

REVIEW

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Data as a Strategic Resource in Organizations: A Review of Theoretical Foundations and Emerging Perspectives

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Abstract

Management research has increasingly recognized data as a critical organizational resource, yet its precise theoretical status remains fragmented across competing scholarly traditions. This narrative review examines how the literature conceptualizes data's role in strategy, capability development, and competitive advantage, focusing on the transition from raw data to strategic value. We synthesize key theoretical perspectives, including the resource-based view, dynamic capabilities, information processing theory, and organizational learning, to analyze how data is positioned as a resource, a capability input, and an infrastructural condition. The review identifies three central themes: the conceptual progression from data to strategic value, the organizational enablers of data-driven capability, and persistent theoretical ambiguities regarding data's ontological status. We argue that data's strategic value is neither inherent nor automatic but emerges through complex processes of governance, interpretation, and integration with organizational routines. The analysis highlights unresolved debates about whether data constitutes a primary resource, a foundational capability, or a dynamic asset whose value is contingent on context. This review offers a synthesized framework to guide future research on data-centric strategy and informs managerial understanding of the organizational conditions required to convert data into sustainable competitive advantage.

Keywords Organizational learning, Dynamic capabilities, Strategic management, Data governance, Data as a resource, Resource-based view

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Introduction

The contemporary organizational landscape is marked by an explosion of data [1], prompting growing scholarly interest in its implications for strategy and competitive performance [2, 3]. While research increasingly treats data as a strategic asset, the mechanisms through which it creates value remain contested [4-6]. Early work viewed data as a straightforward input [7], whereas recent studies emphasize the organizational, cognitive, and infrastructural conditions shaping its strategic potential [8, 9]. These debates reflect broader tensions in management theory regarding resources, capabilities, and the link between information, knowledge, and advantage [10-12].

Integrating data into frameworks such as the resource-based view and dynamic capabilities is particularly challenging. Data's non-rivalrous, easily replicable, and context-dependent nature [1] complicates its classification as a traditional strategic resource [13, 14]. Instead, dynamic capabilities perspectives position data as an enabler of sensing, seizing, and reconfiguration processes [2, 5, 15], contributing to a fragmented but evolving literature across disciplines.

Further complexity arises from the distinction between data, information, and knowledge. Data becomes strategically valuable only through successive transformations mediated by organizational capabilities, governance, and managerial

cognition [6, 12, 16]. Thus, data abundance alone does not ensure advantage [7]; value depends on how it is interpreted and embedded in decision-making [8, 17].

Recent research highlights key enablers such as data governance [9], analytics capabilities [18], culture [19], and alignment [20], while also noting variability in outcomes across contexts [14, 21]. In response, this review synthesizes the literature across three themes: the progression from data to strategic value, the theoretical lenses shaping its interpretation, and the organizational conditions under which data generates competitive advantage.

Literature Synthesis on Data as a Strategic Resource in Organizations

Theoretical perspectives on data in management research

The conceptualization of data as a strategic resource has been shaped by multiple theoretical traditions within management and information systems research. The resource-based view (RBV) has been particularly influential, framing data as an organizational resource that can potentially contribute to sustained competitive advantage if it meets the criteria of value, rarity, inimitability, and non-substitutability [1–3]. However, scholars have noted that data often fail to meet these criteria straightforwardly. Data is frequently non-rivalrous—its use by one actor does not diminish its availability to others—and can be easily replicated, challenging the inimitability condition [4, 8, 22]. Moreover, the value of data is highly context-dependent, with the same dataset generating significant value in one organizational setting but limited utility in another [6, 7, 20]. These observations have led some researchers to argue that data should not be treated as a strategic resource in the traditional RBV sense but rather as an input that acquires strategic significance only when combined with complementary organizational capabilities [10, 11, 14].

In response to these limitations, dynamic capabilities theory has emerged as a complementary lens for understanding how organizations leverage data for strategic advantage. Dynamic capabilities refer to an organization's capacity to sense opportunities, seize them, and reconfigure resources

to maintain competitiveness in changing environments [5, 13, 15]. Within this framework, data is positioned not as a static resource but as an enabler of sensing and seizing processes [2, 9, 23]. For example, data analytics capabilities can enhance an organization's ability to detect market shifts, customer preferences, and operational inefficiencies, thereby informing strategic decisions [3, 12, 18]. Similarly, data-driven reconfiguration capabilities enable organizations to adapt their resource portfolios in response to new insights [1, 17, 24]. This perspective shifts attention from data as a resource per se to the organizational capabilities required to extract, interpret, and act upon data in ways that generate strategic value.

Information processing theory offers a third lens, emphasizing the role of data in reducing uncertainty and enabling effective decision-making [4, 8, 25]. Organizations are conceptualized as information-processing systems that must match their capacity for information processing to the complexity of their environment [7, 11, 26]. Data serves as a foundational input to this process, but its value depends on the organization's ability to process, interpret, and integrate it into decision-making routines [6, 10, 27]. From this perspective, the strategic value of data is contingent on the alignment between data availability and organizational structures, processes, and cognitive capacities [2, 16, 22]. Mismatches—such as data abundance without interpretive capacity—can lead to information overload rather than improved decision quality [5, 19, 20].

Organizational learning theory provides a fourth perspective, highlighting how data contributes to knowledge creation, memory, and adaptation over time [3, 15, 21]. Learning processes involve the conversion of data into information, and subsequently into knowledge that becomes embedded in organizational routines, practices, and shared cognitive frameworks [1, 9, 23]. This perspective emphasizes that data's strategic value is realized not through isolated analytical exercises but through iterative cycles of interpretation, experimentation, and refinement that build organizational knowledge [4, 11, 18]. Moreover, learning perspectives highlight the role of absorptive capacity—the ability to recognize, assimilate, and apply new knowledge—in determining whether data yields lasting strategic benefits [7, 8, 26]. **Table 1** synthesizes competing theoretical perspectives, clarifying how divergent ontological assumptions about data shape distinct mechanisms of strategic value creation.

Table 1. Competing theoretical conceptions of data in strategic management

Theoretical lens	Ontological view of data	Role in value creation	Contribution
Resource-based view (RBV)	Data as a resource	Potential source of sustained advantage	Value creation
Dynamic capabilities	Data as a capability enabler	Input for sensing, seizing, reconfiguring	Contribution
Information processing theory	Data as uncertainty-reduction input	Improves decision quality	Enabler
Organizational learning	Data as learning substrate	Enables knowledge creation and adaptation	Intelligence
Emerging perspective (integrated)	Data as a dynamic/infrastructural asset	Conditional and context-dependent	Contribution

Data, information, knowledge, and strategic value

A recurrent theme across theoretical perspectives is the conceptual distinction between data, information, and knowledge [2], and the processes through which each is transformed into strategic value [6, 13]. Data is typically defined as raw, unprocessed facts or signals that lack inherent meaning or structure [1, 3, 24]. Information emerges when data is contextualized, categorized, and interpreted [4], thereby acquiring relevance and purpose [11, 14]. Knowledge, in turn, represents a deeper synthesis that incorporates insights, experience, and frameworks for

action [7], enabling organizations to anticipate outcomes and make informed decisions [15, 25]. This hierarchical progression suggests that strategic value is not intrinsic to data [10] but arises from the organizational capabilities that enable successive transformations [12, 27].

The literature reveals considerable variation in how these concepts are operationalized and related to firm performance. Some studies treat data analytics capabilities as direct drivers of competitive advantage [5], implicitly collapsing the distinctions between data, information, and knowledge [9, 16]. Others emphasize the mediating roles of dynamic capabilities [1], suggesting that data must be translated into organizational routines and reconfigurations before yielding performance effects [8, 23]. This divergence reflects broader theoretical debates about whether data constitutes a primary resource, a foundational input, or an infrastructural condition for other strategic activities [4, 17, 22]. The ambiguity is compounded by the fact that data itself is often multiply defined—as a technical artifact, economic asset, organizational resource, or cognitive construct [2]—depending on the scholarly tradition [20, 26]. Recent research has sought to clarify these ambiguities by specifying the organizational mechanisms that mediate the link between data and strategic outcomes. For example, studies highlight the role of information governance in ensuring data quality, security, and accessibility [7], thereby enabling subsequent interpretive processes [11, 18]. Similarly, data-driven culture has been identified as a crucial enabler [10], shaping how employees perceive, share, and act upon data-derived insights [9, 19]. Entrepreneurial orientation and organizational ambidexterity have also been shown to influence how data resources are leveraged for innovation and adaptation [5, 13, 21]. These findings suggest that the progression from data to strategic value is nonlinear and conditional [4], requiring alignment among multiple organizational enablers [8, 22].

Organizational conditions and enablers of data-driven value creation

A substantial body of literature has examined the organizational conditions that enable data to generate strategic value. Data governance has emerged as a foundational enabler, encompassing policies, standards, and accountabilities that ensure data quality, security, accessibility, and compliance [1, 3, 24]. Effective governance provides the infrastructure for reliable data

interpretation and use, without which analytics initiatives risk producing misleading insights or failing to gain organizational traction [4, 6, 14]. Studies have shown that governance mechanisms influence not only data quality but also employees' willingness to share and rely on data in decision-making processes [7, 8, 25].

Analytics capabilities represent another critical enabler, referring to the technical, human, and managerial resources required to extract insights from data [2, 15, 23]. These capabilities span data management infrastructure, analytical tools, and human skills such as statistical modeling, machine learning, and business acumen [9, 10, 16]. Research indicates that analytics capabilities alone are insufficient for strategic value; they must be complemented by interpretive capabilities that translate analytical outputs into actionable insights and organizational changes [5, 12, 26]. This distinction aligns with the broader theoretical emphasis on dynamic capabilities, where sensing (analytics) must be coupled with seizing (interpretation) and reconfiguration (action) to yield performance outcomes [1, 11, 20].

Managerial interpretation and cognitive factors have also been identified as crucial determinants of data's strategic value. Managers' mental models, assumptions, and interpretive schemas shape how data is understood and which insights are deemed actionable [4, 8, 17]. Organizations with diverse cognitive resources and inclusive decision-making processes are better positioned to surface novel interpretations and avoid groupthink or confirmation bias in data analysis [6, 7, 18]. Moreover, aligning data-driven insights with strategic priorities requires that managers possess both domain expertise and analytical literacy, enabling them to bridge the technical and strategic domains [2, 22, 27]. **Table 2** delineates the capability configurations required at each transformation stage, highlighting how misalignment between enablers and processes constrains the realization of strategic value.

Table 2. Organizational capability configurations enabling data-to-strategy transformation

Transformation stage	Required capability type	Key organizational enabler	Failure n
Raw data → Information	Data processing capability	Data governance	Poor da quality & fragment

		and infrastructure	
Information → Knowledge	Interpretive capability	Managerial cognition and analytical literacy	Misinterpre and bi
Knowledge → Capability	Integration capability	Business alignment and cross-functional coordination	Insight-a gap
Capability → Strategic value	Dynamic capability	Organizational agility and decision integration	Inertia misalign
Feedback loop (all stages)	Learning capability	Data-driven culture and adaptive governance	Failure to from outc

Business alignment—the degree of fit between data initiatives and organizational strategy—has been highlighted as a critical condition for value creation [10, 13, 19]. Misaligned initiatives risk generating insights that are technically sophisticated but strategically irrelevant, wasting resources and failing to influence performance [1, 3, 14]. Conversely, alignment ensures that data efforts target strategically important problems and that findings are integrated into planning and execution processes [4, 11, 25]. This perspective emphasizes that data's strategic value is not determined solely by its technical properties but by the extent to which it informs and enables the pursuit of organizational goals.

Contradictions and ambiguities in the literature

Despite growing scholarly attention, the literature on data as a strategic resource remains marked by several persistent contradictions and ambiguities. One central tension concerns the ontological status of data: whether it should be conceptualized as a resource, a capability input, or an infrastructural condition [1, 2, 9]. RBV-informed studies often treat data as a resource to be acquired and leveraged [7], while dynamic capabilities perspectives emphasize the organizational capabilities that activate data's potential [8, 20]. Information processing and learning perspectives, in turn, position data as an enabler of

cognitive and adaptive processes [4, 5, 22]. These different framings lead to divergent implications for research design, measurement, and managerial guidance [1], and they complicate efforts to synthesize empirical findings [2].

A second ambiguity relates to the generality versus context-specificity of data's strategic effects. Meta-analyses have revealed variability in the strength and significance of relationships between data capabilities and firm performance [10], suggesting that effects are contingent on industry, firm size, market conditions, and technological maturity [14, 15]. Some studies find that data capabilities are particularly valuable in dynamic environments that require rapid adaptation [3, 12, 18]. In contrast, others report stronger effects in stable contexts where efficiency gains from data analytics can be fully realized [1, 11, 17]. This heterogeneity suggests that universal claims about data's strategic value are untenable [4] and that research must attend to boundary conditions and moderating factors [10].

A third area of ambiguity concerns the temporal dynamics of data-driven value creation. Much of the literature adopts a static or cross-sectional perspective, treating data capabilities as relatively stable assets [4, 8, 24]. However, emerging research suggests that data's strategic value evolves as organizations learn, refine their analytics routines, and accumulate knowledge stocks [6, 7, 25]. The processes through which initial data investments generate sustained advantage—or become eroded by competitive imitation or technological change—remain underexplored [2, 9, 26]. Similarly, the potential for data to create path dependencies or lock-in effects that constrain future strategic flexibility has received limited attention [10, 13, 27].

Finally, the literature exhibits tensions regarding the locus of data-driven strategic value. Some research focuses on firm-level competitive advantage [1], emphasizing market positioning and performance differentiation [5, 20]. Other studies examine operational-level improvements, such as efficiency gains, quality enhancements, or innovation outcomes [4, 11, 23]. The relationship between these levels of analysis—and whether operational benefits translate into sustainable competitive advantage—remains underspecified [7, 15, 18]. Moreover, recent work has begun to explore how data enables value creation at ecosystem and network levels [2], where data sharing and integration across organizational boundaries generate new forms of collective advantage [12, 16]. These multi-level

dynamics introduce additional complexity into theoretical frameworks [3, 22]. **Figure 1** presents the integrated theoretical architecture illustrating how data is transformed into strategic value through staged processes mediated by organizational enablers, theoretical lenses, and recursive feedback dynamics.

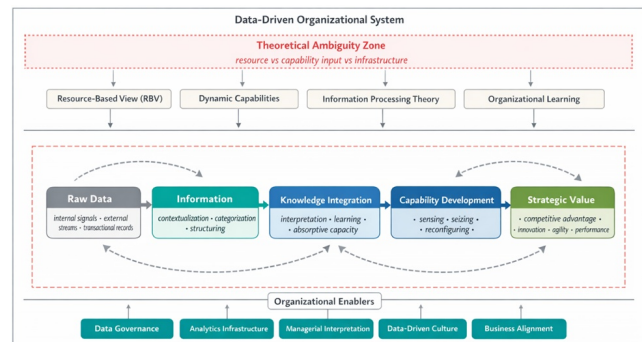


Figure 1. Theoretical architecture of data as a strategic resource in organizations

Emerging Theoretical Perspectives in Management Research

Data as resource, capability input, or infrastructural condition

The conceptual ambiguities identified in the preceding synthesis reflect a deeper theoretical fragmentation in how management research positions data within established frameworks. A growing body of scholarship has sought to resolve these tensions by proposing more nuanced categorizations that move beyond binary classifications of data as either resource or capability [20, 23, 25]. One emerging perspective conceptualizes data as a foundational capability—an enabling condition that does not confer advantage in itself but shapes the potential to develop higher-order capabilities [1, 9, 10]. This perspective aligns with research on digital infrastructures, which argues that data becomes strategically valuable only when embedded within organizational systems, routines, and cultural practices that enable its effective use [7, 8, 13].

Another strand of literature treats data as a dynamic asset whose value is realized through continuous processes of refinement, integration, and application [4, 11, 14]. From this view, the strategic significance of data is not determined by its static attributes but by the organizational

routines that govern its collection, curation, and deployment [2, 15, 18]. This perspective draws on evolutionary economics and the knowledge-based view, emphasizing that data, like knowledge, is inherently contextual and its value emerges through use rather than possession [5, 22, 26]. Such framing suggests that competitive advantage derives less from data ownership than from superior capabilities in data-driven learning and adaptation [3, 19, 24].

A third emerging perspective questions whether data should be conceptualized as a resource at all, instead framing it as a mediating condition that alters the nature of organizational resources and capabilities [6, 12, 16]. According to this view, data functions as a meta-resource that enhances the productivity and flexibility of traditional resources such as physical assets, human capital, and intellectual property [1, 8, 20]. For example, data-enabled predictive analytics can transform a physical asset from a static cost center into a dynamic service platform, fundamentally altering its strategic role [7, 9, 27]. This perspective has implications for how organizations evaluate investments in data infrastructure and analytics capabilities, shifting focus from direct returns to the enabling effects on other strategic resources.

The Role of Context in Data-Driven Strategy

A consistent finding across theoretical perspectives is that data's strategic value is profoundly shaped by organizational and environmental context [4, 11, 20]. Industry characteristics influence both the availability of data and the potential for analytics to generate competitive differentiation. In data-intensive sectors such as finance, retail, and healthcare, data capabilities have become essential for operational efficiency and regulatory compliance. At the same time, in traditional manufacturing industries, the potential for data-driven innovation may depend on investments in complementary technologies and skills [2, 15, 23]. Research indicates that organizations in dynamic environments derive greater strategic benefit from data analytics capabilities, as the ability to sense and respond rapidly to change becomes a critical source of advantage [10, 22, 25].

Organizational factors such as size, age, and resource endowment also moderate the relationship between data and strategic outcomes. Large organizations with

established IT infrastructures and substantial financial resources may be better positioned to develop comprehensive data capabilities. Yet, they may also face greater inertia and cultural barriers to data-driven transformation [1, 3, 14]. Smaller organizations, while often resource-constrained, may exhibit greater agility and willingness to experiment with novel data applications [6, 7, 18]. Research on small and medium-sized enterprises suggests that data's strategic value in these contexts depends heavily on managerial vision, external partnerships, and the ability to integrate data insights with existing knowledge bases [5, 13, 19].

Cultural and institutional factors further shape how data is perceived and utilized within organizations. National and industry-level institutional contexts influence data privacy norms, regulatory frameworks, and the legitimacy of data-driven decision-making [4, 8, 17]. Organizational culture—including norms around data sharing, risk tolerance, and evidence-based decision-making—has been identified as a critical enabler or barrier to realizing value from data investments [2, 9, 16]. Organizations with cultures that encourage experimentation, tolerate failure, and reward data-informed risk-taking are more likely to translate data capabilities into innovation and performance gains [10, 12, 27].

The Governance Imperative

The literature consistently emphasizes that data governance is not merely a technical or compliance concern but a strategic imperative that shapes whether data investments yield sustainable advantage [1, 11, 20]. Governance encompasses the allocation of decision rights, the definition of accountability structures, and the establishment of policies and standards for data management [4, 15, 23]. Effective governance ensures that data is reliable, accessible, and secure, but its strategic significance extends beyond these operational functions [7, 22, 25]. Governance mechanisms influence how data is interpreted, who has authority to act on insights, and how data-driven decisions are integrated with broader strategic processes [2, 24, 26].

Recent research has highlighted the dynamic nature of data governance, emphasizing that governance arrangements must evolve as organizations mature in their data capabilities and as external conditions change [8, 10, 17]. Static governance frameworks risk becoming

constraints that limit innovation and responsiveness, whereas adaptive governance approaches enable organizations to balance control with flexibility [5, 9, 18]. Studies of data governance journeys reveal that successful organizations treat governance as an ongoing learning process rather than a one-time implementation, continuously refining policies, roles, and practices in response to emerging challenges and opportunities [3, 13, 21].

The relationship between governance and value creation is mediated by trust—both in the data itself and in the decision-making processes that data informs [1, 6, 14]. Organizations that invest in governance mechanisms that enhance data transparency, auditability, and lineage can build confidence among decision-makers that data-derived insights are reliable and actionable [4, 12, 16]. Conversely, weak governance can undermine trust, leading to decisions based on intuition or hierarchy rather than evidence, thereby neutralizing the strategic potential of data investments [7, 11, 27].

Organizational Capabilities for Data-Driven Transformation

Beyond governance, a range of organizational capabilities has been identified as critical for converting data into strategic value. Analytics capabilities represent the technical dimension, encompassing data management infrastructure, analytical tools, and specialized human skills in statistics, machine learning, and data visualization [2, 15, 20]. However, research consistently finds that technical capabilities alone are insufficient; they must be complemented by interpretive capabilities that enable managers to extract meaning from analytical outputs and translate insights into strategic actions [10, 22, 23]. This interpretive function requires not only analytical literacy but also domain expertise and the ability to bridge technical and strategic domains [1, 8, 25].

Integration capabilities—the ability to combine data insights with other organizational knowledge and embed them into routines and processes—have emerged as a crucial differentiator between organizations that realize value from data and those that do not [4, 6, 17]. Integration involves aligning data initiatives with strategic priorities, embedding analytics into decision-making workflows, and ensuring that insights are disseminated to relevant actors across the

organization [7, 9, 26]. Research on business alignment underscores that data efforts must be tightly coupled with organizational strategy to generate performance effects; isolated analytics initiatives, however technically sophisticated, are unlikely to yield sustainable advantage [2, 13, 19].

A third category of capabilities concerns organizational learning and adaptation. Organizations that develop the capacity to learn from data-driven experiments, iterate on analytical approaches, and continuously refine their data practices are better positioned to sustain competitive advantage over time [10, 11, 14]. This learning orientation includes the ability to capture lessons from both successful and unsuccessful analytics initiatives, adjust governance frameworks in response to new requirements, and evolve data strategies as markets and technologies change [1, 3, 18]. Studies suggest that such dynamic learning capabilities may be more critical to long-term success than any single data asset or analytics tool [4, 12, 27].

Discussion

The synthesis presented in this review reveals that management research has made significant strides in conceptualizing data as a strategic resource while simultaneously exposing persistent theoretical ambiguities and empirical inconsistencies. The literature reflects a maturing field that has moved beyond simplistic assumptions that data automatically generate value, toward more nuanced understandings that emphasize organizational, cognitive, and contextual contingencies [7, 8, 20]. Yet, as our analysis has shown, fundamental questions remain regarding the theoretical status of data, the mechanisms of value creation, and the boundary conditions under which data-driven strategies yield competitive advantage [1, 5, 22].

A central contribution of this review is the identification of three distinct yet overlapping conceptualizations of data in management research: data as a resource, data as a capability input, and data as an infrastructural condition. These framings are not mutually exclusive but represent different analytical emphases that carry distinct implications for theory and practice [2, 15, 23]. The resource-based view's framing of data as a potential source of sustained advantage directs attention to questions of rarity, inimitability, and organizational complementarities [4, 11, 25]. Dynamic capabilities perspectives, by contrast,

emphasize the processes through which data enables sensing, seizing, and reconfiguring, positioning data as an enabler of organizational agility and adaptation [9, 10, 26]. Information processing and organizational learning lenses highlight data's role in reducing uncertainty and building organizational knowledge over time [6, 7, 17]. Each perspective offers valuable insights, yet none fully captures the complexity of data's role in contemporary organizations.

The theoretical architecture presented in **Figure 1** offers a synthesized framework that integrates these multiple perspectives while acknowledging areas of persistent ambiguity. The model's progression from raw data to strategic value, through stages of information integration and capability development, reflects the contingent, multi-step nature of value creation [1, 3, 24]. By incorporating organizational enablers such as governance, analytics infrastructure, managerial interpretation, and business alignment, the framework recognizes that data's strategic potential is realized only when supported by complementary organizational conditions [4, 11, 14]. The inclusion of feedback loops captures the dynamic, iterative character of data-driven strategy, where outcomes inform ongoing data collection, capability development, and governance refinement [7, 15, 18].

The shaded theoretical ambiguity zone in the figure highlights a critical insight from this review: that despite growing scholarly attention, the ontological status of data remains contested. Whether data should be treated as a primary resource, a foundational capability, or an infrastructural condition has implications for how researchers measure data-related constructs, specify theoretical models, and interpret empirical findings [2, 12, 16]. This ambiguity also carries practical consequences, as organizations that misdiagnose the nature of their data assets may invest inappropriately in data collection while neglecting the interpretive, governance, and integration capabilities that are essential for value creation [10, 22, 27].

The review also underscores the importance of context in shaping data's strategic value. Industry characteristics, organizational size and culture, regulatory environments, and technological maturity all moderate the relationship between data capabilities and performance outcomes [1, 8, 20]. This heterogeneity suggests that universal prescriptions for data-driven strategy are unlikely to be effective; rather, organizations must develop context-sensitive approaches that align data investments with their specific strategic priorities, resource endowments, and

environmental conditions [4, 6, 23]. Future research should therefore prioritize identifying configurational pathways—combinations of data capabilities, organizational enablers, and contextual factors—that reliably produce strategic value [7, 9, 25].

Several limitations of the existing literature warrant acknowledgment. First, much of the research employs cross-sectional designs that capture relationships at a single point in time, limiting understanding of how data-driven capabilities and their effects evolve [2, 11, 14]. Longitudinal studies that trace the development of data capabilities and their performance implications across organizational lifecycles are needed to complement existing cross-sectional evidence [10, 22, 26]. Second, the literature exhibits a strong bias toward large firms in developed economies, leaving questions about data-driven strategy in small and medium-sized enterprises, emerging economies, and non-profit contexts underexplored [1, 8, 17]. Third, while the literature increasingly emphasizes organizational enablers such as governance and culture, these constructs remain inconsistently defined and measured, limiting cumulative knowledge development [4, 15, 18].

Conclusion

This narrative review examines how management research conceptualizes data as a strategic resource across competing theoretical perspectives. The analysis reveals that data's strategic value emerges through complex, contingent processes involving governance, interpretation, capability development, and contextual alignment, rather than being inherent or automatic. The theoretical architecture developed here organizes these insights while acknowledging persistent ambiguities regarding data's ontological status—an unresolved tension that invites continued theoretical development rather than premature closure.

For managers, realizing strategic value from data requires organizational enablers beyond technology acquisition: governance frameworks that ensure data quality and trust, interpretive capabilities that translate insights into action, and cultural norms that support evidence-based learning.

For researchers, future priorities include longitudinal studies of capability development over time, comparative research across contexts to identify boundary conditions, refinement of data's theoretical status, and methodological

pluralism to capture complex value-creation processes. As data-rich environments intensify, converting data into sustainable advantage remains elusive precisely because value-creation mechanisms are complex and contingent. This review contributes a scholarly foundation for understanding data as a strategic resource to guide future research and practice.

Acknowledgements

None

Conflict of interest

None

Financial support

None

Ethics statement

None

Received: 20 Jun 2025 Revised: 05 Aug 2025 Accepted: 10 Sep 2025

Published online: 18 September 2025

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