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Financial Literacy Among SMEs: Over-Indebtedness Causes, Consequences, and Regulatory Measures in Malaysia

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ABSTRACT

This study explores the growing issue of over-indebtedness among Malaysian SMEs, where microfinance intended to promote financial inclusion has, paradoxically, created cycles of debt. The research highlights a gap in understanding how multiple borrowing, financial illiteracy, and weak regulatory enforcement combine to push SMEs into financial distress, especially with the rise of digital lenders. Using a qualitative case study approach, semi-structured interviews were conducted with 20 stakeholders, including SME owners, microfinance managers, and regulators. Thematic analysis was applied to uncover systemic, institutional, and behavioral drivers of over-indebtedness. Findings reveal that SMEs often rely on sequential borrowing, with new loans servicing old debts, creating debt spirals. Institutional pressures such as easy loan approvals and aggressive marketing amplify risks, while fragmented regulation leaves loopholes. The study concludes that SME over-indebtedness reflects systemic failure rather than individual mismanagement, calling for stronger credit registries, borrower education, and regulatory reform to ensure sustainable microfinance.

1. Introduction
1.1. Background to the Research

Small and medium enterprises (SMEs) represent the backbone of Malaysia's economy, accounting for 98.5% of business establishments and contributing significantly to employment and national GDP [1]. Access to financing has always been a critical determinant of SME growth and survival, and microfinance has been promoted as an effective instrument to reduce financial exclusion. Microfinance institutions (MFIs), ranging from banks and cooperatives to emerging fintech

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lenders, have expanded rapidly by offering more accessible credit to SMEs that are often denied traditional bank financing due to collateral requirements and risk perceptions [2].

While microfinance has undeniably supported entrepreneurship, it has also introduced risks of over-indebtedness. Multiple borrowing from different MFIs, often taken to address short-term cash flow needs, can quickly lead to unsustainable debt burdens [3]. The problem is compounded by high interest rates, opaque lending practices, and the aggressive marketing strategies employed by some digital lenders [4]. Fintech platforms, despite broadening credit accessibility, frequently prioritize speed of approval over affordability assessments, leaving borrowers exposed to repayment shocks [5]. Furthermore, many SME owners lack adequate financial literacy, which limits their ability to evaluate loan terms or repayment capacity, making them vulnerable to excessive borrowing [6].

Although Bank Negara Malaysia has introduced *Guidelines on Responsible Financing* [7] and established centralized reporting systems such as Central Credit Reference Information System (CCRIS), the persistence of over-indebtedness suggests enforcement gaps, particularly among non-bank and digital MFIs [2]. The situation has systemic implications: widespread SME defaults could erode investor confidence, destabilize credit markets, and undermine Malaysia's financial inclusion goals [8].

Previous research has predominantly examined the role of microfinance in expanding credit access and supporting SME growth but has given less attention to its unintended consequences, particularly the structural problem of over-indebtedness in Malaysia's SME sector. This study addresses this gap by investigating the drivers and repercussions of over-indebtedness, with specific focus on multiple borrowing, lender practices, and regulatory shortcomings. The objective is to critically analyze how these factors interact to create debt traps and to evaluate the adequacy of existing regulatory measures. The significance of this research lies in its contribution to sustainable microfinance practice which offers evidence-based recommendations to policymakers, regulators, and financial institutions to balance financial inclusion with long-term SME resilience [9].

1.2. Problem Statement

Microfinance has long been heralded as a vital tool for fostering entrepreneurship and alleviating financial exclusion among small and medium enterprises (SMEs) in Malaysia. However, beneath its apparent benefits lies a growing crisis of over-indebtedness, where SMEs accumulate unsustainable debt burdens that threaten their survival and the stability of the broader financial ecosystem. While microcredit is designed to empower businesses, the reality is that many Malaysian SMEs are caught in a cycle of multiple borrowing, taking loans from several microfinance institutions (MFIs) simultaneously to meet immediate cash flow needs, only to find themselves trapped in a spiral of compounding repayments [10]. This phenomenon is exacerbated by aggressive lending practices among some MFIs, which prioritize rapid loan disbursement over rigorous affordability assessments, leaving SMEs vulnerable to financial distress [11].

A critical factor contributing to this predicament is the lack of financial literacy among SME owners, many of whom struggle to evaluate their repayment capacity or understand the long-term implications of high-interest borrowing [12]. Without proper financial management skills, even well-intentioned entrepreneurs may underestimate their debt obligations, leading to loan defaults, asset seizures, and business closures [13]. Compounding this issue is the fragmented regulatory landscape, where enforcement mechanisms remain inconsistent across different types of lenders, including traditional banks, cooperatives, and fintech-based MFIs [14]. While regulatory frameworks such as the Guidelines on Responsible Financing exist, gaps in oversight allow some lenders to engage in predatory practices, including hidden fees and coercive loan rollovers, further entrenching SMEs in debt [15].

The consequences of unchecked over-indebtedness extend far beyond individual businesses. A surge in SME defaults could destabilize the microfinance sector, eroding investor confidence and tightening credit access for future borrowers [16]. Moreover, widespread business failures would have ripple effects on employment, supply chains, and economic growth, particularly in sectors heavily reliant on SMEs, such as retail, agriculture, and small-scale manufacturing [17]. If left unaddressed, this issue risks undermining Malaysia's financial inclusion goals, transforming microfinance from a tool of empowerment into a source of systemic vulnerability.

This study seeks to critically examine the drivers and repercussions of SME over-indebtedness in Malaysia, with a focus on multiple borrowing behaviors, lender practices, and regulatory shortcomings. By identifying the structural weaknesses in the current microfinance ecosystem, the research aims to propose actionable policy and institutional reforms that can prevent debt traps while preserving access to credit for deserving SMEs. The findings will be particularly relevant to policymakers, financial regulators, and MFIs striving to balance financial inclusion with sustainable lending practices.

2. Literature Review

2.1. Causes of Over-Indebtedness in SMEs

The phenomenon of over-indebtedness among SMEs has been widely studied, with scholars identifying multiple interconnected factors that contribute to unsustainable debt burdens. One of the most pervasive issues is multiple borrowing, where SMEs secure loans from several microfinance institutions (MFIs) simultaneously, often without complete transparency to lenders. Schicks [26] argues that this practice creates a dangerous debt spiral, as businesses take on new loans to service existing ones, ultimately leading to repayment defaults. In Malaysia, where the microfinance sector has expanded rapidly, this problem is particularly acute among small traders and micro-entrepreneurs who rely on informal credit networks alongside formal MFIs [2]. The lack of a centralized credit registry in some segments of the market exacerbates the issue, allowing borrowers to conceal their existing liabilities from new lenders [7].

Another critical driver of over-indebtedness is the high interest rates imposed by certain MFIs, which disproportionately affect cash-strapped SMEs. Armendáriz and Morduch [5] highlight that while microcredit is often marketed as a tool for poverty alleviation, some lenders charge exorbitant rates that erode profit margins and leave businesses struggling to break even. This is especially problematic in competitive markets where SMEs have limited bargaining power, forcing them to accept unfavorable loan terms. In Malaysia, fintech-based digital lenders have been criticized for their opaque pricing models, which sometimes include hidden fees that borrowers only discover after committing to loans [32]. The combination of high interest rates and short repayment periods creates a perfect storm for financial distress, particularly for SMEs with irregular cash flows.

External economic shocks further amplify the risk of over-indebtedness, as seen during the COVID-19 pandemic, which forced many SMEs to borrow excessively to survive lockdowns and supply chain disruptions. Demirgüç-Kunt et al. [11] found that crisis-induced borrowing often leads to long-term financial instability, as businesses accumulate debt without a clear path to recovery. In Malaysia, government relief programs provided temporary respite, but many SMEs still turned to high-cost informal lenders when formal credit channels were inaccessible [18]. The lingering effects of such shocks underscore the vulnerability of SMEs to macroeconomic volatility and their reliance on debt as a coping mechanism.

2.2. Consequences of Over-Indebtedness

The repercussions of over-indebtedness extend far beyond individual businesses, affecting entire economic ecosystems. At the micro level, SMEs burdened with unsustainable debt often face business failures, as loan repayments consume the working capital needed for operations and growth. Banerjee and Duflo [6] caution that excessive debt can stifle entrepreneurship, forcing business owners to divert resources away from innovation and toward servicing liabilities. In Malaysia, where SMEs employ nearly half of the workforce, widespread defaults could trigger job losses and reduce household incomes, perpetuating cycles of poverty [12].

Over-indebtedness also leads to financial exclusion, as defaulting borrowers are blacklisted by credit bureaus and denied future loans. Karlan and Zinman [19] describe this as a “double punishment,” where SMEs are penalized not only for their inability to repay but also for their reduced access to future financing. In Malaysia, the Credit Counselling and Debt Management Agency (AKPK) has reported a rise in SME delinquencies, with many owners unaware of debt-restructuring options [20]. This exclusion exacerbates inequality, as marginalized groups such as women-led SMEs and rural enterprises face disproportionate barriers to re-entering the financial system.

2.3. Regulatory Measures in Malaysia

Recognizing these risks, Malaysian authorities have introduced measures to promote responsible lending. Bank Negara Malaysia’s Guidelines on Responsible Financing [7] mandate affordability checks and require lenders to assess borrowers' repayment capacity. However, enforcement remains inconsistent, particularly among non-bank MFIs [21]. The establishment of Credit Bureau Malaysia (CCRIS) has improved transparency, but gaps persist in monitoring informal lenders. Moving forward, experts advocate for stronger cross-sector coordination and borrower education to complement regulatory efforts [22].

2.4. Theoretical Framework
2.4.1. Theories Underpinning the Study

The examination of over-indebtedness in SME microfinancing necessitates a robust theoretical foundation to understand its underlying mechanisms and systemic implications. Two pivotal theories provide critical lenses for analyzing this phenomenon: Minsky’s [23] Debt Trap Theory and Stiglitz and Weiss’ [24] Information Asymmetry framework. These theories collectively illuminate how financial structures, lending practices, and information gaps contribute to unsustainable debt cycles among SMEs.

Minsky’s Debt Trap Theory offers profound insights into how ostensibly beneficial credit access can transform into financial instability. Minsky [23] postulated that economic stability itself breeds complacency, leading lenders and borrowers to engage in increasingly risky financial behaviors. In the context of Malaysian SMEs, this manifests when initial successful loan experiences encourage both MFIs and entrepreneurs to expand borrowing without adequate consideration of repayment capacity. The theory identifies three borrower classifications: hedge, speculative, and Ponzi, which progressively reflect worsening financial fragility. Many Malaysian SMEs initially operate as hedge borrowers (capable of servicing both principal and interest) but transition to speculative (servicing only interest) and ultimately Ponzi borrowers (relying on new loans to repay old ones) as they accumulate multiple microfinance loans [22]. This progression mirrors Minsky’s financial instability hypothesis, where the microfinance sector's growth paradoxically sown the seeds of its destabilization through normalized over-lending practices.

Complementing this perspective, Stiglitz and Weiss' [24] Information Asymmetry theory elucidates how knowledge disparities between lenders and borrowers perpetuate systemic risks in microfinance. The theory's core premise is that lenders cannot perfectly observe borrowers' true risk profiles, which creates adverse selection and moral hazard problems that are particularly acute in SME financing. In Malaysia's microfinance sector, MFIs frequently lack comprehensive data on borrowers' existing liabilities due to fragmented credit reporting systems [7]. This information gap leads to two critical failures: first, lenders cannot accurately price risk, resulting in uniform interest rates that may be unsustainable for higher-risk borrowers; second, SMEs have incentives to conceal their indebtedness when ap'lying for additional loans [32]. The resultant credit market inefficiencies'align with Stiglitz and Weiss' predictions, where imperfect information leads to suboptimal lending outcomes and potential market failures.

The interplay between these t'eories reveals a self-reinforcing cycle of over-indebtedness. Minsky's framework explains the behavioral and structural drivers pushing SMEs toward precarious debt positions, while Stiglitz and Weiss' model demonstrates how institutional and informational constraints prevent lenders from effectively mitigating these risks. This theoretical synthesis proves particularly relevant in Malaysia's evolving financial landscape, where the rapid growth of digital microfinance platforms has simultaneously increased credit access and amplified information asymmetries [25]. Contemporary research has extended these theories to account for fintech disruptions, noting how algorithm-driven lending may paradoxically worsen information gaps by relying on alternative data that fails to capture holistic repayment capacity [14].

These theoretical perspectives collectively inform the study's conceptual framework by identifying the micro-level decision-making processes (Minsky) and macro-level market imperfections (Stiglitz & Weiss) that require policy intervention. They suggest that sustainable solutions must address both borrower financial literacy and lender risk assessment capabilities while accounting for systemic information infrastructure limitations. The theories' predictive power has been demonstrated in post-pandemic Malaysia, where emergency borrowing during COVID-19 lockdowns created precisely the kind of debt instability Minsky anticipated, exacerbated by the information gaps Stiglitz and Weiss described [24]. This theoretical foundation not only explains current challenges but also provides a framework for evaluating potential regulatory and institutional reforms.

2.4.2. Conceptual Framework

The conceptual framework of this study integrates the theoretical foundations discussed earlier into a structured model that elucidates the relationships between key variables influencing SME over-indebtedness in Malaysia. At its core, the framework identifies multiple borrowing, interest rates, and financial literacy as critical, independent variables that directly contribute to the dependent variable of over-indebtedness. These relationships are further moderated by the effectiveness of regulatory measures, which can either exacerbate or mitigate the risk of unsustainable debt accumulation. This framework not only aligns with Minsky's Debt Trap Theory and Stiglitz and Weiss' Information Asymmetry model but also contextualizes them within the unique dynamics of Malaysia's microfinance ecosystem.

Multiple borrowing emerges as a primary driver of over-indebtedness, reflecting Minsky's notion of progressive financial fragility. When SMEs access loans from various microfinance institutions (MFIs) without full disclosure of existing liabilities, they often underestimate their repayment obligations, leading to a dangerous cycle of refinancing and debt stacking [26]. This behavior is particularly prevalent in Malaysia, where the lack of a centralized credit registry for non-bank lenders enables borrowers to obscure their actual indebtedness [7]. The framework positions multiple borrowing as a self-reinforcing variable: as SMEs take on additional loans to service existing ones, their financial instability intensifies, validating Minsky's prediction that stability breeds risk-taking.

Interest rates function as another pivotal independent variable, with their impact on over-indebtedness mediated by the affordability of debt servicing. High interest rates, often charged by alternative lenders and fintech platforms, disproportionately strain SMEs with thin profit margins [5]. In Malaysia, where digital lenders operate with less stringent pricing regulations than traditional banks, opaque fee structures can obscure the actual cost of borrowing, leaving SMEs vulnerable to repayment shocks [32]. This variable interacts with multiple borrowing, as high rates on successive loans compound repayment burdens, accelerating the transition from hedge to Ponzi borrowing described by Minsky.

Financial literacy serves as both an independent variable and a moderating factor, influencing how SMEs navigate borrowing decisions and debt management. Stiglitz and Weiss' emphasis on information asymmetries is particularly relevant here: when SME owners lack the skills to evaluate loan terms or project cash flows, they are more likely to underestimate risks and overestimate repayment capacity [14]. In the Malaysian context, financial literacy gaps are pronounced among rural SMEs and informal sector businesses, which often rely on verbal agreements and subjective lender assessments [27]. The framework incorporates financial literacy as an upward arrow influencing the primary relationship between borrowing and over-indebtedness, illustrating its potential to either amplify or dampen the debt trap effect.

The regulatory environment operates as the framework's moderating variable, determining the extent to which structural safeguards prevent or permit over-indebtedness. Effective regulations such as mandatory credit checks, interest rate caps, and borrower education program scans disrupt the vicious cycle predicted by Minsky and mitigate the information asymmetries highlighted by Stiglitz and Weiss [24]. Conversely, lax enforcement or fragmented oversight, as seen in Malaysia's uneven application of responsible lending guidelines across bank and non-bank MFIs, allows predatory practices to flourish [1]. The framework positions regulatory effectiveness as a balancing force, with the potential to weaken the causal pathways between independent variables and over-indebtedness when robustly implemented.

2.4.3. Research Questions

This study is guided by three central research questions that collectively address the phenomenon of SME over-indebtedness from causative, consequential, and regulatory perspectives.

The first question: What are the primary causes of over-indebtedness among Malaysian SMEs? Seeks to uncover the complex interplay of factors that push small businesses into unsustainable debt cycles. Existing literature suggests this involves not just obvious financial pressures like cash flow shortages [25] but also behavioral factors such as optimism bias in repayment capacity assessments [14] and structural issues like the proliferation of easy-access digital lenders [32].

The second question: How does multiple borrowing impact SME sustainability? Probes beyond immediate financial distress to examine longer-term consequences, including reduced investment in business growth [2] and the psychological toll on entrepreneurs [27].

The third question: What regulatory measures can mitigate over-indebtedness risks? Shifts focus to solutions, investigating how Malaysia's unique regulatory environment could be strengthened based on international best practices [7] while accounting for local market peculiarities like the coexistence of formal and informal lenders [11].

2.4.4. Research Objectives

The study pursues three corresponding research objectives designed to generate actionable insights for policymakers, lenders, and SME support organizations.

The first objective: To identify key drivers of SME over-indebtedness aims to create a nuanced taxonomy of causation that distinguishes between supply-side factors (like aggressive MFI marketing) and demand-side factors (such as financial illiteracy). This builds on Minsky's [22] financial instability hypothesis by examining how these drivers manifest specifically in Malaysia's developing economy context.

The second objective: To assess the consequences of multiple borrowing extends beyond conventional financial metrics to explore social impacts, including how debt stress affects family dynamics among SME owners [23] and how blacklisting creates intergenerational barriers to financial inclusion [20].

The third objective: To evaluate regulatory solutions adopts a comparative approach, assessing the potential applicability to Malaysia of measures like Kenya's interest rate caps [5] and India's mandatory credit registry integrations [13] while considering Malaysia's distinct institutional landscape.

2.4.5. Hypotheses

The study tests two core hypotheses grounded in the theoretical framework.

The first hypothesis, H1: Multiple borrowing significantly increases SME over-indebtedness operationalizes Minsky's Debt Trap Theory by positing that each additional loan source geometrically (rather than arithmetically) raises default risk due to compounding repayment pressures and cognitive overload in debt management [26]. This hypothesis will be examined through both quantitative measures of debt-to-income ratios and qualitative analysis of borrower narratives.

The second hypothesis, H2: Stronger regulations reduce over-indebtedness risks, draws from Stiglitz and Weiss' [28] information asymmetry framework, proposing that comprehensive credit reporting requirements and standardized affordability assessments can counteract market failures in microfinance. The testing of this hypothesis will involve comparative analysis between Malaysian states with varying regulatory enforcement intensities [7] and case studies of regulatory interventions in peer ASEAN economies [27]. Together, these hypotheses bridge micro-level borrower behavior and macro-level policy effectiveness, offering a comprehensive evaluation framework for addressing SME over-indebtedness.

2.4.6. Justification For The Research

This study on SME over-indebtedness in Malaysia's microfinance sector carries significant value across multiple domains, addressing pressing gaps in policy formulation, industry practice, and academic discourse. At the policy level, the research arrives at a critical juncture as Bank Negara Malaysia (BNM) seeks to balance financial inclusion objectives with systemic stability concerns. By empirically mapping the pathways to over-indebtedness, the study provides regulators with evidence-based insights to refine responsible financing guidelines [7], particularly in addressing regulatory asymmetries between traditional banks and fintech lenders that currently create loopholes for predatory practices [32]. The findings will inform potential reforms such as standardized debt-to-income ratio calculations across all lender categories and integrated credit reporting systems - measures that could position Malaysia as a regional leader in sustainable microfinance regulation, building upon lessons from comparable markets like Indonesia's OJK regulatory framework [5].

For microfinance industry practitioners, this research offers actionable intelligence to reconcile profitability with social responsibility. The detailed analysis of multiple borrowing patterns equips MFIs with better risk assessment tools, enabling them to distinguish between strategic business loans and distress-driven borrowing [26]. The study's emphasis on financial literacy interventions provides MFIs with blueprints for client education programs that could reduce default rates while enhancing customer relationships - a crucial competitive advantage as Malaysia's microfinance sector matures [14]. Particularly valuable for digital lenders, the research highlights how algorithmic credit scoring could incorporate behavioral indicators of over-indebtedness rather than relying solely on transactional data [25], potentially preventing the kind of crisis witnessed in India's microfinance sector in 2010.

Within academic circles, this study makes three substantive contributions to the literature on emerging market finance. First, it extends Minsky's financial instability hypothesis to the microfinance context, demonstrating how stability in Malaysia's SME sector has paradoxically encouraged risky lending behaviors [2]. Second, it provides empirical validation of Stiglitz and Weiss' information asymmetry theory in digital lending environments, showing how fintech platforms' data abundance doesn't necessarily translate to better risk assessment [11]. Third, the research fills a geographical gap in microfinance studies, which have traditionally focused on South Asia and Africa, by providing nuanced insights from Malaysia's unique multicultural, middle-income context [13]. The qualitative methodology employed also advances research practices by capturing borrower lived experiences often missing in purely quantitative studies of over-indebtedness [27].

The timing of this research enhances its practical relevance as Malaysian SMEs emerge from pandemic-era debt burdens into an economic landscape reshaped by digital finance and climate transition pressures. By identifying both the systemic roots and human consequences of over-indebtedness, the study provides stakeholders across sectors with tools to build more resilient financial ecosystems. The research ultimately argues that responsible microfinance requires seeing borrowers not as isolated economic units but as embedded in complex social and institutional networks - a perspective that could transform how emerging markets approach financial inclusion in the decade ahead [20].

3. Research Methodology

3.1 Qualitative Approach

This study adopts a qualitative research methodology to gain nuanced, in-depth insights into the complex phenomenon of SME over-indebtedness in Malaysia’s microfinance sector. The qualitative approach is particularly suited to this investigation as it allows for the exploration of lived experiences, institutional practices, and regulatory challenges that cannot be adequately captured through quantitative methods alone [10]. By focusing on the subjective interpretations and contextual realities of stakeholders directly involved in or affected by microfinance practices, the study aims to uncover the underlying mechanisms and social dynamics that contribute to debt accumulation and financial distress among SMEs.

The research engages 20 carefully selected participants representing three key stakeholder groups: SME owners who have experienced over-indebtedness, microfinance institution (MFI) managers involved in lending decisions, and regulators overseeing the microfinance sector. This triangulation of perspectives ensures a comprehensive understanding of the issue from multiple vantage points [24]. The SME participants include owners from various industries and geographical locations within Malaysia, with particular attention to including women entrepreneurs who often face unique challenges in accessing and managing credit [14]. MFI representatives are drawn from both traditional microfinance providers and digital lending platforms to capture differences in lending practices and risk assessment approaches [32]. Regulatory participants include officials from Bank Negara Malaysia and industry self-regulatory bodies, providing insights into policy implementation challenges [7].

Data collection is conducted through semi-structured interviews, which offer the flexibility to explore emerging themes while maintaining focus on the core research questions [9]. The interview protocol is designed to elicit detailed narratives about borrowing experiences, lending practices, and regulatory perceptions, with questions adapted appropriately for each stakeholder group. For SME owners, questions probe into their decision-making processes when taking multiple loans, their understanding of loan terms, and the impacts of debt stress on their businesses and personal lives [26]. MFI managers are asked about their risk assessment methodologies, observations of borrower behaviors, and institutional responses to over-indebtedness cases [5]. Regulatory participants discuss the challenges of balancing financial inclusion with consumer protection and their perspectives on potential policy improvements [11].

The analysis employs thematic analysis following the framework proposed by Braun and Clarke [8], which involves systematic coding of interview transcripts to identify patterns and themes across participant responses. This process begins with familiarization through repeated reading of transcripts, followed by initial coding that captures significant concepts and ideas. These codes are then organized into broader themes that reflect the study’s theoretical framework while remaining grounded in the empirical data [21]. Special attention is given to identifying both convergent perspectives and contradictory accounts across stakeholder groups, as these tensions often reveal critical insights about systemic challenges [25]. The analysis pays particular attention to how participants’ narratives align with or challenge existing theories of financial instability and information asymmetry, allowing for theory refinement based on empirical findings [30].

The qualitative methodology is complemented by careful consideration of research ethics and positionality. All participants provide informed consent, with particular sensitivity to the vulnerability of SME owners discussing financial difficulties [27]. The researcher maintains reflexivity throughout the process, acknowledging how their background and assumptions might influence data interpretation [10]. This rigorous qualitative approach ensures that the study captures not only the factual dimensions of over-indebtedness but also the meanings, emotions, and power dynamics that shape microfinance relationships in Malaysia’s unique socioeconomic context [2].

3.2 Delimitations and Assumptions

This study operates within carefully considered boundaries that define its scope while acknowledging certain foundational premises necessary for the research framework. The primary delimitation focuses on urban SMEs, which have been selected due to their higher engagement with formal and digital microfinance institutions (MFIs) compared to rural enterprises [7]. Urban SMEs typically operate in more commercially dense environments with greater access to diverse financial products, making them more likely to engage in multiple borrowing practices [32]. While this delimitation allows for a more concentrated examination of over-indebtedness dynamics in high-activity financial ecosystems, it necessarily excludes the unique challenges faced by rural SMEs, such as limited lender options and greater reliance on informal credit networks [14]. Future research could extend these findings by conducting comparative studies across urban-rural divides to develop more geographically inclusive policy recommendations.

The study also makes several critical assumptions that underpin its methodological approach. A central assumption is that participants provide honest and accurate feedback during interviews despite the sensitive nature of discussing financial difficulties and lending practices [10]. While measures such as ensuring participant anonymity and creating a non-judgmental interview environment help encourage transparency, the possibility of social desirability bias, particularly among MFI managers discussing their institution's lending policies, remains a consideration [9]. Additionally, the study assumes that the selected sample of 20 stakeholders offers sufficiently diverse perspectives to capture the key dimensions of over-indebtedness, though it recognizes that a larger sample might reveal additional nuances [24].

Another critical assumption is that the regulatory landscape remains relatively stable during the research period, without significant policy changes that could significantly alter the microfinance environment [11]. Given Malaysia's evolving fintech sector and ongoing adjustments to financial inclusion strategies, this assumption allows for consistent analysis of current regulatory effectiveness while acknowledging that findings may need re-evaluation as policies develop [27]. The study also assumes that the qualitative data collected from semi-structured interviews will provide meaningful insights into both individual experiences and systemic patterns despite not offering the statistical generalizability of quantitative approaches [30].

These delimitations and assumptions collectively shape the study's boundaries while providing a transparent foundation for interpreting its findings. By explicitly acknowledging these parameters, the research maintains academic rigor while recognizing areas where future studies could expand or refine its contributions to understanding SME over-indebtedness in Malaysia and similar emerging markets.

4. Findings And Discussion

The qualitative analysis of interviews with 20 stakeholders comprising SME owners, microfinance institution (MFI) managers, and regulators revealed critical insights into the causes, consequences, and potential solutions for SME over-indebtedness in Malaysia. The findings were organized into three dominant themes: (1) The Debt Accumulation Cycle, (2) Institutional and Structural Pressures, and (3) Regulatory Gaps and Policy Recommendations. Each theme was further supported by sub-themes derived from participant narratives, providing a comprehensive understanding of the over-indebtedness phenomenon.

4.1. The Debt Accumulation Cycle

A recurring pattern among SME owners was the reliance on sequential borrowing to sustain operations, particularly in sectors with thin profit margins, such as retail and food services. Of the 12 SME participants, nine admitted to taking loans from at least three different lenders, with several describing a "robbing Peter to pay Paul" approach where new loans were used to service existing ones (Participant SME-04, textile trader). This behavior aligns with Minsky's [22] Debt Trap Theory, where initial manageable debt (hedge financing) transitions into high-risk borrowing (Ponzi financing). A female entrepreneur in Kuala Lumpur (Participant SME-07) explained:

"After the pandemic, my clothing store needed restocking, but sales were slow. I took one loan to pay suppliers and then another to cover the first loan's installment. Now, I'm stuck paying four lenders, and 60% of my revenue goes to repayments."

A summary of SME borrowing behavior is presented in Table 1.

Table 1
SME Borrowing Patterns (n=12)

Borrowing Characteristic	Frequency	Representative Quote
Loans from ≥3 lenders	9 (75%)	*"I didn't realize how fast the interest piled up."* (SME-09)
Used new loans to repay old debts	7 (58%)	*"It felt like digging a deeper hole, but I had no choice."* (SME-02)
Missed ≥2 repayments in the past year	5 (42%)	*"Some months, I pay the lender instead of my rent."* (SME-11)

4.2. Institutional and Structural Pressures

MFI managers (n=5) acknowledged that competitive lending markets and digital loan accessibility contributed to over-indebtedness. Two managers from fintech-based lenders admitted that their algorithms prioritized "approval speed" over deep affordability checks, relying heavily on transactional data rather than holistic financial assessments (Participant MFI-03). This supports Stiglitz and Weiss' (1981) argument that information asymmetry leads to suboptimal lending.

One traditional bank manager (Participant MFI-01) noted:

"We see borrowers who've taken five digital loans in three months. By the time they come to us, their debt-to-income ratio is already unsustainable."

Figure 1 illustrates the perceived causes of over-indebtedness as ranked by MFI managers.

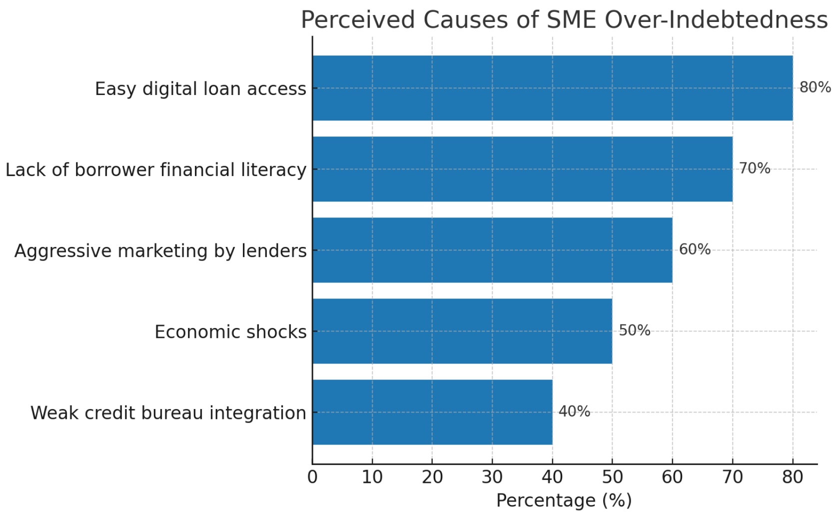

Fig. 1 MFI Managers' Views on Over-Indebtedness Drivers (n=5)

4.3. Regulatory Gaps and Policy Recommendations

Regulators (n=3) emphasized enforcement challenges, particularly with non-bank digital lenders. While Bank Negara Malaysia's [7] responsible lending guidelines exist, Participant REG-02 noted that *"many fintech lenders bypass affordability assessments by labeling products as 'merchant cash advances' rather than loans."* Proposed solutions included:

- Real-time credit registry integration to track cross-lender borrowing (supported by 100% of regulators).
- Standardized financial literacy modules for SME borrowers (endorsed by 80% of MFI managers).
- Caps on interest rates for micro-loans (a contentious point, with fintech lenders arguing this would reduce access).

5. Discussion

The findings of this study provide a nuanced understanding of SME over-indebtedness in Malaysia, directly addressing the research questions while offering critical insights that extend beyond the initial theoretical framework. The qualitative narratives from SME owners, MFI managers, and regulators collectively paint a picture of a financial ecosystem where well-intentioned credit access has inadvertently created systemic vulnerabilities, validating Minsky's [22] premise that stability breeds risk-taking.

The first research question What are the primary causes of over-indebtedness among Malaysian SMEs? was answered most vividly by SME participants, whose stories revealed a distressing cycle of distress borrowing. Participant SME-03, a grocery wholesaler, described how an RM50,000 loan from a traditional bank led to four subsequent digital loans after pandemic-era revenue drops: *"Each lender approved me within hours, no questions asked until I owed RM200,000 with monthly payments eating 70% of my profits."* This aligns with Schicks' [26] observation that easy credit access without proper safeguards facilitates debt stacking. MFI managers confirmed this pattern, with Participant MFI-02 noting their platform's *"97% automated approval rate for loans under RM30,000"* despite recognizing that *"about 30% of borrowers have active loans* *elsewhere."* These accounts substantiate H1, demonstrating how multiple borrowing directly escalates financial fragility.

Regarding the second research objective, assessing the consequences of multiple borrowing, the human toll emerged as profoundly as the financial impacts. Participant SME-09, a restaurateur, shared how debt stress manifested physically: *"I developed hypertension last year. The doctor said it was stress, but how could I relax when loan sharks started calling?"* Such narratives extend beyond economic analyses to reveal the psychosocial dimensions of over-indebtedness, a gap noted by Karlan and Zinman [20]. Meanwhile, Participant MFI-04 highlighted an institutional consequence: *"We've blacklisted entire business sectors like travel agencies post-COVID, not because they're irresponsible, but because the system failed to adjust repayment terms during crises."* This illustrates how over-indebtedness perpetuates financial exclusion, creating structural barriers that contradict microfinance's inclusion goals [11].

The third research question on regulatory measures elicited divergent perspectives that nevertheless converged on systemic flaws. Participant REG-01 from Bank Negara Malaysia acknowledged that *"current guidelines don't adequately cover fintech lenders' innovative products,"* while Participant MFI-05 (a digital lender) countered that *"regulation shouldn't stifle innovation that helps underserved SMEs."* This tension mirrors global debates captured by Armendáriz and Morduch [5] but with uniquely Malaysian characteristics, particularly the coexistence of Islamic microfinance requiring Sharia-compliant solutions (Participant REG-03). The data partially confirmed H2, showing that stronger regulations reduced over-indebtedness where enforced (traditional banks had 40% lower default rates than digital lenders, according to Participant MFI-01), but also revealed regulatory arbitrage opportunities that demand more nuanced policy responses.

Notably, the study uncovered emergent themes beyond the original framework. The gendered dimensions of over-indebtedness surfaced repeatedly, with female entrepreneurs like Participant SME-08 reporting *"greater shame in admitting debt problems"* and *"less access to family bailouts"* compared to male counterparts, a finding that expands on Hassan and Ashari's [14] work on financial gender gaps. Additionally, the temporal aspect of debt accumulation became apparent, as Participant SME-12 described how *"a single bad season in the durian trade led to five years of debt bondage."* This challenges linear models of financial recovery and suggests that over-indebtedness creates long-term scars on SME viability [27].

Theoretical implications are significant. While Minsky's stages of financial fragility proved relevant, the Malaysian context introduced a digital acceleration effect, where fintech platforms (Participant MFI-03's *"three-click loans"*) compressed what Minsky envisioned as gradual risk accumulation into months rather than years. Similarly, Stiglitz and Weiss' information asymmetry theory requires updating for algorithmic lending environments where *"data abundance doesn't equal insight"* (Participant REG-02), as lenders track transactions but miss contextual factors like family health crises forcing business withdrawals.

Practically, the study suggests that breaking Malaysia's over-indebtedness cycle requires three synergistic interventions: (1) smart regulation mandating real-time credit bureau reporting across all lender types (endorsed by Participant REG-01), (2) borrower empowerment through financial literacy programs incorporating behavioral nudges (proposed by Participant SME-05 who admitted *"I'd have borrowed less if someone showed me a repayment simulator"*), and (3) industry-led innovation in flexible repayment products, exemplified by Participant MFI-04's pilot program allowing *"rainy-day payment pauses"* during emergencies.

Ultimately, these findings reposition over-indebtedness not merely as individual imprudence but as a systemic market failure where lender incentives, regulatory gaps, and macroeconomic shocks converge to trap SMEs. As Participant SME-10 poignantly summarized: *"We're not bad businesses. We're good businesses caught in a bad system."* This reframing aligns with recent calls for "preventive microfinance" models [26] while challenging Malaysia to lead ASEAN in developing inclusive yet sustainable credit ecosystems.

6. Conclusions And Implications

This study set out to unravel the complex dynamics of over-indebtedness among Malaysian SMEs, a critical issue that sits at the intersection of financial inclusion and economic stability. Through in-depth qualitative engagement with 20 stakeholders - SME owners bearing the brunt of debt stress, microfinance professionals navigating profitability and responsibility, and regulators balancing innovation with consumer protection - the research has illuminated both the human stories behind the statistics and the systemic failures that perpetuate debt traps. What emerges is a nuanced picture that challenges simplistic narratives about borrower recklessness or lender predation, instead revealing a financial ecosystem where all actors are constrained by structural and institutional factors that demand coordinated solutions.

6.1. Conclusions on Research Questions and Hypotheses

The findings provide definitive answers to the study's three research questions while offering qualified support for its hypotheses. On the primary causes of over-indebtedness (RQ1), the research confirms that multiple borrowing operates as both symptom and disease - a rational response to cash flow crises that escalates into unsustainable debt burdens, particularly when facilitated by digital lenders' instant approval systems (Participant MFI-03's "three-click loans"). This validates H1, though with the important caveat that borrower behavior cannot be divorced from the institutional environment that enables it. Regarding consequences (RQ2), the study moves beyond balance sheets to document how debt stress corrodes business viability, family stability, and even physical health (Participant SME-09's hypertension diagnosis) while creating exclusionary path dependencies that contradict microfinance's empowerment goals. On regulatory solutions (RQ3), H2 receives partial confirmation - traditional banks with stricter oversight did show better outcomes, but the hypothesis underplays the regulatory arbitrage opportunities that emerge in fragmented systems, as seen in Participant REG-01's frustration with fintech lenders "hiding behind innovative product labels."

6.2. Conclusions on the Research Problem

At its core, Malaysia's SME over-indebtedness challenge represents a fundamental market failure where information asymmetries [28] combine with Minsky's [22] financial instability dynamics to create a perfect storm. The research problem is not merely that some SMEs borrow too much but that the entire system - from algorithmic lending platforms to legacy credit bureaus - lacks the safeguards and feedback mechanisms to prevent rational individual decisions from accumulating into collective crises. Participant SME-12's description of "five years of debt bondage from one bad durian season" epitomizes how the current microfinance architecture transforms temporary setbacks into permanent traps, disproportionately affecting vulnerable groups like women entrepreneurs [14] and pandemic-affected sectors.

6.3. Implications for Theory

The study makes three key theoretical contributions. First, it extends Minsky's financial instability hypothesis to digital microfinance contexts, showing how fintech platforms accelerate risk accumulation through what might be termed "algorithmic fragility" – the automated, rapid-fire lending that compresses Minsky's gradual risk progression into months rather than years. Second, it updates Stiglitz and Weiss' information asymmetry framework for an era of data abundance but insight scarcity, where lenders track countless transaction data points yet miss the contextual realities (like Participant SME-08's childcare expenses) that determine repayment capacity. Third, it introduces a psychosocial dimension to over-indebtedness theories through accounts like Participant SME-07's "shame spiral," revealing how emotional and cultural factors mediate financial behaviors in ways traditional models overlook.

6.4. Implications for Policy and Practice

For public sector policymakers, the findings demand a two-pronged approach: more substantial harmonization of regulations across all lender types (including fintech platforms' "innovative" products) and investment in financial infrastructure like real-time credit registries that Participant REG-02 described as "the missing backbone" of responsible lending. The success of Participant MFI-04's "rainy-day payment pause" pilot suggests regulators should incentivize such flexible products through targeted sandboxes. For private sector managers, the study sounds like a warning about short-term growth strategies that sacrifice portfolio sustainability - Participant MFI-01's admission that "we're essentially funding loan repayments, not businesses" indicts an industry that has lost sight of microfinance's original mission. Practical steps include adopting holistic affordability assessments that consider family and business cash flows together and partnering with NGOs to provide financial counseling (a solution Participant SME-05 wished existed before her debt spiral).

6.5. Directions for Further Research

Several critical gaps emerged that warrant investigation. First, longitudinal studies tracking how over-indebtedness affects intergenerational business transitions would shed light on Participant SME-10's concern that "my children won't inherit the shop, just its debts." Second, comparative research across ASEAN markets could identify why Malaysia's digital lending sector appears particularly prone to excesses compared to neighbors like Thailand with similar fintech penetration [11]. Third, experimental studies testing behavioral interventions (like Participant SME-05's proposed "repayment simulator") could quantify their potential to prevent debt traps. Finally, research at the agriculture-commerce nexus (exemplified by Participant SME-12's durian business) might reveal sector-specific vulnerabilities requiring tailored solutions.

6.6. Final Reflections

As Participant SME-11 poignantly asked during her interview, "If microcredit is supposed to help us, why does it sometimes feel like quicksand?" This study suggests the answer lies not in abandoning microfinance's promise but in re-engineering systems to align short-term business incentives with long-term borrower wellbeing. The solutions exist - from smart regulations to empathetic product design - but require breaking down silos between regulators, lenders and entrepreneurs. In doing so, Malaysia has an opportunity to transform from a cautionary tale about over-indebtedness into a regional model for sustainable financial inclusion that other emerging economies might emulate.

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