

# Empowering Women Micro-Entrepreneurs in the Digital Era: Driving Business Success Through Competency and Digital Adoption

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## ABSTRACT

In the rapidly evolving digital economy, women micro entrepreneurs serve as vital catalysts for inclusive economic growth and social development. However, despite various institutional support systems, many women-led micro-enterprises struggle to sustain their operations due to a critical gap between personal capabilities and technological deployment. Drawing upon the Resource-Based View (RBV), this conceptual paper proposes a theoretical framework to examine the impact of entrepreneurial competency on the business success of women micro-entrepreneurs, measured through non-financial firm performance. This paper focuses on the mediating role of digital adoption, arguing that while entrepreneurial competency is a foundational internal resource, its influence on non-financial performance is fully realized only when channelled through active digital adoption ranging from e-commerce integration to digital payment systems. Through a synthesis of contemporary literature, a set of research propositions is formulated, asserting that digital adoption acts as a critical operational bridge. This study contributes to the entrepreneurship literature by articulating a holistic conceptual model that extends beyond traditional financial metrics, offering actionable insights for policymakers, financial institutions, and NGOs to design targeted digital upskilling programs in the post-pandemic landscape.

**Keywords:** Women Micro-Entrepreneurs, Entrepreneurial Competency, Digital Adoption, Business Success, Resource-Based View (RBV), PLS-SEM.

## INTRODUCTION

### Research Background

In the rapidly evolving global digital economy, micro, small, and medium enterprises (MSMEs) serve as the backbone of economic stability, accounting for over 90% of businesses worldwide. Within this landscape, women micro-entrepreneurs have been widely recognized as vital catalysts for inclusive economic growth, particularly in developing nations where formal employment options may be limited (Nambiar & Mohamed, 2024). Women serve as vital catalysts for economic development at both household and community levels. However, in developing nations, their potential is frequently constrained by systemic barriers, including unemployment, low household income, poverty, and structural gender inequities. In response to these socioeconomic pressures, a growing number of women pursue micro-entrepreneurship as a primary household survival strategy. Prior empirical literature underscores that fostering female entrepreneurship represents an effective mechanism for poverty alleviation, particularly as women are disproportionately impacted by economic marginalization and structural unemployment (Ekpe et al., 2010).

Recognizing this potential, governments in emerging economies including Malaysia have increasingly prioritized female labor force and entrepreneurial participation to drive national growth (Rozita et al., 2015). Institutional intervention, particularly through accessible microfinance, empowers female entrepreneurs to contribute meaningfully to household well-being while mitigating gender inequality (Biswas & Hassan, 2009).

Furthermore, organizational elements such as structural social capital, institutional support, appropriate skill training, and mandatory savings mechanisms directly condition the operational performance of women-led micro-enterprises (Tata & Prasad, 2008).

However, in today's rapidly evolving digital economy, internal competencies alone may no longer guarantee business viability (Nambisan et al., 2019). The accelerating pace of market digitalization demands that micro-enterprises integrate technological tools to sustain competitive advantage (Kraus et al., 2022). The strategic focus of the 13th Malaysia Plan (13MP) reinforces the national agenda of empowering female micro-entrepreneurs by bridging the digital divide, boosting female labor participation to 60%, and enhancing core business competencies to ensure sustainable firm performance. Digital adoption encompassing e-commerce integration, social media marketing, digital financial ledgers, and mobile payment systems serves as a critical operational vehicle that translates an entrepreneur's intrinsic capabilities into tangible market outcomes (Akpan et al., 2021). Grounded in the Resource-Based View (RBV) (Barney, 1991), while entrepreneurial competencies provide foundational knowledge and strategic vision, active digital adoption operationalizes these internal resources into enhanced market reach, customer engagement, and business resilience (Chatterjee et al., 2021; Vadana et al., 2021). Consequently, a critical theoretical gap exists in understanding how digital adoption acts as a key mediating bridge between entrepreneurial competencies and firm performance in the post-pandemic landscape (Bouncken et al., 2021).

To address these empirical and theoretical gaps, this conceptual paper proposes an integrated framework to examine the influence of entrepreneurial competencies on the non-financial performance of female micro-entrepreneurs, focusing specifically on the mediating role of digital adoption.

## **Problem Statement**

Despite a plethora of digital transformation initiatives, grants, and training programs introduced by governments and non-governmental organizations (NGOs), the failure rate of women-led micro-enterprises to sustain long-term digital operations remains worryingly high. Past empirical studies indicate that providing access to financial capital, subsidies, or physical infrastructure alone no longer guarantees business longevity or performance in contemporary, hyper-competitive digital marketplaces (Zainol et al., 2023).

The primary hurdle encountered by women micro-entrepreneurs stems from a distinct deficit in entrepreneurial competency. This deficit encompasses a lack of advanced digital literacy, inadequate strategic management skills, and a lack of psychological resilience needed to adapt to rapid technological disruptions (Rahman & Ahmad, 2025). Many women micro-entrepreneurs juggle heavy household responsibilities alongside their businesses, leaving them with limited time to upskill. Consequently, this competency gap creates a significant bottleneck in their digital adoption.

Instead of fully integrating technology, many women entrepreneurs limit their digital usage to basic communication tools (e.g., standard instant messaging apps for casual order-taking). They frequently struggle to transition toward advanced e-commerce platforms, automated cashless payment systems, or digital customer relationship management (CRM) analytics that could fundamentally drive business efficiency and scaling (Santos & Tan, 2026).

From a theoretical standpoint, the direct relationship between an entrepreneur's inner competency and ultimate business outcomes has often yielded inconsistent or weak empirical results in literature. This inconsistency suggests that the transition from individual competence to actual firm success is not automatic or linear; it requires an active, transformative behavioral agent.

To bridge this critical gap, this study proposes digital adoption as a crucial mediating variable. Drawing upon the Resource-Based View (RBV), this framework argues that inner entrepreneurial competencies act as vital intangible internal resources. However, these resources will only translate into business success when they are actively manifested through the actual adoption, deployment, and integration of digital technologies into daily

business operations. Without digital adoption acting as the mechanism of execution, even highly competent entrepreneurs may find their business growth stifled in a digital-first economy.

## Research Questions

To address the research gaps identified above, this study seeks to answer the following questions:

1. Does entrepreneurial competency significantly influence the business success of women micro-entrepreneurs?
2. Does entrepreneurial competency significantly influence the level of digital adoption among women micro-entrepreneurs?
3. Does digital adoption significantly influence the business success of women micro-entrepreneurs?
4. Does digital adoption significantly mediate the relationship between entrepreneurial competency and business success?

## Research Objectives

Specifically, this study aims to achieve the following objectives:

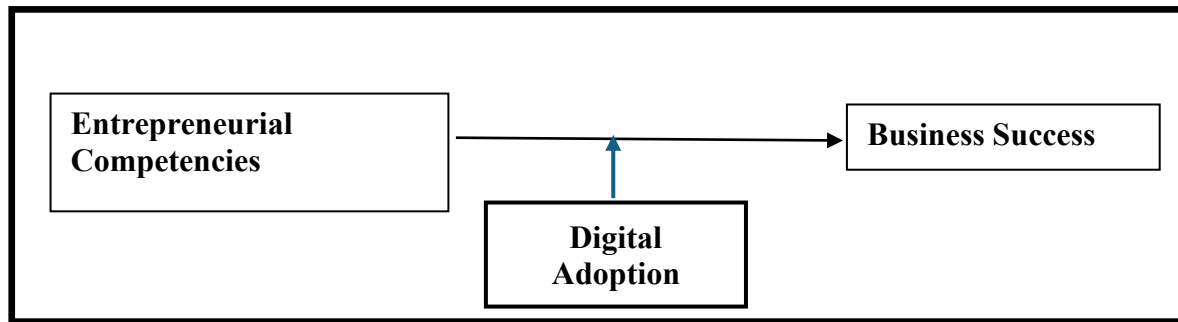
1. To examine the relationship between entrepreneurial competency and the business success of women micro-entrepreneurs.
2. To evaluate the influence of entrepreneurial competency on the level of digital adoption among women micro-entrepreneurs.
3. To analyze the impact of digital adoption on the business success of women micro-entrepreneurs.
4. To test the mediating role of digital adoption in the relationship between entrepreneurial competency and business success.

## LITERATURE REVIEW

### Theoretical Framework: Resource-Based View (RBV)

The theoretical foundation of this study is anchored in the Resource-Based View (RBV), originally pioneered by Barney (1991). RBV posits that a firm can achieve sustainable competitive advantage and superior business success by identifying, developing, and deploying unique internal resources that are valuable, rare, inimitable, and non-substitutable (VRIN). In the context of micro-enterprises, traditional physical and financial resources are often scarce. Therefore, the survival and success of these firms depend heavily on intangible internal resources and dynamic capabilities.

This study extends the RBV framework by conceptualizing entrepreneurial competency as a core intangible internal resource (human capital) possessed by women micro-entrepreneurs. However, having internal resources alone does not automatically guarantee market success. Firms must possess the dynamic capability to deploy these resources effectively. Consequently, this framework introduces digital adoption as a dynamic capability the process through which an entrepreneur converts inner knowledge, skills, and strategic mindsets into actual technological actions (e.g., e-commerce, digital payments). Through the lens of RBV, digital adoption acts as the critical mechanism that transforms internal entrepreneurial competencies into business success (firm performance).



### Entrepreneurial Competency and Business Success (RQ1 / RO1)

Entrepreneurial competency refers to the cluster of related knowledge, attitudes, strategic mindsets, and interpersonal skills that an individual must possess to produce outstanding performance within an entrepreneurial venture (Rahman & Ahmad, 2025). For women micro-entrepreneurs, these competencies often manifest as financial literacy, opportunity recognition, relationship-building, and psychological resilience in overcoming socio-economic barriers.

According to Sánchez (2012), the significance of competencies towards organizational or business performance is indispensable and directly impacting in nature. In fact, Noor Hazlina, Ramayah, Wilson, and Kummerow (2010) have highlighted its status as key indicators towards business successes for SMEs, with them being strongly associated and more prominent in environments that are hostile and dynamic. Brophy and Kiely (2002) have suggested focusing on entrepreneurial competencies as an effective solution. The success of a business can be measured by assessing an entrepreneur's business management, whether effectively and using the right methods. They must be able to perceive and adapt to uncertain variables as it produces entrepreneurs that are adaptable, dynamic and "self-regulating" (Haynie & Shepherd, 2009).

Extensive literature has established that highly competent entrepreneurs are better equipped to navigate market uncertainties, manage operational risks, and steer their firms toward growth. When women entrepreneurs possess strong managerial and strategic competencies, they can optimize limited resources, improve customer satisfaction, and ensure long-term business survival. However, some researchers argue that in the modern digital-first economy, the direct link between traditional competencies and firm success has become less consistent (Zainol et al., 2023). While competence forms the bedrock of business potential, the rapidly shifting market landscape demands that these internal traits be combined with external market tools to generate measurable success. Hence, it is hypothesized:

*H<sub>1</sub>: Entrepreneurial competency has a significant positive relationship with the business success of women micro-entrepreneurs.*

### Entrepreneurial Competency and Digital Adoption (RQ2 / RO2)

Digital adoption goes beyond the superficial usage of technology; it represents the deep integration and routine utilization of digital tools such as e-commerce storefronts, digital accounting software, and cashless payment infrastructures to transform business processes (Santos & Tan, 2026). The transition from conventional business operations to digitalized formats requires a strong proactive baseline within the individual entrepreneur.

While competencies represent latent internal capabilities, their realization relies on an entrepreneur's willingness and ability to adopt contemporary business practices (Nambisan et al., 2019). Digital adoption encompassing the use of social media marketing, e-commerce platforms, mobile payment systems, and digital record-keeping requires specific strategic foresight, opportunity recognition, and technical adaptability (Akpan et al., 2021).

Entrepreneurs with strong conceptual and opportunity competencies are more adept at identifying digital tools that reduce transactional friction and broaden market access (Kraus et al., 2022). Furthermore, high commitment and organizing competencies provide the persistence required to overcome technological learning curves and integrate digital systems into daily business routines (Man et al., 2008). Therefore, internal entrepreneurial competencies act as vital antecedents that drive the adoption of digital technologies.

According to the RBV, an entrepreneur's internal competencies directly dictate their capacity to absorb and accept new technological innovations. Women micro-entrepreneurs who exhibit higher strategic, conceptual, and learning competencies possess less technological anxiety and a stronger growth mindset. They are more capable of identifying the commercial value of digital platforms (like TikTok Shop or Shopee) and are highly motivated to undergo upskilling programs to master these tools. Conversely, a lack of entrepreneurial competency often acts as a psychological and operational bottleneck, causing entrepreneurs to resist digital transformation or restrict technology usage to basic communication (e.g., WhatsApp personal chats). Thus, higher inner competencies are a prerequisite for deeper technological execution:

*H<sub>2</sub>: Entrepreneurial competency has a significant positive relationship with digital adoption among women micro-entrepreneurs.*

### **Digital Adoption and Business Success (RQ3 / RO3)**

In the contemporary marketplace, digital adoption has shifted from an operational luxury to a fundamental determinant of firm performance and survival. By integrating digital tools into their business models, micro-enterprises can effectively mitigate the traditional limitations of scale, geography, and capital.

Digital adoption functions as an operational mechanism that expands a firm's dynamic capabilities (Teece, 2007). In developing economies, integrating digital payment platforms and social commerce directly mitigates traditional geographic and operational limitations faced by female micro-entrepreneurs (Biswas & Hassan, 2009).

From a non-financial performance perspective, digital adoption enhances customer engagement, streamlines inventory management, reduces response times, and builds social capital through digital networks (Chatterjee et al., 2021). Micro-enterprises that actively adopt digital channels exhibit superior operational resilience, adapt faster to market changes, and achieve higher levels of customer loyalty compared to digitally stagnant firms (Bouncken et al., 2021; Kraus et al., 2022).

Empirical evidence demonstrates that digital adoption directly enhances both the financial and non-financial metrics of business success. For instance, utilizing e-commerce platforms allows women micro-entrepreneurs to expand their market access from localized neighbourhoods to national or even international customer bases (Nambiar & Mohamed, 2024). Furthermore, the adoption of cashless payment systems (such as DuitNow QR) reduces transaction friction, boosts sales volume, and improves cash flow management. From an operational standpoint, digital marketing and social commerce optimize advertising costs and enable direct data-driven engagement with consumers. Consequently, higher levels of technological integration lead to enhanced profitability, competitive positioning, and business longevity. Therefore:

*H<sub>3</sub>: Digital adoption has a significant positive relationship with the business success of women micro-entrepreneurs.*

### **The Mediating Role of Digital Adoption (RQ4 / RO4)**

While entrepreneurial competency provides the vital internal potential for firm growth, the pathway through which this potential translates into actual business success in the digital era is non-linear and complex. This study argues that a significant missing link in entrepreneurship literature is the behavioural bridge between *what an entrepreneur knows* (competency) and *what the firm achieves* (success). This bridge is represented by digital adoption.

According to the RBV framework, internal resources (such as entrepreneurial competencies) often require operational capabilities or routines (such as digital adoption) to effectively translate into tangible performance outcomes (Barney, 1991). Competencies alone represent potential capacity; without strategic technological execution, internal skills may fail to yield competitive advantage in a digitalized marketplace (Nambisan et al., 2019).

Digital adoption serves as an operational bridge that transforms intrinsic knowledge, strategic vision, and relationship-building skills into dynamic market actions (Akpan et al., 2021; Chatterjee et al., 2021). For women micro-entrepreneurs operating under resource constraints, digital tools enable the practical execution of strategic goals turning raw competency into enhanced market visibility, operational efficiency, and customer satisfaction. Consequently, digital adoption plays a critical mediating role, explaining the mechanism through which internal competencies lead to non-financial business success

Through the lens of the Resource-Based View, internal resources (competency) remain latent or underutilized unless they are activated through dynamic organizational capabilities (digital adoption). A highly competent woman entrepreneur who understands market strategy (competency) will actively deploy that knowledge by building an online store, utilizing automated inventory systems, and executing targeted digital ads (digital adoption), which ultimately drives sales and market share (business success). Without actual digital adoption, the positive effects of an entrepreneur's competency may be stifled by an inability to reach modern digital consumers. Therefore, digital adoption serves as the critical explanatory mechanism the mediator that channels personal capabilities into tangible business outcomes. Based on this theoretical synthesis, it is hypothesized:

*H4: Digital adoption significantly mediates the relationship between entrepreneurial competency and the business success of women micro-entrepreneurs.*

## METHODOLOGY

This study adopts a post-positivist philosophy and a deductive approach to empirically test the proposed theoretical model anchored in the Resource-Based View (RBV). A cross-sectional, quantitative survey design is selected to assess the relationships between entrepreneurial competency (independent variable), digital adoption (mediating variable), and non-financial firm performance (dependent variable) among women micro-entrepreneurs. The target population comprises registered female micro-entrepreneurs operating within the informal and formal retail and services sectors. In accordance with standard definitions, micro-enterprises are defined as businesses employing fewer than 5 full-time employees or generating annual sales below regional micro-enterprise thresholds (World Bank, 2020). A purposive, non-probability sampling design is employed to access hard-to-reach women micro-entrepreneurs. All constructs are measured using adapted, multi-item, 5-point Likert scales ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Data analysis will follow a two-step Partial Least Squares Structural Equation Modeling (PLS-SEM) approach using SmartPLS 4 (Hair et al., 2022). PLS-SEM is specifically chosen due to its robustness with non-normal distributions, exploratory capability with complex structural models, and effectiveness in assessing mediation effects.

## IMPLICATIONS AND CONCLUSION

### Practical and Policy Implications

These insights carry profound implications for policymakers, financial institutions, and non-governmental organizations (NGOs) tasked with driving women's economic empowerment:

1. **Shift in Training Programs:** Government agencies (such as MDEC, SME Corp, and Amanah Ikhtiar Malaysia) should move away from generic "one-size-fits-all" digital workshops. Training must simultaneously target both core entrepreneurial mindsets (resilience, strategic planning) and hard technical digital skills.
2. **Targeted Support Ecosystems:** Financial and technical aid should be tied to progressive digital milestones, ensuring that micro-entrepreneurs are hand-held through the actual deployment phase of e-commerce and digital accounting tools.

## Conclusion

Ultimately, empowering women micro-entrepreneurs in the digital era requires moving past the assumption that basic digital access or general business acumen is enough. This study concludes that Digital Adoption is the crucial behavioral bridge transforming individual capability into institutional success. By fostering both internal competencies and active technological execution, stakeholders can effectively ensure the long-term resilience, growth, and socioeconomic success of women-led micro-enterprises in an increasingly digitalized global economy.

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