

Leveraging Human and Social Capital for Micro-Entrepreneurship Sustainability in Terengganu: A Conceptual Review

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Abstract

Micro-entrepreneurship is crucial in sustaining local economies, particularly in developing regions like Terengganu, Malaysia. However, micro-enterprises are constantly challenged by limited capital, poor digital readiness, and weak support networks. Drawing on the Resource-Based View (RBV) and Social Capital Theory (SCT), the contribution of human and social capital was discussed, focusing on how they contribute to entrepreneurial sustainability. Employing a conceptual, systematic review based on 65 academic sources, three theoretical propositions were presented on the impact of human and social capital. Also, a conceptual framework was developed to guide future empirical research. Importantly, the study emphasizes the synergistic interaction between human and social capital, highlighting that their integration yields greater resilience and adaptability than either form of capital alone. This approach extends RBV and SCT by situating them in the context of rural micro-entrepreneurship, contributing new insights to the sustainability literature and offering practical guidance for policymakers and entrepreneurship development programs.

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INTRODUCTION

Micro business owners face intensifying pressures to survive and adapt in a rapidly evolving economic landscape shaped by globalization, digitalization, and post-pandemic uncertainty (Lestari et al., 2024; Stephan et al., 2023; Shatila et al., 2025). In Malaysia, micro-enterprises remain central to employment and inclusion, with particular relevance in Terengganu's local economy (Fazal et al., 2022; SME Corp Malaysia, 2022). However, sustaining micro-enterprises in such settings continues to be challenged by resource and capability constraints that can weaken continuity and adaptive upgrading (Munawaroh et al., 2023; Safari & Das, 2023; Laila et al., 2025). Accordingly, sustainability should be understood not only through constraints but also through the capability configurations that enable recovery and longer-term growth (OECD, 2024; Hendratmi et al., 2024).

Research consistently identifies human capital such as education, technical and digital skills, entrepreneurial experience and social capital including networks, trust, and access to market information to be critical determinants of micro-entrepreneurial sustainability (Becker, 1962; Unger et al., 2011; Martin, McNally, &

Kay, 2013; Stephan et al., 2023; Jibril et al., 2024; Adler & Kwon, 2002; Davidsson & Honig, 2003; Watson, 2007; Muthee & Maina, 2023; Rijal et al., 2024; Kim & Heo, 2024; Dadhich et al., 2024). Recent conceptual developments, such as the Four Capitals Framework (Awang et al., 2025), have expanded this understanding by incorporating human and social capital, together with financial and intellectual resources, highlighting the importance of developing multiple forms of capital in harmony, particularly in rural contexts like Terengganu. However, the literature still under-specifies the mechanism of complementarity when and through what pathways social capital amplifies or conditions the effect of human capital on micro-enterprise sustainability because many studies model the two capitals as additive or independent predictors rather than as a conversion process (Davidsson & Honig, 2003). This gap is addressed by proposing a conceptual framework, based on literature (Jibril et al., 2024; Baptista et al., 2020), that links human and social capital to the sustainability of micro business ownership in Terengganu, providing direction for future research and policy.

BACKGROUND

Micro-enterprises are a cornerstone of Malaysia's economic structure, making up over 76% of all SMEs and contributing more than 38% to the business sector's GDP (SME Corp Malaysia, 2022: SME Annual Report). While sustainability challenges are national, regional differences shape micro-enterprise vulnerability. Comparative indicators such as digital access, sector concentration, and exposure to climate risk vary across Malaysian states; for example, household internet access differs by strata and location, and connectivity improvements are uneven across regions (DOSM, 2025). Likewise, state economic structures differ in their sectoral mix and dependence, which can influence how micro firms absorb shocks and access markets (SME Bank, 2025). Climate-related exposure also varies geographically, with Malaysia's east-coast states including Terengganu frequently associated with monsoon-related flood impacts and coastal vulnerability (Ariffin et al., 2023). These businesses are particularly critical in rural states like Terengganu, as they support local economies, create jobs, and drive inclusive development (Al Mamun et al., 2021; Jibril, 2024). Micro-enterprises empower vulnerable groups, as women and youth embark on self-employment and grassroots entrepreneurship (Jibril, 2024). Despite their significance, micro-enterprises are at risk of experiencing failure, as more than 60% do not survive beyond their first five years. Most failures are attributed to financial constraints, limited entrepreneurial education, weak business networks, and difficulties in adapting to digital transformation (Department of Statistics Malaysia, 2023; Safari & Das, 2023; Wang & Guedes, 2024). These challenges have intensified with the COVID-19 pandemic, highlighting the need for greater business continuity planning and accelerated digitalization (Stephan et al., 2023; Lestari et al., 2024).

Many micro-enterprises in Terengganu still rely on traditional business models and informal practices, increasing their vulnerability to market disruptions and external shocks (Seferiadis et al., 2023; Dadhich et al., 2024). Limited digital literacy and lack of access to formal financing or up-to-date market information can hinder their growth and sustainability significantly (Dadhich et al., 2024). Also, the absence of robust support systems and ecosystem linkages creates difficulties for micro business owners to navigate regulatory changes and exploit new opportunities (Baptista et al., 2020; Buratti & Menter, 2025). Addressing these barriers requires more than just financial support, as comprehensive strategies to strengthen both internal capacities (such as education and digital skills) and external linkages (such as social networks) are also crucial for building long-term resilience and adaptability among micro-entrepreneurs. Accordingly, the proposed framework highlights how human and social capital jointly support micro business sustainability in resource-constrained settings (Baptista et al., 2020; Jibril et al., 2024).

LITERATURE REVIEW

Micro-enterprise sustainability extends beyond short-term profitability and refers to the ability of firms to withstand shocks, adapt operations, and maintain stable livelihoods over time. In regional economies such as Terengganu, sustainability pressures are shaped by structural conditions, including sectoral concentration, exposure to climate risks, and uneven access to markets and finance. Prior work emphasizes that resilience is linked to individual capabilities and surrounding social systems rather than isolated financial indicators (Kraus et al., 2020; OECD, 2021). Accordingly, this

study conceptualizes sustainability as a multidimensional outcome encompassing business continuity, income stability, adaptive capacity, and responsible business practices. Building on this view, micro-enterprise sustainability increasingly relies on integrating multiple forms of capital particularly human and social capital because these resources interact to create reinforcing dynamics that strengthen resilience and adaptability (Adler & Kwon, 2002; Jibril et al., 2024). This synergy is especially salient in rural settings like Terengganu, where it can help micro-entrepreneurs overcome structural constraints and transition from survival-oriented activity toward sustainable, growth-oriented ventures (Rijal et al., 2024; Awang et al., 2025).

Micro-Entrepreneurship and Its Role in Sustainable Development

Micro-entrepreneurship comprises small-scale businesses, commonly operated by individuals or families with limited capital and often embedded in informal or underserved market contexts. Despite their modest scale, micro-enterprises play an important role in generating income, reducing unemployment, and supporting grassroots economic resilience, including in rural and semi-urban regions such as Terengganu (OECD, 2022; Jibril et al., 2024). In Malaysia, micro-enterprises are defined as firms with fewer than five employees and annual sales below RM300,000 (SME Corp Malaysia, 2022). Beyond livelihood creation, micro-businesses can contribute to local resource utilization and community empowerment, including participation by women and youth (Fazal et al., 2022; Subramaniam, 2024). Post-pandemic dynamics further elevate the importance of digital adoption as a pathway for continuity and market expansion (Kamaludin, 2023).

However, sustaining micro business ownership requires more than entrepreneurial initiative. Ongoing success depends on access to capital, market exposure, skill development, and robust support systems. Many micro-entrepreneurs continue to struggle with financial illiteracy, weak business networks, and a lack of formal training, and these barriers can undermine resilience and growth (Lestari et al., 2024; Wang & Guedes, 2024; Al Mamun & Uddin, 2025). Strengthening both human and social capital has become vital to enable micro-enterprises to adapt and thrive in dynamic environments (Baptista et al., 2020; Rijal et al., 2024). Importantly, micro-entrepreneurship is a key driver of the Sustainable Development Goals (SDGs), advancing decent work, gender equality, and poverty alleviation (Stephan et al., 2023; OECD, 2022). As stated in the SDGs, enabling environments, supported by targeted training, mentorship, and inclusive policies, are critical for helping micro-enterprises transition from survival to growth-oriented models (Subramaniam, 2024). Within this conceptual framework, micro business owners are seen not merely as operators, but as agents of community transformation. Their entrepreneurial efforts, deeply rooted in social and cultural contexts, influence their capacity to innovate, adapt, and sustain operations in Terengganu's evolving economic landscape.

Human Capital in Micro-Entrepreneurship

Human capital, in the form of knowledge, skills, and experience acquired through education, training, and personal development, is the element that forms the backbone of productive entrepreneurship (Becker, 1962; Schultz, 1993). In resource-constrained, rural areas like Terengganu, where formal training opportunities are scarce, human capital is essential for sustaining micro businesses and fostering resilience. Education and practical training build core entrepreneurial skills in areas such as financial management, marketing, and digital adaptation, enabling micro-entrepreneurs to navigate market shifts and operational risks (Unger et al., 2011; Baron & Tang, 2016; Stephan et al., 2023; Jibril et al., 2024). In Terengganu, informal platforms, community workshops, peer mentoring, and NGO initiatives often fill the training gap, and these efforts have helped entrepreneurs develop service quality, adopt digital tools, and improve business decision-making (Kamaru, 2023; Subramaniam, 2024).

Entrepreneurial experience, including lessons from both successes and failures, is the tools that build adaptability and psychological resilience, enhancing survival rates and risk management (Martin, McNally, & Kay, 2013; Vuong et al., 2020; Minniti & Bygrave, 2001). Today, digital literacy is increasingly vital, as literature shows that entrepreneurs adept in e-commerce, social media, and data analytics is more competitive and responsive to market disruptions like COVID-19 (Ince et al., 2023; Subramaniam, 2024).

Digital capability shapes sustainability by expanding market access, improving operational coordination, and enabling faster learning through online information channels. It also increases the effectiveness of social networks by turning connections into actionable resource channels (Kim & Jin, 2024). From the perspective of Terengganu, lifelong learning and an innovation mindset are critical for sustaining micro-enterprise growth. Collaborations between local institutions and communities can expand access to relevant skills and reduce the rural-urban divide (Tisdell & Merriam, 2025). Evidence links education and ongoing training to stronger sales growth, digital engagement, and business longevity (Fatoki, 2020). In summary, human capital equips Terengganu's micro-entrepreneurs with the capacity to learn, adapt, and innovate ensuring their businesses remain resilient, competitive, and contributors to inclusive regional development. Empirical evidence from Malaysia and the wider ASEAN context further indicates that skills development and digital upskilling can improve performance and stability, but these gains tend to be stronger when entrepreneurs are also embedded in supportive networks that provide mentoring, market information, and access to customers and supply chains (Hashim, 2023; Osman, 2025). This pattern implies that capitals operate jointly rather than independently, because human capital enhances capability, while social capital strengthens conversion of capability into market linkages and opportunities. Accordingly, the discussion now turns to social capital as the relational mechanism through which skills and knowledge translate into sustained micro-enterprise outcomes.

Social Capital in Micro-Entrepreneurship

Social capital refers to networks of relationships that enable entrepreneurs to access resources, information, and support (Bourdieu, 1986; Adler & Kwon, 2002). It encompasses both bonding social capital, like close ties with family and local communities, and bridging social capital, such as external links to customers, suppliers, and support agencies (Putnam, 2000; Westlund & Bolton, 2003). For micro business owners, both forms are vital for seizing business opportunities, acquiring market intelligence, and sustaining growth in competitive environments. Social capital strengthens a micro-entrepreneur's ability to secure financing, share market insights, and obtain emotional support when challenges arrive (Watson, 2007; Muthee & Maina, 2023). While strong professional networks allow business owners to access timely information and respond strategically to industry trends (Rijal et al., 2024; Kim & Heo, 2024). In Malaysia, micro business owners who build and leverage social networks are more likely to survive and innovate, especially in rural and semi-urban settings like Terengganu (Dadhich et al., 2024; Alauddin, 2024).

For Terengganu's micro-enterprises, community-based organizations, informal peer groups, and digital platforms have become especially important. These networks facilitate access to business information, mentorship, market entry, and digital upskilling can help entrepreneurs navigate the challenges of limited formal infrastructure and rapid economic changes (Subramaniam, 2024; Alauddin, 2024; Cau et al., 2024). Robust social capital is linked not only to improved business performance but also to greater adaptability in the face of crises, such as the COVID-19 pandemic (Jibril et al., 2024). Moreover, social capital fosters trust, experience sharing, and collaborative problem-solving, providing both practical and psychological support (Muthee & Maina, 2023; Botelho et al., 2024). Thus, in the context of micro-entrepreneurs in Terengganu, actively developing and leveraging these networks is a strategic necessity for business survival and growth. In summary, social capital is not merely a passive resource but a dynamic driver of innovation, collaboration, and long-term sustainability in the region's micro-enterprise sector.

The interaction between human and social capital represents a key mechanism shaping micro-enterprise sustainability because the two resources operate as complements. Human capital (skills, experience, managerial cognition) supports opportunity recognition, disciplined execution, and adaptive learning, while social capital provides information flows, finance pathways, market linkages, and trusted support that make opportunities actionable. Accordingly, strong skills with weak networks can constrain scaling and stability, whereas strong networks with weak skills can limit the

conversion of access into performance (Stam et al., 2014). Recent evidence further suggests that entrepreneurship outcomes may depend on human–social capital coupling, including threshold or nonlinear effects (Sheng et al., 2024), and that social capital can influence performance through capability pathways such as dynamic capabilities (Van Tran et al., 2024). These insights strengthen the rationale for a framework that specifies complementarity explicitly, rather than treating human and social capital as parallel predictors of sustainability.

METHODOLOGY

A qualitative, conceptual methodology was employed to develop a theoretical framework explaining how human and social capital contribute to micro-enterprise sustainability, particularly within the regional context of Terengganu, Malaysia. This approach is suitable for theory-building research that synthesizes existing knowledge to offer new perspectives (Jabareen, 2009; Tisdell & Merriam, 2025). No primary data was collected for this study. Instead, insights were synthesized from prior empirical studies, policy reports, and theoretical models to construct a conceptual framework reflecting the realities of micro-enterprises operating in resource-constrained environments. This method is well-suited for integrating fragmented findings from the literature and advancing new theoretical insights.

The literature review followed a systematic and purposive strategy, focusing on scholarly articles, government documents, and reports published between 2000 and 2024. The databases used are spread across Scopus, Web of Science, ScienceDirect, and Google Scholar. Inclusion criteria required that sources (i) address micro business ownership and sustainability, (ii) focus on human and social capital, and (iii) examine developing regions, especially Southeast Asia and Malaysia. In terms of keyword searches, terms like “micro business ownership,” “business sustainability,” “human capital,” “social capital,” and “conceptual framework” were used. Articles were screened based on relevance, publication quality, and citation frequency. Ultimately, a total of 65 sources were selected for review.

Thematic Analysis and Coding Steps

The next process after the completion of the relevant literature search is to perform a structured thematic analysis. This process synthesizes and organizes key constructs for the conceptual framework:

1. Initial Familiarization:

All selected sources were thoroughly reviewed to develop an in-depth understanding of their findings, theoretical bases, and contexts relating to micro-entrepreneurship, human capital, and social capital. Preliminary notes were made on recurring concepts, challenges, and context-specific observations.

2. Development of the Coding Scheme:

An initial coding framework was developed using a combination of deductive and inductive approaches. For deductive codes, they were derived from theoretical constructs identified in the research questions and literature (such as “entrepreneurial skills,” “network support,” “financial literacy,” and “digital readiness”). Next, inductive codes were generated from recurring themes emerging during the reading process (such as “community-based training,” “gendered barriers,” “informal business practices,” etc.).

2. Systematic Coding of Literature:

Each source was systematically analyzed, with relevant statements, findings, and insights coded using the predefined coding scheme. This step was carried out manually and organized in a spreadsheet for transparency. The coding was conducted in two main phases:

- Open Coding: All relevant concepts were identified and coded without restriction to capture the breadth of the literature.
- Axial Coding: Related codes were grouped, and interconnections between themes were identified, revealing broader thematic categories.

3. Theme Identification and Synthesis:

The codes were then organized into major thematic categories:

- Human Capital Dimensions (e.g., education, experience, digital skills)
- Social Capital Dimensions (e.g., networking, trust, community support)

- Barriers and Enablers (e.g., access to finance, institutional support, cultural factors)
- Outcomes (e.g., business longevity, adaptability, growth).

Thematic patterns and relationships were synthesized to illustrate how human and social capital interact and influence micro-enterprise sustainability.

4. Refinement and Validation:

Themes and their interrelationships were compared and cross-checked across multiple sources to ensure consistency and reliability. Any inconsistencies or unique findings were highlighted for discussion or as potential directions for future research. The thematic structure was periodically refined to ensure that accuracy and authenticity were reflected in the conceptual landscape.

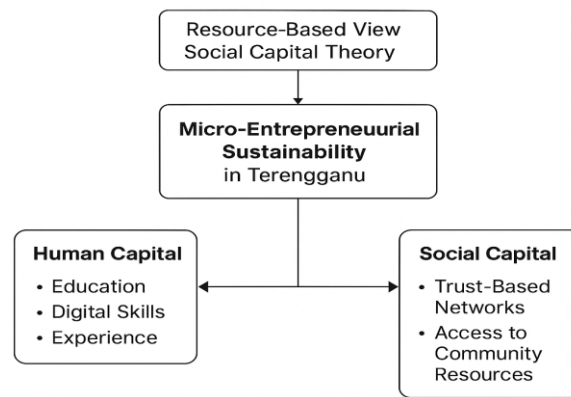
5. Framework Construction:

The finalized themes and the identified relationships served as the basis for constructing the conceptual framework, which visually and narratively represents how human capital and social capital contribute to micro-enterprise sustainability.

This transparent and systematic thematic analysis approach enhances the credibility and reproducibility of the study. The outcome, which is the conceptual framework, is robustly grounded in a comprehensive review of the literature and provides a foundation for future empirical research in the field. This framework is grounded in two key theoretical perspectives: the Resource-Based View (RBV), emphasizing the strategic value of internal resources such as skills and knowledge (Barney, 1991), and Social Capital Theory (SCT), which highlights how networks, trust, and relationships function as key external enablers of entrepreneurial success (Bourdieu, 1986; Adler & Kwon, 2002). Future empirical validation will test the conceptual framework using a structured survey of micro-entrepreneurs in Terengganu, with a target sample size planned to ensure adequate statistical power for SEM estimation and subgroup comparisons (Kock & Hadaya, 2018; Cheah et al., 2023). The unit of analysis will be the enterprise owner-operator, consistent with firm-level survey practice that collects responses from business owners and top managers (World Bank, 2026).

Key constructs will include human capital, social capital, digital capability, and sustainability outcomes (e.g., resilience, income stability, and business continuity), enabling empirical assessment of both direct effects and interaction pathways proposed in the framework (Cheah et al., 2023). Construct measures will be adapted from prior validated scales and refined through expert review and pilot testing to strengthen content validity and clarity (Morgado et al., 2017). Reliability will be assessed using internal consistency metrics (e.g., composite reliability) and indicator evaluation, while construct validity will be examined through convergent validity (e.g., AVE) and discriminant validity tests, prioritizing HTMT alongside conventional checks (Hair et al., 2014; Benitez et al., 2020). Common method bias will be addressed using both procedural remedies (e.g., item wording, separation of measures, anonymity) and statistical diagnostics appropriate for SEM/PLS-SEM, such as full collinearity assessment (Kock, 2015).

Although this study is conceptual in nature, the framework is designed to guide future empirical research. Approaches such as structural equation modelling (SEM), case studies, or longitudinal mixed-methods designs can be used to validate and refine the relationships proposed empirically. These conceptual insights aim to advance theory development and inform policy interventions to strengthen grassroots entrepreneurship in resource-constrained environments.



Conceptual Framework

The conceptual framework illustrates how human capital and social capital jointly influence the sustainability of micro-business ownership in Terengganu, grounded by the Resource-Based View (RBV) and Social Capital Theory (SCT). While the focus was initially put on these two forms of capital, Awang et al. (2024) proposed a broader model incorporating four interdependent capitals, human, social, financial, and intellectual, and regarded these capitals are essential to sustaining micro-entrepreneurship in the same regional context. Although narrower in scope, the present framework aligns with the foundational principles of RBV by emphasizing strategic resource utilization and reinforcing the relevance of a multidimensional capital approach. In this framework, the Human Capital encompasses internal entrepreneurial capabilities such as education, digital literacy, and experiential knowledge that strengthen decision-making and adaptability, while Social Capital represents the external relational assets such as trust-based networks, community ties, and informal support systems that enhance access to information and resources. The directional arrows in the framework represent the complementary and synergistic interaction between these two capitals, supporting the core argument that the resilience and long-term viability of rural micro-enterprises are best achieved through the integration of internal competencies and external social networks.

LIMITATIONS OF CONCEPTUAL STUDIES

A key limitation of conceptual research is the absence of primary empirical data, which restricts the ability to test causality or generalize findings to specific populations. The validity of the developed framework heavily depends on the quality and context of existing literature, which may introduce bias or result in the oversight of emerging trends. Without empirical support, proposed conceptual relationships remain theoretical and untested, limiting their immediate applicability. Additionally, conceptual models often require future empirical validation to confirm their practical significance and contextual relevance. This is particularly important in unique or localized contexts, such as Terengganu's micro-enterprise sector, where generalized assumptions may not hold true. As such, while conceptual studies provide valuable theoretical foundations and guide future research, their limitations underscore the importance of follow-up empirical work. Recognizing these constraints helps in interpreting findings cautiously and encourages a balanced integration of theory and evidence in scholarly research, especially within evolving research environments.

FINDINGS

Drawing on a comprehensive literature review, this conceptual analysis reveals the centrality of human and social capital for micro-enterprise sustainability in Terengganu. Key themes from the literature are presented below, accompanied by specific propositions to guide future research. These themes are grounded in theoretical underpinnings and supported by empirical studies across comparable contexts, highlighting their relevance and transferability. The integration of theory and context-specific variables ensures a nuanced framework for future empirical validation.

Human Capital and Entrepreneurial Sustainability

Human capital, comprising education, experience, skills, and cognitive abilities, enables entrepreneurs to make informed decisions, innovate, and navigate business challenges. In micro-enterprises, these capitals enhance financial management, marketing acumen, and adaptability to market shifts. Empirical studies have consistently found that entrepreneurs with robust human capital are more likely to sustain long-term operations and create competitive advantages (Barney, 1991; Fazal et al., 2022; Subramaniam, 2024). In Terengganu, owners with superior digital literacy, financial knowledge, and entrepreneurial experience are expected to demonstrate greater resilience in uncertain markets. Also, learning capacity and problem-solving skills further contribute to strategic agility (Tisdell & Merriam, 2025). Moreover, human capital development is essential for micro-enterprises facing rapid technological changes and evolving consumer preferences. Formal and informal training, mentorship, and continuous education are vital strategies to strengthen individual competencies. Based on the proposed conceptual framework, three propositions were proposed, including:

Proposition 1 (P1):

Human capital positively influences the sustainability of micro-enterprises by enhancing entrepreneurial competence and strategic decision-making.

Social Capital and Community-Based Support

Social capital consists of networks, trust, norms, and relationships that foster cooperation and support. In rural and semi-urban Terengganu, social capital is embedded in religious, family, and neighbourhood networks, opening access to market information, emotional support, and resources often unavailable through formal channels (Adler & Kwon, 2002; Bourdieu, 1986). Thus, high levels of social capital are linked to improved business continuity and adaptive capacity, particularly where formal infrastructure is limited (Wang & Guedes, 2023; Lestari et al., 2024). Strong social ties can also mitigate the effects of economic shocks and policy fluctuations by providing informal safety nets. These networks are especially critical in environments where micro-entrepreneurs operate with limited financial and institutional resources. Trust-based relationships often replace formal contracts, reducing transaction costs and enhancing cooperation.

Proposition 2 (P2):

Social capital strengthens the sustainability of micro-enterprises by facilitating access to resources, support, and knowledge networks.

Interdependency of Human and Social Capital

The interaction between human and social capital is foundational to this framework. Human capital increases an entrepreneur's capacity to spot and exploit opportunities, while social capital provides critical external resources and support. Successful entrepreneurs are the ones who can combine high competence with strong networks, and they will be in a better position to recover from setbacks and adapt to changes. This harmony reflects the Resource-Based View (RBV) and Social Capital Theory (SCT), where internal strengths are reinforced by external assets (Barney, 1991; Adler & Kwon, 2002). Recent evidence further shows that social capital can strengthen the contribution of human capital to SME performance, reinforcing the idea that capabilities yield greater returns when embedded in supportive networks (Hashim et al., 2023). This synergy enables entrepreneurs to mobilize both tangible and intangible resources, boosting innovation, resilience, and performance. Furthermore, the dynamic interplay between these two forms of capital can generate cumulative advantages over time, especially when embedded in culturally cohesive and trust-rich communities. Integrated frameworks that consider both capitals provide a more realistic model for analyzing entrepreneurial sustainability in developing regions.

Proposition 3 (P3):

The interaction between human and social capital has a synergistic effect on business sustainability in resource-constrained environments. The interaction between human and social capital creates a synergistic effect that significantly strengthens micro-enterprise sustainability in resource-constrained environments like Terengganu. Human capital equips entrepreneurs with essential skills and adaptability (Unger et al., 2011), while social capital offers networks, trust, and access to critical resources (Adler & Kwon, 2002). The synergy mechanism is expected to operate through network activation efficiency: human capital supports the strategic use of ties (e.g., targeting customers, suppliers, and financing), while digital literacy reduces coordination costs and expands network reach. As a result, the same network can generate higher utility for sustainability outcomes (Talip & Wasiuzzaman, 2024). When integrated, these capitals reinforce each other enabling entrepreneurs to seize opportunities and adapt to change thus affirming that long-term resilience depends on both internal competencies and external support systems (Jibril et al., 2024). Therefore, a combined focus on capacity-building and community engagement is crucial for sustainable development in the micro-enterprise sector.

DISCUSSION

The proposed conceptual framework highlights that micro-enterprise sustainability arises not from internal capacity or external support alone, but from their strategic alignment (Mamun et al., 2018; Ibrahim et al., 2024). The literature shows that Terengganu's micro business owners benefit most when human and social capital are mutually cultivated to foster resilience, innovation, and adaptability (Halim et al., 2022; Hazudin et al., 2023). This insight supports the notion that policies and capacity-building programs should spread its focus, rather than just individual skill development (Latip & Othman, 2020; Mamun et al., 2021). Efforts must be strengthened in terms of community-based networks and collaborative platforms (Zainol et al., 2018; Mustapha et al., 2020). Integrating informal social safety nets, religious networks, and peer mentoring programs into micro-enterprise policy frameworks can further enhance knowledge sharing and business continuity, particularly in culturally cohesive settings like rural Terengganu (Saufi et al., 2021; Sanusi & Kusairi, 2017). Furthermore, the proposed propositions (P1, P2, P3) provide a clear foundation for empirical testing using structural equation modelling, in-depth case studies, or comparative surveys (Hazudin et al., 2023; Ibrahim et al., 2024). Incorporating mixed-methods approaches could also enrich understanding of gender, religion, and digital literacy as moderating factors in capital-sustainability dynamics (Hashim et al., 2023; Mamun et al., 2020).

Future research can also explore variations in these relationships across different regions or industry sectors, assessing how context influences the interplay between capital resources and sustainability (Mamun et al., 2019; Hashim et al., 2023). Regional variation across Malaysia can be explained by differences in infrastructure and digital inclusion, institutional support capacity, network structure, and sectoral exposure to place-based risks. For example, uneven digital access and capability gaps in peripheral regions can condition the returns to digitalization and market-linkage strategies, making digital access a context-sensitive mechanism (Fang et al., 2022). Similarly, SME outcomes are shaped by institutional and policy environments that vary in effectiveness across settings, implying that state-level comparisons can help distinguish mechanisms that are contingent on institutional support from those that are more general (Falahat et al., 2020). In addition, exposure to recurrent hazards (e.g., monsoon-related flooding) differs spatially and can amplify micro-enterprise vulnerability, strengthening the value of network-based support during shocks and recovery (Rosmadi et al., 2023; Ghani & Jan, 2025). Ultimately, this conceptual synthesis enriches theoretical discourse and informs targeted policy interventions designed to enhance the sustainability and transformative potential of micro-enterprises in Terengganu and similar regions (Mamun et al., 2020; Halim et al., 2022).

CONCLUSION AND POLICY RECOMMENDATIONS

This conceptual paper underscores the vital roles of human and social capital in fostering the sustainability of micro-enterprises in resource-constrained regions such as Terengganu. By extending the Resource-Based View (RBV) and Social Capital Theory (SCT) to rural micro business ownership, the proposed framework clarifies that sustainability emerges from the strategic alignment of entrepreneurial competencies and community-embedded networks, rather than

from internal capacity or external support alone (Mamun et al., 2018; Ibrahim et al., 2024). Specifically, financial literacy, experiential learning, adaptive capacity, and digital capability strengthen micro-entrepreneurs' decision quality and responsiveness, while social capital provides trust-based access to resources, information flows, and informal safety nets that stabilize operations under shocks (Halim et al., 2022; Hazudin et al., 2023).

Consequently, policy should target mechanisms that convert capabilities and relationships into sustainability outcomes, not treat micro-enterprise survival as a generic funding shortfall. Targeted digital upskilling can expand market access, improve coordination, and accelerate learning, consistent with evidence that digital capabilities raise entrepreneurial performance in SMEs (Kim & Jin, 2024). Community-based financing that leverages trusted local ties (e.g., group lending) can reduce information asymmetry through peer selection and monitoring, strengthening repayment discipline and business continuity (Malhotra, 2026), while broader evidence links higher social capital to lower default risk in credit markets (Lu et al., 2020). Mentorship should be designed as “coach–cash–connect,” pairing skills development with financing pathways and market linkages so that entrepreneurs can translate learning into market participation (Thawesaengskulthai et al., 2025). Taken together, these recommendations operationalise the proposed network-activation pathway and align capacity-building with the social infrastructure through which resources are mobilised.

To translate these insights into effective practice, the following actionable recommendations are proposed for policymakers and entrepreneurship programs in Terengganu:

1. *Establish Integrated Entrepreneurship Development Centres:*

Based on in this proposal, dedicated centres should be developed to deliver comprehensive training in financial management, digital literacy, and business operations. These centres should collaborate with local educational institutions and industry stakeholders to offer both classroom-based and experiential learning opportunities tailored to the needs of rural micro-entrepreneurs.

2. *Facilitate Community-Driven Networking and Digital Engagement:*

Under this initiative, regular networking sessions, digital forums, and business clinics can be organised to strengthen relationships among micro-entrepreneurs, mentors, and support agencies. The emphasize should be put on the adoption of digital platforms to broaden market access, encourage knowledge sharing, and cultivate peer support, particularly in underserved communities.

3. *Expand Access to Inclusive Microfinance and Social Support Mechanisms:*

In here, the reach of community-based microfinance programs and cooperative savings initiatives that prioritize women, youth, and marginalized groups must be actively carried out. Leverage trusted local networks, such as religious or neighbourhood associations to deliver financial products, advisory services, and group-based business support, thereby reinforcing both economic and social resilience.

Future research should empirically validate the proposed conceptual framework across diverse regional settings and socioeconomic groups, utilizing mixed methods or structural equation modelling. This work will not only strengthen the theoretical foundation of micro-enterprise sustainability but also inform more targeted and effective policy interventions for rural development.

CONTEXTUAL CONTRIBUTION

This study offers a critical and timely contribution by recontextualizing human and social capital as joint drivers of micro-entrepreneurship sustainability within rural Malaysia, especially Terengganu. While prior models often isolate these capitals, the authors propose a synergistic framework rooted in Resource-Based View (RBV) and Social Capital Theory, contextualized for low-resource, semi-urban environments. This effort is significant given that recent work by Ahmad et al. (2021) showed that strong interpersonal networks must complement human capital development in SMEs to ensure post-pandemic sustainability in emerging economies. Similarly, Kadiyono and Susanto (2025) affirmed the dual role of digital literacy and community-based support systems in boosting microenterprise resilience in Indonesia,

an economy structurally similar to Malaysia's rural sectors. The paper builds on these findings by offering a tailored framework that reflects the local economic geography and cultural dynamics of Terengganu.

In practical terms, this research fills a crucial gap by providing a localized, theory-driven roadmap for policy and grassroots development. As Laila et al. (2025) explained, rural micro-entrepreneurs in Southeast Asia increasingly rely on social trust networks and informal mentoring to navigate limited access to capital and infrastructure. Their emphasis on strengthening these dimensions is echoed in Setiawan (2023), who advocated for multi-stakeholder programs that integrate digital skills, community leadership, and peer collaboration. Furthermore, the concept introduced here aligns with cross-regional evidence from Reniati et al. (2024), which showed that social capital directly moderates the effect of human capital on business continuity in underdeveloped regions. Thus, conceptual enrichment and evidence-based policy relevance were emphasized here, by arguing that sustainable micro-enterprise development must go beyond individual competencies and involve collective social mechanisms to support inclusive rural growth

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