

DIGITAL GOVERNANCE AND FINANCIAL CAPABILITY AS A STRATEGIC MODEL FOR MSME BUSINESS RESILIENCE IN THE INTELLIGENT ECONOMY

Teta Manggala Putera Perdhana, S.E.^{1*}, Ahmad Arif Amrul Bahtiyar, S.Si.²

¹Master of Management Program, FEB, Universitas Widyatama, Bandung, Indonesia

²Master of Management Program, FEB, Universitas Negeri Padang, Padang, Indonesia

* Corresponding author:

teta.manggala@widyatama.ac.id

ariefamroel@student.unp.ac.id

ABSTRACT

Micro, Small, and Medium Enterprises (MSMEs) are currently facing increasingly complex transformation pressures. MSME actors are not only required to sell through digital channels, but also to use digital payments, manage cash flow, understand customer data, produce marketing content, protect business information, and respond to the emergence of AI-enabled tools in daily business activities. However, technology adoption does not automatically improve business performance and resilience when it is not supported by governance, digital financial literacy, cash control, and managerial capability. This article aims to formulate a strategic model of MSME business resilience by integrating digital governance and financial capability in the intelligent economy. This study employs a conceptual qualitative approach through a narrative review of recent literature, digital economy policy data, and contextual synthesis of MSME practices related to QRIS, e-wallets, marketplaces, WhatsApp Business, digital bookkeeping applications, and AI-enabled tools. The findings indicate that digital technology can support MSMEs in marketing, customer engagement, operational efficiency, transaction recording, and decision-making. Nevertheless, it also creates new risks, including inaccurate technology-assisted decisions, weak data protection, platform dependency, poor financial recording, mixed personal-business finances, and uncontrolled digital costs. This article proposes an integrative model based on six pillars: digital literacy, digital governance, digital financial capability, cash flow control, data-driven decision-making, and digital risk management. The contribution of this article lies in interpreting digital technology and digital finance not merely as operational tools, but as strategic capabilities that must be governed to strengthen MSME resilience, competitiveness, accountability, and long-term sustainability.

Keywords: digital financial capability, digital governance, intelligent economy, MSME resilience, strategic management

1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in Indonesia's economy through employment absorption, income distribution, local economic development, and the strengthening of community-based economic resilience. However, in recent years, MSMEs have faced increasingly complex transformation pressures. Competition no longer takes place only among business actors in physical markets, but also across marketplaces, social media platforms, instant messaging channels, food delivery applications, digital payment ecosystems, and data-driven business environments.

MSME actors are now expected to produce digital content, respond quickly to customers, accept digital payments, manage inventory, record cash flow, understand consumer behavior, and adjust business strategies according to rapid market changes. Digital transformation has therefore shifted from being an optional tool to becoming a strategic requirement for MSMEs. Nevertheless, the central issue is no longer whether MSMEs use digital technology, but whether they are able to govern and manage technology as part of their business system.

In Indonesia, MSME digitalization has developed rapidly, particularly through digital payment adoption. Bank Indonesia reported that, by the first semester of 2025, QRIS had reached 57 million users and 39.3 million merchants, with 93.16% of merchants being MSMEs. During the same period, QRIS transactions reached 6.05 billion transactions with a total value of IDR 579 trillion. This indicates that digital payment has become an important entry point for MSMEs into the national digital economy and financial ecosystem. However, the use of QRIS and digital payment systems does not automatically make MSMEs financially resilient if digital transactions are not followed by proper recording, cash flow analysis, working capital management, margin calculation, and separation between personal and business finances.

In addition to digital payments, artificial intelligence-based tools have begun to enter MSME business practices. Business actors increasingly use digital tools for captions, promotional design, copywriting, customer communication, product descriptions, chatbot assistance, inventory management, and marketing recommendations. The OECD states that artificial intelligence has significant potential to improve productivity and innovation among SMEs, but SME AI adoption remains relatively low compared with other digital technologies and larger firms, mainly due to barriers such as skills, infrastructure, cost, and organizational readiness.

In practice, many MSMEs already use QRIS, marketplaces, WhatsApp Business, Instagram, TikTok, Canva, digital cashier applications, digital bookkeeping applications, and AI-enabled tools. However, these technologies are often used in a fragmented manner. Some MSMEs receive digital payments but do not prepare cash reports. Some use AI-assisted content but do not have a clear brand strategy. Some sell through marketplaces but do not understand platform fees, advertising costs, discount structures, profit margins, and dependency risks.

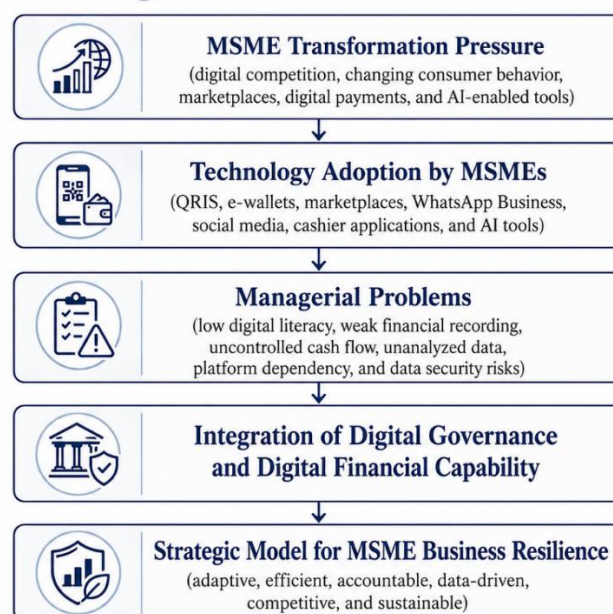
Others use AI tools without understanding information accuracy, customer data security, copyright issues, and ethical boundaries.

Therefore, this article argues that MSME business resilience in the intelligent economy cannot be built merely through technology adoption. It requires the integration of digital governance and digital financial capability. Digital governance is needed to ensure that digital tools, including AI-enabled tools, are used ethically, safely, strategically, and in accordance with business objectives. Digital financial capability is needed to transform digital transactions into useful financial information for decision-making. From a management perspective, MSMEs require strategy, governance, control, literacy, systems, and data-based decision-making.

The novelty of this article lies in integrating digital governance and financial capability as a strategic model for MSME business resilience. Unlike previous studies that tend to discuss digital marketing, AI adoption, QRIS, financial technology, or digital financial literacy separately, this article offers an integrative model that positions digital governance and digital financial capability as two complementary strategic capabilities. Thus, this article does not merely ask whether MSMEs use technology, but how technology should be governed to strengthen business resilience, competitiveness, accountability, and sustainability.

The research question of this article is: How can digital governance and financial capability be formulated as a strategic model to strengthen MSME business resilience in the intelligent economy? The objective of this study is to formulate a conceptual model that integrates digital governance, digital financial capability, strategic management, and MSME resilience so that business actors do not merely use technology, but are able to manage it as a strategic resource.

Figure 1. Research Framework



Source: Author's elaboration, 2026.

2. LITERATURE REVIEW

2.1 MSME Digital Transformation and Business Resilience

MSME digital transformation does not only refer to the use of online platforms. It also involves changes in how business actors manage transactions, customers, marketing, inventory, data, and finance. Mature digital transformation requires digital awareness, digital strategy, implementation capability, and continuous improvement. Kahveci (2025) proposes the DASAT framework, consisting of digital awareness, digital strategy and roadmap, digital adoption and implementation, and digital transformation continuous improvement. This framework is relevant because many MSMEs have entered the digital ecosystem but still lack a roadmap, priorities, performance indicators, and evaluation mechanisms.

Soomro et al. (2024) show that digital technology adoption by SMEs can support economic and social value creation and improve business performance. This finding strengthens the view that digital technology can become a strategic resource for MSMEs. However, its benefits depend heavily on organizational capability, managerial readiness, and the ability to transform digital tools into business value.

From a business resilience perspective, resilient MSMEs are those that can survive, adapt, and recover from market pressures. Resilience requires operational flexibility, market sensing capability, financial discipline, innovation, and effective decision-making. Therefore, digital transformation strengthens resilience only when technology becomes part of a business management system rather than a fragmented operational tool.

2.2 Digital Technology Adoption in MSMEs: Opportunities and Risks

Digital technology provides significant opportunities for MSMEs. It can support marketing, content creation, customer analysis, customer service, administrative automation, financial recording, and decision-making. Badghish et al. (2024) show that AI adoption by SMEs for sustainable business performance can be explained through the Technology–Organization–Environment framework, which emphasizes technological readiness, organizational capability, and environmental support. This suggests that MSMEs do not only need access to digital technology; they also require managerial readiness and ecosystem support to use it productively.

Sánchez et al. (2025) also emphasize that AI adoption in SMEs faces implementation challenges, resource limitations, and the need for responsible use. Their study integrates the Technology–Organization–Environment framework with selected attributes of Diffusion of Innovation theory to explain adoption dynamics. This is relevant for MSMEs because technology adoption is influenced not only by perceived usefulness, but also by organizational readiness, environmental pressure, implementation capacity, and responsible governance.

Digital technology also brings risks. AI-enabled tools may generate inaccurate information, lead to overdependence on automated content, expose customer data, and produce poor business decisions if used without verification. Marketplaces may widen market access but also

increase dependency on platform rules, algorithms, fees, discounts, and advertising costs. Therefore, digital technology must be governed through clear principles, simple rules, and responsible business practices.

2.3 Digital Financial Capability of MSMEs

Digital financial capability refers to the ability of business actors to use digital financial services, understand digital transactions, record cash flow, manage working capital, read simple financial reports, and make financial decisions based on data. In Indonesia, QRIS has become one of the most important entry points for MSMEs into digital finance. The rapid growth of QRIS users and MSME merchants indicates that digital payment infrastructure has become widely available.

However, digital payment is not the final stage of financial transformation. MSMEs must be able to transform digital transactions into managerial information. If QRIS transactions are only received but not recorded, analyzed, or connected to inventory, costs, margins, and profit, then the benefits stop at payment convenience. Santoso (2025) finds that digital financial literacy and digital finance accessibility are relevant to SME performance, with digital finance adoption playing a mediating role, particularly in a developing economy context such as Indonesia.

Thus, digital financial capability should not be understood merely as the ability to use QRIS, e-wallets, mobile banking, or digital cashier applications. It must be expanded into the ability to read transaction data, prepare records, control cash, calculate margins, evaluate costs, and make rational business decisions.

2.4 Digital Governance and Digital Financial Capability as Dynamic Capability

From a strategic management perspective, digital governance and digital financial capability can be understood as part of dynamic capability. Dynamic capability refers to an organization's ability to sense changes, seize opportunities, and reconfigure resources to remain competitive. For MSMEs, digital tools can help business actors identify market trends, create content faster, understand customer needs, improve service, and optimize operational decisions. Meanwhile, digital financial capability helps MSMEs control cash, evaluate margins, manage costs, and access financing.

The OECD (2025) emphasizes that AI can improve productivity and innovation among SMEs, but adoption still faces barriers such as skills, infrastructure, cost, and organizational readiness. This indicates that digital technology becomes a strategic capability only when it is supported by governance, literacy, and managerial readiness.

Therefore, the integration of digital governance and digital financial capability can be formulated as a strategic model. Digital governance helps MSMEs use technology safely, ethically, and productively, while digital financial capability helps MSMEs maintain cash flow, evaluate financial health, and sustain business operations. These two capabilities complement each other in shaping MSME resilience.

2.5 Research Gap and Novelty Position

Studies on MSMEs and digital technology have extensively discussed digital marketing, QRIS, financial technology, marketplaces, financial literacy, and AI adoption. However, most of these studies discuss these aspects separately. Studies on AI often focus on marketing, efficiency, or automation, while studies on digital finance often focus on payments, financial inclusion, or digital financial literacy. A more integrative model is still needed to explain how digital governance and digital financial capability jointly shape MSME business resilience.

The novelty of this article does not lie in claiming that digital technology or digital finance has never been studied. Rather, the novelty lies in combining both into one strategic management model. This article positions digital governance as a mechanism to ensure that technology is used ethically, safely, verified, and productively, while digital financial capability is positioned as MSMEs' ability to transform digital transactions into financial information for decision-making.

Table 1. Literature Mapping and Article Position

Area of Study	General Focus in Literature	Research Gap	Position of This Article
MSME digital transformation	Digital adoption, platforms, marketplaces, innovation	Not always connected to business resilience	Digitalization is positioned as a strategic process
Digital technology adoption in SMEs	Efficiency, marketing, automation, performance	Governance risk is rarely linked to small MSME realities	Digital governance becomes a resilience pillar
Digital financial literacy	QRIS, fintech, e-wallets, digital recording	Often stops at payment adoption	Expanded into digital financial capability
Business resilience	Adaptation, survival, business continuity	Limited integration of digital governance and finance	Resilience is built through capability integration
Strategic management	Dynamic capability, competitive advantage	Needs an applicable model for MSME realities	Proposes a digital governance–financial capability model

Source: Author's elaboration, 2026.

3. METHODS

This study employs a conceptual qualitative approach using a narrative literature review, digital economy policy analysis, and strategic management model synthesis. This approach is selected because the study aims to formulate a conceptual model of digital governance and financial capability to strengthen MSME business resilience, rather than to test causal relationships quantitatively.

The data sources consist of three groups. First, recent academic articles published within the last five years discussing digital technology adoption, responsible technology use, digital transformation, digital financial literacy, SME performance, and business resilience. Second,

international institutional reports and digital economy policy documents related to technology adoption and SMEs. Third, Indonesian contextual data related to MSME digitalization, QRIS, the intelligent economy, and the development of digital finance.

The analysis was conducted in four stages. First, identifying transformation pressures faced by MSMEs. Second, mapping opportunities and risks associated with digital technology and digital finance. Third, categorizing the issues into strategic management dimensions, including digital governance, digital financial capability, cash flow control, customer data, digital literacy, and resilience. Fourth, synthesizing a strategic model of MSME business resilience based on digital governance and digital financial capability.

Table 2. Research Analysis Stages

Stage	Analytical Activity	Expected Result
Issue identification	Examining MSME digital transformation pressures	Practical problem mapping
Literature review	Reviewing digital adoption, digital finance, and resilience literature	Conceptual foundation
Issue categorization	Classifying issues into technology, finance, strategy, and risk	Multidimensional analytical framework
Model synthesis	Formulating a digital governance and financial capability model	Conceptual MSME resilience model

Source: Author's elaboration, 2026.

Figure 2. Conceptual Research Method Flow



Source: Author's elaboration, 2026.

4. RESULTS AND DISCUSSION

4.1 Field Reality: MSMEs Are Digital, but Not Always Well-Governed

Many Indonesian MSMEs already use digital technology in daily business activities. QRIS is used to receive payments, WhatsApp Business is used to communicate with customers, marketplaces are used to expand sales channels, social media is used for promotion, and AI-enabled tools are increasingly used to support content creation. However, digitalization is often partial and unstructured. MSMEs may receive digital payments but lack cash reports. They may create content with AI-enabled tools but have no marketing strategy. They may enter marketplaces but fail to understand platform cost structures.

This condition shows that the main challenge is not merely technology adoption, but technology governance. Without governance, technology may increase business activity but not necessarily strengthen resilience. MSMEs may appear to have high transaction volume but still face cash flow problems. They may become viral but fail to maintain inventory, service quality, and customer satisfaction. They may use AI-generated content but produce messages that do not match their brand identity.

4.2 Digital Governance as a Pillar of MSME Business Resilience

Digital governance in MSMEs can be understood as a set of principles and practices to ensure that digital tools are used responsibly, safely, relevantly, and strategically. For MSMEs, digital governance does not need to be as complex as corporate governance in large organizations. The essential issue is to establish simple rules: what data may be entered into digital tools, what decisions may be supported by AI-enabled systems, how generated content should be verified, how customer information should be protected, and how digital outputs should align with business identity.

Digital governance is important because MSMEs often use technology spontaneously. For example, business actors may ask AI-enabled tools to create promotional captions, product descriptions, discount ideas, or sales strategies. Without verification, the output may contain exaggerated claims, inaccurate information, or messages that do not reflect the business character. Therefore, digital technology should be understood as a managerial assistant, not a substitute for business judgment.

4.3 Digital Financial Capability as the Foundation of Resilience

Digital financial capability is the ability of MSMEs to convert digital transactions into useful financial information. QRIS, e-wallets, mobile banking, digital cashier applications, and bookkeeping applications should not stop as transaction tools. They should become the basis for preparing sales reports, monitoring cash flow, calculating costs, understanding margins, managing inventory, and planning working capital.

MSMEs with digital financial capability can more easily identify best-selling products, sales cycles, inventory needs, advertising effectiveness, and real profitability. In contrast,

MSMEs without financial control may experience a paradox: high sales but weak cash flow. This is why digital financial capability becomes one of the most important foundations of business resilience.

4.4 Integration of Digital Governance and Financial Capability in MSME Strategy

Digital governance and digital financial capability have complementary functions. Digital governance helps MSMEs use technology to identify market opportunities, create content, understand customers, and improve service. Digital financial capability helps MSMEs measure whether those strategies generate real profit. In other words, digital governance supports value creation, while digital financial capability supports value measurement and control.

For example, digital tools may help MSMEs design a promotional campaign. However, the success of that campaign must be evaluated through digital sales data, profit margins, advertising costs, repeat purchases, and cash flow. If a campaign increases sales but reduces margins because of excessive discounts, it may not be financially healthy. Therefore, integrating digital governance and financial capability is crucial for strategic decision-making.

4.5 Implementation Risks: Shadow Technology, Platform Dependency, and Financial Blind Spots

Three major risks require attention. First, shadow technology refers to the use of digital tools without rules, risk awareness, or data control. Second, platform dependency refers to excessive reliance on marketplaces, social media algorithms, or third-party applications. Third, financial blind spots refer to situations where business actors receive many digital transactions but do not understand their actual financial position.

These risks indicate that MSMEs should not only receive digital marketing training. They need digital management training that includes digital literacy, financial literacy, data literacy, cash flow control, digital risk management, and strategic decision-making.

Table 3. Opportunities and Risks of Digital Technology and Digital Finance for MSMEs

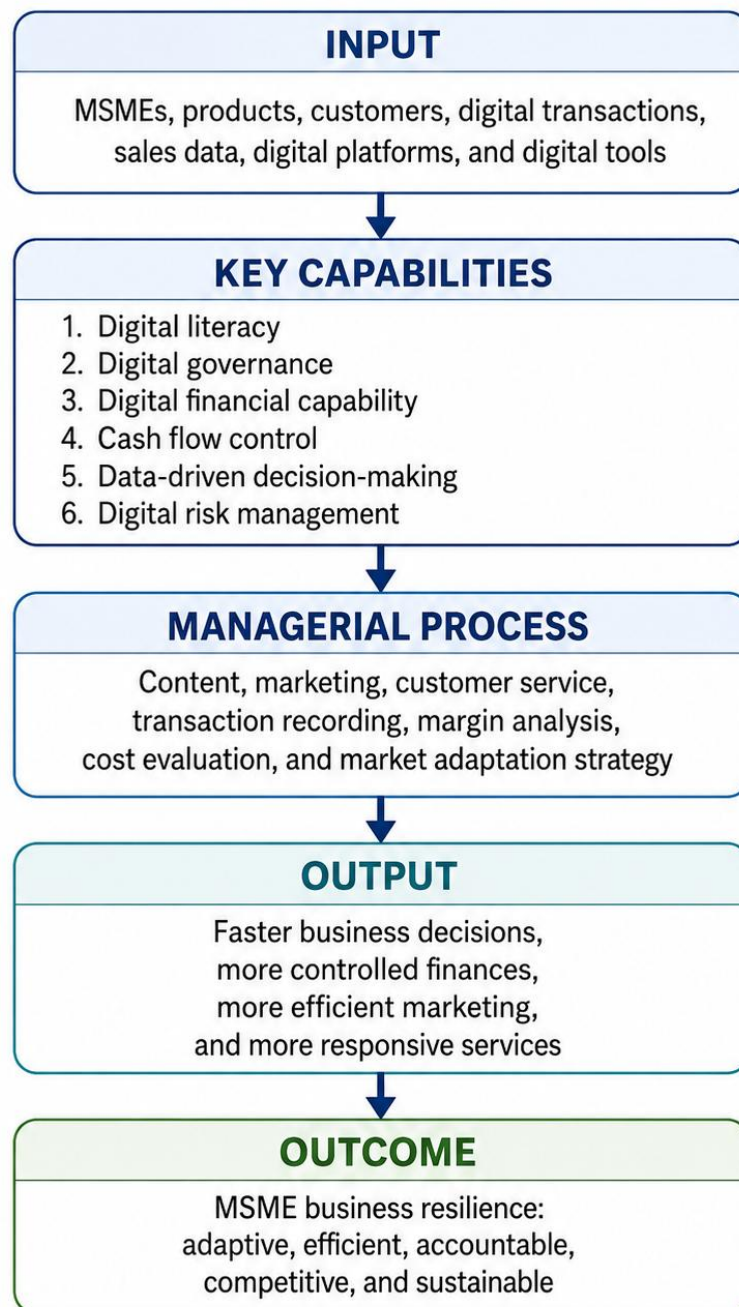
Aspect	Opportunity	Risk	Managerial Need
Digital content tools	Faster and cheaper promotion	Inaccurate or off-brand content	Verification and brand guidelines
Customer data	More personalized services	Customer data leakage	Data ethics and privacy
QRIS/digital payment	Easier transactions	Not automatically converted into reports	Cash recording system
Marketplace	Wider market access	Platform dependency and high costs	Margin and channel analysis
Bookkeeping applications	More organized reports	Inconsistent use	Input discipline and routine evaluation
Customer analytics	More accurate strategy	Misinterpretation of data	Basic data literacy

Source: Author's elaboration, 2026.

4.6 Strategic Model for MSME Business Resilience

Based on the analysis, this article proposes a strategic model of MSME business resilience based on the integration of digital governance and digital financial capability. This model positions MSMEs not only as technology users, but also as managers of digital capabilities.

**Figure 3. Strategic Model of MSME Business Resilience
Based on Digital Governance and Digital Financial Capability**



Source: Author's elaboration, 2026.

Table 4. Pillars of the Strategic MSME Business Resilience Model

Pillar	Focus	Success Indicator
Digital literacy	Understanding functions, limitations, and risks of digital tools	MSME actors use technology appropriately
Digital governance	Rules for data, ethics, verification, and security	Technology use is safe and controlled
Digital financial capability	QRIS, e-wallets, cashier applications, digital bookkeeping	Transactions are converted into reports
Cash flow control	Separation of personal and business funds, working capital control	Healthier business cash flow
Data-driven decision-making	Sales, customers, margins, and inventory analysis	Decisions are based on data
Digital risk management	Platform, data, security, and digital cost risks	MSMEs are more prepared for disruption

Source: Author's elaboration, 2026.

4.7 Model Evaluation Indicators

In order for this model to be used in future research, MSME training, or community service programs, clear evaluation indicators are needed. These indicators are important so that the model does not remain only conceptual, but can be translated into survey instruments, interview guidelines, training modules, or MSME mentoring tools.

Table 5. Evaluation Indicators for Digital Governance and Digital Financial Capability in MSMEs

Dimension	Evaluation Indicator	Objective
Digital literacy	Ability to understand the functions, limits, and risks of digital tools	Prevent inappropriate technology use
Digital governance	Rules for data, verification, and content ethics	Maintain security and credibility
Digital finance	Use of QRIS, e-wallets, mobile banking, and digital cashier systems	Facilitate transactions and recording
Financial recording	Sales, cost, profit, and cash flow reports	Measure business financial health
Cash control	Separation between personal and business cash	Prevent financial leakage
Margin analysis	Cost of goods sold, margins, discounts, and platform costs	Maintain profitability
Business resilience	Ability to survive during sales decline or cost increases	Measure business resilience
Market adaptation	Ability to adjust strategy based on data	Strengthen competitiveness

Source: Author's elaboration, 2026.

5. CONCLUSION AND LIMITATION

Digital governance and digital financial capability are two strategic aspects for strengthening MSME business resilience in the intelligent economy. Digital technology can help MSMEs improve marketing efficiency, understand customers, accelerate content creation, and support decision-making. However, technology must be governed through clear principles to avoid misinformation, data leakage, platform dependency, uncontrolled digital costs, and practices that do not align with business identity.

Digital financial capability is also a critical foundation because digital transactions do not automatically make MSMEs financially healthy. QRIS, e-wallets, marketplaces, mobile banking, and cashier applications must be connected to financial recording, cash flow control, margin analysis, and cost evaluation. Thus, MSMEs do not only receive money digitally, but also understand their financial condition more accurately.

This article emphasizes that MSME resilience is not built merely through technology adoption, but through the ability to govern technology. The novelty of this article lies in the integration of digital governance and digital financial capability as a strategic model for MSME business resilience. This model is relevant to management studies because it connects strategic management, finance, technology, education, business behavior, and local economic development.

The limitation of this article is its conceptual nature. The proposed model has not yet been empirically tested through field surveys, interviews, or quantitative analysis. Future research is recommended to test the model using MSME respondents, develop measurement instruments, examine the relationship between digital governance and business resilience, and evaluate the role of digital financial capability as a mediating or moderating variable. Future studies may also compare MSMEs across sectors, such as culinary, fashion, services, and creative industries.

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