

Digital Transformation and Management Accounting Information Quality: A Systematic Literature Review and Integrative Theoretical Framework

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Abstract: Digital technologies such as big data analytics, artificial intelligence, and enterprise systems have fundamentally reconfigured how management accounting information is generated, processed, and deployed within organizations. Despite an expanding body of literature on the relationship between digital transformation and management accounting information quality (MAIQ), existing research remains fragmented across accounting, information systems, and organizational scholars, lacking a unified theoretical framework. Following the PRISMA 2020 protocol, this study systematically reviews 192 peer-reviewed articles published between 2010 and 2026 retrieved from Web of Science, Scopus, and EBSCO Business Source Premier to map the intellectual structure of the domain. Through thematic analysis and theoretical coding, we demonstrate that the digital evolution of MAIQ has progressed through three distinct waves: informatization and process efficiency (2010 to 2015), business-finance integration and granular refinement (2016 to 2020), and intelligence and value relevance escalation (2021 to present). Furthermore, we identify four core explanatory mechanisms, namely technology enablement, process reengineering, governance optimization, and organizational change, which constitute the micro-foundations of MAIQ enhancement, while revealing a critically unexamined cross-mechanism chain effect in current literature. Consequently, this study constructs a multi-level integrative theoretical framework and proposes a six-fold future research agenda, offering key insights for conceptual consolidation, empirical rigor, and contextual refinement in future inquiries.

Keywords: Digital Transformation; Integrative Framework; Management Accounting Information Quality; PRISMA 2020; Systematic Literature Review

JEL Classification: M41; O33; D83

1. Introduction

The global wave of digital transformation has triggered a structural paradigm shift in corporate governance and internal management. As a foundational decision-support function, management accounting has increasingly evolved from a traditional, backward-looking cost-accounting tool into a dynamic, forward-looking strategic intelligence system (Bhimani & Willcocks, 2014). Advanced digital technologies, including Enterprise Resource Planning (ERP) systems, big data analytics, the Industrial Internet of Things (IIoT), and artificial intelligence (AI), have drastically expanded data availability, accelerated processing speed, and broadened the applications of management accounting from compliance control to agile strategic decision-making (Appelbaum et al., 2017). For practitioners, elevating management accounting information quality (MAIQ) is paramount for granular cost control, dynamic budgeting, and data-driven execution. For scholars, this digital shift prompts fundamental inquiries into how technological infrastructures reshape the generation, attributes, and organizational value of management accounting information (Quattrone, 2016).

Despite an expanding body of research on the digital transformation–MAIQ nexus, extant literature predominantly treats digital technology as an exogenous corporate endowment, implicitly assuming a linear, deterministic progression from technological adoption to MAIQ enhancement. However, this static, resource-centric perspective overlooks the deliberate strategic actions required to unlock the potential of digital assets. Drawing upon the Resource-Based View (Barney, 1991) and its dynamic extension, Resource Orchestration Theory (ROT) (Sirmon et al., 2011), we argue that the mere ownership of advanced technologies does not inherently guarantee high-quality information. Rather, superior MAIQ necessitates the purposeful structuring of digital assets, the strategic bundling of technologies with operational processes, and the cross-level leveraging of integrated organizational capabilities.

To address this critical theoretical gap, this study systematically synthesizes extant multidisciplinary literature through the lens of Resource Orchestration Theory, delivering a two-fold theoretical contribution. First, it unfolds the "black box" linking digitalization to MAIQ by re-conceptualizing four core improvement mechanisms (namely technology enablement, process reengineering, governance optimization, and

organizational change) as interconnected resource orchestration processes rather than isolated antecedents. Second, it enriches decision-usefulness theory by delineating how the strategic alignment of digital resource orchestration elevates MAIQ from basic technical accuracy to high-order predictive value relevance.

The remainder of this paper is organized as follows. Section 2 outlines the methodology guiding this systematic literature review based on the PRISMA 2020 protocol. Section 3 maps the three-stage evolutionary trajectory of the research domain. Section 4 synthesizes core theoretical perspectives and explicates the four underlying mechanisms driving MAIQ improvement. Section 5 evaluates boundary conditions and contextual heterogeneities. Section 6 presents an integrative multi-level framework and formulates a six-fold research agenda for future inquiry. Finally, Section 7 concludes the study.

2. Methodology

To ensure systematicity, transparency, and replicability, this study conducts a systematic literature review following the updated PRISMA 2020 protocol (Page et al., 2021). The methodological design encompasses a targeted database search strategy, explicit eligibility criteria, a rigorous multi-stage screening process, and a systematic theoretical coding framework.

2.1 Search Strategy and Identification

To achieve comprehensive coverage across accounting, finance, and general management disciplines, three authoritative electronic databases were queried: the Web of Science Core Collection (SSCI/SCI), Scopus, and EBSCO Business Source Premier. The search timeframe spanned from 2010 to 2026, capturing the complete lifecycle of digital transformation in management accounting, from early enterprise system adoptions to recent generative artificial intelligence applications.

The database queries combined three distinct thematic blocks using Boolean operators:

1. Digital transformation: ("digital transformation" OR "digitalization" OR "digital technology" OR "big data" OR "artificial intelligence" OR "ERP" OR "business analytics" OR "industrial internet")
2. Management accounting: ("management accounting" OR "management control system" OR "cost accounting" OR "budgeting" OR "performance measurement")
3. Information quality: ("information quality" OR "accounting information quality" OR "decision usefulness" OR "value relevance" OR "information accuracy" OR "information timeliness")

The initial search across the three repositories yielded a total of 1,342 items.

2.2 Inclusion and Exclusion Criteria

Articles were evaluated against pre-specified eligibility criteria. To qualify for inclusion, studies had to satisfy three conditions: (1) peer-reviewed academic journal articles published in English; (2) empirical, theoretical, or case-based research explicitly examining the relationship between digital technologies and management accounting information quality or attributes; and (3) a primary focus on firm-level, internal management accounting practices rather than external financial accounting.

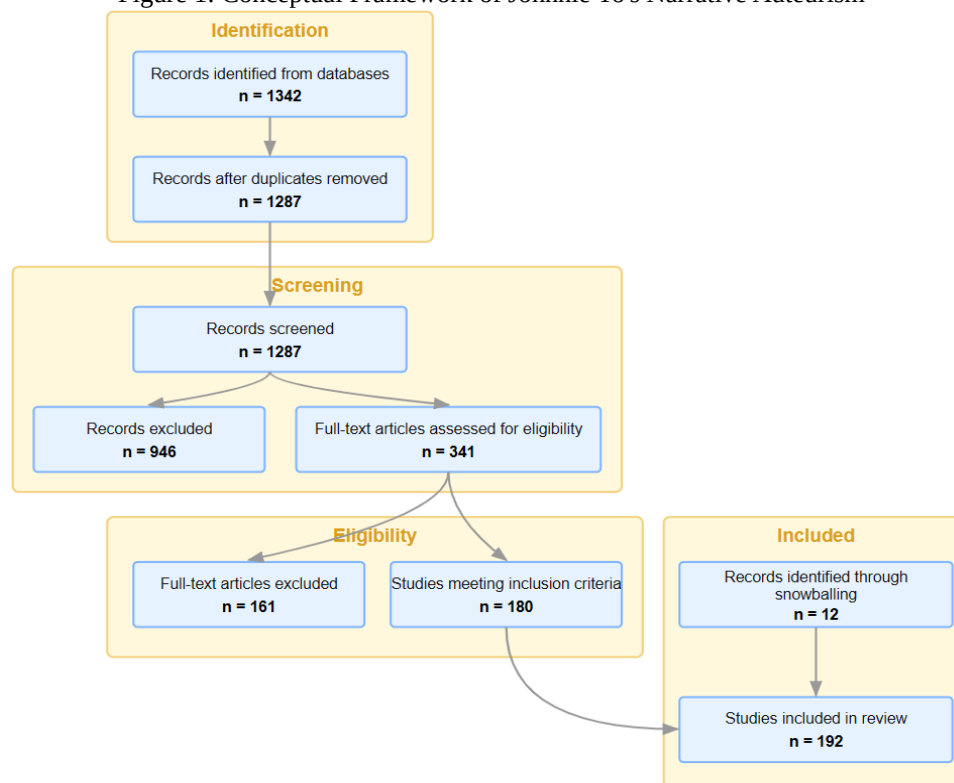
Conversely, exclusion criteria removed: (1) conference papers, book chapters, editorials, and gray literature; (2) studies focusing strictly on external financial reporting quality, auditing, or mandatory public disclosures; and (3) duplicate records identified across databases.

2.3 Screening Process and Sample Selection

The literature screening proceeded through four sequential phases. First, automated and manual cross-database deduplication reduced the preliminary corpus of 1,342 items down to 1,287 unique records. Second, two independent coders performed parallel evaluations of titles and abstracts to exclude irrelevant studies. Third, full-text assessments were conducted against the inclusion criteria, retaining 180 eligible articles. Fourth, forward and backward citation chaining (snowballing) was applied to the shortlisted corpus, incorporating 12 highly cited seminal papers.

The final review sample comprised 192 peer-reviewed articles. Figure 1 presents the PRISMA 2020 flow diagram illustrating the exact record counts and retention decisions at each screening stage.

Figure 1: Conceptual Framework of Johnnie To's Narrative Auteurism



2.4 Coding Scheme and Analytical Approach

A structured two-tier coding scheme was developed to synthesize the finalized sample. The primary tier captured descriptive attributes, including publication year, journal outlet, research methodology, and geographic context. The secondary tier extracted substantive theoretical dimensions, such as core research themes, theoretical perspectives, improvement mechanisms, and empirical findings.

To ensure inter-coder reliability, two researchers independently coded the dataset, achieving a Cohen's kappa coefficient of 0.89, which indicates high coding consistency. Disagreements were systematically resolved through deliberative consensus with a third senior researcher. Finally, a thematic analysis was conducted following the protocol of Braun & Clarke (2006), progressing sequentially from open coding to axial and selective coding to synthesize the core mechanisms and develop the integrative theoretical framework.

3. Evolution of Research on Digitalization and MAIQ

Based on dominant research themes, theoretical lenses, and practical contexts, we identify three sequential evolutionary stages of research in this field.

3.1 Stage 1: Informatization and Process Efficiency (2010–2015)

Core context: Widespread adoption of ERP systems and accounting computerization. Research focus: Technical efficiency gains from information system implementation. Studies primarily examined how automation reduced manual errors and shortened accounting cycles, focusing on reliability and timeliness as core quality dimensions.

Typical topics in this stage include ERP implementation and accounting processing speed, automated reconciliation and data accuracy, and standardization of accounting processes across subsidiaries. The dominant theories were the Technology Acceptance Model (TAM) and business process reengineering theory. Key findings indicated that informatization improved the efficiency of routine accounting tasks and reduced human error, but management accounting remained largely compliance-oriented, with no fundamental expansion of its functional scope (Dechow & Mouritsen, 2005; Granlund & Malmi, 2002).

3.2 Stage 2: Business-Finance Integration and Granularity Refinement (2016–2020)

Core context: Rise of big data, cloud computing, and industrial internet; deepening integration of business and financial data. Research focus: Breaking data silos and expanding information dimensions. Scholars explored

how cross-domain data integration refined cost accounting and enhanced the relevance and granularity of management accounting information.

Typical topics include big data-enabled multi-dimensional profitability analysis, activity-based costing powered by IIoT data, and supply chain digitalization and end-to-end accounting information synergy. The dominant theoretical perspectives were the Resource-Based View (RBV) and Organizational Information Processing Theory (OIPT). Key findings confirmed that digital integration broke the business-finance divide, extending management accounting data from purely financial to full-value-chain business data, and significantly enhancing the decision relevance of cost information (Ma & Tayles, 2018; Zhang et al., 2020).

3.3 Stage 3: Intelligence and Value Relevance Upgrade (2021–Present)

Core context: Diffusion of AI, predictive analytics, and digital twins; shift from data-driven management to algorithmic decision-making. Research focus: Forward-looking and value-creating attributes of management accounting. Studies emphasize foresight, scenario adaptability, and strategic support value of accounting information.

Typical topics include AI-powered rolling forecasting, intelligent risk early warning systems, predictive analytics for strategic resource allocation, and generative AI for management accounting decision support. The dominant theories are resource orchestration theory and dynamic capabilities theory. Key findings reveal that intelligent technologies extend management accounting from ex-post reporting to ex-ante prediction and real-time decision support, evolving it from a back-office support function to a front-end value creation engine (Bhimani, 2022; Kokina & Davenport, 2017).

3.4 Conceptual Evolution: From Technical Quality to Value Quality

Across the three stages, the conceptualization of MAIQ has expanded significantly. Traditional dimensions, which focus on technical attributes, include reliability, accuracy, timeliness, comparability, and compliance. In the digital era, new value-centric dimensions have emerged: decision relevance, granularity, foresight, scenario adaptability, and actionability. This conceptual shift reflects a broader paradigm change: management accounting quality is no longer judged by how faithfully it records the past, but by how effectively it shapes future decisions.

4. Theoretical Perspectives and Core Mechanisms

4.1 Theoretical Anchoring: Resource Orchestration Theory

While extant literature utilizes diverse organizational and behavioral lenses to examine the digitalization–MAIQ relationship (as summarized in Table 1), this study establishes Resource Orchestration Theory (ROT) (Sirmon et al., 2011) as the primary theoretical anchor to unify these fragmented perspectives. ROT posits that the mere possession of heterogeneous resources does not automatically translate into superior organizational capabilities or competitive advantages. Instead, value creation hinges upon the purposeful managerial actions of orchestrating resources through three sequential processes: structuring the resource portfolio, bundling resources to build capabilities, and leveraging those capabilities in the marketplace (Hitt et al., 2007; Sirmon et al., 2011).

In the context of digital transformation, advanced technologies (e.g., AI, big data, blockchain) represent critical digital assets. However, their efficacy in upgrading management accounting information quality (MAIQ) relies heavily on how organizations orchestrate these assets. As developed below, the four core improvement mechanisms identified in contemporary scholarship are not isolated paths; rather, they constitute the micro-foundations of a holistic resource orchestration process. Table 1 summarizes the core logic and application scenarios of each theoretical perspective.

Table 1: The core logic and application scenarios of each theoretical perspective

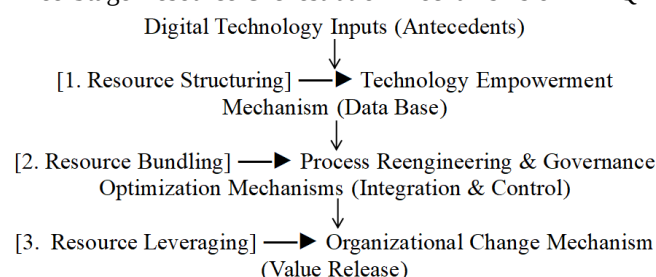
Theoretical Perspective	Core Logic	Application in MAIQ Research
Technology Acceptance Model (TAM)	User adoption determines technology value.	Explains how end-user acceptance of digital tools affects information usage and perceived quality.
Resource-Based View (RBV) / Resource Orchestration Theory (ROT)	Competitive advantage stems from resource configuration, bundling, and dynamic deployment.	Explains how firms structure and bundle digital resources with management accounting processes to build information capabilities.
Organizational	Information capability must	Explains why digitalization improves MAIQ

Theoretical Perspective	Core Logic	Application in MAIQ Research
Information Processing Theory (OIPT)	match organizational task uncertainty.	more significantly under highly volatile environmental uncertainty.
Socio-Technical Systems (STS) Theory	Technology subsystem and social/organizational subsystem must co-adapt.	Explains why identical technologies produce divergent quality outcomes in different organizational structures.
Affordance Theory	Technology enables specific actionable potentials but does not automatically determine outcomes.	Explains heterogeneous MAIQ outcomes based on how actors enact and perceive digital affordances.

4.2 Three-Stage Resource Orchestration Mechanisms of MAIQ Improvement

Figure 2 illustrates the dynamic, three-stage resource orchestration framework through which digitalization systematically elevates management accounting information quality (MAIQ). Anchored in Resource Orchestration Theory (ROT), this overarching process unfolds sequentially across three interconnected stages: resource structuring, resource bundling, and resource leveraging. The following sub-sections elucidate the micro-foundations and explanatory mechanisms embedded within each phase of this orchestration trajectory.

Figure 2: Three-Stage Resource Orchestration Mechanisms of MAIQ Improvement



4.2.1 Resource Structuring: Technology Empowerment and Information Processing Upgrade

The initial phase of digital transformation involves resource structuring, defined as acquiring, accumulating, and divesting digital assets to form an optimal resource portfolio. In this framework, the technology empowerment mechanism represents the micro-foundation of this structuring process.

Digital technologies expand the breadth, depth, and speed of enterprise data architectures.

1. **Breadth Enhancement:** The aggregation of unstructured, multi-source heterogenous data from internal operations, external markets, and supply chains dismantles long-standing information silos, structuring a comprehensive data asset base.
2. **Depth Refinement:** Big data analytics and advanced cost-modeling techniques structure data at a highly granular level, shifting management accounting from aggregate product-level inputs to individual transactional and operational activities.
3. **Speed Acceleration:** Rather than merely accelerating data processing, pervasive cloud architectures effectively collapse the conventional institutional friction associated with rigid month-end closings, rendering the temporal boundary of financial reporting continuous rather than periodic.

Through this structuring process, enterprises successfully transform raw data into structured digital assets, directly optimizing the technical quality dimensions (accuracy, timeliness, and reliability) of MAIQ.

4.2.2 Resource Bundling: Process Reengineering and Governance Optimization

Possessing structured digital assets is insufficient; they must be integrated with existing organizational routines. ROT conceptualizes bundling as the combination of newly structured resources with operational processes to alter existing capabilities or create new ones. This process is manifested through two interlocking mechanisms: process reengineering and governance optimization.

Process Reengineering Mechanism: Digitalization embeds standardized accounting logics directly into operational workflows, creating an automatic "business event $\rightarrow$ accounting entry" generation chain. By bundling digital tools with daily operations, enterprises establish homologous data tracking—where

operational records and accounting entries are generated simultaneously. This eliminates secondary manual entry errors and secures end-to-end digital traceability, ensuring every managerial figure can be verified back to its root business event.

Governance Optimization Mechanism: Digital bundling provides rigid institutional safeguards for data reliability by embedding compliance rules into enterprise platforms. Automated controls reduce management's discretionary manipulation and data distortion. Crucially, full-process digital tracking and automated audit trails facilitate real-time internal monitoring, mitigating opportunistic reporting behaviors and reinforcing the alignment between IT governance and strategic control (Vasarhelyi & Alles, 2008). Consequently, the bundling process alters the production mode of accounting information. It builds a transparent, highly controlled information generation capability, guaranteeing the foundational precision and integrity of MAIQ.

4.2.3 Resource Leveraging: Organizational Change and Value Release

The ultimate goal of resource orchestration is leveraging, which involves mobilizing and deploying newly formed capabilities to execute specific value-creating strategic actions. In this framework, the organizational change mechanism serves as the vital cognitive and structural lever that translates robust data capabilities into realized strategic value. Advanced technology structuring and process bundling will fail to improve institutional decision outcomes if the organization lacks the corresponding structural flexibility and managerial capacity to utilize the information.

Organizational leveraging operates through three complementary vectors that collectively enable value release:

1. **Structural Flattening:** Flattened hierarchies enabled by real-time digital dashboards reduce information transmission friction, asymmetry, and distortion across traditional management layers, drastically accelerating strategic decision-making cycles.
2. **Talent Orchestration:** Upgrading the competencies of finance teams—equipping traditional management accountants with both business acumen and data science skills—allows actors to interpret complex algorithmic data models and translate raw technical outputs into actionable insights.
3. **Data-Driven Culture:** Instilling a corporate culture anchored in data-driven insights ensures that management accounting information is aggressively utilized for proactive strategy formulation rather than retrospective compliance monitoring.

Consequently, this leveraging phase marks the final transition of MAIQ from baseline technical accuracy to premium value quality. By shifting the corporate mindset from reactive reporting to algorithmic foresight and scenario adaptability, the organizational change mechanism explains why identical digital investments produce highly divergent MAIQ outcomes across firms, acting as the definitive engine for value relevance upgrade in the intelligence era (Bhimani, 2022).

5. Boundary Conditions and Heterogeneous Effects

The impact of digital transformation on MAIQ is not universal; it is moderated by multiple contextual factors at the firm, technology, and environmental levels.

5.1 Firm-Level Boundaries

First, firm size creates heterogeneous effects. Large firms benefit from resource abundance but face organizational inertia; SMEs enjoy greater flexibility but suffer from resource constraints and talent shortages. Most research focuses on large firms, while SME-specific pathways remain under-theorized. Second, industry type matters. Manufacturing firms have richer operational data and more mature digital application scenarios, showing stronger MAIQ gains. Service firms with less standardized processes exhibit weaker and more heterogeneous effects. Third, digital maturity produces stepwise effects: early-stage digitalization improves efficiency; middle-stage digitalization refines granularity; advanced-stage digitalization unlocks strategic value.

5.2 Technology-Level Boundaries

At the technology level, two factors moderate the relationship. First, technology type: foundational technologies such as ERP and cloud accounting primarily improve process efficiency and accuracy; frontier technologies such as AI and predictive analytics primarily enhance foresight and decision value. Second, embedding depth: deeply embedded digital technologies that reshape core business processes produce larger MAIQ gains than superficial tool adoption.

5.3 Environmental Boundaries

External environmental conditions also shape the effect. First, institutional environment: strong data governance and cybersecurity regimes enhance trust in digital accounting information; weak institutional

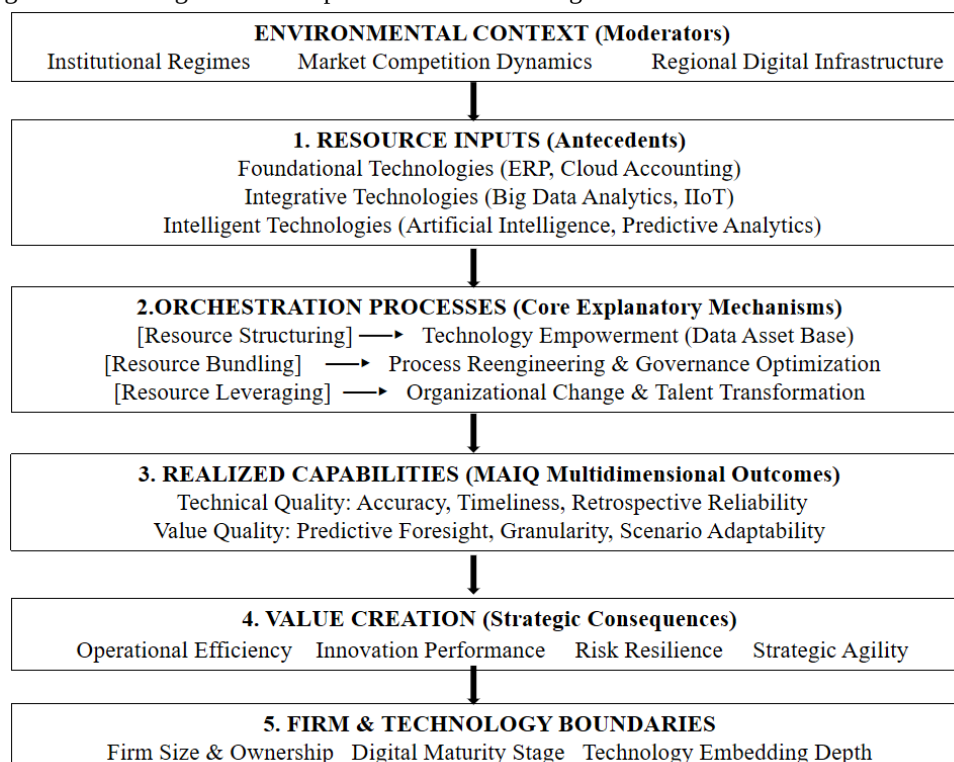
environments amplify data security and algorithmic bias risks. Second, market competition: intensive competition increases demand for decision support information, amplifying the MAIQ improvement effect. Third, digital infrastructure: developed regional digital infrastructure lowers adoption costs and improves interoperability across supply chain partners.

6. Integrative Framework and Future Research Agenda

6.1 An Integrative Theoretical Framework

Building upon the comprehensive literature synthesis, this study proposes a multi-level integrative framework grounded in Resource Orchestration Theory (ROT). The multi-layered nexus detailed in Figure 2 maps, the framework transitions the digitalization–MAIQ nexus from a simplistic linear view to a holistic asset-orchestration paradigm, unifying five systemic layers.

Figure 2: The Integrative Conceptual Framework of Digital Resource Orchestration and MAIQ



The internal theoretical logic of the framework is articulated through four interrelated pillars:

1. Resource Inputs (Antecedents): Digital technology deployment represents the heterogeneous resource endowments acquired by the firm, categorized into foundational (ERP, cloud accounting), integrative (big data, IIoT), and intelligent (AI, predictive analytics) technologies.
2. Orchestration Processes (Mechanisms): In alignment with ROT, digital resources do not automatically upgrade information quality. They operate through an interlocking orchestration chain where technology empowerment structures the data portfolio, process reengineering and governance optimization bundle assets into corporate routines, and organizational change leverages capabilities across management teams.
3. Realized Capabilities (MAIQ Outcomes): Effective orchestration yields distinct informational capabilities, bifurcated into baseline Technical Quality (accuracy, timeliness, reliability) and premium Value Quality (decision relevance, granularity, foresight).
4. Value Creation (Consequences): Realized MAIQ capabilities are ultimately deployed to achieve strategic advantages, manifested as enhanced operational efficiency, innovation performance, risk resilience, and strategic agility.
5. Contextual Contingencies (Boundary Conditions): The efficacy of the orchestration process is contingent upon firm-level (size, industry, maturity), technology-level (type, depth), and environmental-level (institutions, competition, infrastructure) moderators.

6.2 Future Research Agenda

To address critical gaps in the extant literature and advance the theoretical boundaries of digital management accounting, we propose a six-pronged research agenda accompanied by concrete, testable propositions.

Direction 1: Conceptualization and Measurement of Digital-Era MAIQ

Current studies borrow ad-hoc indicators from financial reporting, neglecting the decision-oriented, algorithmic nature of contemporary management accounting. Future research should develop and validate a multi-dimensional MAIQ scale that explicitly captures value-centric attributes such as real-time simulation capability, algorithmic explainability, and prescriptive actionability.

Proposition 1: In highly digitalized environments, the traditional dominance of technical quality metrics (e.g., retrospective reliability) shifts toward value quality metrics (e.g., real-time foresight and scenario adaptability) in driving strategic decision effectiveness.

Direction 2: Multi-Mechanism Integration and Chain Transmission Effects

Extant literature heavily favors single-mechanism, cross-sectional empirical designs, leaving the configuration and sequential dynamics of resource orchestration unexamined. Scholars should utilize methods like fuzzy-set Qualitative Comparative Analysis (fsQCA) and structural equation modeling (SEM) to explore how these mechanisms interact.

Proposition 2: Digital resource orchestration follows a sequential path where the structuring of data assets (technology empowerment) yields technical quality improvements, but its transformation into predictive value quality is fully mediated by bundling (process reengineering) and leveraging (organizational and talent changes) processes.

Direction 3: SME and Emerging Market Context Expansion

The current field suffers from a distinct large-firm and developed-economy bias. Resource-constrained small and medium-sized enterprises (SMEs) and firms operating in volatile emerging markets face unique barriers to digital orchestration.

Proposition 3: Unlike large firms that rely on institutionalized, top-down orchestration across mature business units, resource-constrained SMEs in emerging markets exhibit an agile 'bricolage-style' orchestration, leveraging cloud-based, low-code digital tools to achieve rapid business-finance integration and leapfrogging MAIQ improvements.

Direction 4: The “Dark Side” of Digitalization and Risk Governance

Current scholarship is overwhelmingly techno-optimistic. Future studies must investigate the unintended consequences of digital deployment, including data overloads that paralyze decision-makers, algorithmic biases that distort cost allocations, and technological alienation among traditional accounting staff.

Proposition 4: Superficial digital technology structuring without corresponding governance optimization bundling amplifies information noise and data security vulnerabilities, creating an inverted U-shaped relationship between digital deployment and perceived MAIQ.

Direction 5: Emerging Technology Frontiers and New MAIQ Paradigms

As cognitive technologies like Generative AI, corporate digital twins, and decentralized Web3 infrastructures diffuse, the nature of corporate reporting is undergoing a paradigm shift. Scholarship must explore how these frontier tools redefine information asymmetry and value co-creation.

Proposition 5: Frontier cognitive technologies shift the orchestration paradigm from human-centric 'resource bundling' to autonomous, algorithmic 'automated leveraging,' requiring management accountants to pivot from data interpreters to algorithmic governors to sustain MAIQ relevance.

Direction 6: Methodological Pluralism and Causal Identification

To complement the dominant correlational evidence from cross-sectional surveys, future research must deploy diverse methodologies [cite: 1]. Longitudinal case studies, field experiments, and quasi-natural experiments (e.g., capitalizing on regional digital infrastructure rollouts) are essential to establish rigorous causal paths [cite: 1].

Proposition 6: Longitudinal processual designs and field experiments reveal that the lag effect between digital resource structuring and MAIQ capability realization is significantly shortened in organizations possessing higher dynamic capabilities and digital mindsets[cite: 1].

7. Conclusion

This study systematically reviews 192 peer-reviewed articles tracking the digital transformation and management accounting information quality (MAIQ) nexus between 2010 and 2026. Guided by Resource Orchestration Theory (ROT), three foundational conclusions emerge. First, the intellectual evolution of this field marks a structural paradigm shift from technical process efficiency (2010–2015) to granularity refinement (2016–2020), and ultimately to predictive value relevance upgrades (2021–present). This trajectory mirrors a broader transition of MAIQ from traditional technical quality metrics to advanced strategic value capabilities. Second, the "black box" linking digitalization to MAIQ enhancement is unraveled through a multi-stage resource orchestration chain. Rather than acting as an automatic linear driver, digital technologies require continuous managerial actions: technology enablement structures the data asset portfolio, process reengineering and governance optimization bundle these assets into corporate operational routines, and organizational change leverages the resulting capabilities across decision-making teams. Third, the efficacy of this digital resource orchestration remains highly context-dependent, contingent upon critical boundary conditions at the firm, technology, and environmental levels.

From a theoretical perspective, this review offers a two-fold contribution to the literature. By anchoring the systematic synthesis in Resource Orchestration Theory, this study establishes a unified conceptual framework that bridges the fragmented gaps across management accounting, information systems, and strategic management disciplines. It advances the traditional resource-centric view by demonstrating that resource possession alone is insufficient; the strategic value of corporate data depends entirely on the dynamic orchestration processes of structuring, bundling, and leveraging. Furthermore, this study significantly extends decision-usefulness theory into the algorithmic era by explicating how digital orchestration shifts the primary function of management accounting from a retrospective, compliance-driven recording mechanism to a real-time, forward-looking simulation system. This redefines the conceptual boundaries of MAIQ, establishing a new paradigm where information quality is dictated by predictive foresight and strategic adaptability rather than historical verifiability.

For corporate practitioners, these findings provide a clear caveat against "technological determinism." Investing heavily in advanced software or artificial intelligence applications represents merely the initial resource structuring phase. To realize meaningful MAIQ gains, enterprise leadership must pursue strategic resource bundling by embedding real-time data flows directly into operational workflows, while simultaneously driving resource leveraging through organizational flattening, cultural alignment, and the upskilling of accounting professionals into strategic data orchestrators. For small and medium-sized enterprises (SMEs) and latecomer firms in emerging markets, a phased, scenario-focused "bricolage" orchestration strategy is recommended. Rather than replicating the capital-intensive infrastructure investments of large conglomerates, resource-constrained firms can utilize agile, cloud-based digital affordances to achieve rapid business-finance integration. For policymakers, the findings underscore the need to shift small business support initiatives from generic technology infrastructure subsidies toward dedicated capability-building programs, specifically targeting digital data governance and management accounting proficiency to narrow the widening digital divide.

Despite the rigorous implementation of the PRISMA 2020 protocol, several boundaries of this systematic review warrant acknowledgment. First, the selection scope was restricted exclusively to English-language, peer-reviewed journal articles, which may omit relevant insights published in other languages or gray literature. Second, despite the strict execution of dual-coding protocols and inter-coder reliability checks to minimize interpretative bias, the process of thematic synthesis inherently involves qualitative synthesis. Finally, as cognitive technology enters the era of Generative AI and corporate digital twins, the resource orchestration paradigm is continuously shifting from human-mediated bundling to autonomous, algorithmic orchestration. It is envisioned that the multi-level integrative framework and the six testable propositions developed in this study will provide future scholars with a robust road map to capture these emerging transformations and advance the theoretical frontiers of digital management accounting.

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