

Strategic Flexibility of SMEs in the Context of Digital Transformation

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Abstract: The digital transformation of SMEs is crucial for organizational adaptation and competitiveness. This review explores strategic flexibility in digitally transforming SMEs, highlighting how technologies like cloud computing, big data, and automation enhance adaptability, innovation, and performance. It emphasizes SME heterogeneity and the role of contextual factors such as industry and leadership. Drawing on the Resource-Based View, Dynamic Capabilities, and Institutional Theory, the paper offers an integrated perspective on the link between digital transformation and strategic flexibility. Key research gaps are identified, with future directions calling for multi-level analysis and diverse methodological approaches.

Keywords: strategic flexibility, digital transformation, small and medium-sized enterprises, resource-based view, dynamic capabilities

1. Introduction

In recent years, digital transformation has become a key driver of business innovation and competitiveness. Technologies such as artificial intelligence, big data, cloud computing, and the Internet of Things are reshaping enterprise operations, value creation, and decision-making [1]. For small and medium-sized enterprises (SMEs), which often face resource constraints, the pressure to adapt is particularly high [2]. In this context, strategic flexibility is essential for SMEs to sense change and respond effectively.

While digital transformation and strategic flexibility have attracted academic interest, their intersection in the SME context remains underexplored [3]. Existing research is fragmented, with inconsistent definitions and approaches, limiting a cohesive understanding of how digital transformation influences strategic flexibility and the factors involved [4].

This review aims to synthesize current literature on strategic flexibility in the context of SME digital transformation, focusing on three key questions:

- What are the core conceptual foundations of strategic flexibility?
- How does digital transformation influence its development and application in SMEs?
- What are the prevailing theories, methods, and gaps in current research?

Through systematic analysis, this review seeks to clarify key concepts and offer insights for future research and SME digital strategies.

2. The Strategic Challenges of SMEs in the Digital Era

SMEs face significant strategic challenges stemming from rapid technological change and heightened uncertainty. Emerging digital technologies disrupt traditional operations, reshape industries, and intensify the need for agility and foresight [5]. While offering growth opportunities, digitalization also imposes pressure on SMEs, which often lack the financial resources, digital talent, and strategic clarity to adapt effectively [6, 7]. These constraints may lead to strategic rigidity, such as overdependence on legacy systems and slow responses to change, ultimately threatening competitiveness and survival. In this context, strategic flexibility emerges as a critical capability — enabling SMEs to reconfigure strategies, reallocate resources, and respond dynamically to external shifts.

3. Conceptual Foundations

3.1 Strategic Flexibility in SMEs: Definitions, Theoretical Foundations, and Organizational Implications

Strategic flexibility is a firm's ability to adapt to change, realign priorities, and seize opportunities. Evolving from the idea of shifting between strategic options, it now incorporates the resource-based view, dynamic capabilities, and organizational theory—emphasizing resource redeployment, transformation, and adaptability. For SMEs, strategic flexibility is critical. Their flat hierarchies and centralized leadership support quick responses, but limited resources and reliance on

key individuals can hinder strategic change and digital investment. To stay competitive, SMEs must remain agile, learn continuously, and innovate despite constraints.

3.2 Core Elements and Stage Models of Digital Transformation

Digital transformation (DT) is more than a mere technological upgrade; it constitutes a fundamental shift in how organizations operate, create value, and respond to environmental changes. In academic literature, DT is commonly conceptualized as a multi-stage process that encompasses technology adoption, process transformation, and organizational transformation. These stages, while often presented sequentially, are inherently iterative and interdependent (Table 1).

Table 1. Core Elements and Stages of Digital Transformation in SMEs

Stage	Description
Technology Adoption	Integration of digital tools such as ERP systems, cloud platforms, and AI solutions into existing business operations.
Process Transformation	Redesign of workflows and enhancement of operational efficiency through automation, digitization, and data-driven decision-making.
Organizational Transformation	Structural and cultural changes, including leadership evolution and employee upskilling, to support and sustain long-term digital initiatives.

Digital transformation requires more than technical adoption—it demands strategic agility, cultural alignment, and internal resource reconfiguration. For SMEs, limited financial, human, and technological resources make this process more challenging. Strategic flexibility thus becomes essential, helping SMEs navigate uncertainty, align with market shifts, and build resilience.

4. Literature Clusters and Thematic Analysis

Existing research on strategic flexibility in SME digital transformation centers on four themes. First, digital tools like cloud computing, analytics, and modular systems enhance flexibility by streamlining information flow, speeding decisions, and enabling experimentation. These technologies help SMEs respond quickly to changing markets. Second, strategic flexibility improves performance. It supports innovation, adaptability, and risk management, helping SMEs remain competitive despite resource limits. Third, flexibility is shaped by both external and internal factors. Industry dynamics, such as technological change, influence adaptability demands. Internally, a learning culture, capable leadership, and strong IT support digital responsiveness. Digital literacy and alignment between IT and business are especially important. Fourth, several theories frame the topic. The Resource-Based View sees flexibility as a competitive asset. The Dynamic Capabilities approach emphasizes reconfiguring resources under change. Institutional theory explains how external pressures shape strategy, showing flexibility also involves legitimacy.

5. Gaps and Future Research Directions

Current research on strategic flexibility in SMEs during digital transformation faces several limitations. These include a heavy reliance on quantitative methods, limited exploration of internal mechanisms like agility and resilience, and a tendency to treat SMEs as a uniform group. Most studies also focus on developed economies, neglecting the distinct challenges in emerging markets. Future research should adopt multi-level approaches to examine how leadership, collaboration, and digital skills shape flexibility across organizational levels. Mixed methods and greater attention to context-specific and theoretical integration—such as combining RBV, dynamic capabilities, and institutional theory—can offer deeper insights into SME adaptability.

6. Conclusion

This review highlights strategic flexibility as a vital dynamic capability that enables SMEs to navigate digital transformation and environmental uncertainty. Beyond technological agility, it involves adaptive leadership, culture, and decision-making. By integrating the Resource-Based View, Dynamic Capabilities, and Institutional Theory, the review offers a comprehensive understanding of how SMEs sense, seize, and transform amid disruption. It underscores the need for SME leaders to foster adaptability and invest in digital capabilities, and for policymakers to tailor support to SME diversity. Future research should adopt multi-level and context-sensitive approaches, especially in emerging markets, to deepen understanding of strategic flexibility development.

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