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Financial Literacy and Household Investment Decision-Making in Emerging Economies: Empirical Evidence from India

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Abstract

Financial literacy has emerged as a foundational determinant of household wealth accumulation and investment behavior, particularly in the context of rapidly developing economies where capital markets are maturing alongside expanding retail investor participation. This study empirically examines the relationship between financial literacy and household investment decision-making in the Indian context, drawing upon a cross-sectional survey of 1,240 respondents across six metropolitan and semi-urban regions. Employing Structural Equation Modeling with Partial Least Squares (PLS-SEM), the study constructs a multi-dimensional model of financial literacy encompassing financial knowledge, financial attitudes, and financial behavior, and evaluates their differential effects on investment diversification, risk tolerance, and long-term savings orientation. The findings reveal that financial knowledge exerts the strongest direct effect on investment diversification ($\beta = 0.412$, $p < 0.001$), while financial attitude significantly mediates the relationship between financial knowledge and risk tolerance ($\beta = 0.287$, $p < 0.01$). Demographic covariates including education level, income bracket, and household size are incorporated as control variables. The study further identifies a significant urban–rural financial literacy gap that systematically disadvantages rural households in capital market participation. Moderating analysis reveals that digital access significantly amplifies the positive effects of financial literacy on investment decision quality. The findings carry critical implications for policymakers designing financial inclusion programs, regulators seeking to improve retail investor protection, and academic scholars advancing behavioral finance theory in emerging market contexts.

Keywords: financial literacy, household investment behavior, PLS-SEM, emerging economies, investment diversification, behavioral finance, India

1. Introduction

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The relationship between financial literacy and economic behavior has occupied an increasingly central position in economic scholarship over the past two decades. As global financial systems grow in complexity and individuals bear ever-greater responsibility for their own retirement planning, health expenditure, and wealth management, the cognitive and attitudinal dimensions of financial competence have become critical determinants of economic well-being at the household level. In emerging economies such as India, where the financial services sector has undergone rapid transformation driven by liberalization, digitization, and the expansion of formal banking infrastructure, the question of whether citizens possess sufficient financial knowledge to make optimal investment decisions carries profound implications for both individual prosperity and macroeconomic stability (Lusardi & Mitchell, 2014; Klapper et al., 2015).

India presents a particularly compelling empirical context for the study of financial literacy and investment behavior. With a population exceeding 1.4 billion, a rapidly expanding middle class, a maturing equity market, and an increasingly sophisticated mutual fund industry, the country has witnessed remarkable growth in retail investor participation over the past decade. The number of unique mutual fund investors surpassed 50 million in 2024, and equity market capitalization crossed USD 4 trillion, positioning India among the world's top five stock markets (Securities and Exchange Board of India, 2024). Yet parallel to this expansion lies a sobering reality: national surveys consistently reveal that large proportions of the Indian population, particularly in semi-urban and rural areas, lack even basic financial knowledge relating to interest rates, inflation, and risk diversification (National Centre for Financial Education, 2023). This paradox — of a flourishing capital market embedded within a financially under-literate population — raises urgent questions about the quality of investment decisions being made, the prevalence of financially irrational behavior, and the systemic consequences of knowledge asymmetry in retail investor markets.

The concept of financial literacy, as operationalized in contemporary economic research, extends beyond simple numeracy or familiarity with financial products. Huston (2010) proposes a dual-dimensional framework in which financial literacy encompasses both the comprehension of financial concepts (knowledge) and the application of this understanding in decision-making contexts (application). Subsequent scholars have broadened this conceptualization to include attitudinal dimensions — the degree to which individuals maintain positive orientations toward saving, investment, and financial planning — as well as behavioral dimensions that capture actual financial management practices (Atkinson & Messy, 2012). This tripartite model of financial literacy — encompassing knowledge, attitude, and behavior — has gained considerable empirical traction and informs the analytical framework employed in the present study.

Despite a growing body of research linking financial literacy to individual-level economic outcomes, significant gaps remain in the literature concerning the mechanisms through which financial literacy influences investment decision quality in emerging

market contexts. Most existing studies focus on developed economies, where financial markets are more mature and investor education infrastructure is more robust. Studies set in India or comparable economies often rely on single-dimensional measures of financial literacy, fail to distinguish between the effects of cognitive knowledge and attitudinal orientations, or neglect the moderating role of digital access — a factor of growing importance in the post-COVID investment landscape (Potrich et al., 2016; Grohmann et al., 2018). Furthermore, methodological approaches in the existing literature have often been limited to ordinary least squares (OLS) regression, which inadequately captures the complex latent relationships between constructs in financial literacy research.

The present study addresses these gaps through three principal contributions. First, it employs a theoretically grounded, multi-dimensional construct of financial literacy that captures knowledge, attitude, and behavioral dimensions simultaneously, enabling a more nuanced understanding of how different facets of financial competence differentially influence investment outcomes. Second, it applies PLS-SEM, a second-generation multivariate technique capable of modeling complex latent variable relationships and testing mediation pathways, providing methodological advancement over regression-based approaches prevalent in the regional literature. Third, it incorporates digital access as a moderating variable, recognizing that the proliferation of fintech platforms, mobile trading applications, and digital financial advisory services has fundamentally altered the channels through which financial literacy translates into investment behavior.

The study is organized as follows. Section 2 reviews the theoretical and empirical literature on financial literacy and investment decision-making. Section 3 identifies the research gap and articulates the study's objectives. Section 4 presents the hypotheses. Section 5 describes the research methodology. Section 6 reports the data analysis and findings. Section 7 discusses the implications of the findings. Section 8 presents conclusions and recommendations.

The significance of this inquiry extends beyond academic contribution. India's financial regulators, including the Securities and Exchange Board of India (SEBI), the Reserve Bank of India (RBI), and the Insurance Regulatory and Development Authority (IRDA), have all launched major investor education initiatives in recent years. Understanding the pathways through which financial literacy affects investment quality can help refine these programs, ensuring that educational interventions target the most consequential knowledge and attitudinal deficits. For households, improved financial literacy translates directly into better wealth outcomes, greater retirement security, and enhanced resilience against financial shocks. For the broader economy, a more financially literate investor population contributes to deeper capital markets, more efficient resource allocation, and greater macroeconomic stability (Lusardi, 2019).

2. Literature Review

2.1 Conceptual Foundations of Financial Literacy

The intellectual lineage of financial literacy research can be traced to foundational

contributions in household economics, behavioral finance, and cognitive psychology. Early economic models of household saving and investment, rooted in the Life Cycle Hypothesis (Modigliani & Brumberg, 1954) and the Permanent Income Hypothesis (Friedman, 1957), assumed rational agents with perfect information and consistent intertemporal preferences. The empirical anomalies documented by behavioral economists — including myopic loss aversion (Thaler & Benartzi, 2004), overconfidence bias (Barber & Odean, 2001), and status quo bias (Samuelson & Zeckhauser, 1988) — challenged these assumptions and opened conceptual space for understanding how cognitive limitations and informational deficits distort financial decision-making.

Lusardi and Mitchell (2007) provided a landmark empirical contribution by demonstrating that basic financial literacy — as measured by three questions assessing understanding of interest compounding, inflation, and risk diversification — was strongly associated with retirement savings adequacy among American adults. Their research established a productive empirical tradition linking financial literacy to concrete economic outcomes. Subsequent studies extended this framework to include investment behavior, debt management, insurance choices, and borrowing decisions, consistently documenting positive associations between financial literacy and financial well-being (Lusardi & Mitchell, 2014; van Rooij et al., 2011).

Atkinson and Messy (2012), writing for the OECD, proposed a more comprehensive framework that disaggregated financial literacy into three distinct but interrelated dimensions: financial knowledge (factual understanding of financial concepts), financial attitudes (the affective orientation toward money management and future orientation), and financial behavior (actual financial management practices). This tripartite model has been widely adopted in subsequent empirical research, particularly in cross-national comparative studies (Hung et al., 2009; Herd et al., 2012; Potrich et al., 2016). The present study adopts this framework as its theoretical foundation, operationalizing financial literacy as a formative second-order construct composed of these three dimensions.

2.2 Financial Literacy and Investment Decision-Making

A substantial empirical literature documents the positive relationship between financial literacy and investment participation and quality. Van Rooij et al. (2011) demonstrated, using Dutch household panel data, that individuals with higher financial literacy were significantly more likely to invest in equities, and that this relationship persisted after controlling for wealth, income, education, and risk preferences. Almenberg and Dreber (2015) confirmed similar patterns in Sweden, while Arrondel et al. (2015) documented consistent associations in France. Consistently, higher financial literacy is associated with broader portfolio diversification, greater participation in tax-advantaged savings vehicles, and more appropriate risk-taking given household circumstances.

Behavioral dimensions of financial literacy have received increasing attention. Gathergood and Weber (2017) examined the role of self-control and financial literacy in mortgage choice, finding that financially literate households were significantly less

likely to choose high-cost, fee-heavy mortgage products. Lusardi and Tufano (2015) focused on debt literacy, demonstrating that individuals with limited understanding of compound interest mechanisms were disproportionately represented among those holding high-cost revolving debt. These findings suggest that financial literacy functions not only as an enabler of positive financial decisions but also as a protective factor against financially destructive choices.

In the Indian context, Agarwal et al. (2020) conducted a large-scale study of financial literacy among urban households in six major cities, finding substantial heterogeneity in financial knowledge levels across income and education quintiles. Goyal and Kumar (2021) examined the relationship between financial literacy and mutual fund participation using probit regression analysis, finding that each standard deviation increase in financial literacy scores was associated with a 14-percentage-point increase in the probability of mutual fund investment. Lusardi et al. (2021) conducted a global assessment of financial literacy across 140 countries, documenting that India ranked in the lower half of the distribution, with approximately 24% of adults meeting the threshold for basic financial literacy.

2.3 Attitudinal and Behavioral Dimensions

The role of financial attitudes in mediating the relationship between knowledge and behavior has been less systematically examined. Shim et al. (2010) proposed a model in which financial socialization during adolescence shapes financial attitudes, which in turn mediate the effects of financial knowledge on adult financial behavior. Jorgensen and Savla (2010) provided empirical support for this mediation pathway among college students. In the Indian context, Srinivasan and Nair (2019) documented significant associations between savings-oriented financial attitudes and both investment frequency and portfolio diversification, suggesting that attitudinal factors play an important independent role in investment decision-making beyond their mediation of knowledge effects.

Financial behavior — the third dimension of the Atkinson-Messy framework — encompasses practices such as budgeting, comparison shopping for financial products, maintaining emergency funds, and making regular contributions to long-term investment vehicles. Xiao and Porto (2017) demonstrated that financial behavior mediates the relationship between financial knowledge and financial satisfaction, highlighting the importance of enacted competence over mere declarative knowledge. In the context of investment decision-making, financial behavior captures habits such as regular portfolio review, rebalancing, and active diversification — practices that require not only knowledge but also the disciplined follow-through that characterizes high-quality investment decision-making.

2.4 Digital Access as a Moderator

The proliferation of digital financial services has introduced a new contextual variable into the financial literacy-investment behavior relationship. Mobile trading platforms, robo-advisory services, and digital payment infrastructure have dramatically reduced the transaction costs associated with investment, enabling

individuals with even modest financial resources to participate in capital markets. However, the ability to leverage these digital affordances depends critically on both digital literacy and financial literacy (Lagna & Ravishankar, 2022; Morgan & Trinh, 2020).

Studies in China (Chen & Volpe, 2020) and sub-Saharan Africa (Demirgüç-Kunt et al., 2022) suggest that digital financial services can amplify the financial literacy-investment participation relationship, as digitally connected, financially literate individuals gain disproportionate access to information, analytical tools, and low-cost investment products. In India, the rapid expansion of platforms such as Zerodha, Groww, and Paytm Money has created a new population of first-generation retail investors whose investment behavior may be qualitatively different from those accessing markets through traditional brokerage channels (Prasad & Verma, 2023). The present study incorporates digital access as a moderating variable to test whether the positive effects of financial literacy on investment outcomes are amplified among digitally connected respondents.

2.5 Demographic Determinants of Financial Literacy

A robust body of research documents systematic variation in financial literacy across demographic groups. Gender differences in financial literacy are among the most consistently documented, with women typically scoring lower than men on financial knowledge assessments across diverse cultural contexts (Lusardi & Mitchell, 2014; Fonseca et al., 2012). However, recent research suggests that these gender differences may be more attributable to differential access to financial information and gender-based differences in financial socialization than to intrinsic cognitive differences (Bucher-Koenen et al., 2017). Educational attainment is also consistently positively associated with financial literacy, as is income, occupational status, and urban residence.

In India, caste and religious group membership have been identified as additional determinants of financial literacy and capital market participation (Banerjee & Duflo, 2019), reflecting the role of social capital, community financial networks, and historical exclusion from formal financial systems in shaping financial competence. The present study incorporates gender, education, income, urban/rural location, and age as demographic control variables, enabling estimation of the financial literacy-investment behavior relationship net of these confounding influences.

2.6 Methodological Considerations

The methodological landscape in financial literacy research has evolved considerably. Early studies relied heavily on OLS regression with single-item or simple additive index measures of financial literacy. The limitations of this approach — particularly its inability to account for measurement error in latent constructs and its failure to model complex mediation and moderation pathways — have driven increasing adoption of structural equation modeling approaches (Hair et al., 2019). PLS-SEM, in particular, has gained traction in financial literacy research due to its capacity to handle small-to-medium samples, non-normal data distributions, and formative measurement models — all characteristics typical of survey-based

financial literacy studies (Ringle et al., 2020). The present study employs PLS-SEM using SmartPLS 4.0, following the two-step approach recommended by Anderson and Gerbing (1988) and the reporting guidelines of Hair et al. (2022).

3. Research Gap

Despite the growing body of literature on financial literacy and investment behavior, several critical gaps remain unaddressed in the Indian and broader emerging market contexts.

First, the majority of Indian studies operationalize financial literacy as a unidimensional construct — typically measuring financial knowledge alone — thereby failing to capture the independent and interactive effects of financial attitudes and financial behavior on investment outcomes. This unidimensional treatment obscures the mechanism through which financial literacy influences investment decisions, limiting the actionability of findings for policy design.

Second, methodological limitations characterize much of the Indian literature. Regression-based approaches, while accessible, cannot adequately model the complex latent variable relationships, mediation pathways, and measurement models inherent in financial literacy constructs. The application of PLS-SEM to this domain in the Indian context remains rare.

Third, the moderating role of digital access — particularly salient in post-COVID India where digital financial services have expanded dramatically — has not been systematically examined in the financial literacy-investment behavior relationship. Understanding whether digital connectivity amplifies or substitutes for financial literacy effects is critical for designing contemporary financial inclusion interventions.

Fourth, existing Indian studies have predominantly focused on urban, educated samples, leaving the financial literacy-investment behavior relationship among semi-urban and rural populations substantially under-examined. The present study addresses each of these gaps through its multi-dimensional construct operationalization, PLS-SEM methodology, digital access moderation analysis, and geographically diverse sampling strategy.

4. Objectives

The study pursues the following specific objectives:

Objective 1: To measure and compare the levels of financial literacy (knowledge, attitude, behavior) across demographic groups in the Indian household context.

Objective 2: To empirically examine the direct effects of financial knowledge, financial attitude, and financial behavior on household investment decision quality (operationalized as investment diversification, risk tolerance appropriateness, and long-term savings orientation).

Objective 3: To investigate the mediating role of financial attitude in the relationship

between financial knowledge and investment decision outcomes.

Objective 4: To test the moderating role of digital access in the relationship between financial literacy and investment decision quality.

Objective 5: To analyze the urban–rural financial literacy gap and its implications for differential investment behavior between metropolitan and semi-urban households.

Objective 6: To derive actionable implications for policymakers, financial regulators, and financial education program designers based on the empirical findings.

5. Hypotheses

Drawing from the theoretical framework and literature review, the following hypotheses are proposed:

H1: Financial knowledge is positively and significantly related to investment diversification among Indian households.

H2: Financial knowledge is positively and significantly related to long-term savings orientation among Indian households.

H3: Financial attitude mediates the positive relationship between financial knowledge and risk tolerance appropriateness.

H4: Financial behavior is positively and significantly related to investment decision quality.

H5: Digital access positively moderates the relationship between financial literacy and investment decision quality, such that the positive effect of financial literacy on investment quality is stronger among digitally connected respondents.

H6: There is a significant difference in financial literacy levels and investment decision quality between urban and semi-urban/rural households.

6. Methodology

6.1 Research Design

This study employs a quantitative, cross-sectional survey design. Primary data were collected using a structured questionnaire administered to households across six locations: New Delhi, Mumbai, Bengaluru (metropolitan) and Jaipur, Nagpur, Coimbatore (semi-urban), enabling comparison across geographic tiers.

6.2 Sampling

A stratified random sampling technique was employed, with strata defined by city tier, income bracket, and gender. The final sample comprised 1,240 respondents after excluding incomplete responses (initial collection: 1,380). Sample size adequacy was verified using G*Power analysis and the SmartPLS minimum sample size calculator, both confirming sufficiency for the proposed structural model (Hair et al., 2022).

6.3 Measurement Instruments

Financial literacy was measured using adapted items from the OECD/INFE Financial Literacy Assessment Toolkit (Atkinson & Messy, 2012), comprising 10

items for financial knowledge, 6 items for financial attitude, and 8 items for financial behavior. Investment decision quality was measured through three sub-constructs: investment diversification (5 items), risk tolerance appropriateness (4 items), and long-term savings orientation (5 items), adapted from van Rooij et al. (2011) and Goyal and Kumar (2021). Digital access was measured using a 4-item scale capturing smartphone ownership, internet connectivity, digital financial platform usage, and digital payment frequency. All items employed a 5-point Likert scale unless otherwise specified. The questionnaire was translated into Hindi and Tamil for non-English respondents and back-translated to verify conceptual equivalence.

6.4 Analytical Approach

Data analysis proceeded in two stages. First, Confirmatory Factor Analysis (CFA) was conducted to assess measurement model quality. Second, PLS-SEM was employed to test the structural model. Mediation was tested using bootstrapping with 5,000 iterations. Moderation was tested through interaction term analysis. SPSS 27.0 and SmartPLS 4.0 were employed for analysis.

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7. Data Analysis and Findings

7.1 Demographic Profile

Table 1: Demographic Profile of Respondents (N = 1,240)

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	698	56.3
	Female	530	42.7
	Non-binary/ Prefer not to say	12	1.0
Age	18–25 years	213	17.2
	26–35 years	387	31.2
	36–45 years	329	26.5
	46–55 years	198	16.0
	56 years and above	113	9.1
Education	Secondary or below	178	14.4
	Undergraduate degree	421	33.9
	Postgraduate degree	489	39.4
	Doctoral degree	152	12.3
Monthly Income (INR)	Below 20,000	201	16.2
	20,001–50,000	392	31.6
	50,001–1,00,000	387	31.2

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Characteristic	Category	Frequency	Percentage (%)
	Above 1,00,000	260	21.0
Location	Metropolitan	684	55.2
	Semi-urban	556	44.8
Digital Access	High	498	40.2
	Moderate	512	41.3
	Low	230	18.5

7.2 Descriptive Statistics and Normality

Descriptive statistics revealed that financial knowledge (M = 3.12, SD = 0.78), financial attitude (M = 3.45, SD = 0.67), and financial behavior (M = 3.01, SD = 0.81) were all at moderate levels, consistent with national-level financial literacy assessments (NCFE, 2023). Investment diversification (M = 2.98, SD = 0.84) and long-term savings orientation (M = 3.21, SD = 0.76) were similarly moderate. Skewness and kurtosis values fell within acceptable ranges (|skewness| < 2; |kurtosis| < 7), confirming approximate normality (Hair et al., 2019).

7.3 Measurement Model Assessment

Convergent validity was assessed using Average Variance Extracted (AVE) and Composite Reliability (CR). All constructs satisfied the recommended thresholds (AVE > 0.50; CR > 0.70).

Table 2: Reliability and Convergent Validity

Construct	Items	Cronbach's α	CR	AVE
Financial Knowledge (FK)	10	0.847	0.881	0.512
Financial Attitude (FA)	6	0.823	0.864	0.561
Financial Behavior (FB)	8	0.836	0.872	0.534
Investment Diversification (ID)	5	0.811	0.858	0.548
Risk Tolerance Appropriateness (RTA)	4	0.798	0.849	0.585
Long-term Savings Orientation (LSO)	5	0.829	0.870	0.572
Digital Access (DA)	4	0.802	0.851	0.589

Discriminant validity was established using the Heterotrait-Monotrait (HTMT) ratio criterion (Henseler et al., 2015), with all HTMT values below the conservative 0.85 threshold.

Table 3: Correlation Matrix and Discriminant Validity (HTMT Values in Parentheses)

	FK	FA	FB	ID	RTA	LSO	DA
FK	0.716						

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	FK	FA	FB	ID	RTA	LSO	DA
FA	0.412 (0.48)	0.749					
FB	0.387 (0.44)	0.469 (0.53)	0.731				
ID	0.498 (0.57)	0.374 (0.43)	0.421 (0.49)	0.740			
RTA	0.368 (0.42)	0.412 (0.47)	0.389 (0.45)	0.441 (0.51)	0.765		
LSO	0.422 (0.48)	0.387 (0.44)	0.453 (0.52)	0.456 (0.52)	0.398 (0.46)	0.756	
DA	0.341 (0.39)	0.298 (0.34)	0.367 (0.42)	0.389 (0.45)	0.312 (0.36)	0.334 (0.38)	0.767

Note: Diagonal values represent square roots of AVE. Off-diagonal values are bivariate correlations. HTMT values in parentheses.

7.4 Structural Model Assessment

Model fit was assessed using SRMR (0.061, below the 0.08 threshold), NFI (0.923, above 0.90), and RMS_theta (0.112, below 0.12). These indices collectively confirm acceptable model fit.

Table 4: Model Fit Indices

Index	Value	Recommended Threshold	Status
SRMR	0.061	< 0.08	Acceptable
NFI	0.923	> 0.90	Acceptable
RMS_theta	0.112	< 0.12	Acceptable
R^2 (Investment Diversification)	0.341	—	Moderate
R^2 (Risk Tolerance Appropriateness)	0.287	—	Moderate
R^2 (Long-term Savings Orientation)	0.312	—	Moderate
Q^2 (Investment Diversification)	0.198	> 0	Predictive relevance confirmed
Q^2 (Risk Tolerance Appropriateness)	0.167	> 0	Predictive relevance confirmed
Q^2 (Long-term Savings Orientation)	0.181	> 0	Predictive relevance confirmed

7.5 Hypothesis Testing

Table 5: Direct Effects — Hypothesis Testing Results

Hypothesis	Path	β	SE	t-value	p-value	Decision
H1	FK → Investment Diversification	0.412	0.048	8.583	< 0.001	Supported
H2	FK → Long-term Savings Orientation	0.334	0.051	6.549	< 0.001	Supported
H4 (FB)	FB → Investment Decision Quality	0.298	0.044	6.773	< 0.001	Supported
H6	Urban–Rural Literacy Difference	0.387	0.039	9.923	< 0.001	Supported

Note: β = standardized path coefficient; SE = standard error; t-values based on bootstrapping with 5,000 iterations.

Table 6: Mediation Analysis Results (H3)

Mediation Path	Direct Effect	Indirect Effect	Total Effect	VAF	Decision
FK → FA → RTA	0.198**	0.287**	0.485**	59.2%	Partial mediation

*Note: VAF = Variance Accounted For; *** p < 0.001*

Table 7: Moderation Analysis (H5 — Digital Access as Moderator)

Interaction Path	β	t-value	p-value	Decision
FK × DA → Investment Decision Quality	0.189	4.312	< 0.001	Supported
FA × DA → Investment Decision Quality	0.143	3.287	< 0.01	Supported

The interaction effect was positive and significant, confirming that digital access amplifies the positive effects of financial literacy on investment decision quality. Simple slope analysis revealed that the positive effect of financial knowledge on investment diversification was approximately 2.3 times larger among high-digital-access respondents compared to low-digital-access respondents.

7.6 Urban–Rural Comparison

Independent samples t-tests confirmed significant differences between metropolitan and semi-urban respondents on all financial literacy dimensions: financial knowledge ($t = 8.34$, $p < 0.001$, $d = 0.71$), financial attitude ($t = 5.67$, $p < 0.001$, $d = 0.48$), and financial behavior ($t = 7.12$, $p < 0.001$, $d = 0.61$). Metropolitan respondents scored significantly higher on all investment decision quality outcomes, with effect sizes ranging from medium to large (Cohen's $d = 0.43–0.79$).

8. Discussion

The findings of this study yield several important insights that advance both theoretical understanding and practical knowledge in the domain of financial literacy and household investment behavior. The confirmation of H1 and H2 — demonstrating significant positive effects of financial knowledge on investment diversification and long-term savings orientation — corroborates the extensive international literature (Lusardi & Mitchell, 2014; van Rooij et al., 2011) while providing new empirical evidence in the Indian context at a scale exceeding previous domestic studies.

The partial mediation finding for H3 is particularly noteworthy. The result that financial attitude accounts for 59.2% of the variance in the financial knowledge-risk tolerance relationship suggests that knowledge alone is insufficient to drive appropriate risk behavior — individuals must also develop positive orientations toward systematic financial planning and risk acceptance. This has important implications for financial education program design, suggesting that attitudinal interventions must accompany cognitive instruction.

The moderation results for digital access (H5) confirm the theoretically anticipated amplification effect, with the financial literacy-investment quality relationship being substantially stronger among digitally connected respondents. This finding is consistent with Morgan and Trinh (2020) and underscores the importance of integrating digital literacy with financial literacy in contemporary financial education programs.

9. Theoretical Implications

This study makes several contributions to financial literacy theory. First, it provides empirical validation of the tripartite financial literacy construct (Atkinson & Messy, 2012) in an emerging market context, confirming that knowledge, attitude, and behavioral dimensions each make independent contributions to investment decision quality. Second, it extends the financial literacy-investment behavior model by incorporating digital access as a theoretically motivated moderating variable, providing a more contextually appropriate model for the digital financial services era. Third, the mediation findings contribute to the behavioral finance literature by clarifying the mechanism through which financial knowledge translates into investment behavior — specifically demonstrating the crucial intermediary role of financial attitudes in the knowledge-behavior pathway. These findings suggest that theoretical models of financial decision-making must incorporate affective and attitudinal dimensions alongside cognitive ones.

10. Practical Implications

The findings carry actionable implications for multiple stakeholder groups. For financial regulators such as SEBI and RBI, the results highlight the importance of investment education programs that target

not only financial knowledge (through product disclosure and investor awareness campaigns) but also financial attitudes (through behavioral nudges, peer learning communities, and positive financial identity reinforcement). The digital access moderation finding suggests that financial inclusion programs should simultaneously address digital connectivity and financial literacy, as the two mutually reinforce each other's impact on investment quality.

For financial service providers, the urban–rural gap identified in this study signals a significant under-served market that represents both a commercial opportunity and a development imperative. The design of financial products and advisory services should account for the heterogeneous financial literacy levels of potential customers, with simplified product structures and enhanced customer education for semi-urban markets. For households, the findings underscore the personal value of financial education investment, suggesting that individuals who invest in improving their financial knowledge and cultivating positive financial attitudes will realize measurably better investment outcomes.

11. Conclusion

This study contributes comprehensive empirical evidence on the multidimensional nature of financial literacy and its differential effects on household investment decision quality in India. Employing PLS-SEM on a diverse sample of 1,240 respondents, the study demonstrates that financial knowledge exerts the strongest direct effect on investment diversification, while financial attitude plays a critical mediating role in the knowledge-risk tolerance relationship. Digital access significantly amplifies the positive effects of financial literacy on investment outcomes, and a significant urban–rural literacy gap persistently disadvantages semi-urban households in capital market participation. These findings collectively underscore the necessity of comprehensive, attitudinally sensitive, digitally integrated financial education programs as instruments of both household wealth enhancement and broader financial market development in India. Future research should employ longitudinal designs to trace the causal dynamics of financial literacy evolution and investment behavior change over time, and should investigate sector-specific financial literacy constructs relevant to insurance, real estate, and cryptocurrency investment contexts.

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