

Turning Digital Transformation to Sustainable Competitive Advantage: A Qualitative Multi-Case Study Across Industries

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ABSTRACT

Digital transformation has become one of the most pressing strategic agendas for organizations seeking to maintain competitive advantage amidst rapid technological disruption. This article aims to analyze how the digital transformation process contributes to the formation of sustainable competitive advantage (SCA), by positioning dynamic capabilities and organizational agility as key connecting mechanisms. This research uses a qualitative multi-case case study approach based on document analysis and cross-case synthesis of several organizations across sectors—banking, tourism and hospitality, manufacturing, and small and medium enterprises—that have been published in the current literature. Data are analyzed thematically through stages of within-case and cross-case analysis to identify patterns, similarities, and contextual specificities. The results show that digital transformation does not automatically generate sustainable competitive advantage, but rather depends on the organization's capacity to build dynamic capabilities, strategic agility, and a culture of innovation that aligns with each organization's resource and institutional context. The novelty of this research lies in the integration of the Resource-Based View and Dynamic Capabilities Theory frameworks in a cross-sector and cross-country synthesis that has rarely been done in qualitative-comparative ways. Practical implications for managers and policy makers, limitations of the study, and directions for further research are also discussed at the end of the article.

Keywords: digital transformation; sustainable competitive advantage; dynamic capabilities; organizational agility; qualitative case studies.

INTRODUCTION

The digital economy has fundamentally changed the way organizations create, deliver, and capture value. The development of digital technologies—from artificial intelligence, cloud computing, big data analytics, to digital platforms—has driven nearly all industrial sectors to undertake digital transformation (DT) as a strategic response to the changing competitive landscape (Lu & Shahrudin, 2024). Digital transformation is no longer viewed simply as an investment in information technology, but rather as a strategic reorganization process that touches on business models, organizational structures, work cultures, and relationships with stakeholders (He, 2025; Shao, 2025). In this context, an organization's ability to effectively utilize digital technology is viewed as a strategic resource with the potential to generate sustainable competitive advantage (SCA), a condition where an organization is able to maintain superior performance compared to its competitors



in the long term because it possesses valuable, rare, difficult-to-imitate, and difficult-to-substitute resources and capabilities.

The pressure to digitally transform is intensifying with the acceleration of post-pandemic technological disruption, rising customer expectations for data-driven services, and the emergence of platform business models that are changing the competitive landscape across nearly all industries. This phenomenon is not limited to large multinational corporations, but also to small and medium-sized enterprises (SMEs), which are being challenged to adapt to stay ahead of competitors who have already adopted digital technologies (Kahveci, 2025; Van Hoang et al., 2025). At the same time, environmental and social sustainability pressures are driving organizations to integrate digital transformation agendas with sustainability agendas, as demonstrated by studies on the transition to a circular economy and net-zero manufacturing (Okorie et al., 2023) and digitalization-based green innovation strategies (Vo-Thai & Tran, 2024). This situation emphasizes that sustainable competitive advantage in the digital era can no longer be understood solely in terms of short-term financial gains, but must also encompass the dimensions of resilience, adaptability, and socio-environmental legitimacy of the organization in the eyes of stakeholders.

Literature reviews show that the relationship between digital transformation and sustainable competitive advantage is complex and not always linear. Xue et al. (2022) found that digital transformation in manufacturing companies influences sustainable competitive advantage through a boundary spanning mechanism, while Ning and Yao (2023) showed that the impact of digital transformation on supply chain competitive performance is highly dependent on a company's supply chain capabilities. In the service sector, Raymond et al. (2023) confirmed the existence of a moderating-mediation effect, explaining why two companies with the same level of digital technology adoption can achieve different competitive outcomes. Similarly, Probojakti et al. (2024) in the banking context found that new digital transformations contribute significantly to sustainable competitive advantage when accompanied by adequate organizational agility. Another study by Jabri and Lahrech (2026) in the United Arab Emirates emphasized the importance of strategic alignment capabilities as a link between digital initiatives and long-term competitive outcomes.

The most widely used theoretical perspectives to explain this phenomenon are the Resource-Based View (RBV) and Dynamic Capabilities Theory. RBV emphasizes that sustainable competitive advantage stems from an organization's internal resources that are valuable, rare, difficult to imitate, and non-substitutable (Du et al., 2024). However, in a rapidly changing digital environment, the mere possession of digital resources is no longer sufficient to guarantee a lasting advantage. Dynamic Capabilities Theory complements RBV by explaining how organizations need to continuously sense, seize, and reconfigure resources (transform) to remain relevant amidst change (De La Torre & De La Vega, 2025; Torres et al., 2026). The integration of these two perspectives is increasingly used in recent literature, including in the context of digital leadership and green innovation in the tourism and hospitality sector (Hussein et al., 2024), circular economy-oriented digital transformation in manufacturing towards net zero (Okorie et al., 2023), and eco-innovation strategies in Vietnamese companies (Vo-Thai & Tran,

2024). At the manufacturing level, Xue et al. (2022) added that the effectiveness of digital transformation in generating sustainable competitive advantage is also determined by boundary spanning capabilities, namely the organization's ability to bridge internal-external boundaries to access new digital knowledge and resources, while Ning and Yao (2023) emphasized the importance of supply chain capabilities as a prerequisite for digitalization to truly translate into superior competitive performance.

At the small and medium enterprise (SME) level, the challenges of digital transformation have different characteristics than those of large companies. Kahveci (2025) identified a number of interrelated enablers of digital transformation in SMEs, ranging from digital literacy of business leaders, infrastructure availability, to external ecosystem support. This finding aligns with the results of a study by Van Hoang et al. (2025) on manufacturing SMEs in emerging markets, which emphasized the role of digital absorptive capacity as a critical mediator between digital capability and sustainable competitive advantage. In the Indonesian context, Widyastuti et al. (2023) found that the success of digital transformation in SMEs is largely determined by the development of a collaborative digital ecosystem involving the government, financial institutions, and the business community, given that the resource limitations faced by SMEs cannot be overcome individually. Similar findings also emerged in the context of other developing countries, such as Zimbabwe, where Mataruka et al. (2024) showed that service companies can still gain competitive benefits from digital transformation despite limited technological infrastructure, as long as competitive advantage is positioned as an intermediary variable actively managed by management.

In addition to organizational capability aspects, the dimensions of data-driven leadership and decision-making have also received increasing attention in recent literature. Wang et al. (2025) demonstrated that digital leadership combined with data-driven decision-making can foster organizational creativity while strengthening sustainable competitive advantage. Meanwhile, Suljic (2025, as cited in the related literature) and Alioune (2026) highlighted the importance of digital transformation leadership grounded in ethical governance and artificial intelligence capabilities in fostering organizational agility in new S-curve industries. Torres et al. (2026) extended this discussion by demonstrating, through a structural equation modeling approach, that artificial intelligence readiness, digital transformation capabilities, organizational agility, and innovation ambidexterity collectively shape the trajectory toward sustainable competitive advantage.

Despite the rapid growth of the literature on digital transformation and sustainable competitive advantage, most empirical studies are still dominated by quantitative survey-based approaches and structural equation modeling in a single context—one sector, one country, or one type of organization (Torres et al., 2026; Mataruka et al., 2024; Wang et al., 2025). While these approaches are powerful in testing causal relationships between variables, they tend to be less able to capture the complex processes, contexts, and narrative mechanisms that explain why and how digital transformation can—or cannot—generate sustainable competitive advantage across organizations with varying characteristics. Systematic reviews by Lu and Shaharudin (2024) and Leão and Silva (2021) also confirm that research

explicitly comparing cross-sector and cross-country patterns qualitatively remains relatively limited compared to single-context quantitative studies.

The novelty of this article lies in three aspects. First, it employs a multi-case qualitative case study design that synthesizes findings from diverse sector and country contexts—banking, tourism and hospitality, manufacturing, supply chains, and SMEs in both developed and developing countries—to identify cross-case patterns that are contextually richer than mere statistical generalizations. Second, it explicitly integrates the Resource-Based View and Dynamic Capabilities Theory as dual analytical lenses, thus explaining both the structural conditions (digital resource ownership) and the dynamic processes (reconfiguration capabilities) that collectively shape sustainable competitive advantage, as alluded to but not fully integrated by Du et al. (2024) and Shapovalova (2025). Third, it places contextual and moderating factors—business size, industry sector, resource availability, and institutional pressures—as explicit parts of the analytical framework, rather than treating them as mere control variables as is common in quantitative studies. Thus, this research is expected to provide a more holistic understanding of the mechanisms behind the relationship between digital transformation and sustainable competitive advantage, while also offering theoretical propositions that can be further tested quantitatively in future research.

This study has several limitations that should be considered when interpreting the proposed ASVC framework. First, the analysis is based on a conceptual synthesis of twenty-five sources published between 2021 and 2026, which may not capture the full range of research on attention scarcity and digital platform competition. Second, the reviewed literature covers diverse theoretical perspectives and platform contexts, making direct comparison across studies difficult. As the framework has not yet been tested using primary user-level, platform-level, or market-level data, its explanatory relationships should be considered theoretically grounded propositions rather than empirically validated causal relationships.

Future research should therefore empirically test the ASVC framework across different types of digital platforms, including social media, e-commerce, streaming services, and generative AI systems. Quantitative studies could examine the relationships among attention scarcity, algorithmic engagement, value extraction, and market power, while qualitative and comparative research could investigate how users, platforms, and regulators experience and respond to these dynamics in different institutional contexts. Such research would help refine the framework and determine whether its micro, meso, and macro dimensions consistently explain attention-driven value competition across digital markets.

Based on the above description, this study was formulated to answer the following questions: (1) how do digital transformation patterns contribute to sustainable competitive advantage in organizations across sectors and countries; and (2) what mechanisms explain variations in digital transformation outcomes across organizations with relatively similar levels of technology adoption. The purpose of this study is to develop an integrated conceptual understanding of the digital transformation pathway towards sustainable competitive advantage, while providing practical recommendations for managers and policymakers in designing sustainable digital transformation strategies.

METHODOLOGY

Research Design

This research employs a qualitative approach with a multiple case study design, following the replication logic developed within the case study methodology tradition, to identify general patterns as well as contextual specificities in the phenomena of digital transformation and sustainable competitive advantage. The choice of case study design is based on the contextual, processual, and organizationally meaningful nature of the phenomenon, making it more appropriate to understand it through in-depth analysis than by examining the relationships between variables in isolation (He, 2025; Tahat, 2021). The qualitative multiple case study approach was chosen because it allows the researcher to conduct within-case analysis to understand the specifics of each organization, as well as cross-case synthesis to discover patterns and propositions that apply more broadly.

Cases and Data Sources

Cases were selected purposively using the following criteria: (a) the organization has clearly documented its digital transformation process; (b) data on achievements or indicators of competitive advantage are available; and (c) the cases represent a diversity of sectors and geographic contexts to enable informative cross-case comparisons. Based on these criteria, this study analyzes six cases of organizations/groups of organizations across sectors as presented in Table 1, sourced from recent studies on banking (Probojakti et al., 2024), cross-industry sectors in the United Arab Emirates (Jabri & Lahrech, 2026), tourism and hospitality (Hussein et al., 2024), manufacturing SMEs in emerging markets (Van Hoang et al., 2025), the service sector in Zimbabwe (Mataruka et al., 2024), and MSMEs in Indonesia (Widyastuti et al., 2023). The primary data sources in this study are published academic documents (indexed journal articles with active DOIs), research reports, and supporting secondary data relevant to each case.

Data Collection and Analysis Procedures

Data collection was conducted through systematic document analysis techniques on the published sources mentioned above. Each document was reviewed using a uniform case protocol, covering four aspects: (1) organizational and sector context; (2) key drivers of digital transformation; (3) identified connecting mechanisms or mediators; and (4) the resulting sustainable competitive advantage. Data analysis followed the flow as presented in Figure 2, namely establishing a case study protocol, selecting multiple cases, collecting secondary data and documents, within-case analysis, cross-case synthesis, and drawing themes and theoretical propositions. This process was iterative, where findings at one stage could trigger a review at the previous stage to ensure consistency of interpretation (data triangulation).

Thematic analysis was used to identify categories and patterns that recurred across cases. The initial conceptual framework, as presented in Figure 1, was constructed based on a theoretical synthesis of the Resource-Based View and

Dynamic Capabilities Theory, then used as an analytical lens (sensitizing concepts) without limiting the possibility of new themes emerging from the data (an abductive approach). To maintain the credibility and trustworthiness of qualitative research, several strategies were employed, namely source triangulation (multiple cross-journal and cross-national studies), an audit trail in the form of systematic recording of the coding process, and conceptual member-checking by comparing the researcher's interpretations with the conclusions reported in the original studies. The limitations of generalization are analytical in nature (analytic generalization), not statistical generalization, as is common in qualitative case study research.

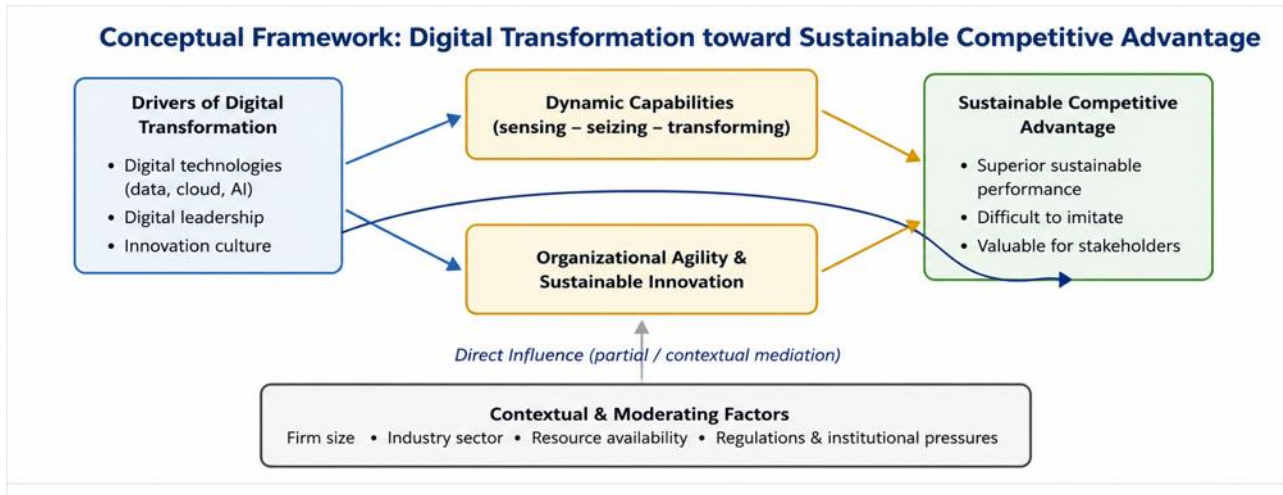


Figure 1. Conceptual Framework of Digital Transformation towards Sustainable Competitive Advantage

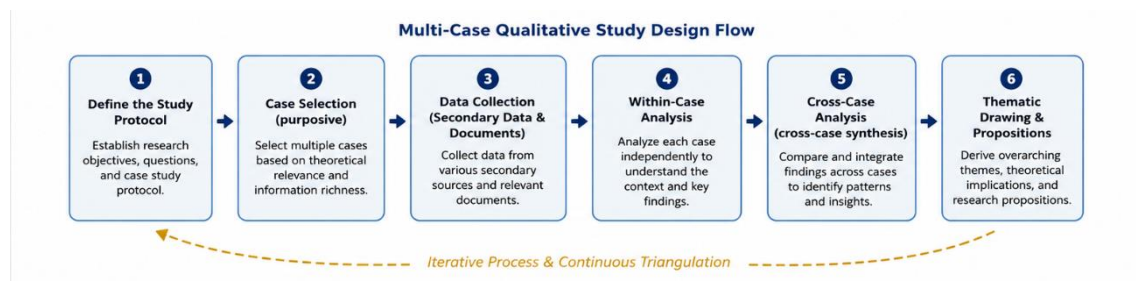


Figure 2. Multi-Case Qualitative Case Study Design Flow

RESULTS AND DISCUSSION

Cross-Case Findings

A cross-case analysis of six case organizations shows that digital transformation consistently serves as a starting point for strategic change, but the nature and magnitude of the resulting competitive benefits vary significantly depending on the connecting mechanisms the organization successfully establishes. A summary of the cross-case findings is presented in Table 1.

Table 1. Cross-Case Synthesis of Digital Transformation and Sustainable Competitive Advantage

Case / Context	Key Drivers of Digital Transformation	Connecting Mechanism (Mediator)	The Form of Sustainable Competitive Advantage
Banking (Probojakti et al., 2024)	Digitalization of services, transformational leadership	Organizational agility, corporate resilience	Performance resilience amidst financial market turmoil
UAE – cross-sector (Jabri & Lahrech, 2026)	National scale digital technology investment	Strategic alignment capabilities	Consistency of strategic direction with digital capabilities
Tourism & Hospitality (Hussein et al., 2024)	Digital leadership	Green absorptive capability, eco-innovation	Sustainable reputation and green differentiation
Manufacturing SMEs in developing countries (Van Hoang et al., 2025)	Basic digital capabilities (technology adoption)	Digital absorptive capacity	Cost efficiency and strengthening niche market positions
Zimbabwe – services (Mataruka et al., 2024)	Adoption of digital technology amidst infrastructure limitations	Competitive advantage as an intervening variable	Improved performance despite limited resources
Indonesian SMEs (Widyastuti et al., 2023)	Digital ecosystem and multi-stakeholder collaboration	Digital literacy and institutional support	Sustainability of micro, small and medium enterprises

Table 1 highlights the central theme emerging from all cases: that digital transformation never stands alone as a determinant of sustainable competitive advantage. In the banking case, Probojakti et al. (2024) show that the digitalization of new services significantly impacts performance resilience when accompanied by adequate organizational agility and corporate resilience; without both, digital investments risk becoming sunk costs without tangible translation into competitive position. A similar pattern is found in the UAE case, where Jabri and Lahrech (2026) emphasize that strategic alignment capability—the ability to consistently align digital initiatives with corporate strategic direction—is a prerequisite for digital transformation to translate into a lasting advantage.

Furthermore, comparisons between cases reveal a gradient in digital maturity that influences the magnitude of competitive advantage gained. In organizations with a high level of digital maturity, such as the cross-sector case in the UAE (Jabri & Lahrech, 2026) and the banking case (Probojakti et al., 2024), digital transformation has shifted from simply digitizing processes to digitalizing business models as a whole, resulting in structural competitive advantages that are more difficult for competitors to imitate. Conversely, in organizations with

developing digital maturity, such as manufacturing SMEs in emerging markets (Van Hoang et al., 2025) and MSMEs in Indonesia (Widyastuti et al., 2023), digital transformation still focuses on operational efficiency and expanding market access, resulting in incremental competitive advantages that are more vulnerable to imitation by new competitors. This gradation pattern strengthens the argument that the relationship between digital transformation and sustainable competitive advantage is not a single-stage relationship, but rather an evolutionary process that develops as organizational capabilities accumulate over time, in line with the idea of Dynamic Capabilities Theory which emphasizes the processual nature of capabilities (De La Torre & De La Vega, 2025).

The Role of Dynamic Capabilities and Organizational Agility

The most striking finding from the cross-case synthesis is the central role of dynamic capabilities as a mediating mechanism between digital transformation and sustainable competitive advantage, as predicted by the conceptual framework in Figure 1. In the tourism and hospitality sector, Hussein et al. (2024) found that digital leadership influences sustainable competitive advantage through green absorptive capabilities and eco-innovation—organizations that are able to absorb digital knowledge and transform it into environmentally friendly practices achieve differentiation that is difficult for competitors to imitate. This finding is consistent with the results of Vo-Thai and Tran's (2024) study of Vietnamese companies, which showed that green innovation strategies based on knowledge management and digitalization generate competitive advantages that are relatively resilient to short-term market pressures. Similarly, Okorie et al.'s (2023) study in the context of manufacturing towards a circular economy and net zero shows that digital transformation creates competitive advantage precisely when it is directed at supporting the transition to environmental sustainability, rather than simply operational efficiency.

At the SME level, the identified connecting mechanisms differ slightly in their characteristics. Van Hoang et al. (2025) demonstrated that digital absorptive capacity is a crucial mediator enabling manufacturing SMEs in emerging markets to convert basic digital capabilities into competitive advantages, given that resource constraints require SMEs to be more selective and efficient in absorbing and applying digital knowledge. Kahveci (2025) reinforced these findings by identifying a network of interconnected enablers—from leaders' digital literacy, ecosystem support, to access to financing—that collectively determine the success of SMEs in sustaining digital transformation. In the Indonesian context, Widyastuti et al. (2023) emphasized that the existence of a collaborative digital ecosystem is key to the success of SMEs, as individual SMEs generally lack sufficient resources to build digital capabilities independently. These findings reinforce the proposition that dynamic capabilities do not always originate solely within an organization but can also be formed through external networks and support, particularly in developing countries.

Contextual Factors as Determinants of Variation in Results

Cross-case synthesis also confirms the crucial role of contextual and moderating factors as depicted in Figure 1. The Zimbabwean case analyzed by

Mataruka et al. (2024) shows that service firms can still gain competitive benefits from digital transformation despite operating within a limited national technological infrastructure, as long as management actively positions competitive advantage as a manageable variable, rather than an automatic outcome of technology adoption. This finding underscores that the institutional context and resource availability are not simply control variables, but rather factors that actively shape the pathway from digital transformation to competitive advantage. A similar finding is seen in the study by Wu et al. (2024), which shows that government regulation moderates the strength of the relationship between digital transformation and green competitive advantage; regulations that support green innovation strengthen the translation of digitalization into competitive advantage, while weak regulations tend to weaken it. The factor of business size also appears to consistently moderate the strength of mediating mechanisms across cases: in large-scale organizations such as banks and cross-sector companies in the UAE, dynamic capabilities are more easily institutionalized through work units and formal procedures, whereas in SMEs and MSMEs, dynamic capabilities are more often embedded in individual business leaders and are informal in nature, making them more vulnerable to sudden changes in leadership and external pressures (Kahveci, 2025; Tahat, 2021).

Leadership dimensions also play a significant role in contextual factors. Wang et al. (2025) found that digital leadership combined with data-driven decision-making consistently catalyzes organizational creativity and sustainable competitive advantage, while Alioune (2026) demonstrated that in a new S-curve industry in Spain, digital transformation leadership based on artificial intelligence capabilities requires organizational agility as a mediating variable to translate into sustainable competitive advantage. Torres et al. (2026), using a structural equation modeling approach in a broader context, confirmed that artificial intelligence readiness and innovation ambidexterity strengthen the relationship between digital transformation capabilities and sustainable competitive advantage, in line with the proposition that dynamic capabilities are multidimensional and mutually reinforcing.

Managerial and Theoretical Implications

The above findings have several concrete managerial implications. First, managers need to position digital technology investments as part of an organization's overall capability development agenda, rather than as stand-alone projects separate from core business strategies. The banking (Probojakti et al., 2024) and UAE (Jabri & Lahrech, 2026) cases demonstrate that organizations that treat digital transformation as an integral part of strategic planning—rather than solely an IT initiative—tend to be more successful in translating it into a lasting competitive advantage. Second, for organizations with limited resources, such as SMEs and MSMEs, collaboration strategies and the development of external digital ecosystems have proven to be effective alternative pathways to address internal capability limitations, as demonstrated by findings in the context of Indonesian MSMEs (Widyastuti et al., 2023) and the SME enabler framework developed by Kahveci (2025). Consequently, policymakers in developing countries need to direct support not only toward providing technological infrastructure but also toward

strengthening collaborative ecosystems that connect SMEs with financial institutions, technology providers, and training institutions.

Third, the dimensions of digital leadership and ethical governance require special attention, considering that leadership is a driving factor and determines the direction of the use of artificial intelligence and data capabilities to support organizational innovation (Wang et al., 2025; Alioune, 2026; Torres et al., 2026). Organizations that ignore the aspects of leadership and digital culture risk experiencing what can be called a "digital investment trap," namely a condition where technology spending continues to increase without being accompanied by a commensurate increase in competitive capabilities. Theoretically, the findings of this study reinforce the need to shift the unit of analysis from simply the "level of digital technology adoption" to "the organization's capacity to convert digital technology into dynamic capabilities," as also begun to be emphasized by Shapovalova (2025) and Du et al. (2024). This shift in the unit of analysis is crucial for the development of research and measurement of sustainable competitive advantage in the digital era going forward, including the possibility of developing a composite index that combines indicators of technology adoption, dynamic capabilities, and contextual factors in an integrated manner.

Integrated Discussion

Overall, the cross-case findings in this study strengthen the argument that the relationship between digital transformation and sustained competitive advantage is mediated and conditioned, rather than a direct, deterministic relationship. This finding is consistent with the conclusions of the systematic reviews of Lu and Shahrudin (2024) and Leão and Silva (2021), which assert that the majority of empirical studies find a mediating effect of dynamic capabilities, organizational agility, or strategic alignment capabilities in the relationship. The contribution of this study lies in presenting these patterns in an integrated manner across sectors and countries, demonstrating that despite the diversity of contexts—from banking in emerging economies to emerging S-curve industries in Europe—the underlying mechanism remains the same: digital resource ownership (RBV perspective) must be combined with continuous reconfiguration capacity (Dynamic Capabilities perspective) for the resulting competitive advantage to be truly sustainable, in line with the conceptual arguments of Du et al. (2024) and Shapovalova (2025).

These findings also provide important nuances to the literature that tends to treat digital transformation as a single, homogeneous variable. The comparison between cases in this study shows that the drivers of digital transformation vary widely—from national-scale technology investments (Jabri & Lahrech, 2026) to the adoption of basic technologies in resource-constrained SMEs (Van Hoang et al., 2025)—but successfully translating these into sustainable competitive advantage always depends on the organization's ability to manage the process adaptively. Consequently, effective digital transformation policies and strategies need to be designed contextually, taking into account not only technology availability but also organizational capability readiness and external ecosystem support, particularly for SMEs in developing countries like Indonesia..

CONCLUSION

This research uses a qualitative, multi-case study approach to analyze how digital transformation contributes to sustainable competitive advantage in organizations across sectors and countries. The cross-case synthesis results show that digital transformation plays a crucial role as a starting point for strategic change, but its success in generating truly sustainable competitive advantage depends heavily on the dynamic capabilities, organizational agility, and strategic alignment capabilities that organizations are able to build, as well as on contextual factors such as business size, industry sector, resource availability, and regulatory and institutional pressures. These findings confirm the relevance of integrating the Resource-Based View and Dynamic Capabilities Theory as complementary analytical frameworks in explaining this phenomenon.

Practically, this study recommends that managers and policymakers treat digital transformation not merely as a technology acquisition project, but rather as a continuous process of transforming organizational capabilities, encompassing digital leadership development, strengthening organizational agility, and building an external collaborative ecosystem—particularly for resource-constrained SMEs. Theoretically, this study offers integrated propositions that can be further tested quantitatively in future research, for example through multi-group structural equation modeling to compare the strength of mediating mechanisms across sectors and countries more precisely.

This research has several limitations. First, as a qualitative case study based on secondary documents, the generalizability of the findings is analytical rather than statistical. Second, limited access to primary organizational data leads to interpretations relying on published reports, which can potentially be subject to reporting bias. Future research is recommended to complement this approach with in-depth interviews with organizational actors directly, as well as expanding the scope of cases to understudied sectors, such as the public sector and nonprofit organizations, to deepen our understanding of digital transformation pathways to sustainable competitive advantage.

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