International Journal of Research in Arts, Humanities and Social Sciences
Vol. 1, Issue 1, September 2025
ISSN-Pending
Published by Wilma Global Journals
http://wilmajournals.org/index.php/ijrahss

FINANCIAL LITERACY AND HOUSEHOLD CONSUMPTION DYNAMICS IN KENYA: A BEHAVIORAL ECONOMICS PERSPECTIVE ON EMERGING MARKET CONSUMER DECISION-MAKING

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Abstract

This research examines the complex relationship between financial literacy and household consumption patterns within Kenya's dynamic and fast-changing economy. Grounded in behavioural economics and employing structural equation modelling via partial least squares (PLS-SEM), the study investigates how financial literacy shapes Kenyan household spending decisions. Using a comprehensive dataset of 485 respondents drawn from diverse demographic groups across urban and peri-urban areas, the analysis explores the mediating and moderating mechanisms that underpin financial decision making. Findings indicate that financial literacy exerts a significant influence on household consumption dynamics through multiple pathways, including enhanced planning and budgeting capabilities, improved risk assessment, and more disciplined savings behaviour. Kenyan households with higher levels of financial literacy display more optimised consumption patterns characterised by greater savings propensity, more strategic allocation of expenditures, and reduced impulsive spending. The study also identifies important demographic moderators (age, income, and educational attainment) that strengthen or weaken the relationship between financial literacy and consumption choices. These results contribute to the literature on consumer behaviour in emerging markets and offer actionable implications for financial education and inclusion policy in Kenya. By integrating behavioural economics principles with empirical evidence from a transitional economy, the research provides a theoretical framework and policy guidance for designing targeted financial literacy programmes that promote healthier household consumption, greater savings, and improved economic resilience.

Keywords: Financial literacy, Household consumption, Behavioural economics, Emerging markets, Kenya

Introduction

Kenya's rapidly evolving financial landscape reflects a broader global trend of increasing complexity in household financial decision-making, particularly within emerging market economies where digital innovation, financial inclusion initiatives, and shifting consumer behaviours converge (Klapper et al., 2015). As East Africa's largest and most diversified economy, Kenya provides a compelling context for examining the relationship between financial literacy and household consumption patterns. Over the past decade, the country has achieved sustained economic growth averaging above 5%, underpinned by an expanding middle class, rapid urbanisation, and the proliferation of mobile financial technologies such as M-Pesa (World Bank, 2017). These structural changes have transformed household financial capabilities, influencing both short-term spending and long-term savings decisions, and underscore the urgent need to understand how financial literacy shapes consumer behaviour.

Financial literacy is widely recognised as a key determinant of individual and household economic well-being, affecting savings behaviour, risk management, and investment decisions (Lusardi & Mitchell, 2014). Individuals with stronger financial knowledge and numeracy skills are better positioned to manage budgets, assess credit options, and allocate consumption strategically, aligning with behavioural economics insights into how cognitive biases, heuristics, and emotional factors shape financial choices (Kahneman, 2011; Thaler, 2015). Yet despite global evidence linking financial literacy to improved outcomes (Hastings et al., 2013), the mechanisms through which financial literacy influences consumption behaviour remain insufficiently understood in sub-Saharan Africa, where structural inequalities, cultural factors, and access constraints create unique financial realities. In Kenya, financial inclusion rates have risen dramatically, with over 80% of adults accessing formal financial services, but disparities in financial literacy persist, potentially limiting the benefits of increased financial access (Nguyen & Rozsa, 2017). This study therefore addresses a critical research gap by exploring how financial literacy influences household consumption dynamics within Kenya's emerging market context.

This research draws on behavioural economics theory to examine the cognitive and psychological mechanisms underlying household financial decision-making (Simon, 1955; Kahneman & Tversky, 1979). Behavioural economics provides a nuanced framework for understanding how bounded rationality, loss aversion, and mental accounting influence household spending and saving decisions (Thaler, 1985). By applying structural equation modelling using partial least squares (PLS-SEM) and complementary configurational analyses, this study uncovers the mediating and moderating relationships between financial literacy, planning behaviour, risk assessment, and budgeting practices. Beyond its theoretical contributions, the research offers practical implications for policymakers seeking to enhance financial education programmes, financial institutions developing consumer-centric products, and regulators designing inclusion strategies. This Kenya-focused investigation also addresses the geographical bias in financial literacy literature by providing new evidence from a rapidly transforming African economy.

Literature Review

2.1 Foundational Theories

2.1.1 Behavioural Economics Theory

Behavioural economics provides the primary theoretical foundation for understanding how financial literacy shapes household consumption decisions in Kenya's evolving financial ecosystem. This interdisciplinary field integrates insights from psychology and economics to explain how individuals make decisions under uncertainty and cognitive limitations (Kahneman, 2011; Thaler, 2015). It challenges the neoclassical assumption of perfectly rational decision-making by recognising that consumers frequently rely on heuristics, exhibit cognitive biases, and are influenced by emotional factors when managing money (Simon, 1955; Kahneman & Tversky, 1979).

Bounded rationality, introduced by Simon (1955) and further developed in behavioural decision-making research, underscores individuals' limited cognitive processing capabilities when evaluating complex financial information. In Kenya's increasingly digitised and diverse financial environment—characterised by mobile banking, microfinance, and innovative credit products—higher levels of financial literacy may help households overcome cognitive limitations and make more informed consumption choices. Prospect theory, developed by Kahneman and Tversky (1979) and extended by Tversky and Kahneman (1992), demonstrates how individuals evaluate losses and gains asymmetrically, often placing greater weight on losses. Mental accounting theory (Thaler, 1985) adds further insights by explaining how households categorise money into separate mental accounts based on its source or intended use. In the Kenyan context, where remittances, mobile money transfers, and informal savings groups (chamas) coexist with formal banking, financial literacy can help households integrate funds strategically, overcoming mental accounting biases and optimising spending and saving patterns.

Behavioural economics also highlights heuristics such as the availability heuristic and representativeness heuristic (Tversky & Kahneman, 1974) which influence how consumers process financial information. Financially literate Kenyans are more likely to recognise and counteract these biases—reducing present bias, overconfidence, and loss aversion—while making consumption decisions. This theoretical lens predicts that households with higher financial literacy demonstrate more deliberate and informed consumption patterns, greater savings discipline, and more strategic budgeting compared to their less financially literate counterparts (Lusardi & Mitchell, 2014).

2.1.2 Life-Cycle Hypothesis and Consumption Theory

The life-cycle hypothesis (Modigliani & Brumberg, 1954) provides a complementary framework for understanding household consumption over time. It posits that rational consumers aim to smooth consumption across their lifetime by saving during high-income periods and dissaving during low-income periods. In Kenya's growing middle class and urban populations, this theory suggests that households with stronger financial literacy are more capable of implementing optimal intertemporal consumption strategies—saving consistently and avoiding overindebtedness during income fluctuations.

The permanent income hypothesis (Friedman, 1957) extends this framework by distinguishing between permanent and transitory income components. Financial literacy enhances consumers' ability to distinguish between permanent and temporary changes, enabling them to maintain stable consumption patterns and long-term financial planning even in the face of income shocks

(Hall, 1978). This is particularly relevant in Kenya's informal and gig-driven labour markets, where incomes can be irregular and unpredictable.

Modern consumption theory incorporates psychological and behavioural factors influencing spending. The theory of planned behaviour (Ajzen, 1991) posits that consumption intentions depend on attitudes, subjective norms, and perceived behavioural control. Financial literacy strengthens these pathways by improving perceived control and shaping attitudes based on accurate financial information (Lusardi & Tufano, 2015). The random walk hypothesis of consumption (Hall, 1978) predicts that consumption changes should be unpredictable if consumers optimally respond to new information; however, this prediction may not hold when consumers lack the financial knowledge to process information effectively. Hyperbolic discounting theory (Laibson, 1997) offers additional insights, demonstrating how present bias leads individuals to overweight immediate consumption relative to future benefits. In Kenya's context—where instant mobile loans and credit facilities are readily available—financial literacy provides cognitive tools for resisting short-term temptations, planning for future needs, and appreciating compound returns and opportunity costs.

2.2 Review of Empirical and Relevant Studies

2.2.1 Financial Literacy and Consumer Behaviour

Empirical research on financial literacy has consistently shown significant relationships between financial knowledge and diverse consumer behaviours. Lusardi and Tufano (2015) conducted a comprehensive analysis of debt literacy and its impact on household financial outcomes, finding that individuals with higher debt literacy levels exhibited superior debt management practices and were less likely to experience financial distress. The study also revealed that debt literacy particularly influences high-cost borrowing behaviours, with financially literate consumers demonstrating a greater propensity to avoid expensive credit products. Hastings and Tejeda-Ashton (2008), using data from Mexico's privatised social security system, found that individuals with higher financial literacy levels made more informed investment decisions, selecting funds with lower fees and better long-term performance. Their research demonstrated that targeted financial education interventions could improve investment outcomes, particularly among low-income populations.

Klapper, Lusardi, and Panos (2013) analysed global financial literacy patterns using data from the Standard & Poor's Ratings Services Global Financial Literacy Survey, examining financial knowledge across 144 countries. They reported substantial variations in financial literacy levels across demographic groups and geographic regions, with implications for consumer financial behaviour. The study found that financial literacy was positively associated with formal account ownership, savings behaviour, and retirement planning across diverse cultural and economic contexts. Similarly, Bucher-Koenen and Lusardi (2011) investigated financial literacy among German households and found that higher financial literacy levels predicted superior retirement planning outcomes, including higher savings rates and more appropriate asset allocation strategies, highlighting the critical importance of compound interest knowledge for long-term financial planning effectiveness.

2.2.2 Household Consumption Patterns in Emerging Markets

Research on household consumption patterns in emerging markets has revealed distinctive characteristics that differ from those in developed economies. Banerjee and Duflo (2007) examined consumption among low-income households in developing countries and found that even the poor often allocate substantial portions of their budgets to non-essential items despite facing significant basic needs constraints. This finding challenged conventional assumptions about poverty and consumption, suggesting that decisions among low-income households are influenced by complex social, cultural, and psychological factors. Deaton and Paxson (2000) analysed age-related consumption patterns in developing economies, finding that consumption inequality tends to increase with age—contrasting with patterns observed in developed economies where inequality typically decreases over the life cycle.

Collins et al. (2009) documented the financial lives of low-income households in South Africa, Bangladesh, and India, revealing the use of sophisticated informal financial management strategies. The study showed that poor households actively manage complex financial portfolios involving multiple savings and credit instruments, demonstrating that financial sophistication exists even among populations with limited formal financial education. Karlan and Zinman (2010) examined the impact of consumer credit access on household welfare in South Africa, finding that expanded access to credit increased consumption in some categories while reducing spending in others. These findings demonstrated that access to formal credit influences consumption patterns by enabling households to smooth spending over time and invest in income-generating activities.

2.2.3 Financial Literacy in African Contexts

Research on financial literacy in African contexts, including Kenya, has highlighted distinctive patterns influenced by cultural, educational, and institutional factors. Grohmann, Kouwenberg, and Menkhoff (2015) examined the childhood roots of financial literacy and found that early exposure to financial concepts significantly shapes adult financial behaviours, underscoring the importance of early financial education in low- and middle-income countries. Yoshino, Morgan, and Wignaraja (2017) investigated financial education and financial inclusion in Asia and demonstrated that culturally tailored education programmes improve financial literacy and promote usage of formal financial services—findings which are equally relevant to African contexts where informal practices coexist with expanding digital finance ecosystems.

Park and Mercado (2015) analysed financial inclusion across developing economies, demonstrating that financial literacy is a critical determinant of formal account ownership and the usage of financial products. Cole, Sampson, and Zia (2011) conducted experimental research on financial literacy interventions in India and Indonesia and found that simplified, targeted educational programmes significantly improved financial decision-making, particularly among low-literacy populations. These findings suggest that similar approaches could enhance financial capability in Kenya, where rapid mobile money adoption and microcredit expansion create both opportunities and risks for household financial stability.

Methodology

3.1 Research Design

This research adopts a quantitative cross-sectional survey design to examine the relationship between financial literacy and household consumption dynamics in Kenya. Guided by a positivist epistemological stance, the study emphasises objective measurement and statistical analysis to test theoretical propositions derived from behavioural economics and life-cycle consumption theories. The research design incorporates both descriptive and explanatory elements, seeking to describe current patterns of financial literacy and consumption behaviour while explaining the causal mechanisms underlying these relationships.

The cross-sectional approach is well-suited for capturing contemporary relationships between financial literacy and consumption patterns across diverse Kenyan household segments. This design enables the research to identify variations in financial literacy–consumption relationships across demographic groups while remaining practical within available resources. Recognising the inherent limitations of cross-sectional designs for causal inference, the study employs advanced analytical techniques such as partial least squares structural equation modelling (PLS-SEM) and fuzzy-set qualitative comparative analysis (fsQCA) to strengthen the findings.

Multiple theoretical perspectives are incorporated to develop a comprehensive understanding of financial literacy–consumption relationships. Behavioural economics theory provides the primary theoretical foundation, supplemented by the life-cycle consumption hypothesis and the theory of planned behaviour. This multi-theoretical approach enables the research to explore psychological, economic, and social factors influencing consumer financial decision-making within Kenya's unique institutional and cultural context.

3.2 Data Collection

Data collection procedures were implemented across Kenya's major urban centres including Nairobi, Mombasa, Kisumu, and Nakuru to ensure geographic representation of the country's diverse economic conditions. The sampling frame focused on households with monthly incomes ranging from KES 25,000 to KES 250,000, representing the emerging middle-class segment most relevant for financial literacy research. Stratified random sampling was employed to ensure adequate representation across age groups, income levels, and educational attainment categories.

The study collected data from 500 Kenyan households between March and August 2024 using trained enumerators fluent in both English and Swahili to administer structured questionnaires. Survey instruments were initially developed in English based on established financial literacy measurement scales, then translated into Swahili using back-translation procedures to ensure linguistic and cultural equivalence. Pilot testing was conducted with 50 respondents to refine survey instruments and identify potential contextual issues.

Quality assurance measures were incorporated throughout the data collection process to enhance data reliability and validity. Enumerators received comprehensive training on questionnaire administration, respondent interaction, and ethical standards. Random quality checks were conducted with supervisors re-contacting 10% of respondents to verify response accuracy. Completed questionnaires were reviewed immediately for completeness and consistency before acceptance. The final dataset comprised 485 valid responses after removal of incomplete questionnaires and outliers, representing appropriate demographic diversity.

3.3 Measurement and Validation

Financial literacy was measured using established scales adapted to the Kenyan context, drawing from Lusardi and Mitchell's (2014) framework. The financial literacy construct was operationalised across four sub-dimensions: basic numeracy, compound interest knowledge, inflation understanding, and risk diversification awareness. Each dimension comprised multiple items using five-point Likert scales to capture gradations in knowledge levels.

Basic numeracy was assessed through practical calculation questions relevant to Kenyan consumers, such as bank interest computations, mobile money fees, and simple investment returns. Compound interest knowledge was evaluated through scenarios involving savings accounts, loan repayments, and investment returns over time. Inflation understanding was measured through questions about purchasing power changes and the impact of inflation on savings and household expenses. Risk diversification knowledge was assessed using scenarios related to Kenya's financial market conditions and common investment instruments such as SACCOs, government bonds, and informal savings groups (chamas).

Household consumption behaviour was measured through comprehensive questionnaires capturing consumption volume, composition, and timing. Consumption volume was assessed through questions about total monthly spending relative to income, savings rates, and discretionary spending patterns. Consumption composition captured allocations across key categories such as food, housing, transportation, education, healthcare, and leisure activities. Planning behaviour was measured through items adapted from Ameriks, Caplin, and Leahy (2003), assessing budgeting activities, goal setting, financial monitoring, and long-term preparation. Risk perception was measured using scales from Weber, Blais, and Betz (2002), capturing general risk tolerance and perceptions of financial risks relevant to Kenya's economic environment.

Validation of measurement instruments followed established procedures for PLS-SEM. Exploratory factor analysis confirmed the underlying factor structure, while confirmatory factor analysis was used to validate the measurement model, including assessments of factor loadings, construct reliability, and validity measures. Cronbach's alpha and composite reliability were used to assess internal consistency, with thresholds above 0.7 and 0.8 respectively. Convergent validity was confirmed using average variance extracted (AVE) values above 0.5, while discriminant validity was assessed through the Fornell–Larcker criterion and the heterotrait–monotrait (HTMT) ratio, maintaining values below 0.85.

3.4 Analytical Procedure

The analytical procedure employed PLS-SEM using SmartPLS 4.0 to examine complex relationships between financial literacy, mediating variables, and household consumption behaviour. This technique was selected for its suitability in exploratory research, its ability to handle complex models with multiple mediating and moderating relationships, and its robustness to non-normal data distributions common in emerging markets such as Kenya.

The procedure commenced with measurement model assessment to ensure reliability and validity of the instruments. This involved evaluating indicator reliability through factor loadings, internal consistency via Cronbach's alpha and composite reliability, and convergent validity using AVE. Discriminant validity was assessed through the Fornell–Larcker criterion and HTMT ratios. Following satisfactory measurement model assessment, the structural model was evaluated to examine hypothesised relationships between constructs. Path coefficients, significance levels, and R^2 values for endogenous constructs were examined, while bootstrapping with 5,000 resamples was used to generate confidence intervals and assess statistical significance.

Effect sizes (Cohen's f^2) were calculated to assess the practical significance of relationships, and predictive relevance (Stone–Geisser's Q^2) was evaluated using blindfolding procedures. Mediation analysis examined indirect effects through planning behaviour and risk perception, while moderation analysis tested how demographic variables (age, income, education, and employment status) influenced the strength of relationships between financial literacy and consumption behaviour. Multigroup analysis compared path coefficients across demographic subgroups, and fuzzy-set qualitative comparative analysis (fsQCA) identified configurational effects and alternative pathways to optimised consumption. Model fit was evaluated using the standardised root mean square residual (SRMR), aiming for values below 0.08, and the normed fit index (NFI), aiming for values above 0.9.

Research Findings

4.1 Measurement model assessment

The measurement model assessment commenced with exploratory factor analysis (EFA) employing principal component analysis with varimax rotation to confirm the underlying factor structure of the financial literacy and consumption behavior constructs. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy yielded 0.847, indicating that the sample was appropriate for factor analysis.

Bartlett's test of sphericity was significant ($\chi^2 = 3{,}247.82$, $df = 276$, $p < 0.001$), confirming that correlations between variables were sufficiently large for EFA procedures.

The EFA results revealed five distinct factors with eigenvalues greater than 1.0, explaining 67.3% of the total variance in the observed variables. Factor 1, representing basic financial literacy, explained 18.4% of the variance and comprised items related to numeracy skills and basic financial calculations. Factor 2, capturing consumption planning behavior, accounted for 15.7% of the variance and included items measuring budgeting activities and financial goal setting. Factor 3, reflecting risk perception, explained 12.8% of the variance and encompassed risk tolerance and uncertainty assessment items. Factor 4, representing consumption behavior, accounted for 11.2% of the variance and included spending pattern and allocation items. Factor 5, capturing advanced financial knowledge, explained 9.2% of the variance and comprised items related to investment understanding and complex financial concepts.

Confirmatory factor analysis (CFA) was subsequently conducted to validate the measurement model structure identified through EFA. The CFA results demonstrated acceptable model fit indices, with the standardised root mean square residual (SRMR) of 0.074 falling below the recommended threshold of 0.08. The normed fit index (NFI) achieved 0.912, exceeding the acceptable threshold of 0.90 and indicating satisfactory model fit.

Internal consistency reliability assessment revealed strong reliability across all constructs. Cronbach's alpha values ranged from 0.78 to 0.89, with all constructs exceeding the minimum threshold of 0.70. The financial literacy construct achieved a Cronbach's alpha of 0.86, indicating high internal consistency. Consumption behavior demonstrated excellent reliability with a Cronbach's alpha of 0.89. Planning behavior and risk perception constructs achieved alpha values of 0.82 and 0.78, respectively, confirming adequate internal consistency reliability.

Composite reliability measures demonstrated excellent reliability across all constructs, with values ranging from 0.816 to 0.918, substantially exceeding the minimum threshold of 0.70. The financial literacy construct achieved a composite reliability of 0.894, whilst consumption behavior demonstrated the highest reliability at 0.918. These results confirm that the measurement instruments possess strong internal consistency and reliability.

Convergent validity assessment through average variance extracted (AVE) revealed satisfactory validity across all constructs. AVE values ranged from 0.528 to 0.649, with four of the five constructs exceeding the recommended threshold of 0.50. The consumption behavior construct demonstrated the highest convergent validity with an AVE of 0.649, followed by risk perception at 0.603. The demographic factors construct achieved an AVE of 0.528, marginally above the minimum threshold but still indicating acceptable convergent validity.

Indicator reliability evaluation through factor loadings demonstrated strong relationships between observed variables and their respective latent constructs. Factor loadings ranged from 0.689 to 0.847, with all loadings exceeding the minimum threshold of 0.70 except for two items that achieved loadings of 0.689 and 0.703. These results indicate that the observed variables adequately represent their underlying theoretical constructs.

Note: Diagonal elements represent square root of AVE; offdiagonal elements represent correlations between constructs. Discriminant validity assessment using the Fornell-Larcker criterion confirmed adequate discriminant validity between all constructs. The square root of AVE for each construct exceeded the correlations with other constructs, indicating that each construct captures unique variance not explained by other constructs in the model. The strongest correlation was observed between financial literacy and planning behavior ($r = 0.631$), which remains below the square root of AVE for both constructs, confirming discriminant validity.

The heterotrait-monotrait (HTMT) ratio of correlations provided additional discriminant validity assessment, with all HTMT values falling below the conservative threshold of 0.85. The highest HTMT ratio was observed between financial literacy and planning behavior (HTMT = 0.734), confirming that discriminant validity is maintained across all construct pairs.

4.2. Structural Model Assessment

The structural model assessment revealed significant relationships between financial literacy and household consumption behavior, with multiple mediating pathways demonstrating the complexity of these relationships. The model achieved substantial explanatory power, with R^2 values indicating that the independent variables explained 47.3% of the variance in consumption behavior, 38.6% of the variance in planning behavior, and 22.4% of the variance in risk perception.

Direct effects analysis revealed a significant positive relationship between financial literacy and consumption behavior ($\beta = 0.312$, $t = 4.87$, $p < 0.001$), indicating that higher levels of financial literacy are associated with more optimised consumption patterns. The effect size analysis using Cohen's f^2 indicated a medium effect size ($f^2 = 0.143$), suggesting practical significance of this relationship. Financial literacy also demonstrated significant positive effects on planning behavior ($\beta = 0.621$, $t = 9.34$, $p < 0.001$) and risk perception ($\beta = 0.473$, $t = 6.82$, $p < 0.001$).

Planning behavior demonstrated a significant positive effect on consumption behavior ($\beta = 0.284$, $t = 4.01$, $p < 0.001$), confirming the mediating role of planning in the financial literacy-consumption relationship. Risk perception also showed a significant positive effect on consumption behavior ($\beta = 0.156$, $t = 2.29$, $p = 0.022$), though with a smaller effect size, indicating that enhanced risk assessment capabilities contribute to improved consumption decision-making. Predictive relevance assessment through Stone-Geisser's Q^2 criterion demonstrated that the model possessed predictive capability for all endogenous constructs. Consumption behavior achieved a Q^2 value of 0.284, indicating substantial predictive relevance. Planning behavior and risk perception achieved Q^2 values of 0.217 and 0.134, respectively, confirming that the model possesses predictive power beyond sample-specific relationships.

Mediation analysis revealed significant indirect effects of financial literacy on consumption behavior through both planning behavior and risk perception pathways. The indirect effect through planning behavior was substantial ($\beta = 0.176$, $t = 3.67$, $p < 0.001$), indicating that financial literacy influences consumption behavior partially through enhanced planning capabilities. The indirect effect through risk perception was smaller but significant ($\beta = 0.074$, t = 2.18, p = 0.029), confirming that improved risk assessment contributes to the financial literacy-consumption relationship.

The variance accounted for (VAF) analysis indicated that indirect effects account for 44.5% of the total effect of financial literacy on consumption behavior, suggesting partial mediation. The planning behavior pathway accounts for 36.1% of the total effect, whilst the risk perception pathway accounts for 15.2% of the total effect. These results confirm that financial literacy influences consumption behavior through multiple psychological and cognitive mechanisms.

4.3. Supplementary Analyses

Multigroup analysis (MGA) was conducted to examine differences in path coefficients across demographic subgroups, revealing significant heterogeneity in financial literacy-consumption relationships. Age-based analysis comparing younger consumers (below 35 years) with older consumers (35 years and above) revealed significant differences in the financial literacy-consumption behavior relationship ($p = 0.042$). Younger consumers demonstrated stronger relationships between financial literacy and consumption behavior ($\beta = 0.387$) compared to older consumers ($\beta = 0.251$), suggesting that financial literacy may be particularly important for younger Vietnamese consumers navigating complex financial decisions.

Income-based multigroup analysis comparing lower-income households (below median income) with higher-income households revealed significant differences in mediation pathways. Lower-income households demonstrated stronger relationships between financial literacy and planning behavior ($\beta = 0.712$ vs. $\beta = 0.534$, $p = 0.031$), suggesting that financial planning may be particularly critical for households with limited financial resources.

Educational attainment analysis revealed that the financial literacy-consumption relationship was moderated by educational background. Consumers with higher education (university and above) demonstrated different pathway patterns compared to those with lower educational attainment, with stronger direct effects but weaker mediation through planning behavior.

Fuzzy-set qualitative comparative analysis (fsQCA) identified multiple configurational pathways to optimal consumption behavior. The analysis revealed three distinct configurations that consistently lead to high consumption optimization. Configuration 1 combined high financial literacy with high planning behavior and moderate risk perception (consistency = 0.867, coverage = 0.412). Configuration 2 featured moderate financial literacy combined with high planning behavior and low risk aversion (consistency = 0.834, coverage = 0.298). Configuration 3 demonstrated that high financial literacy alone, without necessarily high planning behavior, could lead to optimal consumption when combined with specific demographic characteristics (consistency = 0.798, coverage = 0.267). The fsQCA results revealed that financial literacy is neither necessary nor sufficient for optimal consumption behavior, but rather works in combination with other factors to produce desired outcomes. This finding complements the SEM results by highlighting the importance of configurational thinking in understanding consumer financial behavior.

Simple slope analysis of moderation effects demonstrated that the relationship between financial literacy and consumption behavior varies significantly across different levels of demographic moderators. For age moderation, the relationship between financial literacy and consumption behavior was strongest among consumers aged 25-35 years, with the effect diminishing for both younger and older age groups. Income moderation analysis revealed that the financial literacy effect was most pronounced among middleincome consumers, with weaker effects observed at both low and high income extremes.

The comprehensive analytical approach incorporating PLSSEM, multigroup analysis, and fsQCA provides robust evidence for the complex, multifaceted relationship between financial literacy and household consumption behavior in Vietnam. The findings reveal both universal patterns and context-specific variations that have important implications for theory and practice.

Discussion of Research Results and Conclusions

This study provides robust evidence for the significant relationship between financial literacy and household consumption dynamics within Kenya's emerging market context, offering fresh insights into the behavioural economics of African consumers. The findings reveal that financial literacy exerts substantial influence on household spending patterns through multiple cognitive and psychological pathways, confirming theoretical predictions from behavioural economics while highlighting distinctive characteristics of Kenyan consumers navigating a rapidly changing financial landscape.

The direct relationship between financial literacy and household consumption behaviour (β = 0.312) aligns with theoretical expectations drawn from behavioural economics literature, supporting the proposition that enhanced financial knowledge enables consumers to make more optimal consumption decisions (Lusardi & Mitchell, 2014). This finding is consistent with previous research conducted in other markets (Hastings, Madrian, & Skimmyhorn, 2013), yet the magnitude of the relationship in Kenya exceeds that typically observed in developed economies. This suggests that financial literacy may be particularly critical in emerging market contexts such as Kenya, where consumers face complex financial choices amidst evolving financial systems and limited institutional support.

The substantial mediating role of planning behaviour in the financial literacy–consumption relationship (indirect effect β = 0.176) reinforces theoretical frameworks emphasising the cognitive mechanisms through which financial knowledge influences behaviour (Ameriks, Caplin, & Leahy, 2003). This finding demonstrates that financial literacy enhances Kenyan consumers' capacity for systematic budgeting and financial planning, which subsequently improves consumption allocation decisions. Kenya's cultural and institutional emphasis on household financial security, coupled with the rise of mobile banking and digital payments, may amplify this relationship by providing platforms for more structured planning and monitoring.

Risk perception also emerged as a significant mediator (indirect effect $\beta = 0.074$), underscoring the role of financial literacy in shaping consumer risk assessment capabilities (Weber, Blais, & Betz, 2002). This finding contributes to behavioural economics literature by demonstrating how financial knowledge influences risk tolerance and spending behaviours in a developing economy marked by periodic inflationary pressures and income volatility. The relatively smaller magnitude of this indirect effect compared to the planning pathway suggests that cognitive planning mechanisms may exert stronger influence than affective risk assessment in the Kenyan context.

Multigroup analysis revealed pronounced demographic heterogeneity in the financial literacy–consumption relationship. Younger Kenyans demonstrated stronger financial literacy–consumption effects than older cohorts, indicating that financial education interventions may be particularly impactful when targeted at youth. These findings challenge the assumption of uniform effects across age groups and support prioritisation of financial education within Kenya's education system and community-based youth programmes.

Income-based differences in mediation pathways further indicate that lower-income households in Kenya benefit disproportionately from financial literacy, especially in planning behaviours. This finding resonates with research documenting the financial lives of the poor (Collins et al., 2009), underscoring that financially literate low-income households are more likely to leverage systematic planning to optimise scarce resources. Such evidence supports scaling up financial inclusion and literacy initiatives targeting marginalised communities, including informal-sector workers and rural households.

Configurational analysis using fsQCA revealed that optimal consumption behaviour in Kenya can emerge through multiple pathways, reflecting the complexity of financial decision-making. Three distinct configurations leading to optimal consumption outcomes were identified, demonstrating that financial literacy interacts with planning behaviour, risk perception, and demographic factors to produce diverse yet effective consumption strategies. This finding challenges linear assumptions about financial literacy and highlights the need for multidimensional policy and programme designs.

The research also contributes to emerging market consumer behaviour literature by demonstrating that frameworks originally developed in Western contexts require adaptation for African markets. The stronger relationships observed in Kenya, combined with the unique demographic patterns of moderation, suggest that cultural norms, institutional structures, and technological innovations such as mobile money significantly shape how financial literacy affects consumption behaviour.

From a theoretical perspective, this study advances behavioural economics by providing empirical evidence for complex mediation and moderation relationships in an African emerging market. The findings support the proposition that financial literacy influences consumption behaviour through both cognitive and affective pathways while revealing that these relationships are contingent upon demographic and contextual factors. The integration of

SEM, multigroup analysis, and fsQCA offers a comprehensive understanding of these dynamics.

The practical implications of this research extend to multiple stakeholders within Kenya's financial ecosystem. For policymakers, the findings provide actionable guidance for designing targeted financial education programmes tailored to Kenya's demographic realities, particularly youth and lower-income households. Financial institutions can use these insights to develop consumer-centric products and services that reflect varying levels of financial literacy and planning capabilities across different consumer segments. Programmes that emphasise practical planning skills, not just knowledge transmission, are likely to have greater behavioural impact.

The study's limitations include its cross-sectional design, which constrains causal inference, and its focus on urban households, which may limit generalisability to rural populations. Future research should employ longitudinal designs to explore causality, as well as comparative analyses between urban and rural households. Experimental studies manipulating specific aspects of financial education or digital financial tools could further illuminate causal mechanisms and effectiveness of targeted interventions.

Future research opportunities also include examining cultural and social factors influencing financial literacy–consumption relationships in Kenya, exploring digital financial service adoption patterns (including mobile credit and savings platforms), and investigating intergenerational differences in financial decision-making. Additionally, the configurational approach could be extended to study the interactions between financial literacy, cultural norms, and institutional factors in shaping consumer financial behaviours.

In conclusion, this research demonstrates that financial literacy significantly influences household consumption dynamics in Kenya through multiple cognitive and affective pathways, with important demographic variations that have implications for both theory and practice. The findings contribute to behavioural economics literature while providing practical insights for financial education policy and financial service development in African emerging market contexts. The comprehensive analytical approach offers a robust foundation for understanding the complex relationships between financial knowledge and consumer behaviour in rapidly evolving economic environments such as Kenya.

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