Financial Literacy, Mentoring, And MSME Performance: A Moderation Framework for Food and Beverage Businesses in Sabah

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ABSTRACT

Micro, small and medium enterprises (MSMEs) contribute to employment and local economic activity, yet their performance may be constrained by financing difficulties, limited managerial resources and uneven access to business knowledge. These issues are relevant to food and beverage (F&B) businesses in Sabah, where daily cash cycles intersect with demand fluctuations, supply-chain costs and tourism-related activity. This conceptual paper develops a framework linking five dimensions of owner-manager financial literacy (financial management, saving, debt, investment and insurance literacy) to F&B MSME performance, while proposing mentoring as a moderator. The paper critically synthesizes empirical and conceptual research on financial literacy, enterprise performance and mentoring, distinguishing direct evidence from theoretical extrapolation. Knowledge-Based Theory and Social Learning Theory serve as the underpinning theories. Knowledge-Based Theory explains why financial knowledge may be a useful resource for business decisions; Social Learning Theory offers a plausible account of how modelling, feedback and guided practice may help owners apply that knowledge. The review indicates that the literature uses varied definitions and measures of financial literacy, and that findings from different countries and sectors cannot automatically be generalized to F&B MSMEs in Sabah. Financial knowledge is not equivalent to financial behaviour, and neither necessarily produces better performance when owners face capital, market or implementation constraints. The framework therefore distinguishes financial management, saving, debt, investment and insurance literacy and treats profitability, business expansion and employment generation as related but non-interchangeable performance outcomes. It develops five direct-effect propositions and five dimension-specific moderation propositions. A further proposition involving overall financial literacy is retained as an alternative composite model, not as an additional interaction to be estimated simultaneously with all five dimension-level interactions. The paper contributes a contextually bounded framework, identifies measurement and explanatory gaps, and sets out priorities for empirical testing. Its practical implications remain provisional until empirical testing.

Keywords: financial literacy, mentoring, MSME performance, food and beverage, Sabah

INTRODUCTION

Micro, small and medium enterprises (MSMEs) contribute to employment, household income and economic activity, but their limited resource base can make them vulnerable to financing constraints and managerial errors. Research identifies access to finance as an important constraint on SME growth and documents the wider developmental contribution of SMEs (Beck et al., 2005; Beck & Demirgüç-Kunt, 2006). Yet access to funds is not sufficient: owners must also evaluate cash-flow requirements, financing costs, operating margins and investment opportunities. Financial literacy is therefore a plausible business capability, but its contribution depends on how knowledge is used and whether firms have the resources to act on financial decisions.

Food and beverage (F&B) businesses provide a particularly relevant setting because purchasing, inventory, pricing, wages and daily receipts require frequent financial decisions. Perishable inputs and variable customer demand can narrow the margin for error. Official statistics indicate that Sabah's F&B services sector comprised 5,807establishments in 2022, engaged 41,425 persons and generated RM3.641 billion in gross output

(Department of Statistics Malaysia, 2024b). These figures establish the sector's economic significance; they do not demonstrate that financial literacy causes stronger firm-level performance. Regional logistics and cost conditions may further shape business decisions, but such contextual pressures should be treated as conditions to investigate rather than evidence that financial literacy is the sole explanation for performance (Idris & Mansur, 2020).

Prior research associate financial literacy with enterprise performance, sustainability and access to finance, but the evidence does not support a simple, uniform pathway. A systematic review found substantial variation in definitions and measures of owner-manager financial literacy and noted the absence of a standardized MSME-specific scale (Anshika & Singla, 2022; Rekha et al., 2025). Empirical studies also suggest that financial literacy may operate alongside financial capabilities, access to finance and technology adoption (Babajide et al., 2023; Kulathunga et al., 2020; Ye & Kulathunga, 2019), while Malaysian evidence reports a positive association between financial literacy and SME financial performance (Yakob et al., 2021). Differences in context, construct operationalization and outcome measurement mean that results from one setting should not automatically be generalized to every financial knowledge domain or to Sabah's F&B MSMEs.

A further problem concerns the distinction between knowing and doing. An owner may understand budgeting but not maintain reliable records, recognize the value of saving but lack a surplus to retain, or understand debt costs but have limited access to suitable financing. The five dimensions considered here-financial management, saving, debt, investment and insurance literacy-inform different decisions and may therefore have different relationships with profitability, expansion and employment. Treating financial literacy as one undifferentiated score may obscure these differences. Performance indicators also require care: a firm may expand or hire before profits improve, while a profitable owner-operated business may deliberately remain small (Ahmad & Jamil, 2020; Zubir et al., 2023).

Mentoring is proposed as a potential boundary condition because a relevant mentor may help an owner interpret information, test assumptions and practice financial routines. However, evidence that mentoring can benefit microenterprise owners does not establish that mentoring moderates each financial literacy–performance relationship (Brooks et al., 2018; St-Jean et al., 2018). The central research problem is therefore not whether financial literacy or mentoring is generally beneficial, but whether the five distinct literacy domains are associated with F&B MSME performance in Sabah and whether the strength of each association varies with mentoring. The paper addresses this problem through a critical synthesis of the literature and a theory-informed conceptual framework. Its gaps are framed as questions for empirical investigation, not as claims that no prior research exists; a systematic search focused specifically on Sabah F&B MSMEs would be required to establish the absence of earlier studies.

CONCEPTUALISATION AND CRITICAL REVIEW OF THE LITERATURE

F&B MSME performance as a multidimensional outcome

Firm performance can be represented through financial and non-financial indicators. Profitability captures the firm's ability to generate returns from operations; business expansion captures changes in scale, reach or capacity; and employment generation reflects the ability to sustain or increase staffing. Ahmad and Jamil (2020) discuss the use of financial and non-financial measures for Malaysian micro-enterprises, while Zubir et al. (2023) examine profitability elements in Malaysia's F&B industry. The three outcomes are related but not interchangeable. A business may hire staff or open an outlet before profitability improves, and a profitable owner-operated business may deliberately avoid expansion. This distinction matters for the proposed framework because the five literacy dimensions may operate over different time horizons. Financial management knowledge is closely connected to daily control, whereas investment literacy may be more relevant to longer-term expansion. Insurance literacy may protect continuity after a shock without increasing short-term sales. Future testing should therefore report results for each performance dimension, where feasible, before relying on a single composite score. If a composite is used, its construction and measurement properties must be justified rather than assuming that profitability, expansion and employment are reflective substitutes.

Financial literacy: construct boundaries and measurement

Financial literacy in an enterprise context should be distinguished from personal financial literacy. It concerns the knowledge and decision capability required to manage business cash flows, assess borrowing, allocate capital and manage financial risks. Reviews by Anshika and Singla (2022) and Rekha et al. (2025) highlight the diversity of definitions and the lack of a standardized MSME-specific scale. Studies may combine objective knowledge questions with self-reported confidence or actual financial practices. These indicators are not equivalent: knowing how to prepare a cash-flow forecast differs from routinely preparing and using one.

For this framework, the five dimensions are treated as distinguishable domains of business financial knowledge. The conceptual distinction is useful only if the measures preserve it. If financial management literacy items ask respondents whether they already maintain records or control costs, the construct may measure practice rather than knowledge. Likewise, if performance is measured using perceived financial control, predictor and outcome items may overlap. Future research should use clearly worded knowledge or capability indicators and independent performance indicators, and should test discriminant validity among the five dimensions.

Financial management literacy

Financial management literacy concerns knowledge of budgeting, record keeping, cash-flow planning, working capital and cost monitoring. These activities are operationally proximal to F&B performance because owners must reconcile sales receipts with inventory purchases, payroll, utilities and other recurring costs. Research on Malaysian SME working-capital management and financial management practices supports the relevance of these activities to business performance (Amram et al., 2023; Venkatesan, 2024). Nevertheless, the relationship should not be overstated: literacy is not the same as implementation, and implementation can be constrained by time, record systems or unreliable demand. The expected pathway is that knowledge improves the quality of decisions when it is translated into routine monitoring and corrective action.

Saving literacy

Saving literacy concerns understanding the role of reserves for emergencies, working capital and future investment. Reserves may help a small firm absorb uneven sales, equipment repairs or supplier price changes without immediately seeking costly credit. Research on business saving and reinvestment indicates that saving decisions are relevant to entrepreneurial activity (Beck et al., 2017; Sumastuti et al., 2024). However, saving is not unconditionally beneficial: retaining excessive idle cash can delay investments, and firms with low margins may be unable to save despite sound knowledge. The relevant capability is to determine an appropriate balance between liquidity protection and productive use of funds, not simply to maximize savings.

Debt literacy

Debt literacy involves understanding interest and other borrowing costs, repayment schedules, contractual terms and the relationship between debt obligations and cash-flow capacity. External finance may enable firms to acquire inventory or equipment, but unsuitable debt can intensify liquidity pressure. Beck and Demirgüç-Kunt (2006) frame access to finance as a growth constraint, while Abor (2007) shows that debt policy is consequential for SME performance. These are distinct questions: access to credit does not establish that borrowing is appropriate, and knowledge of debt does not guarantee access to suitable finance. Debt literacy is expected to support performance when it helps owners assess affordability and match financing to a viable business purpose.

Investment literacy

Investment literacy refers to knowledge used to evaluate risk, return, capital allocation and the financial feasibility of opportunities. In F&B firms, relevant decisions may include equipment purchases, digital ordering systems, product development or opening another outlet. Financial knowledge can improve the assessment of such decisions, but the effect may be delayed and contingent on available capital, market demand and execution. Studies of financial literacy and investment decisions emphasize the relevance of risk perception and advice (Ademola et al., 2019; Calcagno & Monticone, 2015). Accordingly, the proposed relationship concerns the

quality of investment evaluation, not the assumption that greater investment or expansion always improves performance.

Insurance literacy

Insurance literacy concerns understanding business exposures, policy coverage, exclusions, costs and the potential role of insurance in continuity planning. For F&B MSMEs, relevant risks can include property or equipment damage, liability and interruption of operations. Insurance literacy differs from saving and investment literacy because its benefits may be preventive: appropriate protection may reduce losses following an adverse event without producing an immediate increase in sales. Research on financial literacy dimensions and digital insurance adoption supports the relevance of insurance knowledge, while also distinguishing understanding from actual uptake (Al Rahahleh, 2022; Tomasi & Ilankadhir, 2024). Affordability, product suitability and availability remain important constraints.

Mentoring: a potential application-support condition

Mentoring is a developmental relationship in which a more experienced person provides guidance, feedback, examples and practical support. Research has examined the quality and functions of mentoring (Allen & Eby, 2003; Allen et al., 2006), and entrepreneurship studies suggest that mentoring can support learning and self-efficacy (St-Jean et al., 2018). In an F&B MSME, a mentor might review a cash-flow forecast, help compare financing offers, question assumptions behind an equipment purchase or clarify the implications of an insurance policy.

The present paper proposes moderation, not mediation. A mediator explains the process through which an antecedent relates to an outcome; a moderator changes the strength or direction of that relationship (Aiken & West, 1991; Frazier et al., 2004). Thus, the claim is not that financial literacy causes mentoring or that mentoring necessarily causes performance. Rather, relevant mentoring may help owners convert existing knowledge into context-specific action, potentially strengthening the literacy–performance association.

The evidence also cautions against treating all mentoring as equally effective. Brooks et al. (2018) distinguish mentoring from teaching in microenterprise training, and St-Jean et al. (2018) connect mentoring functions and learning orientation with novice entrepreneurs' self-efficacy. Advice that is generic, inaccurate or unrelated to the financial decision at hand may not improve application. Mentoring should therefore be measured in terms of access, frequency, relevance and quality where possible. A binary item indicating only whether an owner has a mentor may capture availability but not the developmental functions required by the proposed mechanism.

Critical synthesis and research gaps

The literature supports the relevance of financial literacy but leaves three issues unresolved for this framework. The first is a construct and measurement gap. Reviews identify variation in definitions and dimensions and the absence of a universally adopted MSME-specific measure (Anshika & Singla, 2022; Rekha et al., 2025). This limits comparability and makes it difficult to determine whether conflicting findings arise from substantive differences or from measures that capture knowledge, confidence and behaviour differently.

The second is an explanatory gap. Financial literacy may relate to performance through financial management, access to finance, technology adoption or sustainable business practices (Babajide et al., 2023; Kulathunga et al., 2020). Financial access has also been examined as a moderator of the literacy-performance relationship (Abdallah et al., 2025), while entrepreneurial resilience has been considered as a boundary condition (Alshebami & Murad, 2022). These studies indicate that knowledge alone may not overcome resource constraints. They do not, however, establish that mentoring moderates the five specific financial-literacy pathways proposed here.

The third is a contextual and model-specification gap. Evidence from other countries, sectors and business types offers theoretical guidance but cannot establish that the same relationships apply to F&B MSMEs in Sabah. Moreover, an aggregate financial literacy score may conceal differences between routine cash-flow decisions, financing decisions, capital allocation and risk protection. The proposed contribution is not to claim that no prior

study has examined financial literacy, performance or mentoring. It is to formulate a contextually bounded framework that differentiates five financial knowledge domains and specifies mentoring as a hypothesized boundary condition requiring direct interaction tests. A systematic search focused on Sabah F&B MSMEs would be needed before making a stronger claim about the absence of prior studies.

Empirical grounding and proposed construct operationalization

The empirical literature provides support for examining financial literacy and enterprise performance, but the evidence is heterogeneous and does not validate every proposed dimension equally. Abdallah et al. (2025) examined SMEs in Kuwait and reported a positive relationship between financial literacy and SME performance, with financial access considered as a moderator. Yakob et al. (2021) examined financial literacy and financial performance among SMEs, while Ye and Kulathunga (2019) considered financial literacy in relation to SME sustainability. Babajide et al. (2023) examined financial literacy alongside financial capabilities and sustainable business-model practices among small business owners in Nigeria. Kulathunga et al. (2020) investigated technological and financial literacy in relation to SME performance, considering enterprise risk-management practices. These studies provide empirical grounds for a broad financial literacy-performance association and show that the relationship may operate alongside other organizational capabilities. They do not, by themselves, demonstrate that each of the five dimensions proposed here has an independent positive effect in Sabah's F&B sector.

The evidence is more uneven at the dimension level. Al Rahahleh (2022) discusses budgeting, saving, investment, debt and insurance as distinguishable areas of financial literacy, but the study concerns Saudi citizens rather than business owners. Beck et al. (2017) examine entrepreneurial saving practices and reinvestment, offering a basis for the liquidity-reserve argument but not a direct test of saving literacy as defined here. Abor (2007) links debt policy with SME performance, although debt policy is not identical to an owner's debt knowledge. Ademola et al. (2019) examine financial knowledge, literacy and investment decisions, while Calcagno and Monticone (2015) address financial literacy and demand for financial advice. Tomasi and Ilankadhir (2024) examine knowledge of digital insurance among micro-entrepreneurs in Uganda, but their outcome is digital insurance adoption rather than overall firm performance. The proposed five-domain model therefore draws on related empirical findings while recognizing that direct evidence for all five literacy-to-performance paths remains limited.

For empirical testing, financial management literacy should capture knowledge of budgeting, cash-flow forecasting, bookkeeping, working-capital requirements and cost calculations. Saving literacy should capture knowledge of reserve purposes, liquidity buffers and the trade-off between retaining cash and reinvesting. Debt literacy should assess understanding of interest and total borrowing costs, repayment schedules, collateral and affordability relative to cash flow. Investment literacy should assess knowledge of risk-return trade-offs, payback, capital budgeting and evaluation of alternatives. Insurance literacy should assess understanding of business risks, coverage, exclusions, premiums and claims. Wherever possible, objective knowledge questions should be used alongside, but not conflated with, self-rated confidence. Actual practices such as maintaining records, saving money or purchasing insurance should be measured separately as behaviours, not treated automatically as knowledge indicators.

Mentoring should not be operationalized solely as a yes/no question if the intended construct is developmental support. A more informative measure would assess (i) access to a mentor, (ii) frequency and continuity of contact, (iii) mentor experience or relevant financial expertise, (iv) relevance of advice to the owner's financial decisions, and (v) feedback, modelling and follow-up support. A binary access item may be retained as a screening or descriptive variable, but it is unlikely to capture the quality and functions implied by the moderation argument. Researchers should also distinguish formal mentors, informal business advisers, accountants, family advice and training providers, because these sources may provide different forms of support.

F&B MSME performance should be measured through clearly specified indicators of profitability, business expansion and employment generation. Profitability may be captured through changes in sales margin, net profit or perceived profitability over a defined period; expansion may include additional outlets, production capacity, product range or market reach; and employment generation may capture changes in the number of paid workers.

Because these outcomes may not move together, researchers should first examine them separately. If an overall performance construct is subsequently formed, its measurement specification must be justified and validated rather than assuming that the three indicators are interchangeable reflective items. Measures should specify a common reference period and, where feasible, triangulate owner reports with business records.

Table 1 summarizes the proposed construct and measurement indicators. These are recommendations for future operationalization and not validated scales. Instrument development should include expert review, cognitive interviews with Sabah F&B owners and pilot testing before the main study. Researchers should assess content validity, reliability and construct validity, including discriminant validity among the five literacy dimensions and between knowledge, behaviour and performance.

Table 1. Proposed Construct Operationalization and Measurement Indicators

Construct	**Dimension**	**Proposed measurement indicators**
Financial literacy (independent variable)	Financial management literacy	Knowledge of budgeting, cash-flow forecasting, bookkeeping, working-capital requirements and cost calculations.
Financial literacy (independent variable)	Saving literacy	Knowledge of reserve purposes, liquidity buffers, and the trade-off between retaining cash and reinvesting.
Financial literacy (independent variable)	Debt literacy	Understanding of interest and total borrowing costs, repayment schedules, collateral and affordability relative to cash flow.
Financial literacy (independent variable)	Investment literacy	Knowledge of risk–return trade-offs, payback, capital budgeting and evaluation of alternatives.
Financial literacy (independent variable)	Insurance literacy	Understanding of business risks, coverage, exclusions, premiums and claims.
Mentoring (moderating variable)	Mentoring support	Access to a mentor; frequency and continuity of contact; mentor experience or relevant financial expertise; relevance of advice; feedback, modelling and follow-up support.
F&B MSME performance (dependent variable)	Profitability	Changes in sales margin, net profit or perceived profitability over a defined period.
F&B MSME performance (dependent variable)	Business expansion	Changes in outlets, production capacity, product range or market reach.
F&B MSME performance (dependent variable)	Employment generation	Changes in the number of paid workers.

Source: Authors' conceptual development based on the literature reviewed.

Theoretical Foundation

Knowledge-Based Theory

Knowledge-Based Theory treats knowledge as a strategically important resource and emphasizes the integration of specialized knowledge in organizational activity (Grant, 1996; Spender, 1996). Applied cautiously to owner-managed MSMEs, the theory suggests that an owner-manager's financial knowledge may inform resource allocation, financing choices and responses to uncertainty. The owner's knowledge is important but not sufficient: firm performance also depends on access to capital, employees, suppliers, customers and market

conditions. The theory therefore provides the rationale for examining financial literacy as a potentially valuable resource, not a deterministic claim that knowledge necessarily generates performance.

Social Learning Theory

Social Learning Theory explains learning through observation, modelling, interaction and the consequences of action (Bandura, 1977; Bandura, 1986). Bandura's (1997) account of self-efficacy is also relevant because owners may need confidence and guided practice to apply financial concepts under uncertainty. Mentoring can provide opportunities to observe a financial practice, discuss its rationale, receive feedback and adapt it to a business. This theory supplies a plausible explanation for why mentoring might affect the conversion of financial knowledge into action.

Integration and theoretical boundary

The theories perform different explanatory functions. Knowledge-Based Theory provides the resource logic for the proposed financial literacy-performance relationships; Social Learning Theory explains a plausible learning and application mechanism through which mentoring may condition those relationships. Neither theory independently proves the proposed paths or interaction effects. The propositions below are derived from the combination of theory and empirical literature and remain open to rejection. The framework is most defensible when mentoring is relevant to the financial domain, the owner has an opportunity to act, and resource or market constraints do not overwhelm the benefits of better decisions.

Conceptual Framework And Proposition Development

The outcome framework specifies F&B MSME performance as the dependent construct, five financial literacies dimensions as explanatory constructs, and mentoring as a moderator. Each direct proposition is grounded in the decision function of the relevant literacy domain. Each moderation proposition follows from the expectation that relevant mentoring can support application through modelling, feedback and guided practice. The theory section explains why these relationships are plausible; the propositions specify the relationships to be tested.

Direct relationships

Financial management literacy and performance

Financial management literacy is closely linked to recurring decisions about cash flow, inventory, operating costs and working capital. Such knowledge can help owners identify emerging cash shortages and make pricing or purchasing decisions using better information. Evidence on working-capital and financial management practices supports the practical importance of these routines (Amram et al., 2023; Venkatesan, 2024). Yet the proposed relationship is strongest when literacy is measured as knowledge and performance is measured independently, avoiding overlap between knowledge items and reported practices.

Proposition 1a (P1a): Financial management literacy is positively associated with F&B MSME performance in Sabah.

Saving literacy and performance

Understanding reserves can help owners prepare for demand fluctuations and unexpected costs, protecting continuity and reducing dependence on emergency borrowing. However, the relationship may be weaker where margins are too low to accumulate reserves or where excess cash retention sacrifices profitable investment. The proposition therefore concerns saving literacy as the capacity to make informed reserve decisions rather than the amount saved.

Proposition 1b (P1b): Saving literacy is positively associated with F&B MSME performance in Sabah.

Debt literacy and performance

Knowledge of borrowing costs, repayment schedules and contractual obligations can help owners distinguish productive finance from unaffordable debt. This is relevant in a sector where sales receipts may vary while

inventory and labour costs recur. Since access to finance and the suitability of debt are different constructs, the relationship is expected to reflect informed evaluation rather than a higher volume of borrowing.

Proposition 1c (P1c): Debt literacy is positively associated with F&B MSME performance in Sabah.

Investment literacy and performance

Investment literacy may improve assessment of risk, return, payback and resource fit before owners commit scarce capital to equipment, new products or expansion. The performance implications may emerge over a longer period and depend on demand, finance and implementation. The proposition is thus a directional expectation, not a claimthat every investment is beneficial.

Proposition 1d (P1d): Investment literacy is positively associated with F&B MSME performance in Sabah.

Insurance literacy and performance

Insurance literacy may help owners identify material exposures and understand whether coverage is suitable and affordable. Its contribution may be indirect and event-dependent: the benefit can appear as reduced losses or improved continuity rather than immediate revenue growth. This potentially weaker or delayed pathway makes empirical testing important.

Proposition 1e (P1e): Insurance literacy is positively associated with F&B MSME performance in Sabah.

Moderating role of mentoring

The following propositions concern interaction effects. They should not be inferred from a significant direct effect of mentoring or from a positive direct effect of financial literacy. Empirically, moderation requires testing the relevant interaction term and interpreting it alongside the main effects (Aiken & West, 1991; Frazier et al., 2004). The predicted direction is positive where mentoring is sufficiently relevant and effective to support application.

Financial management literacy

A mentor may help owners translate financial management knowledge into routines by reviewing records, demonstrating simple cash-flow forecasting and providing feedback on costs and margins. This support is likely to matter only if the advice is implemented and the records reflect business activity.

Proposition 2a (P2a): Mentoring positively moderates the relationship between financial management literacy and F&B MSME performance in Sabah.

Saving literacy

Mentoring may help owners set realistic reserve targets, separate business funds from personal funds and decide when reserves should be retained or reinvested. This may strengthen the relevance of saving literacy to performance, although a mentor cannot create surplus cash where the business has persistently inadequate margins.

Proposition 2b (P2b): Mentoring positively moderates the relationship between saving literacy and F&B MSME performance in Sabah.

Debt literacy

Mentoring may help owners interpret finance offers, compare repayment obligations and relate borrowing decisions to actual cash-flow patterns. Its moderating role is plausible when the mentor has relevant financial knowledge and provides advice aligned with the firm’s circumstances.

Proposition 2c (P2c): Mentoring positively moderates the relationship between debt literacy and F&B MSME performance in Sabah.

Investment literacy

Investment decisions involve uncertainty and trade-offs that may benefit from experience-based discussion. A mentor can challenge overly optimistic assumptions, help compare alternatives and consider timing and operating costs. This support may strengthen the link between investment literacy and performance, although it cannot remove market uncertainty.

Proposition 2d (P2d): Mentoring positively moderates the relationship between investment literacy and F&B MSME performance in Sabah.

Insurance literacy

A mentor may help owners identify relevant exposures, understand exclusions and compare protection options against the business's capacity. This could make insurance knowledge more actionable, although affordability and availability may constrain the ultimate decision.

Proposition 2e (P2e): Mentoring positively moderates the relationship between insurance literacy and F&B MSME performance in Sabah.

Composite financial literacy: an alternative model

A composite proposition can test whether mentoring moderates the relationship between an overall financial literacy construct and performance. This model represents the combined contribution of financial knowledge domains and is conceptually different from the five dimension-specific tests. However, the composite interaction should be estimated in a separate model from the dimension-level interactions. Including the overall score and all of its constituent dimensions in the same equation risks redundancy, multicollinearity and ambiguous interpretation.

Proposition 3 (P3): Mentoring positively moderates the relationship between overall financial literacy and F&B MSME performance in Sabah.

Summary of propositions

Based on the theoretical foundations and critical synthesis of the literature, eleven research propositions are developed to explain the proposed relationships between financial literacy, mentoring and F&B MSME performance. The propositions comprise five direct relationships between the dimensions of financial literacy and MSME performance, five moderation propositions examining the role of mentoring, and one alternative proposition involving overall financial literacy. Table 2 summarizes the proposed relationships and their expected directions.

Table 2. Summary of Research Propositions

Code	Proposed relationship	Expected direction
P1a	Financial management literacy → performance	Positive association
P1b	Saving literacy → performance	Positive association
P1c	Debt literacy → performance	Positive association
P1d	Investment literacy → performance	Positive association

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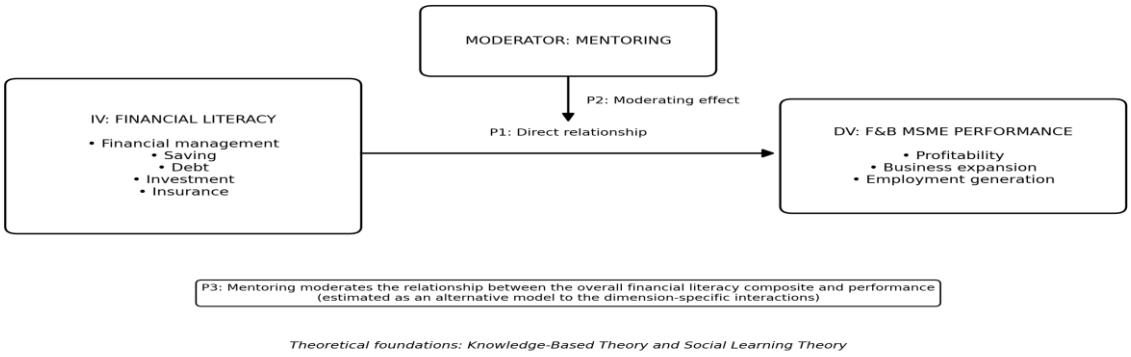
P1e	Insurance literacy → performance	Positive association
P2a	Mentoring × financial management literacy → performance	Positive interaction
P2b	Mentoring × saving literacy → performance	Positive interaction
P2c	Mentoring × debt literacy → performance	Positive interaction
P2d	Mentoring × investment literacy → performance	Positive interaction
P2e	Mentoring × insurance literacy → performance	Positive interaction
P3	Mentoring × overall financial literacy → performance	Positive interaction

Source: Authors' conceptual development based on the literature reviewed.

Proposed conceptual framework

Figure 1 presents the outcome framework. Knowledge-Based Theory and Social Learning Theory are the explanatory foundations for the framework, not additional variables in the outcome model.

Figure 1. Proposed conceptual framework



Source: Authors' conceptual development based on the literature reviewed

DISCUSSION AND CONTRIBUTIONS

The framework advances a conditional explanation of the financial literacy-performance relationship. Rather than assuming that financial literacy is a single, uniformly effective capability, it separates five domains that differ indecision content and temporal proximity to performance. Financial management literacy is closest to routine operating control; saving literacy concerns liquidity resilience; debt literacy concerns financing suitability; investment literacy concerns longer-horizon capital allocation; and insurance literacy concerns protection against adverse events. These distinctions imply that the magnitude and timing of associations may differ even if all five propositions are theoretically plausible.

The framework also makes the knowledge-application distinction explicit. Knowledge-Based Theory supports the premise that financial knowledge can inform decisions, but it does not imply that knowledge automatically changes organizational outcomes. Owners may lack time, capital, record systems or access to suitable financial products. Social Learning Theory offers a complementary explanation for mentoring: feedback, modelling and guided practice may make knowledge more usable. This is a proposed mechanism, not evidence that mentoring will moderate every path. A general mentoring measure may be too broad to capture support for insurance or debt decisions specifically.

A further contribution is the separation of direct and interaction propositions. Prior evidence that financial literacy predicts performance, or that mentoring is beneficial, cannot establish moderation. Future studies should test interaction terms directly and plot conditional associations where appropriate. The five dimension-level moderation propositions are most informative when mentoring measures reflect the relevance and quality of guidance. The overall financial literacy proposition should be tested as an alternative model rather than simultaneously with all component interactions.

The contextual contribution is deliberately bounded. Sabah's F&B MSMEs provide a meaningful setting because their daily financial decisions interact with sector-specific operating demands and regional conditions. Nevertheless, contextual relevance should not be confused with proof of uniqueness. The current review motivates a Sabah-specific test but does not establish, without a systematic region-specific search, that no earlier study has examined these relationships. Future research should document its search strategy and compare Sabah findings with other Malaysian regions or sectors where possible.

Implications For Research And Practice

Theoretical implications

The framework clarifies the division of labour between its theories: Knowledge-Based Theory explains why financial literacy is a potentially valuable knowledge resource, while Social Learning Theory explains how mentoring may support its application. It also treats moderation as an empirical proposition rather than a conclusion inferred from mentoring's direct effect. Finally, the model highlights that a composite financial literacy score and five separate dimensions answer different questions and should be analyzed transparently.

Practical and policy implications

For enterprise-support organizations, the framework suggests combining financial education with opportunities to apply learning to actual business decisions. Practical support could include cash-flow forecasting, working-capital planning, comparison of financing terms, investment appraisal and basic risk-protection reviews. Programme evaluation should distinguish knowledge gains from changed practices and business outcomes. Mentors should be matched to the financial issues owners face, and advice should account for firm size, business maturity, cash constraints and the local operating environment. These implications are provisional until the propositions are empirically tested.

Research design and measurement priorities

Future empirical work should define the population and MSME classification criteria, identify F&B subsectors, and account for firm age, size, owner experience, access to finance and market conditions. Financial literacy should be measured with indicators that distinguish objective knowledge from self-efficacy and enacted practices. Mentoring measurement should capture availability and, where feasible, frequency, relevance, feedback and mentor expertise. Performance may be measured through objective records, owner-reported changes or both; researchers should report the limitations of each approach.

Cross-sectional self-report designs may be vulnerable to common-method bias and reverse direction: better-performing firms may have more capacity to seek mentoring or financial training. Longitudinal designs, multiple information sources or carefully justified controls would improve inference. For moderation, researchers should mean-centre or otherwise appropriately scale predictors where justified, include main effects and interaction terms, and report conditional effects. A non-significant interaction would indicate a lack of support for that particular moderation proposition in the tested model, not proof that mentoring has no value in other circumstances.

Limitations And Future Research

This paper is a conceptual synthesis and does not estimate the proposed relationships. Its arguments depend on the quality and scope of the cited literature, much of which concerns settings beyond F&B MSMEs in Sabah. The five-dimensional conceptualization is useful for hypothesis development but requires measurement

validation; the dimensions may overlap, and the three performance indicators may not form a single reflective construct. The three dimensions of MSME performance (profitability, business expansion and employment generation) represent distinct but complementary aspects of enterprise performance. These dimensions collectively contribute to the overall assessment of MSME performance rather than necessarily reflecting a single underlying phenomenon. Accordingly, a formative measurement specification may be more conceptually appropriate, as each dimension captures a different aspect of enterprise outcomes. Nevertheless, this specification requires theoretical justification and empirical assessment in future research. Mentoring also varies by formality, quality and financial relevance. Future studies should validate the measures with Sabah F&B owners and relevant experts, test alternative performance specifications, and compare dimension-level and composite models. Qualitative interviews could first establish how owners understand and apply financial knowledge and what mentors actually do, followed by quantitative tests of the propositions.

CONCLUSION

This conceptual paper proposes a framework linking financial management, saving, debt, investment and insurance literacy with F&B MSME performance in Sabah, with mentoring as a potential moderator. The literature supports the relevance of financial literacy but also reveals heterogeneous definitions, measurement challenges and conditional pathways between knowledge and outcomes. Knowledge-Based Theory explains the resource logic of financial literacy, while Social Learning Theory offers a plausible explanation for mentoring's role in knowledge application. The propositions are therefore theoretically informed expectations, not established findings. By differentiating financial literacy domains, specifying interaction effects and clarifying measurement priorities, the framework provides a focused basis for future empirical work and for evaluating financial education and mentoring initiatives.

Declarations

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Conflict of interest: The authors declare no conflict of interest.

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