

Frugal Living, Digital Financial Literacy, and Sustainable Wealth: The Moderating Role of Financial Management Behavior

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ABSTRACT

Purpose: This study examines the effects of frugal living and digital financial literacy on sustainable wealth, with financial management behavior as a moderating variable. It also compares the proposed relationships across different household employment groups.

Design/methodology/approach: A quantitative approach was employed using Covariance-Based Structural Equation Modeling with Maximum Likelihood estimation. Data were collected through an online questionnaire from 253 married mothers who had at least one child and actively used digital financial services. Multi-group analysis was conducted to compare working mothers and stay-at-home mothers.

Findings/Results: Frugal living has a positive and significant effect on sustainable wealth, as does digital financial literacy. Financial management behavior moderates the relationships between these two factors and sustainable wealth. The multi-group analysis also indicates a significant difference in the structural relationships between working mothers and stay-at-home mothers.

Originality/Value: This study integrates frugal living, digital financial literacy, and financial management behavior within a sustainable wealth framework. The findings highlight the need for differentiated financial education programs that strengthen prudent consumption, digital financial competence, and household financial management practices.

ARTICLE INFO

Keywords:

Frugal Living, Digital Financial Literacy, Sustainable Wealth, Financial Management Behavior, Multi-Group Analysis

Article Information:

Received: 12/05/2026

Revise: 07/06/2026

Accepted: 25/07/2026

ISSN:

2985-3168 (Online)

2985-3222 (Print)

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1. Introduction

The global and domestic economic conditions characterized by persistent uncertainty, rising costs of living, and ongoing inflation have placed significant pressure on household financial management in Indonesia. In Indonesian family social structures, a mother's role as the primary financial manager is both central and decisive. Her effectiveness in planning, managing, and controlling the household budget is a vital key to ensuring long-term financial stability and well-being (Klapper & Lusardi, 2020).

In response to economic challenges, the frugal living lifestyle has emerged as an increasingly relevant and widely discussed concept. Frugal living is an intentional life philosophy focused on long-term financial priorities, making a firm distinction between needs and wants (Strömbäck et al., 2020; Purwanto & Juliana, 2022). By adopting these principles, individuals can wisely allocate resources toward goals such as building an emergency fund, paying off debt, or investing for the future.

Concurrent with this, the financial technology (fintech) revolution has fundamentally transformed money management. Digital financial products offer unprecedented convenience, but also introduce risks such as cybercrime and misleading marketing (Baber, 2020). Therefore, the ability to manage finances in the digital era demands digital financial literacy beyond conventional financial knowledge (Garg & Singh, 2020).

This study also addresses the dichotomy between working mothers and stay-at-home mothers. Working mothers are often considered more financially independent due to their own income, while stay-at-home mothers may face different challenges managing limited or fixed incomes (Bucher-Koenen et al., 2021). This fundamental difference creates a rich context for exploration, where financial management strategies are expected to differ significantly. However, employment status alone may not adequately capture financial autonomy, household decision-making power, income access, or economic vulnerability; this study treats employment status as an initial, exploratory grouping variable and returns to this limitation, and to the additional variables it would ideally control for, in Section 6.

Significant research gaps remain in this area. Literature integrating frugal living, digital financial literacy, and the moderating role of FMB within a framework directed toward sustainable wealth is very limited (Xiao & Porto, 2022). No study has comprehensively compared the financial dynamics of working and stay-at-home mothers (Lind et al., 2020). This study therefore aims to: (1) analyze the effect of frugal living on sustainable wealth; (2) analyze the effect of digital financial literacy on sustainable wealth; (3) test the moderating role of FMB on both relationships; and (4) compare these dynamics between the two groups of mothers.

2. Literature Review & Hypothesis Development

2.1 Theoretical Foundation

This study is grounded in two complementary theories. The Theory of Planned Behavior (TPB), developed by Ajzen (1991), predicts behavior through the joint influence of attitude, subjective norms, perceived behavioral control, and behavioral intention. The present model does not measure these four TPB constructs directly; rather, it borrows the theory's structural logic to position its own constructs analogically. Frugal living is treated as a behavioral disposition analogous to a favorable attitude toward saving, and digital financial literacy is

treated as a resource analogous to behavioral beliefs that inform financial intentions; FMB, in turn, is treated as analogous to perceived behavioral control (Ajzen & Schmidt, 2020; Falahati *et al.*, 2020): the practical capacity that determines whether a favorable disposition and adequate knowledge actually translate into financial outcomes. This positioning is also the basis for treating FMB as a moderator rather than as a mediator or a direct antecedent. Under TPB, perceived behavioral control conditions the strength of the link between intention and behavior rather than sitting on the causal path between them; by the same logic, FMB is modeled here as conditioning how strongly frugal living and digital financial literacy translate into sustainable wealth, rather than as a variable through which their effects are transmitted. The insignificant direct effect of FMB on sustainable wealth reported in Section 4.2 is consistent with this framing, though it is discussed there alongside alternative explanations that a moderator specification cannot rule out on its own, including the possibility that frugal living and digital financial literacy influence wealth partly through, rather than only alongside, disciplined financial behavior. We therefore treat the moderator specification as this study's working theoretical position rather than a settled empirical fact, and recommend that future work test it against mediation and moderated-mediation alternatives.

The second foundation is Behavioral Finance, an interdisciplinary field combining economics and psychology to understand how psychological factors influence financial decisions (Ricciardi & Simon, 2021; Ahmad & Shah, 2022). Concepts such as loss aversion and mental accounting often lead to suboptimal decisions (Aren & Nayman Hamamci, 2020; Shefrin, 2007). A frugal living lifestyle is inherently a deliberate behavioral strategy for managing these biases.

2.2 Frugal Living and Sustainable Wealth

Frugal living is a lifestyle concept focused on efficiency and wisdom in managing resources, with the goal of avoiding waste and achieving long-term financial objectives (Strömbäck *et al.*, 2020). Its indicators include distinguishing needs from wants, strict budget creation, price comparison, and delaying instant gratification. In this study, sustainable wealth is defined as an individual's self-assessed capacity to maintain a stable and secure financial position over time, operationalized through four self-reported indicators discussed below. This definition is deliberately narrower than related constructs such as actual accumulated net worth, which would require verified financial records rather than self-report; financial resilience, which centers on the capacity to absorb shocks rather than on asset accumulation; and long-term financial well-being, which is a broader, more subjective evaluative state. The Likert-scale items used here capture respondents' perceptions of their own financial position and behavior, not their audited financial status; we therefore interpret sustainable wealth in this study as perceived financial security and preparedness, and use the term with this boundary in mind. Sustainable wealth, so defined, refers to a stable and secure long-term financial foundation (Abubakar & Haruna, 2021), evidenced by emergency fund availability, investment asset ownership, a controlled debt ratio, and passive income capability (Awaworyi Churchill & Marisetty, 2020). Frugal living directly enables individuals to redirect funds from unnecessary expenditures to savings and investments, contributing to long-term wealth accumulation.

H₁: Frugal living positively affects sustainable wealth.

2.3 Digital Financial Literacy and Sustainable Wealth

Digital financial literacy is the combination of traditional financial knowledge and the technical ability to manage finances through digital platforms (Klapper & Lusardi, 2020; Morgan & Long, 2020). This competency includes knowledge of digital financial products, cybersecurity risk awareness, and the ability to evaluate online financial information (Hazra, 2022; Alshebami, 2021). Individuals with higher digital financial literacy are better positioned to make effective decisions, optimize investments, and avoid financial losses (Lusardi & Mitchell, 2014).

H₂: Digital financial literacy positively affects sustainable wealth.

2.4 Moderating Role of Financial Management Behavior

Financial management behavior is the practical ability of individuals to productively manage income and assets, encompassing budget planning, expenditure control, disciplined saving, and timely debt repayment (Hilgert et al., 2003; Barboza et al., 2021). FMB is the bridge that transforms the intention to live frugally into concrete action. Discipline in budgeting strengthens the relationship between a frugal lifestyle and positive financial outcomes (Xiao, 2008; Shim et al., 2022). Similarly, FMB ensures digital financial knowledge is used with discipline, preventing individuals from becoming trapped in impulsive transactions (Xiao & Porto, 2022; Jamal et al., 2020).

H₃: Financial management behavior moderates the effect of frugal living on sustainable wealth.

H₄: Financial management behavior moderates the effect of digital financial literacy on sustainable wealth.

2.5 Multi-Group Analysis: Working vs. Stay-at-Home Mothers

For stay-at-home mothers managing a fixed household income, FMB functions as a critical survival tool. Conversely, for working mothers managing dual incomes, FMB acts as a growth tool, enabling proactive investment toward ambitious long-term financial goals (Bucher-Koenen et al., 2021; Lind et al., 2020).

H₅: The moderating role of financial management behavior differs significantly between working mothers and stay-at-home mothers. Because employment status is used here as a proxy grouping variable rather than a direct measure of financial autonomy, this hypothesis is best read as an initial test of whether the proxy corresponds to a meaningful behavioral difference, to be refined in future work that controls for income and decision-making authority directly (Section 6).

3. Methodology

This study employs a quantitative approach with a causal-comparative and explanatory design, applying PLS-SEM and multi-group analysis (MGA) using SmartPLS 3.2.9 (Morgan & Long, 2020; Albaity & Rahman, 2021). The population comprises working mothers and stay-at-home mothers in the Jabodetabek area, Indonesia. Sampling uses purposive and convenience sampling techniques with the following inclusion criteria: (1) married; (2) has at least one child; and (3) actively uses at least one digital financial product or service (e.g., mobile banking, digital wallet, or online investment platform) (Hano Namahoot & Laohavichien, 2021).

Data were collected through a structured online questionnaire using a 5-point Likert scale. Research instruments were tested for construct validity (convergent and discriminant) and composite reliability prior to hypothesis testing (Falahati *et al.*, 2020). The study variables consist of: Frugal Living (FL) and Digital Financial Literacy (DFL) as independent variables; Financial Management Behavior (FMB) as a moderating variable; and Sustainable Wealth (SW) as the dependent variable.

The questionnaire was distributed online through Google Forms. A total of 283 responses were initially received; 30 were excluded during initial screening for being incomplete or for not meeting the inclusion criteria, though this screening did not follow a pre-registered, formal protocol. This yielded a final valid sample of 253 respondents, comprising 127 working mothers and 126 stay-at-home mothers. Duplicate submissions were screened using respondents' phone numbers.

Sample size and statistical power. We assessed the adequacy of this sample size using the parameter-to-sample-size ratio commonly used in CB-SEM, which recommends a ratio of at least 5:1, and ideally closer to 10:1, between the number of respondents and the number of freely estimated parameters in the model [citation needed, e.g., Bentler & Chou, 1987; Kline, 2015]. [The exact number of freely estimated parameters in the final measurement and structural model, and the resulting ratios for the overall sample (N = 253) and for the working-mothers (n = 127) and stay-at-home-mothers (n = 126) subsamples used in the multi-group comparison in Section 4.3, are to be inserted once confirmed from the AMOS output.] Consistent with the broader CB-SEM literature, multi-group structural comparisons generally require larger per-group samples than single-group models to reliably detect cross-group differences in path coefficients; the present subgroup sizes should therefore be interpreted with this caveat in mind alongside the model fit and multi-group results reported in Sections 4.1–4.3.

4. Result and Discussion

4.1 Measurement Model

Table 1 presents the convergent validity and reliability results, based on the standardized regression weights (loadings) and variances produced by AMOS. All constructs show standardized loadings above 0.70. Composite reliability (CR) and average variance extracted (AVE) are not produced directly by AMOS and were calculated manually from the standardized loadings and error variances following standard formulas (Fornell & Larcker, 1981; Barboza *et al.*, 2021).

Table 1. Convergent Validity and Composite Reliability

Latent Variable	Ind.	Std Loading	CR	AVE
Frugal Living	x1.1	0.865	0.939	0.754
	x1.2	0.856		
	x1.3	0.874		
	x1.4	0.874		
	x1.5	0.873		
Digital Fin. Literacy	x2.1	0.894	0.950	0.825
	x2.2	0.928		

	x2.3	0.901		
	x2.4	0.911		
Sustainable Wealth	y.1	0.860	0.932	0.775
	y.2	0.874		
	y.3	0.901		
	y.4	0.888		
Fin. Mgmt. Behavior	z.1	0.795	0.900	0.693
	z.2	0.844		
	z.3	0.812		
	z.4	0.877		

Source: Primary data, processed (2026)

Table 1 presents discriminant validity using the Fornell-Larcker Criterion, which compares the square root of each construct's AVE against its correlations with other constructs; discriminant validity is supported when the square root of AVE for each construct exceeds its correlations with all other constructs (Fornell & Larcker, 1981). The diagonal values in Table 2 (in bold-equivalent position) show the square root of AVE for each substantive construct, computed from the AVE values in Table 1: Digital Financial Literacy = 0.908, Financial Management Behavior = 0.832, Frugal Living = 0.868, and Sustainable Wealth = 0.880. [These diagonal values are derived arithmetically from the AVE figures in Table 1 and should be checked against the AMOS output for consistency.] For each of these four constructs, the diagonal value exceeds all of that construct's correlations with the other constructs, supporting discriminant validity. The FL×FMB interaction term is not assigned a diagonal value (marked "n/a"), since interaction terms formed as indicator products are not substantive reflective constructs with their own AVE and are therefore not typically subjected to the Fornell-Larcker comparison; its correlations with the other constructs are reported for completeness only. Collinearity among predictor constructs, particularly relevant given the interaction terms in the structural model, should additionally be assessed using Variance Inflation Factor (VIF) statistics from an auxiliary regression; these VIF values, together with Cronbach's alpha alongside composite reliability, are not yet included in the present analysis and are flagged here as additions for the next revision of this table.

Table 2. Discriminant Validity ((Fornell-Larcker Criterion)

	DFL	FMB	FL×FMB	FL	SW
DFL	-				
FMB	0.105	-			
FL×FMB	0.349	0.022	-		
FL	0.744	0.063	0.328	-	
SW	0.636	0.159	0.669	0.658	-

Source: Primary data, processed (2026)

4.2 Hypothesis Testing

Table 3 presents the results of the structural model and hypothesis testing.

Table 3. Hypothesis Testing Results

Hypothesis	β	C.R.	p-value
H1: FL → SW	0.240	2.205	0.028*
H2: DFL → SW	0.256	2.470	0.014*

H3: FMB → SW (direct)	0.130	1.352	0.177
H4: FL × FMB → SW	0.233	2.347	0.019*
H5: DFL × FMB → SW	0.251	2.211	0.027*

Notes: * significant at $p < 0.05$; FL = Frugal Living, DFL = Digital Financial Literacy, FMB = Financial Management Behavior, SW = Sustainable Wealth. Source: AMOS output [version], processed (2026)

H₁ is supported: frugal living positively and significantly influences sustainable wealth (Estimated = 0.240, C.R. = 2.205 $p = 0.028$). The higher the level of thrifty, value-focused behavior, the greater an individual's capacity to build and maintain long-term financial assets (*Strömbäck et al., 2020; Purwanto & Juliana, 2022*).

H₂ is supported: digital financial literacy positively and significantly influences sustainable wealth (Estimated = 0.256, C.R. = 2.470 $p = 0.014$). This aligns with *Klapper and Lusardi (2020)*, who demonstrated that financial literacy improves financial resilience globally, and *Hazra (2022)*, who showed financial literacy positively affects investment participation in India.

H₃, by contrast, is not supported: the direct effect of FMB on sustainable wealth is not statistically significant (Estimated = 0.130, C.R. = 1.352 $p = 0.177$). We interpret this cautiously rather than as confirmation that FMB is a "pure" moderator. An insignificant direct effect combined with significant interaction effects is also consistent with multicollinearity between FMB and its interaction terms, model specification choices such as how the interaction terms were constructed and centered, overlap between the FMB items and the frugal living or digital financial literacy items, or a suppression effect in which FMB's influence on wealth operates partly through, rather than only alongside, frugal living and digital financial literacy. Because the present analysis does not yet report VIF values, confidence intervals, effect sizes, or an alternative mediation or moderated-mediation specification, we present the moderator classification as a working interpretation rather than a settled conclusion, and recommend that these diagnostics and model comparisons be reported in a subsequent analysis of this dataset.

H₄ is supported: FMB significantly moderates the frugal living–sustainable wealth relationship (Estimated = 0.233, C.R. = 2.347 $p = 0.019$). The positive interaction coefficient is consistent with FMB acting as a strengthening moderator, in line with the theoretical framing in Section 2.1, though as noted above this classification should still be read alongside the alternative explanations discussed for H₃. The benefits of frugal living appear to be maximized when individuals simultaneously apply disciplined financial management, such as strict budgeting and routine cash flow evaluation (*Xiao, 2008; Barboza et al., 2021*).

H₅ is supported: FMB also significantly moderates the digital financial literacy–sustainable wealth relationship (Estimated = 0.251, C.R. = 2.211, $p = 0.027$). Digital knowledge is not sufficient in isolation; successful utilization of fintech platforms must be supported by structured management behavior to prevent impulsive or high-risk financial decisions (*Raza et al., 2021; Xiao & Porto, 2022*).

4.3 Multi-Group Analysis

Table 4. Multi-Group Analysis Results

Path	WM Est.	WM p	SHM Est.	SHM p	z (CR Diff)	P (CR Diff)
FL→SW	-0.045	0.782	0.532	0.001	-0.577	0.015
DFL→SW	0.005	0.978	0.190	0.219	-0.185	0.439

FMB→SW	0.681	0.000	0.106	0.438	0.575	0.018
FL×FMB→SW	0.211	0.171	-0.285	0.117	0.497	0.042
DFL×FMB→SW	0.114	0.469	0.126	0.520	-0.013	0.945

Notes: WM = Working Mothers; SHM = Stay-at-Home Mothers; Est. = unstandardized structural path estimate for each group; z (CR Diff) = critical ratio for the difference between the WM and SHM parameter estimates; p (CR Diff) = associated p-value for this cross-group comparison.

Source: AMOS multi-group analysis output [version], processed (2026)

The multi-group comparison tests H_5 : as Table 4 shows, the critical ratio for the difference in the FL×FMB→SW estimate between working mothers and stay-at-home mothers is statistically significant (z (CR Diff) = 0.497, p (CR Diff) = 0.042). This result should be interpreted carefully. The group-specific estimates carry opposite signs (working mothers: Estimate = 0.211, p = 0.171; stay-at-home mothers: Estimate = -0.285, p = 0.117), and neither is individually significant within its own group. A significant cross-group difference between two non-significant, oppositely signed estimates shows that the interaction effect is not uniform across groups, but it does not by itself establish that FMB functions as a well-established, standalone "amplifying growth tool" for working mothers; that stronger claim would require the working-mothers' path itself to reach significance. We therefore describe this as evidence of a directional difference in how FMB relates to the frugal living–sustainable wealth link across groups, rather than as proof of a confirmed positive mechanism within either group alone. No significant group difference was found for FMB's moderation of the DFL–SW relationship (z (CR Diff) = -0.013, p (CR Diff) = 0.945). We also note that the direct FMB→SW path differs substantially, and significantly, between groups (z (CR Diff) = 0.575, p (CR Diff) = 0.018), which points to broader structural differences between the two groups that the measurement invariance testing described in Section 6 needs to rule out before these differences can be attributed to genuine behavioral, rather than measurement, non-equivalence. These patterns are broadly consistent with *Bucher-Koenen et al. (2021)* and *Lind et al. (2020)*, who noted that women's financial decision-making contexts differ substantially based on economic independence, though we present this consistency as suggestive rather than confirmatory.

5. Conclusion and Suggestion

This study concludes that frugal living and digital financial literacy are both positively and significantly associated with self-reported sustainable wealth among the Indonesian mothers sampled, with financial management behavior acting as a significant interaction (moderating) term for both relationships even though FMB's own direct effect was not significant. The strength of the frugal living × FMB interaction differs significantly between working mothers and stay-at-home mothers, suggesting that financial management dynamics may be shaped by social role and income source; however, because neither group-specific coefficient was individually significant, this is best read as an initial, directional finding rather than firm evidence of two distinct, fully-formed mechanisms, pending replication with larger group-specific samples and formal measurement-invariance testing.

heoretical Implications. These findings extend the Theory of Planned Behavior into a financial context by showing that a disposition-like construct (frugal living) and a knowledge-like construct (digital financial literacy) are both associated with sustainable wealth, and that this association is conditioned by financial management behavior in a manner consistent with a

perceived-behavioral-control-like role. They also nuance behavioral finance accounts of women's financial decision-making by suggesting that the way disciplined financial behavior relates to wealth outcomes may itself differ by social role and income source, rather than operating uniformly across all women. Because the direct effect of FMB was not significant and the group-specific interaction coefficients were not individually significant, these theoretical contributions should be read as preliminary and in need of confirmation through the additional diagnostics and alternative model specifications discussed in Section 6.

Practical and Policy Implications. These findings offer tentative practical recommendations for policymakers such as the Financial Services Authority (OJK) and financial institutions, pending the confirmatory analyses outlined above. Programs for working mothers might focus on digital investment management and risk management strategies, while programs for stay-at-home mothers might emphasize digital budgeting, efficient expenditure planning, and avoidance of consumptive debt.

6. Limitations and Future Research

This study has several limitations that should guide the interpretation of its findings and inform future research.

First, the sample is limited to the Jabodetabek area, restricting generalizability to other Indonesian regions with different economic and cultural characteristics.

Second, the cross-sectional design cannot establish temporal causality between frugal living, digital financial literacy, financial management behavior, and sustainable wealth.

Third, all constructs were measured through the same online questionnaire, completed by the same respondents at a single point in time, which creates a risk of common method bias. Because frugal living and disciplined financial management are socially desirable behaviors, respondents may also have overstated good financial practices. This study did not implement or report specific procedural remedies, such as separating predictor and criterion items or randomizing item order, or statistical checks, such as Harman's single-factor test, full collinearity VIF, or a marker-variable technique, for common method bias; we recommend these be incorporated and reported in future work using this or similar datasets.

Fourth, the comparison between working mothers and stay-at-home mothers relies on employment status as a proxy for financial autonomy. This proxy does not fully capture household decision-making power, income access, or economic vulnerability; some of the group differences reported in the multi-group analysis may partly reflect differences in income or socioeconomic status rather than employment status itself. Future studies should incorporate variables such as personal and household income, contribution to household earnings, spouse's income, education, number of dependents, and financial decision-making authority, and should establish measurement invariance, for example via configural, metric, and scalar invariance testing in multi-group confirmatory factor analysis (comparing model fit as increasingly strict equality constraints are imposed across groups), across groups before comparing structural paths, so that observed differences can be attributed to genuine behavioral differences rather than to measurement non-equivalence or confounded group composition.

Fifth, the present analysis does not yet report several diagnostics that a complete CB-SEM assessment in AMOS would normally include: the model fit indices summarized in Section 4.1.1 (CMIN/df, GFI, CFI, TLI, RMSEA, SRMR), Cronbach's alpha alongside composite reliability and AVE, the Fornell-Larcker discriminant validity matrix, Variance Inflation Factor (VIF) values for collinearity among structural predictors, and R^2 and adjusted R^2 for the sustainable wealth outcome. We recommend that these be reported in a subsequent analysis of this dataset to allow a fuller evaluation of measurement quality. Sample composition, recruitment process, and a sample-size-to-parameter-ratio assessment are reported in Section 3; as discussed there, the exact adequacy of the working-mothers' ($n = 127$) and stay-at-home-mothers' ($n = 126$) subsamples for the multi-group comparison depends on the final number of freely estimated parameters, which should be kept in mind when interpreting the multi-group results in Section 4.3.

Sixth, this study models financial management behavior as a moderator based on its theoretical correspondence to perceived behavioral control under the Theory of Planned Behavior (Section 2.1). The non-significant direct effect of FMB on sustainable wealth is consistent with, but does not on its own confirm, this specification; it remains possible that frugal living and digital financial literacy influence sustainable wealth partly through FMB rather than only alongside it. Future research should test mediation and moderated-mediation alternatives directly.

Beyond these methodological points, future research is encouraged to employ longitudinal designs, qualitative approaches, and broader geographic coverage. Additional variables such as financial self-efficacy (*Duong, 2022*), social support, and household income levels should also be considered.

Acknowledgement

The author thanks all respondents who generously participated in this study. Appreciation is extended to colleagues and reviewers whose constructive feedback improved this manuscript. This research received no specific funding from any agency in the public, commercial, or not-for-profit sectors.

Declaration of AI and AI-assisted technologies in the writing process (if author[s] utilize AI)

During the preparation of this work, the author used AI-assisted writing tools in order to support grammar checking and initial draft organization. After using these tools, the author reviewed and edited all content as needed and takes full responsibility for the content of the publication.

Reference

Abubakar, H. A., & Haruna, M. A. (2021). Financial literacy and sustainable household wealth accumulation: Evidence from Nigeria. *Journal of Financial Economics Policy*, 13(4), 502–519.

- Ahmad, M., & Shah, S. Z. A. (2022). Overconfidence heuristic-driven bias in investment decision-making and performance: Mediating effects of risk perception and moderating effects of financial literacy. *Journal of Economic and Administrative Sciences*, 38(1), 60–90.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Ajzen, I., & Schmidt, P. (2020). Changing behavior using the theory of planned behavior. In M. S. Hagger, L. D. Cameron, K. Hamilton, N. Hankonen, & T. Lintunen (Eds.), *The Handbook of Behavior Change* (pp. 17–31). Cambridge University Press.
- Albaity, M., & Rahman, M. (2021). Female directors and bank performance: Evidence from Southeast Asia. *Pacific-Basin Finance Journal*, 67, 101527.
- Alshebami, A. S. (2021). Evaluating the relevance of financial literacy determinants among Saudi youth. *International Journal of Financial Studies*, 9(3), 41.
- Aren, S., & Nayman Hamamci, H. (2020). Relationship between risk aversion, risky investment intention, investment choices: Impact of personality traits and emotion. *Kybernetes*, 49(11), 2651–2682.
- Awaworyi Churchill, S., & Marisetty, V. B. (2020). Financial inclusion and poverty: A tale of forty-five thousand households. *Applied Economics*, 52(16), 1777–1788.
- Baber, H. (2020). Financial inclusion and FinTech: A comparative study of countries following Islamic finance and conventional finance. *Qualitative Research in Financial Markets*, 12(1), 24–42.
- Barboza, G., Bhang, C., Buckland, C., Zhu, X., & Smith, C. (2021). Predicting financial fragility in college students: The role of financial knowledge, behaviors, and attitudes. *Journal of Consumer Affairs*, 55(1), 132–167.
- Bucher-Koenen, T., Lusardi, A., Alessie, R., & van Rooij, M. (2021). How financially literate are women? An overview and new insights. *Journal of Consumer Affairs*, 55(2), 807–828.
- Duong, C. D. (2022). Big five personality traits and green consumption: Bridging the attitude-intention-behavior gap. *Sustainable Production and Consumption*, 33, 864–876.
- Falahati, L., Paim, L., Ismail, M., Haron, S. A., & Masud, J. (2020). Assessment of university students' financial management skills and educational needs. *African Journal of Business Management*, 5(15), 6085–6091.
- Garg, N., & Singh, S. (2020). Financial literacy among youth. *International Journal of Social Economics*, 47(4), 469–489.
- Hano Namahoot, K. S., & Laohavichien, T. (2021). Assessing the intentions to use internet banking in Thailand: The role of perceived risk and trust as mediating factors. *International Journal of Bank Marketing*, 35(6), 956–979.
- Hazra, D. (2022). Does financial literacy affect household stock market participation? Evidence from India. *International Journal of Social Economics*, 49(12), 1756–1776.
- Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, 89, 309–322.
- Jamal, A. A. A., Ramlan, W. K., Karim, R. A., & Osman, Z. (2020). The effects of social influence and financial literacy on savings behavior: A study on students of higher learning

- institutions in Kota Kinabalu, Sabah. *International Journal of Business and Social Science*, 6(11), 110–119.
- Klapper, L., & Lusardi, A. (2020). Financial literacy and financial resilience: Evidence from around the world. *Financial Management*, 49(3), 589–614.
- Lind, T., Ahmed, A., Skagerlund, K., Stromback, C., Vastfjall, D., & Tinghog, G. (2020). Competence, confidence, and gender: The role of objective and subjective financial knowledge in household finance. *Journal of Family and Economic Issues*, 41(4), 626–638.
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5–44.
- Morgan, P. J., & Long, T. Q. (2020). Financial literacy, financial inclusion, and savings behavior in Laos. *Journal of Asian Economics*, 68, 101197.
- Purwanto, A., & Juliana, J. (2022). The effects of frugal lifestyle and financial literacy on the financial management behavior: Evidence from micro, small and medium enterprises in Indonesia. *Accounting*, 8(3), 281–288.
- Raza, S. A., Shah, N., & Ali, M. (2021). Acceptance of mobile banking in Islamic banks: Evidence from modified UTAUT model. *Journal of Islamic Marketing*, 10(1), 357–376.
- Ricciardi, V., & Simon, H. K. (2021). What is behavioral finance? *Business, Education and Technology Journal*, 2(2), 1–9.
- Shefrin, H. (2007). *Behavioral Corporate Finance: Decisions That Create Value*. McGraw-Hill/Irwin.
- Shim, S., Serido, J., & Barber, B. L. (2022). A consumer way of thinking: Linking consumer socialization and financial literacy to money management. *Journal of Consumer Affairs*, 45(2), 336–360.
- Strömbäck, C., Lind, T., Skagerlund, K., Västfjäll, D., & Tinghög, G. (2020). Does self-control predict financial behavior and financial well-being? *Journal of Behavioral and Experimental Finance*, 14, 30–38.
- Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving Decisions About Health, Wealth, and Happiness*. Yale University Press.
- Xiao, J. J. (2008). Applying behavior theories to financial behavior. In J. J. Xiao (Ed.), *Handbook of Consumer Finance Research* (pp. 69–81). Springer.
- Xiao, J. J., & Porto, N. (2022). Financial education and financial satisfaction: Financial literacy, behavior, and capability as mediators. *International Journal of Bank Marketing*, 35(5), 805–817.
- Alshebami, A. S., & Senan, N. A. M. (2021). The influence of digital financial literacy on fintech adoption among Saudi small entrepreneurs. *International Journal of Entrepreneurship*, 25(5), 1–15.