

Digital Transformation and Enterprise Value: A Systematic Review and Research Agenda Abstract

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ABSTRACT

Digital transformation has emerged as a strategic imperative for contemporary organizations, yet its relationship with enterprise value remains insufficiently understood despite a rapidly expanding body of research. This paper provides a systematic review of the literature examining the mechanisms through which digital transformation influences enterprise value. Drawing upon the resource-based view and dynamic capabilities theory, we synthesize findings from peer-reviewed studies to identify three primary pathways: operational efficiency enhancement, business model innovation, and technological capability augmentation. Our analysis further reveals that the value-creation potential of digital transformation is contingent upon organizational dynamic capabilities, external financing environments, and industry-specific characteristics. We develop an integrative conceptual framework that maps these mechanisms and boundary conditions, and propose a research agenda addressing critical gaps in the literature, including the need for longitudinal designs, cross-industry comparisons, and deeper examination of mediating processes. This review contributes to theory by consolidating fragmented evidence and provides practical guidance for managers and policymakers navigating the complexities of digital transformation.

Keywords: Digital Transformation, Enterprise Value, Dynamic Capabilities, Technological Innovation, Systematic Review

1. INTRODUCTION

Enterprises operate in an environment of unprecedented technological change. The proliferation of digital technologies, including artificial intelligence, cloud computing, big data analytics, and the Internet of Things, has fundamentally altered how firms compete, create value, and interact with stakeholders (Inegbedion et al., 2024). Digital transformation, defined as the process through which organizations leverage digital technologies to fundamentally reshape business processes, organizational structures, and value propositions, has become a strategic priority for firms across industries (Noah et al., 2025). Simultaneously, enterprise value, the present value of future cash flows and a comprehensive reflection of firm performance, market position, and growth potential, remains the ultimate metric by which corporate strategy is evaluated (Tian et al., 2025).

Despite extensive scholarly attention, the relationship between digital transformation and enterprise value remains fragmented and theoretically underdeveloped (Lu et al., 2026). Some studies report substantial positive effects of digitalization on firm performance and market

valuation (Bao et al., 2026), while others highlight implementation challenges, organizational resistance, and even value destruction during transitional periods (Zhang & Wang, 2024). This inconsistency suggests that the value-creation mechanisms of digital transformation are neither automatic nor uniform, but rather contingent upon organizational capabilities, external conditions, and contextual factors that remain inadequately specified in the literature (Liu & Wang, 2025).

This paper addresses these inconsistencies by providing a systematic review of the literature linking digital transformation to enterprise value. Our objective is threefold (Hönigsberg et al., 2026). First, we synthesize existing empirical evidence to identify the primary mechanisms through which digital transformation enhances enterprise value (Yu et al., 2024). Second, we examine the boundary conditions and moderating factors that shape the strength and direction of this relationship (Basdekidou & Papapanagos, 2024). Third, we develop an integrative conceptual framework and articulate a research agenda to guide future investigations (Shen et al., 2025).

The review contributes to the literature in several ways. Theoretically, we integrate insights from the resource-based view (Barney, 1991) and dynamic capabilities theory (Teece et al., 1997; Teece, 2007) to provide a coherent framework for understanding how digital investments translate into value creation. Practically, our findings offer actionable insights for managers seeking to maximize the return on digital investments and for policymakers designing supportive institutional environments (Chandra et al., 2024).

2. THEORETICAL FOUNDATIONS

2.1 The Resource-Based View

The resource-based view (RBV) provides the foundational theoretical lens for understanding why firms differ in their ability to create value from digital transformation. According to RBV, sustainable competitive advantage derives from firm-specific resources that are valuable, rare, imperfectly imitable, and non-substitutable (Barney, 1991). This perspective, originally articulated by Wernerfelt (1984) and Penrose (1959), shifted strategic inquiry from external market positioning to internal resource endowments. Subsequent refinements, including the VRIO framework (Barney, 2001), emphasized that resource possession alone is insufficient; firms must also possess the organizational capabilities to deploy resources effectively (Liu et al., 2025). From an RBV perspective, digital transformation generates strategic value when it enables the development of resources that meet the VRIN criteria (Gautam, 2025). Digital infrastructure, data assets, algorithmic capabilities, and digital talent pools represent such resources. They are valuable in enhancing operational efficiency and customer insight (Tang, 2025). They are rare due to the time and investment required for development. They are difficult to imitate because they are embedded in organizational processes (Tan et al., 2026). They are non-substitutable given the unique advantages of digital technologies (Vial, 2021). Empirical research supports this view. Kaya et al. (2025) found that digital technologies can circumvent traditional organizational constraints to directly influence financial performance, a finding that underscores the distinctive value of digital resources compared to conventional information technology investments.

However, critics have noted that RBV inadequately addresses the dynamic processes through which resources are created, integrated, and reconfigured (Shen et al., 2025). This limitation is particularly salient in the context of digital transformation, where technological change is rapid and environmental conditions are volatile (Kruglov & Shaw, 2024). The dynamic capabilities perspective addresses these concerns by emphasizing the processes through which firms sense opportunities, seize them, and continuously transform their resource bases (Yue et al., 2023).

2.2 Dynamic Capabilities Theory

Dynamic capabilities theory extends RBV by explaining how firms build and maintain competitive advantage in rapidly changing environments. Teece et al. (1997) defined dynamic capabilities as "the ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments". Teece (2007) further decomposed dynamic capabilities into three core processes: sensing (identifying and assessing opportunities), seizing (mobilizing

resources to capture opportunities), and transforming (continuously renewing and reconfiguring resources).

Digital transformation is intrinsically a manifestation of dynamic capabilities (Elkmash et al., 2025). The adoption of digital technologies enables firms to enhance sensing capabilities through big data analytics, improve seizing capabilities through digital platforms and agile execution, and strengthen transforming capabilities through organizational redesign and process automation (Yu et al., 2026). Zhou and Xu (2023) demonstrated that digitally mature firms respond more rapidly to market changes, reduce operational costs, and enhance innovation capabilities, all of which reflect the core components of dynamic capabilities.

The dynamic capabilities lens is particularly valuable for understanding the contingent nature of digital transformation's value effects (Qiu & Qiu, 2025). Digital investments do not automatically generate value. Rather, value emerges when firms possess the organizational capabilities to sense digital opportunities, seize them through strategic action, and transform their operations accordingly (Tu et al., 2025). This perspective helps explain the heterogeneity observed in empirical studies: firms with stronger dynamic capabilities consistently demonstrate superior returns from digital transformation investments.

2.3 Integrating RBV and Dynamic Capabilities

Our theoretical framework integrates RBV and dynamic capabilities to provide a comprehensive lens for examining the digital transformation-enterprise value relationship (Peiyao & Benrui, 2024). RBV explains why digital resources can serve as sources of competitive advantage, while dynamic capabilities explain how firms develop and leverage these resources in response to environmental change (Shen et al., 2025). This integration addresses the criticism that RBV is static and the concern that dynamic capabilities lack attention to resource endowments (Zhao & Han, 2025). Together, these theories provide a robust foundation for understanding the mechanisms through which digital transformation creates value and the conditions under which this value is realized (Efendi et al., 2023).

3. MECHANISMS LINKING DIGITAL TRANSFORMATION TO ENTERPRISE VALUE

Our review identifies three primary mechanisms through which digital transformation enhances enterprise value: operational efficiency enhancement, business model innovation, and technological capability augmentation (Le Coz & Bouchaud, 2024). These pathways are not mutually exclusive; they often operate in combination, creating reinforcing effects that amplify value creation (Jha, 2025).

3.1 Operational Efficiency Enhancement

Digital transformation enables substantial improvements in operational efficiency, directly reducing costs and improving productivity (Gouel et al., 2023). This pathway represents the most direct link between digitalization and enterprise value, as efficiency gains translate immediately into improved profitability and financial performance (Salguero, 2025).

Research has documented multiple mechanisms through which digital technologies enhance operational efficiency. First, automation reduces labor costs and minimizes human error (Ling & Ling, 2025). Jiang et al. (2026) demonstrated that the implementation of intelligent technologies allows firms to automate and streamline production processes, significantly reducing operational expenses. Similarly, Barua et al. (2025) found that AI-enabled production management systems enhance productivity and reduce waste.

Second, digital transformation optimizes supply chain operations (Liu & Ren, 2026). Through real-time monitoring, predictive analytics, and blockchain-enabled traceability, firms can reduce inventory costs, minimize disruptions, and improve coordination with suppliers (Udupi et al., 2025). Liu and Song (2024) documented that digital technologies reduce corporate operating costs by 8% to 12%, with supply chain optimization contributing significantly to these savings. Samuels (2025) further confirmed that digital supply chain solutions improve resilience and efficiency, particularly in complex logistics environments.

Third, digital transformation enhances decision-making efficiency through data-driven insights. Rialti et al. (2024) demonstrated that data analytics capabilities enable firms to optimize resource

allocation, improve forecasting accuracy, and reduce uncertainty in strategic decisions. Zhang and Gu (2024) found that digital management tools automate and standardize procedures, reducing management costs and improving overall operational efficiency.

The cumulative evidence indicates that operational efficiency gains represent a reliable pathway through which digital transformation contributes to enterprise value (Song et al., 2024). However, the magnitude of these gains varies significantly across firms and industries, suggesting that efficiency effects are moderated by organizational factors and industry characteristics (Zandi et al., 2025).

3.2 Business Model Innovation

Beyond operational improvements, digital transformation enables fundamental business model innovation, creating new revenue streams, expanding market reach, and transforming how firms capture value (Chen & Shen, 2026). This mechanism potentially generates larger and more sustainable value effects than operational efficiency alone (Tran et al., 2025).

Digital technologies enable several forms of business model innovation. Platform-based business models, for example, leverage network effects to create value through multi-sided markets. Liu and Wang (2024) documented the widespread adoption of platform models across retail, transportation, and entertainment industries, demonstrating their value-creation potential. Hönigsberg et al. (2026) found that digital platforms enable SMEs to overcome resource constraints and compete in new market spaces.

Subscription-based models and service extensions represent another form of digital-enabled innovation. Tong et al. (2024) found that firms implementing digital transformation experienced an average increase of 10% to 15% in revenue from new business lines. Manufacturing firms, for instance, have transitioned from product-centric to service-centric models, using digital platforms to provide maintenance, support, and value-added services that generate recurring revenue.

Digital transformation also facilitates customer value co-creation and personalization (Guo et al., 2025). By analyzing customer behavior data, firms can identify unmet needs, design tailored offerings, and deliver personalized experiences (Sharma et al., 2024). Shang and Wu (2022) demonstrated that customer-centric digital strategies enhance satisfaction, loyalty, and lifetime customer value. Zhou and Xu (2023) found that digital technologies enable real-time customer tracking and customization, significantly improving customer retention and revenue growth.

The business model innovation pathway is particularly relevant in dynamic environments where traditional business models are being disrupted. Firms that leverage digital technologies to reinvent their value propositions and revenue models can achieve sustainable competitive advantage and superior enterprise value (Han et al., 2026).

3.3 Technological Capability Augmentation

The third mechanism through which digital transformation influences enterprise value is through the augmentation of technological innovation capabilities. Digital technologies enhance firms' ability to develop new products, improve R&D efficiency, and accelerate innovation cycles (Samuels, 2025).

Chen and Xiao (2025) provided direct empirical evidence for this pathway, demonstrating that digital transformation significantly enhances innovation performance by improving R&D investment efficiency (Zheng et al., 2025). Their study found that R&D investment partially mediates the relationship between digital transformation and innovation performance, suggesting that digitalization enables more effective allocation of innovation resources (Zhen & Shang, 2025). Yuan et al. (2024) similarly found that digital platforms facilitate access to external innovation resources, promoting open innovation and accelerating new product development.

Digital technologies reduce the time required for innovation activities (Xing et al., 2024). Jian and Miao (2024) found that firms adopting digital technologies reduced their new product development cycles by 30% to 40%, enabling faster time-to-market and improved competitive positioning. In high-tech industries, where innovation speed is a critical competitive dimension, this acceleration can significantly enhance enterprise value (Li et al., 2026).

The impact of digital transformation on technological capability is particularly pronounced in R&D-intensive industries. Qiu and Qiu (2025) demonstrated that digital transformation enhances innovation capability in smart manufacturing enterprises by enabling data-driven R&D, reducing experimentation costs, and facilitating knowledge integration. These findings suggest that digital technologies fundamentally reshape how firms conduct R&D and commercialize innovation (Jiang et al., 2026).

Importantly, the innovation pathway often interacts with the operational efficiency and business model pathways (Barua et al., 2025). Digital transformation can simultaneously improve efficiency, enable new business models, and enhance innovation capabilities, creating reinforcing value-creation effects (Ledingham et al., 2025). This synergistic potential highlights the importance of adopting an integrated perspective when examining the digital transformation-enterprise value relationship (Wolfe et al., 2025).

4. BOUNDARY CONDITIONS AND MODERATING FACTORS

The value-creation potential of digital transformation is not uniform across firms and contexts (Huang et al., 2025). Our review identifies three key sets of factors that moderate the relationship between digital transformation and enterprise value: organizational dynamic capabilities, external financing environments, and industry-specific characteristics.

4.1 Organizational Dynamic Capabilities

Firms differ substantially in their capacity to translate digital investments into value, and these differences are largely explained by dynamic capabilities. Firms with strong sensing capabilities can better identify digital opportunities; those with strong seizing capabilities can more effectively implement digital initiatives; and those with strong transforming capabilities can more successfully embed digital changes into organizational routines (Fayad et al., 2026).

Empirical evidence supports the moderating role of dynamic capabilities. Firms with stronger digital leadership and platform capabilities demonstrate superior returns from digital transformation investments (Lu et al., 2026; Wang et al., 2026). Longsheng et al. (2025) found that CFOs' digital competencies significantly influence the effectiveness of digital transformation, confirming that leadership capabilities shape value-creation outcomes.

Organizational culture and employee capabilities also moderate the digital transformation-value relationship. Firms with innovation-oriented cultures are better positioned to leverage digital technologies for value creation (Zhang et al., 2025). Conversely, firms with entrenched routines and resistance to change face significant challenges in realizing the value of digital investments (Jiang & Xing, 2025). These findings suggest that digital transformation is not simply a technological initiative but requires complementary organizational changes to achieve value creation (Jin et al., 2025).

4.2 External Financing Environment

The availability and cost of external financing significantly moderate the relationship between digital transformation and enterprise value (He et al., 2025). Digital investments require substantial upfront capital, and firms with better access to financing can invest more aggressively in digital transformation and capture greater value over time (Yao & Jiang, 2026).

Peng et al. (2024) demonstrated that financial service coverage alleviates information asymmetry and reduces financing costs, enabling firms to invest more effectively in digital initiatives. Ling and Ling (2025) found that digital inclusive finance promotes enterprise innovation, suggesting that financing environments amplify the innovation-enhancing effects of digital transformation. Gao et al. (2025) further confirmed that financial service coverage improves credit availability for SMEs, enabling digital investments that might otherwise be constrained.

The moderating role of financing environments is particularly important for SMEs and firms in capital-intensive industries (Wang & Zhang, 2025). Winberry (2024) showed that firms facing financing constraints prioritize incremental improvements over breakthrough innovations, potentially limiting the value-creation potential of digital transformation. This suggests that supportive financing policies are critical for enabling firms to fully leverage digital transformation for value creation (Liu et al., 2025).

4.3 Industry-Specific Characteristics

Industry characteristics substantially influence the digital transformation-value relationship. Firms in high-tech industries tend to capture greater value from digital transformation due to the strategic importance of technology in their competitive positioning (Liu & Song, 2024). Conversely, firms in traditional, less technology-intensive industries may face greater challenges in realizing value from digital investments.

The pharmaceutical industry provides a compelling illustration of industry-specific dynamics. Pharmaceutical firms operate under stringent regulatory requirements, lengthy R&D timelines, and complex intellectual property regimes that shape the value-creation potential of digital transformation (Gautam, 2025). In this context, digital transformation enhances R&D efficiency and regulatory compliance, but also introduces unique challenges related to data security, validation, and regulatory approval that may slow value realization (Tan et al., 2025).

Cross-industry differences highlight the importance of contextual sensitivity in understanding digital transformation's value effects. The mechanisms through which digital transformation creates value, and the barriers that impede value realization, vary significantly across industries (Fang et al., 2025). This suggests that future research should attend more carefully to industry-specific factors when examining the digital transformation-enterprise value relationship (Li et al., 2025).

5. SYNTHESIS AND RESEARCH GAPS

5.1 Summary of Key Findings

Our review reveals a complex and contingent relationship between digital transformation and enterprise value (Qiu et al., 2025). Three primary mechanisms, operational efficiency enhancement, business model innovation, and technological capability augmentation, mediate this relationship (Wei et al., 2026). The strength of these mechanisms varies with organizational dynamic capabilities, external financing environments, and industry characteristics (Fayad et al., 2026).

The evidence suggests that digital transformation can generate substantial enterprise value, but only under enabling conditions (Ong et al., 2026). Firms with strong dynamic capabilities, access to supportive financing, and operating in appropriate industry contexts are best positioned to capture the value of digital investments (Bhushan & Misra, 2025). Conversely, firms lacking these enabling conditions may invest heavily in digital transformation without realizing commensurate value returns, potentially experiencing value destruction during transitional periods (Wang & Xi, 2026).

5.2 Key Research Gaps

Despite significant progress, the literature reveals several critical gaps that warrant attention. First, there is a lack of integration across mechanisms. While studies have examined individual pathways, few have investigated how the three mechanisms interact and whether they operate synergistically or substitute for one another (Bao et al., 2026). Understanding these interactions is essential for developing comprehensive theories of digital value creation (Schmitt, 2026).

Second, mediating processes remain under-specified. Although we have identified three broad mechanisms, the specific processes through which digital transformation enables operational efficiency, business model innovation, and technological capability augmentation remain unclear (Zhou et al., 2025). For example, how exactly does digital transformation improve R&D efficiency? What specific capabilities link digitalization to customer value co-creation? These process-level questions require more detailed investigation (Jawad & Sala-i-Martin, 2025).

Third, the role of context is inadequately understood. While our review identifies industry characteristics, financing environments, and dynamic capabilities as moderators, the mechanisms through which these contextual factors shape value creation are not well specified (Barua et al., 2025). Further research is needed to understand how and why the digital transformation-value relationship varies across firms and contexts (Rashid & Kausik, 2024).

Fourth, methodological limitations constrain current knowledge. Most studies rely on cross-sectional designs, making it difficult to establish causality and examine dynamic processes

(Pretorius et al., 2025). Furthermore, the majority of studies employ single-country data, limiting generalizability and raising questions about the influence of institutional environments (Liu et al., 2024).

Fifth, most studies are conducted in Western or East Asian contexts, with limited investigation of developing economies. The growing scholarship on China provides valuable insights, but findings may not generalize to other institutional settings (Xu et al., 2025). Cross-national comparative research is needed to understand how institutional environments shape the digital transformation-value relationship (Ghag et al., 2024).

Finally, research on specific industries remains sparse, particularly regarding the pharmaceutical sector. Given the industry's distinct characteristics, more focused investigations are needed to understand how digital transformation creates value in this context and how the unique challenges of pharmaceutical innovation shape digital strategy (Fascinari & English, 2025).

6. CONCLUSION

Based on our theoretical integration and review of empirical evidence, we propose a conceptual framework that delineates the mechanisms through which digital transformation influences enterprise value, along with the boundary conditions that moderate these relationships. Specifically, we posit that digital transformation drives enterprise value through three core mechanisms: operational efficiency enhancement (P1), business model innovation (P2), and technological capability augmentation (P3). Furthermore, we argue that these effects are not uniform but are contingent upon several contextual factors. Organizational dynamic capabilities are proposed to positively moderate the digital transformation–enterprise value relationship, such that firms with stronger dynamic capabilities derive greater value from their digital investments (P4). Similarly, the availability and accessibility of external financing serve as an enabling condition, amplifying the value-creation potential of digital transformation in financially supportive environments (P5). Industry characteristics also play a moderating role, with the value-enhancing effects being more pronounced in technology-intensive sectors and industries featuring favorable regulatory frameworks (P6). In addition to these direct and moderated pathways, we propose that technological innovation and operational efficiency act as key mediating mechanisms through which digital transformation translates into enterprise value—specifically, digital transformation enhances enterprise value by fostering technological innovation (P7) and by improving operational performance (P8). Taken together, this integrated framework offers a comprehensive account of how, when, and through which channels digital transformation contributes to enterprise value creation (Devenport et al., 2026).

Digital transformation represents one of the most significant strategic challenges facing contemporary organizations (Sibassaha et al., 2025). This systematic review has synthesized the growing literature on the relationship between digital transformation and enterprise value, identifying three primary value-creation mechanisms, operational efficiency enhancement, business model innovation, and technological capability augmentation, and highlighting the boundary conditions that shape this relationship (Liang et al., 2025).

Our analysis reveals that digital transformation can generate substantial enterprise value, but this potential is realized only when enabling conditions are present (Guangbin & Zhang, 2026). Organizational dynamic capabilities, external financing environments, and industry characteristics significantly moderate the value-creation effects of digital transformation (Chen et al., 2026). The conceptual framework and propositions we develop provide a foundation for future research, while the identified gaps highlight promising avenues for investigation (Yang et al., 2025).

Theoretical contributions of this review include the integration of RBV and dynamic capabilities to explain the digital transformation-value relationship, the specification of three core value-creation mechanisms, and the articulation of key moderating conditions (Yue & Lin, 2023). For managers, the review underscores that digital transformation is not merely a technological initiative but requires complementary organizational changes, strategic alignment, and supportive external conditions to generate value (Huang & Wu, 2026). For policymakers, the

findings suggest that supportive financing environments and enabling regulations can enhance the value-creation potential of digital transformation (Zhang, 2024).

In conclusion, the digital transformation-enterprise value relationship is complex, contingent, and context-dependent. Future research that addresses identified gaps and extends our conceptual framework will enhance understanding of this critical relationship and provide more nuanced guidance for practice and policy.

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