

Original Research Article

Integrating digital financial solutions into MSME business models: An assessment of MSME readiness for digital financial integration

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Abstract: The strategic integration of digital financial solutions is increasingly critical to the sustainability and competitiveness of Micro, Small, and Medium Enterprises (MSMEs), particularly in developing economies. This study assesses MSME readiness for digital financial integration across four dimensions—Digital capability, financial literacy, infrastructure, and organizational adaptability—And examines how readiness influences integration quality and business outcomes. Employing a mixed-methods design with a quantitative emphasis, survey data were collected from 189 MSMEs in Surigao del Sur, Philippines. Descriptive statistics, correlation analysis, and multiple regression were used to analyze relationships among readiness, integration depth, and outcomes. Results indicate a strong positive association between readiness and the extent of digital financial integration. MSMEs with higher readiness demonstrate significantly better business model improvements, operational efficiency, and financial resilience, while partial or fragmented integration yields only moderate gains. Findings underscore the importance of shifting from adoption metrics to integration quality and readiness diagnostics. Policy and managerial implications emphasize targeted capacity-building and infrastructure support to embed digital finance within core business processes and sustain MSME competitiveness.

Keywords: digital financial solutions; MSME readiness; digital financial integration; operational efficiency; financial resilience

1. Introduction

Rapid advances in digital financial solutions—Such as mobile payments, electronic wallets, online banking, digital lending, and fintech-enabled accounting—Are reshaping how firms transact, access finance, and manage operations. For MSMEs, these technologies offer pathways to improved cash-flow management, operational efficiency, market reach, and resilience. Yet, successful integration extends beyond access; it requires adequate infrastructure, financial literacy, digital skills, and organizational adaptability.

While prior studies highlight adoption benefits, gaps remain regarding MSME readiness and the quality of integration into business models. Many analyses emphasize usage rates rather than the embedding of digital finance within strategic and operational processes, particularly in developing-country contexts where MSMEs face structural and digital constraints. Addressing these gaps, this study evaluates MSME readiness and examines how readiness translates into integration depth and performance outcomes.

Guided by an input–process–output framework, the study posits that MSME characteristics and external environments (inputs) shape readiness dimensions (process), which in turn determine integration quality and business outcomes (outputs). By reframing the discourse from adoption to integration quality, the study contributes evidence to inform policy, capacity-building, and MSME strategy.

2. Methods

2.1. Research design

A mixed-methods design with a dominant quantitative component was employed to assess readiness

and its effects on integration and outcomes. This approach is appropriate for explanatory analysis of relationships among constructs.

2.2. Study area and sample

The study was conducted in selected municipalities of Surigao del Sur, Philippines. The sample comprised 189 DTI-registered MSMEs (micro = 131; small = 49; medium = 9), selected based on operational status and willingness to participate.

2.3. Instrumentation and validity

A researcher-developed questionnaire aligned with the study's input–process–output framework measured: (a) digital financial solutions utilized; (b) MSME characteristics and external environment; (c) readiness dimensions (digital capability, financial literacy, infrastructure, organizational adaptability); and (d) business outcomes. Content validity was established by six experts from academia, government, and industry. Reliability was confirmed via test–retest procedures.

2.4. Data analysis

Descriptive statistics addressed usage patterns and readiness levels. Pearson correlation and multiple regression examined relationships among readiness, integration depth, and outcomes. Analyses were conducted with statistical support, following accepted multivariate analysis standards.

3. Results

3.1. MSME characteristics and digital finance use

Most respondents were micro-enterprises and relatively young firms (<3 years). Online banking was the most commonly used solution, followed by fintech-enabled accounting and mobile payments; digital lending was the least utilized, indicating uneven adoption across tools.

3.2. External environment and readiness

Government policy support and customer preference for digital payments were positively perceived, while internet stability and power reliability remained constraints. Readiness was uneven: MSMEs reported moderate digital capability and financial literacy, but low confidence in troubleshooting and advanced decision-making. Infrastructure gaps and cautious investment attitudes constrained deeper integration.

3.3. Business outcomes by enterprise type

Medium enterprises consistently reported higher gains in business model improvement, operational efficiency, and financial resilience, while micro-enterprises experienced modest benefits, suggesting scale-related capacity differences.

3.4. Integration depth and outcomes

A clear gradient emerged: MSMEs with high integration reported substantially better outcomes across all dimensions than those with medium or low integration. Partial integration produced moderate gains, underscoring the limits of fragmented adoption.

4. Discussion

Findings demonstrate that readiness is a decisive enabler of high-quality digital financial integration. Consistent with digital transformation literature, integration depth—Rather than mere adoption—Drives performance improvements. Infrastructure reliability, advanced digital skills, and organizational alignment differentiate high-performing MSMEs from those experiencing limited benefits. The plateau observed at medium integration levels suggests diminishing returns from incremental adoption absent organizational embedding.

The results extend prior work by empirically linking readiness diagnostics to integration quality and outcomes in a developing-economy context. They reinforce the strategic imperative to embed digital finance within core processes—Planning, accounting, and decision-making—To realize efficiency and resilience gains.

5. Conclusion

The study provides evidence that MSMEs achieve superior business model improvements, operational efficiency, and financial resilience when digital financial solutions are deeply integrated and supported by strong readiness. Benefits vary with integration depth; partial adoption yields limited returns. Shifting evaluation from adoption rates to readiness and integration quality is essential for sustainable MSME development.

6. Recommendations

- (1) Policy: Incorporate readiness diagnostics and integration benchmarks into digital finance programs.
- (2) Support Institutions: Deliver integrated training that combines technical skills, financial decision-making, and process redesign.
- (3) MSMEs: Prioritize organizational adaptability and strategic embedding of digital finance within operations.

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