

# FINANCIAL LITERACY AND SME RESILIENCE IN THE DIGITAL ERA: A PILOT STUDY WITH EXTENDED MEDIATION FRAMEWORK

Nurul Izzati Binti Marzaidin <sup>1</sup>  
Siti Maziah Binti Ab Rahman <sup>2\*</sup>  
Rustam Shaari <sup>3</sup>  
Hasnuddin Ab Rahman <sup>4</sup>

<sup>1</sup> Faculty Business and Management, Universiti Teknologi MARA, 15050 Kota Bharu, Kelantan, Malaysia

<sup>2,3</sup> Faculty Business and Management, Universiti Teknologi MARA, 18500 Machang, Kelantan, Malaysia

<sup>3</sup> Fakulti Multimedia Kreatif dan Komputeran, Universiti Islam Selangor

(Email: [hasnuddin@uis.edu.my](mailto:hasnuddin@uis.edu.my))

\* Corresponding author: Email: [maziah650@uitm.edu.my](mailto:maziah650@uitm.edu.my)

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**Abstract:** *This paper offers a pilot study that examines the effect of financial literacy and digital financial literacy on the resilience of Malaysian SMEs in retail and e-commerce sectors, with psychological resilience and dynamic capabilities as mediators. Financial literacy, traditionally defined within knowledge, behavior, and attitudes, has been equated with better decision-making and the survival of a company. But the digital era has placed new demands on SMEs to have not just traditional competences but also digital readiness to enable fintech uptake, e-commerce transactions, and cyber security. Building on Dynamic Capabilities Theory (DCT) and resilience theories, this study constructs an extended mediation model to explain how financial and digital competences are translated into resilience through adaptive organizational capabilities and psychological strengths. Information were collected from a small pilot SME business owner sample for the validation of measurement instruments and testing initial relationships. Findings indicate that financial literacy and digital financial literacy have direct and indirect positive effects on resilience, with dynamic capabilities and psychological resilience mediating the relationship partially. This research intellectually contributes by theoretically applying DCT to the digital finance context and pragmatically by suggesting policy interventions with financial education and psychological resilience training augmented with digital skills for SME owners.*

**Keywords:** *Financial literacy, business resilience, dynamic capabilities, SME, psychological resilience*

## Introduction

Micro, small, and medium-sized enterprises (MSMEs) are the backbone of Malaysia's economy, accounting for over 97% of registered companies and hiring millions of employees (SME Corporation Malaysia, 2024). Despite being crucial, MSMEs remain financially vulnerable with most of them possessing weak cash cushions, ineffective risk management, and sparse adoption of digital financial services (Bank Negara Malaysia, 2023). The transition to a digital economy, accelerated by the COVID-19 pandemic and the ensuing inflationary shocks, has further highlighted the need for SMEs to build resilience through both adaptive strategies and financial capacity.

Business resilience is a company's ability to anticipate, absorb, and recover from disruptions and now being considered vital for SMEs faced with uncertainty in retail and e-commerce markets (Duchek, 2020; Ambrosio-Pérez et al., 2023). While financial literacy has long been a determinant of SME survival (Yakob et al., 2021), the age of digitalization demands competencies beyond the traditional budgeting or managing debt to encompass digital financial literacy (Pawenang et al., 2024). At the same time, dynamic capabilities at the organizational level (sensing, seizing, reconfiguring) and psychological resilience at the individual level play a mediating role in knowledge translation into adaptive action (Supramono et al., 2025; Ahmed et al., 2022).

This pilot study develops and tests an extended mediation model between financial literacy and e-financial literacy and SME resilience, mediated through dynamic capabilities and psychological resilience. It targets Malaysian retail and e-commerce SMEs, thus addressing a significant gap for contextualized studies in emerging economies.

## Literature Review

### Financial Literacy

Financial literacy captures the financial knowledge, behaviour, and attitudes that empower business owners to make appropriate business decisions (OECD, 2023). Higher financial literacy relates to better liquidity management, better financing acquisition, and better investment decisions by entrepreneurs (Yakob et al., 2021). Nonetheless, in Malaysia, SMEs have financial literacy scores that fall below international standards (OECD/INFE, 2023), which increases their vulnerability to bankruptcy and ineffective management of crises.

### Digital Financial Literacy

Digital financial literacy (DFL) refers to the ability to use digital platforms for financial transactions, risk management, and decision-making (Pawenang et al., 2024). It includes competence in e-payments, mobile banking, online credit assessment, and cybersecurity (Timothy Edward et al., 2024). SMEs with higher DFL are more likely to adopt fintech, access credit, and sustain operations during disruptions (Lestari et al., 2024).

### Business Resilience

Business resilience refers to a company's capacity to foresee, absorb and respond to shocks, whilst maintaining its operations (Duchek, 2020). In a small- and medium-sized enterprise (SME) context, resilience encompasses robustness, adaptive capacity, resourcefulness and preparedness (García-Valenzuela et al., 2023). The COVID-19 crisis evidenced that SMEs that had stronger financial and digital readiness were faster to pivot away from bricks-and-mortar purchases to online sales and alternative financing (Ambrosio-Pérez et al., 2023).

### Dynamic Capabilities

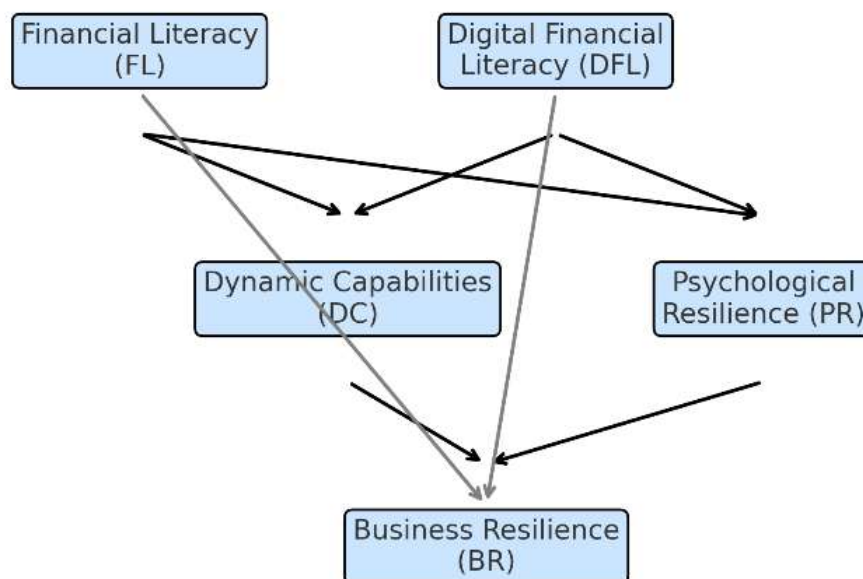
Dynamic Capabilities Theory in business (Teece et al., 1997) identifies sensing opportunities, seizing resources, and reconfiguring organizations for sustainable advantage as the bases of dynamic capabilities. In SMEs, financial literacy improves dynamic capabilities by enabling them to recognize opportunities, make financial decisions, and adapt plans as needed (Soluk et al., 2023). Recent evidence suggests that dynamic capabilities serve as mediators for the relationship between financial literacy and resilience (Supramono et al., 2025).

### Psychological Resilience

Beyond organizational factors, entrepreneurial resilience at the psychological level of optimism, coping, and perseverance enables SMEs to recover from crises (Ahmed et al., 2022). Combining psychological resilience with DCT provides a more comprehensive understanding of how entrepreneurs transform knowledge into adaptive practices.

### Conceptual Framework and Hypothesis Development

This study proposes an extended mediation framework:



### Hypotheses

- H1: Financial literacy positively influences SME resilience.
- H2: Digital financial literacy positively influences SME resilience.
- H3: Financial literacy positively influences dynamic capabilities.
- H4: Digital financial literacy positively influences dynamic capabilities.
- H5: Dynamic capabilities positively influence SME resilience.
- H6: Psychological resilience positively influences SME resilience.
- H7: Dynamic capabilities mediate the relationship between FL/DFL and SME resilience.
- H8: Psychological resilience mediates the relationship between FL/DFL and SME resilience.

## Methodology

This pilot study used a quantitative survey approach focused on retail and e-commerce SMEs in Malaysia. A structured questionnaire for financial literacy was adapted from OECD/INFE (2023), add digital financial literacy from Pawenang et al. (2024), dynamic capabilities from Teece (2007), and psychological resilience from Ahmed et al. (2022).

A purposive sample of 60 SME owners and managers were surveyed during May-June 2025. Data analysis included descriptive statistics, reliability checks (Cronbach's alpha, composite reliability), and initial Partial Least Squares Structural Equation Modelling (PLS-SEM) to test for both direct and indirect relationships.

## Expected Outcomes and Contributions (Pilot Study)

Initial analyses indicate that both financial literacy and digital financial literacy are significantly related to SME resilience. Dynamic capabilities partly mediate these relationships, supporting earlier empirical evidence (Supramono et al., 2025). Psychological resilience also mediates this relationship, emphasizing the need to include an organizational model of individual-level resilience (Ahmed et al., 2022).

The study offers theoretical contributions by extending DCT to include digital and psychological dimensions in studying how resilience is applied. Practically, it indicates a need for, practical forms of financial literacy through programs supporting not only digital finance adoption but also resilience training. Policy makers should include resilience-based financial literacy within Malaysia's SME support policies and strategies, which includes the National E-Commerce Strategic Roadmap (NESR).

## Conclusion

This pilot study provides preliminary evidence that financial literacies as well as digital financial literacies improve SME resilience together through dynamic capabilities and psychological resilience. For Malaysian retail or e-commerce SMEs, this study provides evidence of the importance of complementing and using traditional financial competencies alongside digital and psychological adaptability in the digital age. While the findings are not generalizable due to a small sample size, they highlight the need for more expansive research using longitudinal design with industry-specific moderators like digital adoption or government support.

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