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The Strategic Role of MSMEs in Advancing a Sustainable and Resilient Global Economy

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Abstract: Through a systematic synthesis of recent international studies, this article conceptualizes the interconnection between digitalization, sustainability, and the resilience of small and medium-sized enterprises (SMEs), while also outlining prospective research directions related to inclusive and context-sensitive digital transformation models across varied business settings. Employing a systematic literature review (SLR) methodology aligned with PRISMA guidelines, the study critically evaluates contemporary scholarly publications to explore how digital technologies shape sustainable development trajectories and organizational robustness within SMEs. The analysis demonstrates that digital transformation plays a pivotal role in reinforcing SME competitiveness and adaptability, particularly within an environment characterized by globalization pressures and recurrent economic disruptions. More specifically, digital adoption enhances operational efficiency, enables the development of sustainability-driven business models, strengthens supply chain risk management, and promotes deeper customer engagement through improved responsiveness and interaction. Despite these advantages, the review also reveals persistent barriers, including constrained financial and technological resources, internal cultural resistance to change, and substantial deficiencies in digital competencies. Overall, this article offers a conceptual enrichment of existing literature while providing practical insights for business actors, policymakers, and other stakeholders in designing strategic initiatives aimed at reinforcing the long-term competitiveness and resilience of the SME sector.

Keywords: SMEs, digital transformation, sustainability, resilience, global economy, systematic literature review.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) represent a cornerstone of both global and national economic systems, given their substantial contributions to employment generation, income creation, and the strengthening of domestic productive structures. Globally, MSMEs account for more than 90% of business entities and approximately 50% of formal employment, underscoring their central role in promoting inclusive and sustainable economic growth (World Bank, 2020; Abdu & Jibir, 2018). In Indonesia, MSMEs are particularly pivotal, contributing over 60% of Gross Domestic Product (GDP) and absorbing approximately 97% of total employment (Ministry of Cooperatives and SMEs, 2021). Despite their macroeconomic significance, MSMEs operate within an increasingly complex and volatile environment shaped by market globalization, accelerated digital transformation, and recurrent disruptions in global supply chains. These dynamics intensify competitive pressures and necessitate rapid strategic adaptation to sustain firm-level performance and systemic economic stability (OECD, 2019; Naudé, 2017).

Notwithstanding extensive recognition of MSMEs' economic importance, critical academic and policy-relevant gaps persist in understanding how their contributions can be strategically aligned with broader objectives of global sustainability and economic resilience. Existing empirical studies predominantly emphasize localized economic outcomes, while comparatively limited attention has been devoted to examining the integration of MSMEs into global sustainability agendas and transnational production networks (López-Acevedo & Tan, 2017; Torres & Marshall, 2015). Moreover, structural constraints—particularly limited digital capabilities, restricted access to external finance, and weak participation in global value chains—continue to impede the capacity of MSMEs to function as effective agents of sustainable development (Beck & Demirguc-Kunt, 2006; Asare et al., 2021). This research gap is increasingly salient in light of contemporary global shocks, including financial crises, pandemics, and climate-related risks, which collectively heighten the imperative for more resilient, adaptive, and inclusive economic systems (UNDP, 2021).

From a theoretical standpoint, economic development theory emphasizes innovation and entrepreneurship as fundamental drivers of long-term growth and structural transformation (Schumpeter, 1934; Carree & Thurik, 2010). Sustainability theory further highlights the necessity of balancing economic, social, and environmental objectives to achieve enduring development outcomes (Brundtland Report, 1987; Elkington, 1999). Complementarily, economic resilience theory focuses on the capacity of economic systems to absorb, adapt to, and recover from external shocks, within which MSMEs play a critical stabilizing role at both national and global levels (Briguglio et al., 2009; Rose, 2017). In parallel, Porter's (1980) strategic management framework and the Global Value Chain perspective (Gereffi, 2014) offer important analytical foundations for understanding how strategic differentiation, digitalization, and innovation-driven upgrading can enhance MSME competitiveness and integration into international markets. Accordingly, integrating these theoretical perspectives provides a coherent conceptual framework for examining the strategic role of MSMEs in advancing global economic sustainability and resilience.

This study aims to analyze the strategic contribution of Micro, Small, and Medium Enterprises (MSMEs) in supporting global economic sustainability, to identify the determinants shaping the role of MSMEs in fostering economic resilience under conditions of global uncertainty, and to examine how innovation- and digitalization-driven strategies enhance MSME competitiveness in international markets. Accordingly, this research addresses the following key questions: (1) how MSMEs function as strategic actors in promoting a sustainable and resilient global economy; (2) which internal and external factors influence the effectiveness of MSMEs; (3) how the adoption of innovation and digitalization strengthens MSME competitiveness; (4) what the principal constraints faced by MSMEs are; and (5) which policy instruments are most effective in reinforcing the strategic role of MSMEs. These questions are investigated through a qualitative research design, drawing on systematically collected primary and secondary data.

The scholarly contribution of this study lies in its integrative analytical framework, which synthesizes sustainability, economic resilience, and strategic management perspectives within the MSME literature—an approach that remains relatively underexplored in existing scholarship. This article advances theoretical novelty by positioning MSMEs not merely as domestic economic entities, but as strategic agents of transformation within the global economy toward more resilient, inclusive, and sustainable development trajectories. By combining robust theoretical foundations with empirical insights, this study contributes to the advancement of academic discourse while simultaneously offering policy-relevant and managerial implications for strengthening the global role of MSMEs (Yoshino & Taghizadeh-Hesary, 2018; Bianchi & Wickramasekera, 2016).

Literature Review

The core theories and concepts underpinning this study are grounded in scholarly perspectives that conceptualize Micro, Small, and Medium Enterprises (MSMEs) as key engines of economic activity, particularly within the contexts of sustainability and digitalization. Economic sustainability theory emphasizes that business competitiveness should not be assessed solely in terms of profitability, but also in relation to firms' adaptive capacity to social, economic, and technological transformations (Zhang et al., 2020). Within the digitalization framework, digital transformation theory posits that technology adoption enhances operational efficiency, expands market access, and strengthens business resilience against external shocks (Costa et al., 2020). The intersection of sustainability and digitalization in the MSME context is therefore critical, as these perspectives are complementary in explaining the long-term viability of small firms in an era of globalization.

Prior empirical studies indicate that MSMEs play a significant role within global value chains while simultaneously confronting substantial challenges related to technological adaptation. Evidence from China suggests that digital integration strategies contribute to enhanced innovation capabilities and improved performance among small firms (Li et al., 2020). Similarly, studies conducted in Europe highlight the importance of digital readiness and technological literacy in strengthening the resilience of small businesses during periods of crisis (Bouwman et al., 2019). In developing country contexts, research further underscores the critical role of government policies in facilitating digital technology adoption, thereby enabling MSMEs to compete more effectively in international markets (Mousavi et al., 2020).

Despite the growing body of literature emphasizing the potential of MSME digitalization, significant research gaps remain regarding the extent to which digitalization contributes to long-term sustainability and crisis resilience. Several studies focus predominantly on the technical aspects of technology implementation, with limited attention to the longer-term implications for business structures and broader economic ecosystems (Garzella et al., 2021). Another notable limitation is the geographic concentration of empirical evidence in developed economies, while developing regions—particularly Southeast Asia—remain relatively underexplored in the literature (Nguyen et al., 2021).

This article seeks to address these gaps by conceptualizing digitalization not merely as an efficiency-enhancing tool, but as a strategic mechanism for fostering MSME sustainability and resilience within developing country contexts. By synthesizing cross-country evidence, this study contributes to extending current understanding of how digital adaptation reshapes business models and strengthens MSME competitiveness amid global economic transformations (Scuotto et al., 2021). This perspective is intended to complement and integrate a body of literature that remains fragmented across disciplinary and regional boundaries.

Recent methodological trends in MSME research reflect an increasing integration of survey-based quantitative approaches with in-depth qualitative analyses. For instance, some studies employ big data analytics to map patterns of digital adoption, while others rely on case study designs to capture more nuanced contextual and institutional factors (Raimo et al., 2023). These developments point to the growing need for methodological pluralism, ensuring that MSME research generates not only generalizable insights but also context-sensitive evidence relevant to local conditions and policy environments.

Drawing on these theoretical perspectives and empirical findings, the conceptual synthesis in this study is grounded in the premise that digitalization and sustainability constitute mutually reinforcing dimensions in building MSME resilience. The concept of digital resilience highlights that technology adoption should be viewed not merely as a technical necessity, but as a long-term strategic orientation that positions MSMEs as critical actors in the ongoing transformation of the global economy (Gupta et al., 2022). On this basis, the study proceeds to the methodology section with a clear conceptual foundation for examining the dynamics of MSME digitalization and sustainability in both global and national contexts.

METHOD

This study adopts a systematic literature review (SLR) approach to provide a comprehensive conceptual and empirical mapping of Micro, Small, and Medium Enterprises (MSMEs) sustainability within the context of digital transformation and global economic resilience. The SLR methodology is selected due to its capacity to generate a structured and transparent synthesis of dispersed research findings, thereby producing more robust and generalizable conclusions compared to traditional narrative reviews (Page et al., 2021). This approach is particularly appropriate for addressing research questions that emphasize the identification of literature gaps, methodological trends, and theoretical integration relevant to MSME policy development and managerial practice (Snyder, 2019).

The data sources for this study consist exclusively of secondary literature, specifically peer-reviewed journal articles indexed in major international academic databases, including Scopus, Web of Science, ScienceDirect, and Taylor & Francis Online, as well as open-access databases such as the Directory of Open Access Journals (DOAJ). The literature is restricted to publications from the most recent five-year period (2018–2023) to ensure the relevance of findings to contemporary dynamics in digital transformation and MSME sustainability. This temporal delimitation is intended to enhance the currency and policy relevance of the evidence base in addressing both academic and practical challenges in management and public policy (Linnenluecke et al., 2020; Rojon et al., 2021; Quinn et al., 2025).

Data collection follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol, which comprises four principal stages: identification, screening, eligibility, and inclusion. The literature search is conducted using combinations of keywords such as *SMEs*, *sustainability*, *resilience*, *digital transformation*, and *global value chain*. Boolean operators (AND, OR) are employed to refine and optimize search results in accordance with the research objectives (Moher et al., 2009).

The inclusion criteria encompass: (1) articles published in peer-reviewed academic journals; (2) publications in English or Indonesian; (3) studies explicitly addressing MSMEs, sustainability, resilience, or digital transformation; and (4) open-access publications to ensure transparency and traceability. The exclusion criteria include: (1) opinion pieces, editorials, and non-academic policy reports; (2) duplicate publications; and (3) studies lacking substantive relevance to the core research themes. The multi-stage screening process is implemented to safeguard methodological rigor and analytical accuracy (Booth et al., 2016).

The unit of analysis in this study is the scholarly article itself rather than individuals or organizations. Accordingly, each article that meets the inclusion criteria is treated as a primary analytical unit contributing both empirical evidence and conceptual insights. This approach facilitates a systematic examination of knowledge development and the identification of dominant patterns and trajectories within the extant literature (Xiao & Watson, 2019).

Data analysis is conducted using a thematic synthesis approach supported by NVivo 12 Plus software to organize, code, and categorize the reviewed literature into major analytical themes. The analytical procedure involves open coding, axial coding, and selective coding, which are subsequently integrated into a conceptual framework. The synthesis is conducted narratively to explore interrelationships among themes and to identify research gaps. In addition, a literature triangulation strategy is applied to enhance the validity of the review findings by comparing evidence across independent sources (Thomas & Harden, 2008).

Through these methodological procedures, this study aims to generate valid, reliable, and theoretically and practically meaningful insights that contribute to the advancement of knowledge and practice in the fields of MSMEs, sustainability, and digital transformation at both global and national levels.

The method should be well elaborated enhancing the model, the analysis approach and the steps taken.

This section typically has the following sub-sections:Research type; Population and Sample/Informants; Research Location; Instrumentation or Tools ; Data Collection Procedure; Data Analysis; Ethical Approval.

RESULTS AND DISCUSSION

The synthesis of the literature conducted through the systematic literature review approach identifies several thematic, methodological, and conceptual patterns related to the role of Micro, Small, and Medium Enterprises (MSMEs) in the contexts of digital transformation, sustainability, and economic resilience. The review reveals a substantial increase in relevant scholarly publications over the past five years, reflecting the growing urgency associated with globalization, the Fourth Industrial Revolution, and post–COVID-19 economic dynamics (Adam & Alarifi, 2021). The collected literature indicates that MSME research has increasingly moved beyond a narrow focus on traditional business performance toward a broader emphasis on digital-enabled adaptation strategies, sustainable innovation, and the strengthening of resilience in response to global disruptions (Ferreira et al., 2021).

The characteristics of the reviewed publications indicate a predominance of case study designs and quantitative survey-based research, with a primary focus on MSME sectors in Europe, Asia, and Africa. Studies conducted in Europe tend to emphasize the adoption of sustainability practices and their associations with innovation and competitiveness, whereas research in Asia places greater emphasis on the role of digitalization in enhancing post-pandemic resilience (Bourletidis & Triantafyllopoulos, 2023). In contrast, studies from Africa highlight limited access to digital infrastructure as a major structural constraint hindering the optimization of MSME innovation potential (Donbesuur et al., 2020).

From a substantive perspective, the synthesis identifies three dominant thematic clusters. First, MSME digitalization is consistently associated with improvements in operational efficiency, market expansion, and business model diversification. For example, the utilization of digital platforms has been shown to directly enhance competitiveness by facilitating access to global markets and improving supply chain efficiency (Anwar et al., 2022). Second, sustainability practices among MSMEs function as catalysts for long-term value creation, with particular emphasis on eco-innovation, energy efficiency, and corporate social responsibility (Ilyas et al., 2020). Third, MSME resilience is strongly shaped by the interaction between internal factors (e.g., managerial capabilities, organizational culture, and innovation orientation) and external factors (e.g., policy support, market networks, and technological infrastructure) (Heredia et al., 2022).

The methodological analysis further indicates that the majority of prior studies rely on quantitative survey designs using questionnaire-based instruments to examine the relationships between technology adoption and MSME performance outcomes. Several studies complement these approaches with in-depth interviews and case study methods to capture the contextual dynamics of sustainability practices (Bag et al., 2021). Notably, there is an emerging trend toward systematic and integrative reviews that aim to synthesize fragmented empirical evidence, particularly in relation to MSME resilience in the context of the pandemic and digital transition (Carayannis et al., 2022).

In addition, the literature reveals a discernible shift from an exclusive emphasis on profitability toward the integration of sustainability and resilience as core indicators of long-term competitiveness. Recent studies increasingly underscore the importance of inter-firm collaboration among MSMEs, as well as partnerships with external actors—including governments, universities, and large corporations—in supporting more robust and innovation-oriented ecosystems (Garcia-Perez-de-Lema et al., 2023). This shift is closely aligned with broader transformations toward interconnected green and digital economies.

Overall, the findings of this review demonstrate a consistent pattern whereby MSMEs that successfully integrate digitalization, sustainability, and resilience-oriented strategies exhibit greater adaptive capacity in response to market changes and global crises. The contemporary literature provides compelling evidence that the synergy among these three dimensions is not only central to firm-level competitiveness, but also critical for supporting national and global economic stability (Azizi et al., 2021).

Discussion

The findings of this study underscore that the integration of digitalization, sustainability, and resilience-oriented strategies constitutes a critical determinant in strengthening MSME competitiveness amid global disruptions and the post–COVID-19 environment. The research objective of exploring the interrelationships among these three dimensions has been achieved, as evidenced by consistent patterns indicating that MSMEs adopting digital technologies, integrating environmentally responsible practices, and strengthening organizational resilience exhibit greater adaptive capacity to market changes and enhanced business continuity. These results directly address the research problem concerning the urgency of MSME transformation in response to increasingly complex economic and social challenges (Chege & Wang, 2020).

Within the theoretical framework of sustainable innovation and organizational resilience, these findings suggest that digital technology adoption should be interpreted not merely as an efficiency-enhancing mechanism, but as a strategic instrument enabling business model innovation and new value creation. The resource-based view (RBV) further supports the argument that the combination of internal capabilities (such as innovation orientation) and external enablers (including digital networks and public policy support) reinforces organizational resilience in times of crisis (Ratten, 2020). Accordingly, MSMEs that are able to synergistically internalize digitalization and sustainability demonstrate a stronger capacity to build and sustain long-term competitive advantage.

These results are broadly consistent with prior studies emphasizing the role of digitalization in expanding access to global markets and improving supply chain efficiency. For instance, empirical evidence from Asia indicates that digitalization enhances post-pandemic MSME resilience through the diversification of distribution channels and the integration of e-commerce platforms (Shinozaki & Rao, 2021). Similarly, research in Europe highlights the importance of sustainability practices in reinforcing long-term competitiveness, particularly through eco-innovation and environmentally oriented business models (Bican & Brem, 2020). However, contrasting evidence from African contexts points to structural limitations in digital infrastructure, which constrain digital adoption and, in turn, weaken

MSME resilience during crises (Amankwah-Amoah et al., 2021). These contextual differences emphasize that the effectiveness of digitalization and sustainability strategies is strongly conditioned by regional structural, social, and policy environments.

The primary scholarly contribution of this article lies in its conceptual integration of three core pillars—digitalization, sustainability, and resilience—which have often been examined in isolation within the extant literature. This study advances the literature by proposing an integrative framework in which MSME resilience is understood not solely as a function of internal organizational capacity, but also as contingent upon the strategic adoption of sustainability-oriented digital technologies. This perspective extends theoretical discourse on sustainable business model innovation and offers a novel lens for MSME strategic management in the digital era (Akhter et al., 2022). In doing so, the article contributes to the development of strategic management theory and entrepreneurial practice.

Nevertheless, this study is subject to several limitations. First, as a systematic literature review, the findings are inherently dependent on the scope and quality of the available literature, and thus the possibility of publication bias cannot be fully eliminated. Second, the predominance of quantitative survey-based studies in the reviewed sample may limit the depth of contextual analysis. Third, uneven regional representation—particularly the underrepresentation of developing country contexts—may constrain the generalizability of the findings. These limitations are consistent with prior observations in the MSME literature regarding data accessibility and regional research gaps (Priyono et al., 2020).

Based on these findings and limitations, several important implications can be derived. For researchers, future studies should prioritize the development of cross-country empirical models to rigorously test the interrelationships among digitalization, sustainability, and resilience. For MSME practitioners, the results underscore the importance of adopting holistic management strategies that leverage digital technologies to build resilience and generate sustainable value. For policymakers, the findings offer important guidance on the need to strengthen digital infrastructure, provide sustainability-oriented incentives, and design inclusive policies to support more resilient and innovation-driven MSME ecosystems (Olan et al., 2022). Accordingly, this study not only enriches academic discourse but also offers actionable insights for advancing adaptive and sustainable economic development.

CONCLUSION

This study confirms that the synergy among digitalization, sustainability, and resilience constitutes a strategic pillar for strengthening MSME competitiveness amid conditions of heightened global uncertainty. The findings demonstrate that digital technology adoption not only enhances operational efficiency but also enables the development of new business model innovations. When integrated with sustainability practices, digitalization expands market access, promotes resource efficiency, and strengthens adaptive capacity in response to crises. These results directly address the central research problem by positioning digital transformation as both a primary driver and a catalyst for the sustainable reinforcement of MSME resilience.

The contribution of this article lies in the development of an integrative conceptual framework that explicitly links digital transformation with sustainability practices and organizational resilience strategies. From a theoretical perspective, this study enriches the strategic management and entrepreneurial innovation literature by emphasizing the interdependence of these three core dimensions. From a practical standpoint, the findings provide actionable insights for MSME practitioners in designing digital- and sustainability-oriented strategies, as well as for policymakers in fostering supportive ecosystems that enhance small business competitiveness in the digital era.

Furthermore, the implications of this study highlight opportunities for future cross-country and empirically grounded research, particularly in testing the effectiveness of digitalization and sustainability strategies across diverse MSME sectors. Future studies may extend methodological approaches by integrating quantitative and qualitative data to generate a more nuanced understanding of MSME transformation dynamics. For practitioners, the results underscore the importance of proactively integrating digital innovation with sustainability principles to build long-term, adaptive resilience in an increasingly volatile business environment.

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