conducted between 2023 and 2025 consistently demonstrates that financial self-efficacy predicts key behaviors such as disciplined saving, structured budgeting, credit management, and long-term investment planning.

Studies in the Indian context further reveal that financial self-efficacy mediates the relationship between financial literacy and financial behavior, underscoring its psychological significance in the decision-making process. As a result, self-efficacy serves as a theoretically robust mediator in models examining the behavioral impact of DFL, particularly within digitally active consumer groups.

Consumer Financial Behavior in Digital Environments

Consumer financial behavior encompasses a broad spectrum of activities, including spending, saving, digital payments, borrowing, and long-term financial planning. Behavioral outcomes in digital financial environments are influenced not only by knowledge but also by psychological readiness, risk perception, platform usability, and trust.

Contemporary research indicates that although India has witnessed rapid fintech adoption, responsible financial behavior has not increased proportionally. Consumers often engage in impulsive digital spending, fail to utilize budgeting or planning tools, or become vulnerable to phishing and fraudulent digital activities. These patterns suggest that access to digital platforms does not automatically translate into positive financial outcomes. Instead, financial behavior in digital settings emerges from the complex interaction between literacy, self-efficacy, and the credibility of digital financial services.

Perceived Digital Trust

Perceived digital trust reflects users' confidence in the security, transparency, privacy, and reliability of digital financial platforms. Trust has been widely recognized in the literature as a critical determinant of both initial adoption and sustained use of digital financial services. Empirical findings from 2023–2025 show that higher trust facilitates greater engagement with advanced fintech services, such as online lending, digital investments, and AI-driven advisory tools.

Conversely, low trust—even among digitally literate and confident users restricts adoption to basic transactions or encourages a return to traditional financial habits. With the documented rise in cyber fraud incidents across

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India during 2024–2025, perceived digital trust has become increasingly central to understanding consumer behavior within urban fintech ecosystems.

Moderated Mediation Framework

Theoretical perspectives from behavioral finance and technology trust literature support a conditional indirect effect model for understanding digital financial behavior. First, DFL influences financial behavior indirectly through financial self-efficacy; individuals with stronger digital financial competencies are more confident and, consequently, more capable of engaging in responsible financial actions. Second, perceived digital trust moderates the relationship between self-efficacy and behavior, implying that confidence is unlikely to manifest into behavior unless consumers perceive digital platforms as safe and reliable.

This conditional process where the strength of the indirect effect of DFL on financial behavior depends on the level of digital trust constitutes a moderated mediation relationship. Empirical findings in related domains support this structure, as psychological mechanisms (e.g., self-efficacy) and contextual enablers (e.g., trust) frequently interact to shape behavioral outcomes. Given the rapid expansion of India's fintech landscape, heightened cyber risks, and increasing reliance on digital financial services between 2023 and 2025, this moderated mediation model offers a timely and theoretically grounded approach for examining consumer behavior in metropolitan Indian settings.

RESEARCH GAP

The literature review highlights several gaps that the present study addresses:

- **Limited urban-India–specific evidence on Digital Financial Literacy (DFL):** Despite rapid fintech penetration in metropolitan cities, very few studies empirically examine DFL among urban Indian consumers.
- **Underexplored psychological mechanisms:** Existing research inadequately addresses the role of financial self-efficacy in explaining how DFL translates into actual financial behavior.
- **Lack of contextual moderators such as digital trust:** Although digital trust is critical in fintech adoption, its moderating impact on behavioral relationships remains insufficiently studied.
- **Absence of moderated mediation frameworks:** Indian digital finance studies rarely integrate DFL, self-efficacy, and trust within a conditional indirect effects model.
- **Limited studies capturing advances in fintech between 2023 and 2025:** The rapid evolution of UPI, digital lending, and AI-based financial tools necessitates updated empirical models.

This study fills these gaps by developing and validating a moderated mediation framework that links DFL, financial self-efficacy, digital trust, and consumer financial behavior within India's 2025 digital finance landscape.

STATEMENT OF THE PROBLEM

The rapid expansion of India's digital financial ecosystem driven by UPI, mobile wallets, digital lending platforms, and app-based investment services has transformed the way urban consumers manage, spend, save, and invest. Despite this growth, significant gaps persist in consumers' ability to understand, evaluate, and use digital financial services safely and effectively. Evidence indicates that many users adopt digital finance without adequate digital financial literacy (DFL), leaving them vulnerable to poor financial decisions, fraud, data misuse, and over-borrowing.

Moreover, prior studies have primarily examined general financial literacy or technology adoption but have not sufficiently explored how DFL shapes actual consumer financial behavior, nor the mechanisms through which this influence operates. The role of perceived risk, trust, and digital attitude as mediating or moderating variables remains under-researched in the Indian urban context, especially in light of new fintech innovations and regulatory changes introduced in 2023–2025.

This gap highlights the need for an empirical model that can explain how and under what conditions digital financial literacy affects consumer financial behavior. Hence, the present study investigates the pathways linking DFL to consumer behavior, incorporating mediation and moderation effects to provide a deeper understanding of consumer dynamics in India's fast-evolving digital finance landscape.

OBJECTIVES

The study is guided by the following objectives:

- To examine the impact of Digital Financial Literacy (DFL) on consumer financial behavior in the context of India's rapidly expanding digital financial ecosystem.
- To determine whether financial self-efficacy mediates the relationship between DFL and consumer financial behavior, thereby explaining the psychological mechanism through which literacy influences financial actions.
- To test whether perceived digital trust moderates the relationship between financial self-efficacy and financial behavior, strengthening or weakening this linkage based on the level of trust in digital financial services.
- To validate an integrated moderated mediation model that captures the combined effects of DFL, financial self-efficacy, and digital trust on financial behavior among urban Indian consumers.

HYPOTHESES

Based on the conceptual model and prior empirical findings, the following hypotheses are proposed:

- **H1:** Digital financial literacy (DFL) positively influences consumer financial behavior.
- **H2:** Digital financial literacy (DFL) positively affects financial self-efficacy.
- **H3:** Financial self-efficacy positively influences consumer financial behavior.
- **H4:** Financial self-efficacy mediates the relationship between DFL and consumer financial behavior.
- **H5:** Perceived digital trust moderates the relationship between financial self-efficacy and consumer financial behavior, such that the relationship is stronger at higher levels of perceived digital trust.
- **H6:** The indirect effect of DFL on consumer financial behavior through financial self-efficacy is contingent upon the level of perceived digital trust (moderated mediation).

RESEARCH METHODOLOGY

Research Design

A quantitative, descriptive, and causal research design was adopted to empirically examine the proposed moderated mediation framework. Structural Equation Modelling (SEM) and the PROCESS Macro were used to test direct, indirect, and conditional indirect effects among the study variables.

Study Area and Period

The study was conducted across five major Indian metropolitan cities—Delhi, Mumbai, Bengaluru, Chennai, and Hyderabad—which represent the country's most advanced digital finance ecosystems. Data collection took place between February and September 2025.

Sampling Procedure

- **Population:** Adults aged 18 years and above who use digital financial services.
- **Sample Size:** 320 respondents.
- **Sampling Technique:** Stratified purposive sampling based on city and age groups (18–30, 31–45, 46+), ensuring balanced representation across demographic clusters.
- Inclusion Criterion: Participants must have used at least one digital financial service (e.g., UPI, mobile banking, digital wallets) within the previous six months.

Instrumentation

A structured questionnaire comprising validated, multi-item scales measured the following constructs:

- Digital Financial Literacy (DFL)
- Financial Self-Efficacy
- Perceived Digital Trust
- Consumer Financial Behavior

- Demographic Profile

All items were rated on a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The instrument incorporated established scales adapted to the Indian digital financial context.

Statistical Tools

The following statistical techniques were employed:

- Descriptive statistics (mean, SD, frequencies)
- Reliability analysis (Cronbach's α)
- Construct validity assessment (Composite Reliability, Average Variance Extracted)
- Correlation analysis
- Multiple regression analysis
- SEM using AMOS/SmartPLS for model estimation
- PROCESS Macro (Model 7) using 5,000 bootstrap samples to test moderated mediation effects

DATA ANALYSIS AND RESULTS

Descriptive Statistics

Table 1 presents the mean and standard deviation values for the major constructs. Overall, respondents reported relatively high levels of digital financial literacy, financial self-efficacy, and responsible financial behavior.

Table 1: Descriptive Statistics

Variable	Mean	SD
Digital Financial Literacy	4.08	0.66
Financial Self-Efficacy	4.15	0.63
Digital Trust	3.90	0.72
Financial Behaviour	4.18	0.68

Reliability and Validity

The internal consistency and convergent validity of all constructs were assessed using Cronbach's alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE). As shown in Table 2, all values exceeded the recommended thresholds ($\alpha > 0.70$, $CR > 0.70$, $AVE > 0.50$), confirming reliability and construct validity.

Table 2: Reliability and Validity

Construct	α	CR	AVE
Digital Financial Literacy	0.90	0.92	0.57
Financial Self-Efficacy	0.88	0.90	0.56
Digital Trust	0.91	0.94	0.62
Financial Behaviour	0.87	0.89	0.54

Structural Model Fit

The structural model was evaluated using commonly accepted fit indices. As presented in Table 3, all indices met or exceeded recommended thresholds, indicating a strong model fit.

Table 3: Model Fit

Fit Index	Value	Threshold
CFI	0.948	> 0.90
TLI	0.936	> 0.90
RMSEA	0.049	< 0.08
SRMR	0.045	< 0.08

PROCESS Macro Results (Model 7)

The moderated mediation model was tested using PROCESS Macro (Model 7) with 5,000 bootstrap samples. Results reveal significant direct, indirect, and interaction effects.

- Digital Financial Literacy → Financial Self-Efficacy $\beta = 0.55$, $p < 0.001$
- Digital Financial Literacy → Financial Behavior $\beta = 0.42$, $p < 0.001$

- Financial Self-Efficacy → Financial Behavior $\beta = 0.36$, $p < 0.001$
- Moderation Effect (Self-Efficacy × Digital Trust) $\beta = 0.23$, $p = 0.002$
- Indirect Effect (Mediation): 0.20 95% CI: 0.12 – 0.30
- Index of Moderated Mediation: 0.08 95% CI: 0.03 – 0.15

Since the confidence intervals do not include zero, the mediation and moderated mediation effects are statistically significant. All hypotheses (H1–H6) are supported.

DISCUSSION

The study's findings reaffirm the critical role of digital financial literacy (DFL) in shaping consumer financial behavior within India's rapidly expanding digital financial ecosystem. Consistent with contemporary global research, the results confirm that individuals with higher DFL are better equipped to make informed, responsible, and secure financial decisions in digital environments. This underscores the continued importance of literacy as a foundational determinant of financial outcomes.

A key contribution of this study is the empirical validation of financial self-efficacy as a central psychological mechanism. The mediation results demonstrate that literacy alone is not sufficient; rather, it translates into behavior primarily by enhancing individuals' confidence in their ability to navigate digital financial tools. This aligns with behavioral finance theories highlighting the role of cognitive and psychological capabilities in decision-making. Hence, confidence not just knowledge emerges as a decisive factor in shaping responsible financial behavior.

The study also highlights the crucial role of perceived digital trust as a contextual moderator. Findings show that higher levels of trust strengthen the influence of financial self-efficacy on behavior. Even when individuals possess adequate literacy and confidence, their willingness to engage in sound digital financial practices depends significantly on how safe and reliable they perceive digital platforms to be. This underscores the interdependence of psychological readiness and trust in institutional and technological systems.

Overall, the results indicate that digital financial literacy, psychological empowerment, and digital trust jointly determine financial behavior in modern digital ecosystems. These insights extend existing literature by providing a more comprehensive understanding of the pathways and conditions under which DFL leads to improved financial behavior, particularly in an emerging-market context like urban India.

MANAGERIAL IMPLICATIONS

The findings of this study offer several actionable insights for policymakers, financial institutions, and fintech service providers:

- Expand Digital Financial Literacy (DFL) Initiatives Government agencies, fintech companies, and financial institutions should collaborate to design and scale comprehensive DFL programs. These initiatives must address not only basic digital financial knowledge but also risk awareness, cybersecurity practices, and informed decision-making. Targeted interventions in major urban centers can significantly enhance financial capability among digitally active consumers.
- Integrate Confidence-Building Components in User Education Since financial self-efficacy plays a critical mediating role, digital financial education programs should incorporate behavioral training modules that improve users' confidence in managing digital financial tools. Interactive simulations, guided tutorials, and experiential learning can help individuals translate knowledge into effective action.
- Strengthen Platform Trust and Security Infrastructure Fintech providers must enhance trust by ensuring stronger data protection protocols, user-friendly security features, and transparent communication regarding platform policies. Proactive fraud-prevention mechanisms such as real-time alerts, two-factor authentication, and AI-based anomaly detection can further increase user trust and reduce perceptions of risk.
- Leverage AI-Driven Personalization and Behavioral Nudges AI-driven insights can be used to deliver personalized financial guidance, spending alerts, goal-setting tools, and responsible usage prompts. Behavioral nudges—such as reminders, progress tracking, and reward systems can reinforce positive financial habits and reduce impulsive or risky digital financial behavior.

Collectively, these managerial actions can significantly enhance consumer outcomes, strengthen financial ecosystem resilience, and support sustainable digital financial inclusion in India's rapidly evolving fintech landscape.

CONCLUSION

The study establishes that digital financial literacy (DFL) is a significant determinant of consumer financial behaviour in urban India. Individuals with higher levels of DFL display more responsible and informed financial actions, demonstrating the critical role of digital competencies in modern financial ecosystems. The findings further reveal that financial self-efficacy acts as a central mediating mechanism, indicating that literacy alone is insufficient consumers must also possess the confidence to apply their knowledge effectively in digital contexts.

Additionally, perceived digital trust significantly moderates the relationship between self-efficacy and financial behaviour. Consumers who trust digital financial platforms are more likely to translate their confidence into real behavioural outcomes, highlighting trust as a pivotal contextual enabler of positive financial practices.

The validated moderated mediation model provides a comprehensive framework for understanding how literacy, psychological empowerment, and digital trust jointly shape financial behaviour. Overall, the study emphasizes the need for integrated, multi-dimensional strategies that enhance literacy, build consumer confidence, and strengthen trust to promote financial well-being in India’s rapidly evolving digital financial ecosystem.

LIMITATIONS

This study is subject to several limitations. First, the reliance on self-reported data may introduce social desirability and recall bias, despite the statistical measures adopted to mitigate such effects. Second, the cross-sectional research design restricts the ability to draw causal inferences, as the relationships observed represent associations at a single point in time. Third, the study sample is limited to urban populations in major metropolitan cities, excluding rural and semi-urban users who may exhibit different levels of digital financial literacy and behavioural patterns. Finally, the model does not incorporate additional psychological constructs—such as risk tolerance, digital anxiety, or behavioural biases which may further explain variations in digital financial behaviour.

FUTURE RESEARCH

Future studies can extend the present findings in several meaningful ways. First, longitudinal research designs should be employed to capture changes in digital financial behaviour over time and to strengthen causal inference. Second, expanding the scope to rural and semi-urban populations would provide a more comprehensive understanding of digital financial literacy and trust across diverse socio-economic contexts. Third, emerging AI-driven digital literacy interventions such as personalized learning modules, conversational agents, and automated financial coaching warrant empirical exploration to assess their effectiveness in enhancing financial capability. Finally, comparative studies across demographic segments, including age, income, education, and occupation groups, would help identify heterogeneous behavioural patterns and tailor interventions more effectively.

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