

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

Bangun Prajadi Cipto Utomo¹, Siti Asri Muthmainah²

¹Universitas Duta Bangsa Surakarta, Indonesia

²Akademi Kebidanan Bhakti Nusantara Indonesia, Indonesia

ABSTRACT: Indonesian micro, small, and medium-sized enterprises (MSMEs) are widely recognised as pillars of economic resilience, employment creation, and community-based entrepreneurship. Yet many MSMEs still struggle to convert digital adoption into sustained competitiveness. Digital presence can increase visibility, but it does not automatically resolve capability gaps in market learning, digital interpretation, innovation routines, and ecosystem access. This study develops a qualitative thematic synthesis explaining how digital marketing strategy, digital literacy, innovation capability, and ecosystem support collectively revitalise the competitiveness of Indonesian MSMEs in the digital economy. The final synthesis used 48 cited sources, consisting of recent peer-reviewed literature, foundational theoretical works, and official Indonesian policy documents. The analysis was guided by the resource-based view, dynamic capability theory, and diffusion of innovation theory. Five interrelated themes were identified: digital marketing as a market-sensing and customer-relationship capability; digital literacy as a managerial foundation for meaningful technology use; innovation capability as the mechanism that converts digital interaction into value creation; ecosystem support as an enabling condition; and strategic integration as the basis of sustainable competitiveness. The findings show that MSME competitiveness is not strengthened by technology adoption alone. It is revitalised when entrepreneurs are digitally literate, marketing is strategically designed, customer information is converted into innovation, and institutional support addresses capability gaps rather than merely encouraging platform onboarding.

KEYWORDS: digital marketing strategy; digital literacy; innovation capability; MSME competitiveness; qualitative thematic synthesis; Indonesia; digital transformation

1. INTRODUCTION

Micro, small, and medium-sized enterprises (MSMEs) remain a central pillar of Indonesia's economic and social resilience. Official policy sources consistently describe MSMEs as major contributors to national output and employment. The Ministry of Finance reports that MSMEs contribute around 61% of national gross domestic product and absorb approximately 97% of the workforce, while the Coordinating Ministry for Economic Affairs highlights that the export contribution of MSMEs remains much lower than their domestic economic role (Coordinating Ministry for Economic Affairs of the Republic of Indonesia, 2025; Ministry of Finance of the Republic of Indonesia, 2025). This imbalance indicates that strengthening MSME competitiveness cannot be reduced to increasing the number of enterprises. It requires a deeper capability agenda involving market access, digital competence, product upgrading, innovation routines, and ecosystem alignment.

The digital economy has changed the competitive logic faced by MSMEs. In conventional markets, small firms could rely heavily on location, personal networks, price flexibility, and informal promotion. In platform-based markets, customers compare products instantly, read reviews, evaluate seller responsiveness, expect convenient payment, track delivery, and judge after-sales communication. Digital platforms therefore create opportunity and pressure at the same time. They can expand market reach, but they also expose MSMEs to stronger comparison, faster imitation, algorithmic uncertainty, and more demanding customers.

Recent scholarship confirms that SME digital transformation is a capability-building process rather than a purely technological project. Studies show that digital readiness, digital literacy, managerial attributes, digital orientation, platform capability, business model transformation, digital leadership, and ecosystem support shape whether digitalisation improves performance (Anatan & Nur, 2023; Barba-Sanchez et al., 2024; Clemente-Almendros et al., 2024; Escos Barragan & Becker, 2025; Held et al., 2026; Prakasa & Jumani, 2024; Sagala & Öri, 2024; Zahoor et al., 2023). This insight is highly relevant for Indonesian MSMEs because owners

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

frequently perform multiple roles at once: producer, marketer, customer-service officer, financial manager, and strategic decision maker. Under these constraints, digital transformation must be practical, incremental, and closely connected to everyday business routines.

The theoretical gap addressed in this article lies in the fragmented treatment of digital marketing strategy, digital literacy, and innovation capability as separate determinants of SME performance. Digital marketing may generate visibility, but visibility does not necessarily produce sales quality, loyalty, or strategic differentiation. Digital literacy may improve tool use, but tool use does not automatically lead to innovation. Innovation capability may create value, but value creation is weaker when it is not informed by market sensing and customer feedback. The contextual gap lies in the limited synthesis explaining how these capabilities interact within Indonesian MSMEs, where digital adoption is often constrained by limited resources, uneven literacy, regional inequality, and inconsistent mentoring support.

This article is grounded in three complementary theoretical perspectives. The resource-based view explains why competitive advantage emerges from valuable, rare, imperfectly imitable, and organisationally embedded resources (Barney, 1991). Dynamic capability theory explains how firms sense opportunities, seize them, and reconfigure resources under changing market conditions (Teece, 2007; Teece et al., 1997). Diffusion of innovation theory explains why adoption is more likely when innovation is perceived as useful, compatible, observable, trialable, and not excessively complex (Rogers, 2003). Together, these perspectives clarify that MSME competitiveness depends not on digital tools alone, but on the capability to combine digital interaction, managerial interpretation, innovation routines, and ecosystem support.

Responding to these gaps, the present study develops a qualitative thematic synthesis that explains how digital marketing strategy, digital literacy, innovation capability, and ecosystem support operate as an integrated capability system. The study does not test statistical hypotheses. Instead, it synthesises recent evidence and Indonesian policy context to build a theoretically grounded and practically useful explanation of MSME competitiveness in the digital economy.

1.1 Research Objectives

The central research question is: How do digital marketing strategy, digital literacy, innovation capability, and ecosystem support jointly revitalise the competitiveness of Indonesian MSMEs in the digital economy? Specifically, the study aims to:

- Synthesise recent peer-reviewed literature and official policy sources on SME/MSME digital transformation, digital marketing, digital literacy, innovation capability, ecosystem support, and competitiveness;
- Identify dominant qualitative themes explaining how digital capability is converted into market value and competitive advantage;
- Develop an integrated interpretive framework for strengthening Indonesian MSME competitiveness; and
- Formulate practical implications for MSME owners, universities, business mentors, and policy makers.

This study contributes to the literature by developing an integrated capability-based framework of MSME digital competitiveness. The framework explains that digital marketing strategy, digital literacy, innovation capability, and ecosystem support should not be viewed as separate managerial instruments, but as mutually reinforcing capabilities. In this framework, digital marketing enables market sensing, digital literacy enables informed decision-making, innovation capability enables value renewal, and ecosystem support enables capability development.

2. LITERATURE REVIEW AND THEORETICAL FOUNDATION

2.1 Resource-Based View

The resource-based view (RBV) provides a foundational explanation of how organisations achieve and sustain competitive advantage through the strategic use of internal resources and capabilities. RBV argues that firms are more likely to outperform competitors when they possess resources that are valuable, rare, imperfectly imitable, and organisationally embedded (Barney, 1991). From this perspective, superior performance is not determined only by external industry structure. It also depends on the ability of a firm to develop, combine, protect, and deploy internal resources that competitors cannot easily replicate.

In the MSME context, the most strategic digital resources are often intangible. Digital marketing capability, digital platform knowledge, customer data capability, digital literacy, organisational learning, and innovation routines can strengthen a small firm's ability to respond to changing customer needs and competitive pressure. Recent studies show that digital capability and digital transformation contribute to small-business performance when these capabilities are embedded in managerial routines and value-creation processes (Prakasa & Jumani, 2024; Rosyidiana & Narsa, 2024). Social media accounts, marketplace stores, online payment systems, and messaging applications are easy for competitors to copy. Their strategic value depends on the way MSMEs combine these tools with customer insight, service reliability, data interpretation, and innovation capability.

2.2 Dynamic Capability Theory

Dynamic capability theory extends RBV by explaining how organisations renew, integrate, and reconfigure resources in changing environments. While RBV emphasises the strategic importance of valuable resources, dynamic capability theory focuses on the

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

processes through which firms sense opportunities, seize market possibilities, and transform resources into new competitive value (Teece, 2007; Teece et al., 1997). This perspective is particularly relevant for MSMEs operating in the digital economy because platform rules, customer expectations, payment systems, and competitive patterns evolve continuously.

Within this study, digital marketing strategy is interpreted as a sensing capability because it enables MSMEs to observe customer behaviour, market trends, and competitor movement. Digital literacy is interpreted as a seizing capability because it enables entrepreneurs to evaluate information and make informed decisions. Innovation capability is interpreted as a reconfiguring capability because it converts digital insight into new products, processes, services, and business models. Ecosystem support strengthens this sequence by reducing resource constraints and facilitating capability renewal.

2.3 Diffusion of Innovation Theory

Diffusion of innovation theory explains how new technologies, ideas, and practices are adopted and disseminated across individuals, organisations, and social systems. Adoption is influenced by perceived relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003). In the MSME context, digital transformation is not simply a process of acquiring technology. It is a behavioural and organisational process involving learning, experimentation, confidence building, and routinisation.

MSMEs often face adoption barriers such as limited financial resources, uneven digital knowledge, perceived technological complexity, weak mentoring, and uncertainty about business benefits. Digital literacy reduces these barriers because entrepreneurs become more capable of evaluating platforms, understanding online customer behaviour, protecting accounts, managing payment risks, and using digital tools for decision making. Recent Indonesian evidence indicates that government support, technology acceptance, social-cognitive learning, and digital literacy influence business transformation among micro and small enterprises (Desmaryani et al., 2024; Raharjo et al., 2024).

2.4 Digital Marketing Strategy as a Market Capability

Digital marketing strategy refers to the systematic use of digital technologies, online platforms, and data-driven communication channels to create, communicate, deliver, and capture customer value. In the MSME context, digital marketing should not be reduced to uploading products or posting promotional content. It functions as a market-sensing, customer-relationship, brand-positioning, and learning capability.

Recent empirical studies show that digital marketing adoption supports SME growth and performance when it is linked to strategy, customer engagement, platform learning, and managerial capability. Bruce et al. (2023) found that digital marketing adoption supports the sustainable growth of SMEs, while Wu et al. (2024) demonstrated that innovativeness, proactiveness, and managerial capabilities influence digital marketing strategy adoption and organisational performance. Sharabati et al. (2024) similarly show that online advertising, social media marketing, search engine optimisation, and customer engagement contribute to SME performance under modern digital transformation conditions.

2.5 Digital Literacy as Foundational Managerial Capability

Digital literacy refers to the knowledge, competence, and critical judgement required to access, evaluate, create, communicate, protect, and use digital information effectively. For MSMEs, digital literacy is not limited to operating a smartphone or creating social media content. It includes understanding platform rules, customer data, digital payment risks, privacy, account security, algorithmic changes, online reputation, and analytics.

Recent evidence positions digital literacy as a key micro-foundation of digital transformation. Zahoor et al. (2023) show that managers' digital literacy contributes to SME digital transformation through digital technology use and interacts with managerial attributes. Indonesian studies also link digital literacy with technology acceptance, business transformation, financial inclusion, sustainability, and entrepreneurial performance (Al-Shami et al., 2024; Desmaryani et al., 2024; Raharjo et al., 2024; Wardana et al., 2023). Digital literacy therefore functions as a managerial capability that influences how entrepreneurs interpret opportunities and risks.

2.6 Innovation Capability and Competitive Renewal

Innovation capability refers to an organisation's capacity to generate, develop, implement, and commercialise new ideas that create value for customers and improve performance. For MSMEs, innovation does not always mean radical invention. It may involve better packaging, clearer product bundles, faster service, improved delivery options, more attractive visual identity, safer digital payment, or more responsive after-sales communication.

Digital adoption becomes competitive only when market information is converted into value creation. Customer reviews can trigger product redesign, repeated questions can improve product descriptions, abandoned orders can reveal pricing or payment barriers, and marketplace analytics can guide new variants. Recent studies show that digitalisation contributes to innovation and competitiveness when firms can transform digital resources into technological innovation, business model renewal, and productivity

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

improvement (da Silva et al., 2025; Hassan et al., 2024; Jiao et al., 2025; Larios-Francia & Ferasso, 2023; Radicic & Petkovic, 2023; Romero & Mammadov, 2025; Valdez-Juárez et al., 2024; Wang et al., 2023).

2.7 Ecosystem Support

MSME competitiveness is shaped not only by internal capability but also by ecosystem conditions. Infrastructure, logistics, financing, certification, marketplace governance, digital payment systems, training quality, universities, mentors, and business associations influence whether digital transformation becomes a practical opportunity or an additional burden. Smaller firms frequently lack sufficient internal resources to pursue digital transformation independently; therefore, external support can reduce capability gaps.

Recent studies show that government support, technology-organisation-environment configurations, business agility, digital leadership, and entrepreneurial ecosystems shape SME performance and competitiveness (Chatterjee et al., 2023; Hidayat-ur-Rehman & Alsolamy, 2023; N'Dri & Su, 2024; Prasannath et al., 2024; Yusuf et al., 2023). For Indonesia, ecosystem support is especially important because MSMEs operate under unequal regional and sectoral conditions. Urban firms may have stronger logistics, mentoring access, and digital infrastructure, while rural firms may face weaker connectivity and fewer structured learning communities.

Table 1. Theoretical Alignment of the Study

Theory	Core logic	Application to MSME competitiveness
Resource-based view	Competitive advantage arises from resources that are valuable, rare, imperfectly imitable, and embedded in organisational routines.	Digital tools are widely available, but integrated digital marketing skill, digital literacy, customer learning, and innovation routines can become strategic capabilities.
Dynamic capability theory	Firms sustain competitiveness by sensing opportunities, seizing them, and reconfiguring resources under changing conditions.	MSMEs sense market signals through digital channels, seize opportunities through informed decisions, and reconfigure products, processes, and relationships.
Diffusion of innovation theory	Adoption depends on perceived advantage, compatibility, observability, trialability, and manageable complexity.	Digital initiatives should be practical, visible, compatible with MSME routines, and supported by mentoring to reduce adoption anxiety.

2.8 Integrated Conceptual Framework and Propositions

Drawing on RBV, dynamic capability theory, and diffusion of innovation theory, this study proposes an integrated conceptual framework to explain how digital capabilities collectively contribute to MSME competitiveness. Rather than viewing digital marketing strategy, digital literacy, innovation capability, and ecosystem support as independent determinants, the framework conceptualises them as mutually reinforcing capabilities operating within a support ecosystem.

Digital marketing strategy functions as the initial market-facing capability because it enables MSMEs to reach customers, communicate value, capture feedback, and observe market behaviour. Digital literacy allows entrepreneurs to evaluate digital information, manage digital risks, and make better decisions. Innovation capability converts digital insight into product, process, service, and business model improvement. Ecosystem support strengthens the whole process by providing infrastructure, policy support, finance, knowledge networks, certification assistance, and market facilitation.

Because this article is a qualitative thematic synthesis, the propositions below are interpretive pathways rather than statistical hypotheses. They are used to organise the conceptual logic of the framework and to guide theoretical interpretation.

Proposition 1 (P1): Digital marketing strategy strengthens digital literacy through market interaction and platform learning.

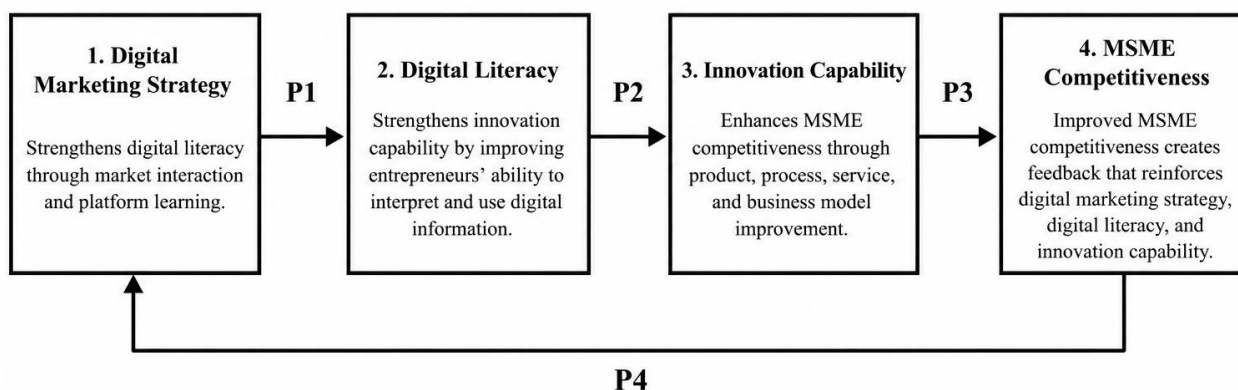
Proposition 2 (P2): Digital literacy strengthens innovation capability by improving entrepreneurs' ability to interpret and use digital information.

Proposition 3 (P3): Innovation capability enhances MSME competitiveness through product, process, service, and business-model improvement.

Proposition 4 (P4): Improved MSME competitiveness creates feedback that reinforces digital marketing strategy, digital literacy, and innovation capability.

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

Figure 1. Integrated conceptual framework of MSME digital competitiveness.



3. MATERIALS AND METHODS

3.1 Research Design

This study used a qualitative documentary research design supported by thematic synthesis. The design is appropriate because the purpose of the article is not to estimate the statistical magnitude of relationships among constructs, but to develop a theoretically grounded and practically meaningful explanation of how digital marketing strategy, digital literacy, innovation capability, and ecosystem support interact in shaping MSME competitiveness.

The analysis combined deductive theoretical sensitivity and inductive pattern recognition. Deductive sensitivity was drawn from RBV, dynamic capability theory, and diffusion of innovation theory (Barney, 1991; Rogers, 2003; Teece, 2007). Inductive attention was directed to recurring arguments in recent empirical articles, systematic reviews, conceptual studies, and official Indonesian policy documents.

3.2 Documentary Corpus and Search Strategy

The documentary corpus consisted of peer-reviewed journal articles, foundational theoretical works, and official Indonesian policy documents. The scholarly corpus prioritised publications from 2023 to 2026 when available, while foundational theoretical sources were retained because RBV, dynamic capability theory, and diffusion of innovation theory are established bodies of theory that cannot be replaced by recent citations alone.

Searches were conducted using combinations of the following terms: SME digital transformation, MSME digital marketing, digital marketing capability, digital literacy SMEs, innovation capability SMEs, business agility SMEs, dynamic capability digital transformation, SME competitiveness digital economy, sustainable digital transformation SMEs, digital orientation SMEs, SME digitalisation barriers, SME innovation performance, and Indonesia MSME digitalisation. A representative search string was: (SME OR MSME) AND (digital transformation OR digital marketing OR digital literacy OR innovation capability) AND (competitiveness OR performance OR sustainable competitive advantage). Sources were traced through publisher platforms and indexing-oriented repositories, including ScienceDirect, SpringerLink, Taylor & Francis Online, MDPI, Heliyon, DOAJ, institutional repositories, and official Indonesian government websites.

The inclusion process was relevance-driven and transparent. Articles were retained when they directly supported one or more focal constructs: digital marketing strategy, digital literacy, innovation capability, digital transformation, ecosystem support, business agility, or MSME/SME competitiveness. Official policy documents were used only to contextualise the economic importance of Indonesian MSMEs. Non-peer-reviewed opinion pieces, unsupported web summaries, marketing brochures, and sources with unclear bibliographic status were excluded.

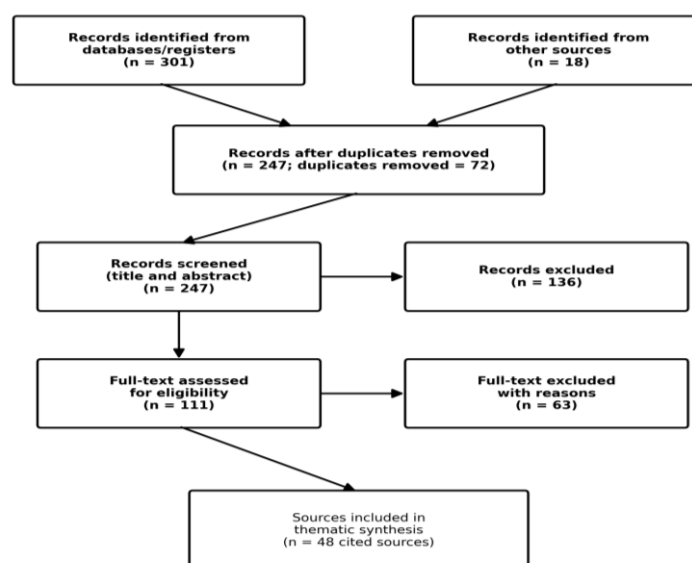
Table 2. Inclusion and Exclusion Criteria

Criterion	Included sources	Excluded sources
Period	Mainly 2023-2026, with foundational theories retained where necessary.	Older studies excluded unless theoretically foundational or methodologically necessary.
Document type	Peer-reviewed journal articles, systematic reviews, empirical studies, conceptual articles, foundational theory sources, and official Indonesian policy documents.	Blogs, brochures, unsupported opinion pieces, and sources with unclear publication status.

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

Topical fit	Digital transformation, digital marketing, digital literacy, innovation capability, ecosystem support, agility, or competitiveness in SMEs/MSMEs.	Studies not related to enterprise capability, digitalisation, innovation, performance, or competitiveness.
Quality orientation	Priority to reputable, traceable, DOI-supported, or publisher-hosted sources when available.	Sources with insufficient bibliographic detail, weak relevance, or unclear publication status.
Geographic relevance	Global SME studies when conceptually transferable and Indonesian evidence when available.	Cases with limited relevance to emerging-economy MSME competitiveness.

Figure 2. PRISMA-informed flow of literature identification and selection.



3.3 Evidence Base

The final synthesis used 48 cited sources relevant to MSME competitiveness in the digital economy. The evidence base included studies on digital transformation readiness, digital marketing strategy, digital literacy, innovation capability, ecosystem support, business agility, and Indonesian MSME performance. The synthesis also retained foundational theoretical sources and official Indonesian policy documents to strengthen conceptual grounding and contextual relevance.

Table 3 summarises the analytical domains and representative evidence integrated into the thematic synthesis. The table is not intended to replace the full reference list, but to show how the literature was organised during analysis.

Table 3. Analytical Domains and Representative Evidence Integrated into the Synthesis

Domain	Representative sources	Contribution to the synthesis
Digital transformation readiness and determinants	Anatan and Nur (2023); Zahoor et al. (2023); Clemente-Almendros et al. (2024); Costa Melo et al. (2023); Escoz Barragan and Becker (2025); Held et al. (2026); Lu and Shaharudin (2024); Romero and Mammadov (2025); Sagala and Öri (2024)	Explains why digital transformation requires readiness, managerial attributes, literacy, strategic orientation, roadmaps, leadership, and dynamic capabilities.
Digital marketing strategy and performance	Amin et al. (2025); Bruce et al. (2023); Hokmabadi et al. (2024); Noer et al. (2025); Sharabati et al. (2024); Wu et al. (2024)	Supports the argument that digital marketing contributes to growth, resilience, performance, and sustainable innovation when linked to strategy, customer engagement, platform learning, and responsiveness.
Digital literacy and digital capability	Al-Shami et al. (2024); Costa Melo et al. (2023); Desmaryani et al. (2024); Martínez-Peláez et al. (2024); Mick et al. (2024); Raharjo et al. (2024);	Shows that digital literacy is a foundational capability for technology acceptance, business transformation, financial inclusion, safe digital practices, and sustainable implementation.

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

	Wardana et al. (2023); Zahoor et al. (2023)	
Innovation capability and business-model renewal	da Silva et al. (2025); Hassan et al. (2024); Jiao et al. (2025); Larios-Francia and Ferasso (2023); Radicic and Petkovic (2023); Romero and Mammadov (2025); Valdez-Juárez et al. (2024); Wang et al. (2023)	Explains how digitalisation becomes competitive when converted into product, process, service, business-model, and innovation-performance outcomes.
Ecosystem, agility, and support mechanisms	Hidayat-ur-Rehman and Alsolamy (2023); Lu and Shaharudin (2024); N'Dri and Su (2024); Prasannath et al. (2024); Restrepo-Morales et al. (2024); Sagala and Ori (2024); Yusuf et al. (2023)	Highlights the roles of business agility, government support, leadership, digitalisation barriers, and ecosystem support.
Indonesian MSME transformation evidence	Al-Shami et al. (2024); Anatan and Nur (2023); Desmaryani et al. (2024); Prakasa and Jumani (2024); Raharjo et al. (2024); Rosyidiana and Narsa (2024); Saputra et al. (2024)	Provides Indonesian or emerging-economy evidence on readiness, literacy, innovation, dynamic capabilities, financial inclusion, and performance.

3.4 Literature Synthesis Procedure

The synthesis process followed a structured thematic procedure. First, all selected documents were read to identify their research focus, theoretical orientation, methodological approach, and key findings. During this stage, attention was given not only to reported results but also to the conceptual assumptions used by each study. Second, relevant statements were extracted and organised according to their relationship with digital marketing strategy, digital literacy, innovation capability, ecosystem support, and competitiveness.

Third, initial codes were generated. Deductive codes were derived from the theoretical framework, including strategic resource, valuable capability, sensing, seizing, reconfiguration, relative advantage, compatibility, complexity, trialability, observability, and routinisation. Inductive codes emerged from the literature itself, including customer trust, digital confidence, platform discipline, account security, payment safety, marketplace learning, content consistency, analytics use, practical mentoring, and ecosystem inequality.

Fourth, related codes were grouped into broader analytical categories. Codes such as customer feedback, market responsiveness, content discipline, customer engagement, and platform analytics were grouped under digital marketing as a market-sensing and customer-relationship capability. Codes such as account security, payment safety, analytics interpretation, and digital confidence were grouped under digital literacy as a managerial capability. Codes such as product redesign, process improvement, packaging renewal, business-model adjustment, and service innovation were grouped under innovation capability as a conversion mechanism.

3.5 Data Analysis Procedure

Thematic analysis followed six stages adapted from established qualitative thematic analysis logic (Braun & Clarke, 2021). First, selected documents were read repeatedly to establish familiarity with their concepts, findings, and contexts. Second, relevant statements were coded according to their relationship with digital marketing strategy, digital literacy, innovation capability, ecosystem support, and competitiveness. Third, similar codes were grouped into candidate themes. Fourth, the themes were reviewed against the full corpus to ensure internal coherence and external distinction. Fifth, each theme was named and defined. Sixth, the themes were interpreted through RBV, dynamic capability theory, and diffusion of innovation theory.

This procedure strengthened analytical transparency by clarifying how the study moved from selected documents to codes, from codes to themes, and from themes to theoretical interpretation. The process also reduced the risk of producing a merely narrative review because each theme was grounded in recurring evidence and linked explicitly to the study's theoretical framework.

3.6 Trustworthiness and Ethical Considerations

Trustworthiness was strengthened through source triangulation, theory triangulation, transparent inclusion criteria, and an audit trail of literature decisions. Source triangulation compared empirical articles, systematic reviews, conceptual studies, foundational theory sources, and official policy documents. Theory triangulation used RBV, dynamic capability theory, and diffusion of innovation theory to interpret recurring findings from different perspectives.

Because this study did not collect primary data from human participants, it did not involve personal identifiers, interviews, or respondent anonymisation. Ethical attention was directed to accurate citation, avoidance of fabricated empirical claims, careful paraphrasing, and fair representation of source arguments. Claims about journal quartile status should be rechecked before formal submission because quartile status may change across Scopus, SJR, and journal ranking databases.

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

4. RESULTS

The thematic synthesis produced five interrelated themes that explain how Indonesian MSMEs can transform digital adoption into competitiveness. The themes do not represent independent variables in a statistical model. Rather, they represent interpretive capability domains that operate sequentially and interactively. Digital marketing strategy creates market visibility and customer interaction. Digital literacy enables entrepreneurs to interpret digital information and manage technological risks. Innovation capability converts customer insight and platform learning into improved value creation. Ecosystem support reduces external constraints and strengthens capability development. Strategic integration connects these domains into a coherent competitiveness pathway.

The synthesis indicates that MSME competitiveness is not revitalised merely by increasing digital presence. Competitiveness emerges when digital tools become embedded in disciplined managerial routines, learning practices, customer relationships, innovation processes, and supportive institutional arrangements. This finding is particularly relevant for Indonesian MSMEs because many enterprises adopt digital platforms under resource limitations, uneven digital competence, and strong competitive pressure from similar sellers.

4.1 Digital Marketing as a Market-Sensing and Customer-Relationship Capability

The first theme shows that digital marketing should not be reduced to online promotion. It strengthens competitiveness when it functions as market sensing, communication discipline, customer relationship management, and value positioning. Studies on digital marketing adoption and SME performance demonstrate that digital tools create business value when entrepreneurs use them to understand customer needs, communicate consistently, build trust, and evaluate market response (Amin et al., 2025; Bruce et al., 2023; Hokmabadi et al., 2024; Noer et al., 2025; Sharabati et al., 2024; Wu et al., 2024).

For Indonesian MSMEs, social media and marketplaces should not be treated merely as display windows. They need to become learning systems. Customer comments, repeated questions, abandoned orders, complaints, reviews, and engagement patterns provide signals that can inform product presentation, packaging, pricing, service response, and communication tone. A digitally present MSME becomes competitive only when it uses such signals to improve decisions.

4.2 Digital Literacy as the Foundation of Managerial Digital Capability

The second theme confirms that digital literacy is a foundational managerial capability. Entrepreneurs with stronger digital literacy are better able to evaluate platform credibility, interpret analytics, manage digital payment risks, protect accounts, respond to algorithmic changes, and compare the effectiveness of digital channels. Recent studies link literacy and digital capability with sustainability, business transformation, financial inclusion, and entrepreneurial performance (Al-Shami et al., 2024; Costa Melo et al., 2023; Desmaryani et al., 2024; Martínez-Peláez et al., 2024; Mick et al., 2024; Raharjo et al., 2024; Sagala & Őri, 2024; Wardana et al., 2023; Zahoor et al., 2023).

Digital literacy also mediates the psychological side of transformation. Entrepreneurs with limited digital confidence may avoid experimentation, outsource critical decisions without understanding them, or abandon platforms when early results are disappointing. Capability development should therefore include confidence building, not only technical instruction. A human-centred approach recognises that learning occurs gradually and must be connected to the actual problems faced by MSME owners.

4.3 Innovation Capability as a Conversion Mechanism

The third theme explains why digital adoption alone is insufficient. Digital platforms increase visibility, but visibility does not automatically create durable competitiveness. Innovation capability converts digital exposure into value creation. Customer feedback can trigger product redesign, analytics can guide new variants, delivery problems can lead to process improvement, and online competition can stimulate stronger branding and differentiation.

This interpretation is supported by studies showing that digitalisation contributes to innovation and performance when firms can transform digital resources into new products, improved processes, and business-model renewal (da Silva et al., 2025; Hassan et al., 2024; Jiao et al., 2025; Larios-Francia & Ferasso, 2023; Radicic & Petkovic, 2023; Romero & Mammadov, 2025; Valdez-Juárez et al., 2024; Wang et al., 2023). In practical terms, innovation for MSMEs does not always require expensive research and development. It can start with better packaging, clearer product bundles, more reliable delivery information, digital payment integration, or more responsive after-sales service.

4.4 Ecosystem Support as an Enabling Condition

The fourth theme highlights that MSME digital transformation is not only an internal business issue. Ecosystem support shapes the ability of entrepreneurs to use digital tools productively. Infrastructure, logistics, financing, certification, marketplace rules, digital payment systems, training quality, and mentoring networks influence whether digital transformation becomes a practical opportunity or an additional burden.

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

Policy support should therefore move from generic digital onboarding to staged capability development. Counting how many MSMEs join marketplaces is less meaningful than assessing whether they can use platforms to improve sales quality, customer retention, product innovation, transaction safety, and profitability. Universities, local governments, financial institutions, and business associations can contribute by providing digital clinics, product photography assistance, marketplace optimisation support, data-security education, and sector-specific mentoring.

4.5 Strategic Integration as the Basis of Sustainable Competitiveness

The fifth theme is the integrative finding. Digital marketing strategy, digital literacy, innovation capability, and ecosystem support should not be treated as separate programmes. They form a capability system. Digital marketing creates market interaction; digital literacy enables interpretation and safe use of digital information; innovation capability converts insights into improved value; and ecosystem support provides enabling conditions.

This integrated logic explains why some MSMEs benefit from digitalisation while others experience only superficial digital presence. Competitiveness is revitalised when entrepreneurs use digital marketing to sense and reach markets, use digital literacy to interpret and manage digital information, use innovation capability to improve products and processes, and use ecosystem support to overcome resource constraints. The result is not only higher visibility but also stronger differentiation, agility, trust, profitability, and market resilience.

Table 4. Summary of Themes, Capability Logic, and Practical Implications

Theme	Capability logic	Practical implication
Digital marketing	Creates market visibility, customer interaction, and feedback signals.	Build content routines, response standards, customer databases, and platform analytics habits.
Digital literacy	Enables safe, critical, and confident use of digital information.	Train owners in platform rules, account security, payment safety, analytics, and data interpretation.
Innovation capability	Converts digital insight into product, process, service, and business-model improvement.	Use customer feedback and marketplace data to redesign products, packaging, service, and value propositions.
Ecosystem support	Provides infrastructure, knowledge, finance, mentoring, certification, and market access.	Move policy and university support from onboarding to staged capability development.
Strategic integration	Combines market sensing, digital interpretation, innovation routines, and external support.	Evaluate digitalisation through competitiveness outcomes, not only platform participation.

5. DISCUSSION

5.1 Theoretical Contributions

This study offers three theoretical contributions to the literature on MSME competitiveness in the digital economy. First, it advances an integrated capability-based interpretation of MSME digital competitiveness. Previous studies often examine digital marketing strategy, digital literacy, and innovation capability as separate predictors of SME or MSME performance. This study argues that these constructs should be understood as interdependent capabilities rather than isolated managerial activities. Digital marketing creates market interaction and customer information, digital literacy enables entrepreneurs to interpret and use digital information responsibly, and innovation capability converts this information into product, process, service, and business-model improvement. Second, the study extends the resource-based view by clarifying that digital tools themselves rarely constitute rare or inimitable resources for MSMEs. Social media accounts, marketplace stores, digital payment systems, and communication applications are widely accessible and easily imitated. Their strategic value emerges only when they are embedded in disciplined routines, customer learning, trust-building practices, data interpretation, and continuous innovation. Therefore, the competitive resource is not platform adoption, but the organisational capability to combine digital tools with market understanding and adaptive value creation. Third, the study contributes to dynamic capability theory by specifying a sequential yet interactive logic of MSME digital renewal. Digital marketing strategy functions as a sensing capability, digital literacy functions as a seizing capability, innovation capability functions as a reconfiguring capability, and ecosystem support functions as an enabling condition. This interpretation shows that MSME competitiveness is revitalised not through technology adoption alone, but through the continuous renewal of capabilities.

5.2 Practical Implications for MSME Owners

For MSME owners, digital competitiveness should be built through simple but consistent routines. First, entrepreneurs should define target customers and value propositions before selecting platforms. Second, digital content should be managed as a trust-building

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

mechanism, not merely as product display. Third, customer questions and complaints should be recorded as learning material. Fourth, basic digital literacy should include security, payment safety, privacy, and analytics. Fifth, innovation should be treated as continuous improvement rather than occasional major change.

Small improvements can produce meaningful competitiveness. Examples include redesigning product photos, improving packaging, creating bundles, clarifying delivery information, introducing digital payment options, responding faster to customers, simplifying ordering, improving product descriptions, and using customer feedback to create new variants. These practices are affordable and realistic for many MSMEs.

5.3 Policy and Institutional Implications

For policy makers, MSME digitalisation programmes should shift from quantity-based onboarding to capability-based outcomes. Rather than measuring only the number of MSMEs registered on platforms, programmes should evaluate whether MSMEs can maintain content consistency, manage customer response, improve product quality, protect digital accounts, use payment systems safely, and convert online interaction into sales and innovation.

Universities can play a strategic role through MSME digital clinics, applied student projects, product photography laboratories, marketplace mentoring, business analytics assistance, cybersecurity awareness, and short practical modules. Such initiatives can translate academic knowledge into community impact while giving students real entrepreneurial learning experience. Business associations and local governments can complement this by providing sector-specific mentoring and peer-learning communities.

5.4 Indonesian Contextualisation of MSME Digital Competitiveness

The Indonesian MSME context gives this study distinctive practical and theoretical relevance. MSMEs in Indonesia are not a homogeneous group. They operate across diverse sectors such as culinary products, batik, fashion, craft, retail, services, agribusiness, and household-based production. Their levels of digital readiness also differ substantially depending on location, owner capability, access to infrastructure, logistics, financing, mentoring, and market networks. As a result, digital transformation cannot be designed as a uniform programme for all MSMEs.

In Indonesia, many MSMEs rely on practical and low-cost digital channels such as WhatsApp Business, Instagram, Facebook, TikTok, Shopee, Tokopedia, Google Business Profile, and digital payment systems such as QRIS. These tools are relatively accessible, but their effective use requires more than account ownership. MSME owners need the ability to prepare clear product descriptions, produce credible visual content, respond quickly to inquiries, manage customer complaints, protect digital accounts, calculate promotional costs, evaluate platform performance, and maintain service reliability after transactions occur.

Therefore, MSME digital competitiveness in Indonesia should not be measured only by the number of enterprises connected to digital platforms. More meaningful indicators include content consistency, customer response quality, transaction safety, repeat purchase, customer trust, product improvement, service innovation, profitability, and market expansion. This contextual interpretation reinforces the central argument of the study: digital transformation becomes competitive only when it is translated into practical, repeated, and capability-enhancing business routines.

5.5 Limitations and Future Research

This study has limitations. First, it is a qualitative documentary study, so it does not measure the statistical strength of relationships among constructs. Second, although the corpus prioritised recent, traceable, and reputable sources, journal quartile status and indexing status may change across databases and years; therefore, authors should verify quartile status again before formal submission. Third, the study synthesises literature and policy documents rather than collecting primary interview data from MSME owners.

Future research can conduct interviews across sectors such as culinary, fashion, batik, craft, services, and manufacturing to examine how entrepreneurs experience digital transformation in daily practice. A sequential mixed-methods design may also be useful. Qualitative interviews can identify lived experiences and barriers, while survey-based SEM can test the relationships among digital marketing strategy, digital literacy, innovation capability, ecosystem support, and competitiveness quantitatively. Future studies may also compare whether the capability system works differently across urban and rural MSMEs, export-oriented and domestic firms, and product-based and service-based sectors.

6. CONCLUSION

This study concludes that the competitiveness of Indonesian MSMEs in the digital economy is revitalised through an integrated capability system consisting of digital marketing strategy, digital literacy, innovation capability, and ecosystem support. Digital marketing strategy enables MSMEs to sense market opportunities, communicate value, engage customers, and collect feedback. Digital literacy enables entrepreneurs to interpret digital information, manage platform risks, protect transactions, and make more informed managerial decisions. Innovation capability converts digital interaction into improvements in products, processes, services,

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

and business models. Ecosystem support strengthens these capabilities by reducing constraints related to infrastructure, financing, knowledge, mentoring, certification, and market access.

The main argument of this study is that digital transformation should not be reduced to platform adoption. For MSMEs, digital competitiveness is created when technology becomes part of daily learning, customer understanding, operational discipline, and adaptive innovation. Digital platforms can expand visibility, but sustained competitiveness depends on how entrepreneurs use digital information to build trust, improve value propositions, respond to changing customer expectations, and differentiate their businesses from competitors.

The study contributes to the literature by offering an integrated qualitative framework for understanding MSME digital competitiveness. It links the resource-based view, dynamic capability theory, and diffusion of innovation theory into a coherent explanation of how digital resources become strategic capabilities. The framework also provides practical guidance for MSME owners, universities, business mentors, and policy makers. Rather than focusing only on the number of MSMEs onboarded to digital platforms, future programmes should evaluate whether MSMEs can improve customer relationships, strengthen digital safety, innovate continuously, increase profitability, and build more sustainable competitiveness.

Acknowledgement

The authors acknowledge Universitas Duta Bangsa Surakarta for academic support in the development of this manuscript. Any remaining errors are the responsibility of the authors.

Funding

The authors received no specific funding for this manuscript.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this manuscript.

Data Availability Statement

This article is based on a qualitative documentary synthesis of published scholarly literature and official policy sources. No primary personal data were collected for this study.

REFERENCES

- 1) Al-Shami, S. A., Damayanti, R., Adil, H., Farhi, F., & Al Mamun, A. (2024). Financial and digital financial literacy through social media use towards financial inclusion among batik small enterprises in Indonesia. *Heliyon*, 10(15), e34902. <https://doi.org/10.1016/j.heliyon.2024.e34902>
- 2) Amin, M., Gohar, M., & Ali, I. (2025). Impact of digital transformation on SME's marketing performance: Role of social media and market turbulence. *Discover Sustainability*, 6, 378. <https://doi.org/10.1007/s43621-025-01228-3>
- 3) Anatan, L., & Nur. (2023). Micro, small, and medium enterprises' readiness for digital transformation in Indonesia. *Economies*, 11(6), 156. <https://doi.org/10.3390/economies11060156>
- 4) Barba-Sanchez, V., Meseguer-Martinez, A., Gouveia-Rodrigues, R., & Raposo, M. L. (2024). Effects of digital transformation on firm performance: The role of IT capabilities and digital orientation. *Heliyon*, 10(6), e27725. <https://doi.org/10.1016/j.heliyon.2024.e27725>
- 5) Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- 6) Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide*. SAGE.
- 7) Bruce, E., Shurong, Z., Ying, D., Yaqi, M., Amoah, J., & Egala, S. B. (2023). The effect of digital marketing adoption on SMEs sustainable growth: Empirical evidence from Ghana. *Sustainability*, 15(6), 4760. <https://doi.org/10.3390/su15064760>
- 8) Chatterjee, S., Chaudhuri, R., Vrontis, D., & Giovando, G. (2023). Digital workplace and organization performance: Moderating role of digital leadership capability. *Journal of Innovation & Knowledge*, 8(1), 100334. <https://doi.org/10.1016/j.jik.2023.100334>
- 9) Clemente-Almendros, J. A., Nicoara-Popescu, D., & Pastor-Sanz, I. (2024). Digital transformation in SMEs: Understanding its determinants and size heterogeneity. *Technology in Society*, 77, 102483. <https://doi.org/10.1016/j.techsoc.2024.102483>
- 10) Coordinating Ministry for Economic Affairs of the Republic of Indonesia. (2025, January 30). Pemerintah dorong UMKM naik kelas, tingkatkan kontribusi terhadap ekspor Indonesia. <https://www.ekon.go.id/publikasi/detail/6152/pemerintah-dorong-umkm-naik-kelas-tingkatkan-kontribusi-terhadap-ekspor-indonesia>

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

- 11) Costa Melo, D. I., Queiroz, G. A., Alves Junior, P. N., Sousa, T. B. D., Yushimito, W. F., & Pereira, J. (2023). Sustainable digital transformation in small and medium enterprises (SMEs): A review on performance. *Heliyon*, 9(3), e13908. <https://doi.org/10.1016/j.heliyon.2023.e13908>
- 12) da Silva, A., de Almeida, I. D., Dionisio, A., Rabadão, C., & Capela, C. (2025). How digital technologies enhance competitiveness in manufacturing SMEs. *Journal of Innovation and Entrepreneurship*, 14, 103. <https://doi.org/10.1186/s13731-025-00576-8>
- 13) Desmaryani, S., Soleh, A., Irmanelly, & Wiarta, I. (2024). Integration of technology acceptance models and government support to improve digital literacy. *Heliyon*, 10(14), e34086. <https://doi.org/10.1016/j.heliyon.2024.e34086>
- 14) Escob Barragan, K., & Becker, F. S. R. (2025). Keeping pace with the digital transformation: Exploring the digital orientation of SMEs. *Small Business Economics*, 64, 1361-1385. <https://doi.org/10.1007/s11187-024-00947-7>
- 15) Hassan, S. S., Meisner, K., Krause, K., Bzhalava, L., & Moog, P. (2024). Is digitalization a source of innovation? Exploring the role of digital diffusion in SME innovation performance. *Small Business Economics*, 62, 1469-1491. <https://doi.org/10.1007/s11187-023-00826-7>
- 16) Held, P., Heubeck, T., & Meckl, R. (2026). Boosting SMEs' digital transformation: The role of dynamic capabilities in cultivating digital leadership and digital culture. *Review of Managerial Science*, 20, 1687-1715. <https://doi.org/10.1007/s11846-025-00919-5>
- 17) Hidayat-ur-Rehman, I., & Alsolamy, M. (2023). A SEM-ANN analysis to examine sustainable performance in SMEs: The moderating role of transformational leadership. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(4), 100166. <https://doi.org/10.1016/j.joitmc.2023.100166>
- 18) Hokmabadi, H., Rezvani, S. M. H. S., & de Matos, C. A. (2024). Business resilience for small and medium enterprises and startups by digital transformation and the role of marketing capabilities: A systematic review. *Systems*, 12(6), 220. <https://doi.org/10.3390/systems12060220>
- 19) Jiao, H., Wang, T., Libaers, D., Yang, J., & Hu, L. (2025). The relationship between digital technologies and innovation: A review, critique, and research agenda. *Journal of Innovation & Knowledge*, 10(1), 100638. <https://doi.org/10.1016/j.jik.2024.100638>
- 20) Kahveci, E. (2025). Digital transformation in SMEs: Enablers, interconnections, and a framework for sustainable competitive advantage. *Administrative Sciences*, 15(3), 107. <https://doi.org/10.3390/admsci15030107>
- 21) Kallmuenzer, A., Mikhaylov, A., Chelaru, M., & Czakon, W. (2025). Adoption and performance outcome of digitalization in small and medium-sized enterprises. *Review of Managerial Science*, 19, 2011–2038. <https://doi.org/10.1007/s11846-024-00744-2>
- 22) Kim, J., & Jin, W. (2024). Impact of digital capabilities on entrepreneurial performance in SMEs. *Journal of Innovation & Knowledge*, 9(4), 100609. <https://doi.org/10.1016/j.jik.2024.100609>
- 23) Larios-Francia, R. P., & Ferasso, M. (2023). The relationship between innovation and performance in MSMEs: The case of the wearing apparel sector in emerging countries. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(1), 100018. <https://doi.org/10.1016/j.joitmc.2023.100018>
- 24) Lu, H., & Shaharudin, M. S. (2024). Role of digital transformation for sustainable competitive advantage of SMEs: A systematic literature review. *Cogent Business & Management*, 11(1), 2419489. <https://doi.org/10.1080/23311975.2024.2419489>
- 25) Martínez-Peláez, R., Escobar, M. A., Félix, V. G., Ostos, R., Parra-Michel, J., García, V., Ochoa-Brust, A., Velarde-Alvarado, P., Félix, R. A., Olivares-Bautista, S., Flores, V., & Mena, L. J. (2024). Sustainable digital transformation for SMEs: A comprehensive framework for informed decision-making. *Sustainability*, 16(11), 4447. <https://doi.org/10.3390/su16114447>
- 26) Mick, M. M. A. P., Kovalesski, J. L., & Chiroli, D. M. de G. (2024). Sustainable digital transformation roadmaps for SMEs: A systematic literature review. *Sustainability*, 16(19), 8551. <https://doi.org/10.3390/su16198551>
- 27) Ministry of Finance of the Republic of Indonesia. (2025). Pengembangan UMKM dorong pertumbuhan ekonomi. <https://www.kemenkeu.go.id/informasi-publik/publikasi/berita-utama/pengembangan-umkm-dorong-pertumbuhan-ekonomi>
- 28) N'Dri, A. B., & Su, Z. (2024). Successful configurations of technology-organization-environment factors in digital transformation: Evidence from exporting small and medium-sized enterprises in the manufacturing industry. *Information & Management*, 61(7), 104030. <https://doi.org/10.1016/j.im.2024.104030>
- 29) Noer, M. Y., Chan, A., Tresna, P. W., & Purbasari, R. (2025). Digital marketing and sustainable innovation in SMEs through bibliometric and systematic review. *Cogent Business & Management*, 12(1), 2548953. <https://doi.org/10.1080/23311975.2025.2548953>

Revitalising Indonesian MSME Competitiveness in the Digital Economy: A Thematic Synthesis of Digital Marketing Strategy, Digital Literacy, And Innovation Capability

- 30) Prakasa, Y., & Jumani, Z. A. (2024). Linking digital capability to small business performance: The mediating role of digital business transformation. *Cogent Business & Management*, 11(1), 2342486. <https://doi.org/10.1080/23311975.2024.2342486>
- 31) Prasannath, V., Adhikari, R. P., Gronum, S., & Miles, M. P. (2024). Impact of government support policies on entrepreneurial orientation and SME performance. *International Entrepreneurship and Management Journal*, 20, 1533–1595. <https://doi.org/10.1007/s11365-024-00993-3>
- 32) Radicic, D., & Petkovic, S. (2023). Impact of digitalization on technological innovations in small and medium-sized enterprises (SMEs). *Technological Forecasting and Social Change*, 191, 122474. <https://doi.org/10.1016/j.techfore.2023.122474>
- 33) Raharjo, K., Afrianty, T. W., & Prakasa, Y. (2024). Digital literacy and business transformation: Social-cognitive learning perspectives in small business enterprises. *Cogent Business & Management*, 11(1), 2376282. <https://doi.org/10.1080/23311975.2024.2376282>
- 34) Restrepo-Morales, J. A., Ararat-Herrera, J. A., López-Cadavid, D. A., & Camacho-Vargas, A. (2024). Breaking the digitalization barrier for SMEs: A fuzzy logic approach to overcoming challenges in business transformation. *Journal of Innovation and Entrepreneurship*, 13, Article 84. <https://doi.org/10.1186/s13731-024-00429-w>
- 35) Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
- 36) Romero, I., & Mammadov, H. (2025). Digital transformation of small and medium-sized enterprises as an innovation process: A holistic study of its determinants. *Journal of the Knowledge Economy*, 16, 8496-8523. <https://doi.org/10.1007/s13132-024-02217-z>
- 37) Rosyidiana, R. N., & Narsa, I. M. (2024). Micro, small, and medium-sized enterprises during the post-pandemic economic recovery period: Digitalization, literation, innovation, and its impact on financial performance. *Cogent Business & Management*, 11(1), 2342488. <https://doi.org/10.1080/23311975.2024.2342488>
- 38) Sagala, G. H., & Öri, D. (2024). Toward SMEs digital transformation success: A systematic literature review. *Information Systems and e-Business Management*, 22, 667-719. <https://doi.org/10.1007/s10257-024-00682-2>
- 39) Saputra, M. H., Utomo, M. N., Ariansyah, K., Wismayanti, Y. F., Andri Ansyah, R. H., Koeswinarno, & Suradi. (2024). Small and medium-sized enterprises dynamic capabilities and competitive advantage: The mediating effect of digitalization. *Entrepreneurial Business and Economics Review*, 12(3), 41-67. <https://doi.org/10.15678/EBER.2024.120303>
- 40) Sharabati, A.-A. A., Ali, A. A. A., Allahham, M. I., Abu Hussein, A., Alheet, A. F., & Mohammad, A. S. (2024). The impact of digital marketing on the performance of SMEs: An analytical study in light of modern digital transformations. *Sustainability*, 16(19), 8667. <https://doi.org/10.3390/su16198667>
- 41) Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of sustainable enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- 42) Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- 43) Valdez-Juárez, L. E., Ramos-Escobar, E. A., Hernández-Ponce, O. E., & Ruiz-Zamora, J. A. (2024). Digital transformation and innovation, dynamic capabilities to strengthen the financial performance of Mexican SMEs: A sustainable approach. *Cogent Business & Management*, 11(1), 2318635. <https://doi.org/10.1080/23311975.2024.2318635>
- 44) Wang, Z., Lin, S., Chen, Y., Lyulyov, O., & Pimonenko, T. (2023). Digitalization effect on business performance: Role of business model innovation. *Sustainability*, 15(11), 9020. <https://doi.org/10.3390/su15119020>
- 45) Wardana, L. W., Ahmad, A., Indrawati, A., Maula, F. I., Mahendra, A. M., Fatihin, M. K., Rahma, A., Nafisa, A. F., Putri, A. A., & Narmaditya, B. S. (2023). Do digital literacy and business sustainability matter for creative economy? The role of entrepreneurial attitude. *Heliyon*, 9(1), e12763. <https://doi.org/10.1016/j.heliyon.2022.e12763>
- 46) Wu, C.-W., Botella-Carrubi, D., & Blanco-Gonzalez-Tejero, C. (2024). The empirical study of digital marketing strategy and performance in small and medium-sized enterprises (SMEs). *Technological Forecasting and Social Change*, 200, 123142. <https://doi.org/10.1016/j.techfore.2023.123142>
- 47) Yusuf, M., Surya, B., Menne, F., Ruslan, M., Suriani, S., & Iskandar, I. (2023). Business agility and competitive advantage of SMEs in Makassar City, Indonesia. *Sustainability*, 15(1), 627. <https://doi.org/10.3390/su15010627>
- 48) Zahoor, N., Zopiatis, A., Adomako, S., & Lamprinakos, G. (2023). The micro-foundations of digitally transforming SMEs: How digital literacy and technology interact with managerial attributes. *Journal of Business Research*, 159, 113755. <https://doi.org/10.1016/j.jbusres.2023.113755>