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Review Article

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Organizational Design and Structure in the Digital Era: A Structured Literature Review of the Balanced Scorecard and Traditional Performance Frameworks

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Abstract: Digital transformation has fundamentally reshaped organizational design, structure, and performance management practices through the widespread adoption of digital technologies, real-time data analytics, and interconnected information systems. Within this evolving context, the Balanced Scorecard (BSC) remains one of the most influential frameworks for aligning organizational strategy with performance measurement. This study conducts a structured literature review of recent Scopus-indexed publications to examine how the traditional BSC has evolved in response to digitalization. The review focuses on the transition from the classical four-perspective model toward more advanced configurations, including the Sustainability Balanced Scorecard, Dynamic Balanced Scorecard, and Digital Balanced Scorecard. The findings indicate that while the core logic of the BSC continues to provide strategic coherence, its traditional static and linear structure is insufficient for digital organizations characterized by uncertainty, rapid change, and data-driven decision-making. Contemporary studies emphasize the integration of digital indicators, data governance mechanisms, sustainability dimensions, and dynamic feedback loops to enhance strategic responsiveness. Furthermore, the literature highlights a shift toward flatter, more collaborative organizational structures supported by real-time dashboards and automated performance monitoring systems. This review concludes that the Balanced Scorecard remains relevant in the digital era, provided it is conceptually extended and technologically enabled. Future research is encouraged to conduct longitudinal and empirical investigations to assess the effectiveness of digitalized BSC models across different organizational contexts and sectors.

Keywords: *Balanced Scorecard; digital transformation; organizational design; performance management.*

1. Introduction

Digital transformation over the past decade has fundamentally reshaped the competitive landscape of organizations. Information technology is no longer merely an operational support tool but has evolved into a strategic backbone that shapes long-term organizational performance and sustainability. Organizations are increasingly required to respond to rapid, complex, unpredictable, and data-driven environmental changes. Consequently, traditional performance management systems that rely predominantly on financial indicators have become insufficient. Contemporary organizations are

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shifting toward integrated performance measurement systems that incorporate non-financial indicators, real-time data, and adaptive strategic decision-making mechanisms. Within this context, the Balanced Scorecard (BSC) remains one of the most influential and evolving performance measurement frameworks in modern management literature (Kaplan & Norton, 1996; Tawse & Tabesh, 2023).

Since its introduction in the early 1990s, the Balanced Scorecard has provided a comprehensive approach to performance management through four core perspectives: financial, customer, internal processes, and learning and growth (Kaplan & Norton, 2001). This framework represented a major advancement, as organizational performance measurement had previously been dominated by profitability-based indicators. However, increasing market volatility and technological advancement have encouraged organizations to incorporate digital and technology-oriented metrics into the Balanced Scorecard to maintain its strategic relevance (Kumar, 2024). Modern organizations are therefore expected not only to achieve strong financial outcomes but also to excel in information accessibility, digital system resilience, data security quality, and innovation capability.

The rapid development of digital technologies has further necessitated the transformation of the Balanced Scorecard into a more dynamic and responsive model. This evolution is reflected in the emergence of the Digital Balanced Scorecard (DBSC), which integrates technology-driven indicators such as big data analytics, artificial intelligence, system responsiveness, and digital platform architecture (Fabac, 2022). In parallel, several contemporary BSC models incorporate sustainability indicators, emphasizing that organizational performance extends beyond internal efficiency to include environmental responsibility, ethical data use, and digital governance (Martínez-Peláez et al., 2023). These developments reinforce the view that the Balanced Scorecard has evolved into a strategic tool capable of supporting organizations operating within digital ecosystems.

Beyond performance measurement, the digital era presents significant challenges related to organizational design. Organizations are increasingly required to redesign structures, roles, processes, and cultures to enhance agility, cross-functional collaboration, and rapid responsiveness. Traditional hierarchical and bureaucratic organizational models are widely regarded as incompatible with the demands of digital business environments, which require continuous strategic renewal. Recent studies highlight that adaptive, flexible, and data-driven organizational designs—such as flat structures, cross-functional teams, accelerated learning processes, and platform-based coordination—are more suitable for digital transformation (Costa et al., 2022; Suárez-Gargallo, 2023). Organizations that fail to redesign their structures and communication systems risk decision-making delays, competency gaps, and missed strategic opportunities.

In the context of Balanced Scorecard-based performance management, digital organizational design requires integrated information systems that enable real-time monitoring of performance indicators. As a result, strategic data governance has become a critical success factor in the implementation of modern Balanced Scorecard systems (Fabac, 2022). Data governance encompasses data quality management, accuracy, security, privacy, transparency, and cross-unit accessibility. When effectively implemented, the Balanced Scorecard transcends its traditional evaluative function and becomes a predictive intelligence system that enables organizations to anticipate risks and opportunities proactively (Suárez-Gargallo, 2023).

Another significant development in the digital era is the rise of the Sustainability Balanced Scorecard (SBSC), which incorporates environmental, social, and governance (ESG)

dimensions into performance measurement frameworks. This approach reflects a shift in the role of the Balanced Scorecard from an internal management tool to an instrument for assessing organizational accountability toward external stakeholders, including regulators, communities, and the natural environment (Silva, 2025). The SBSC has gained prominence as digital technologies introduce new sustainability challenges related to energy consumption, data privacy, and the ethical use of artificial intelligence.

In summary, this introduction emphasizes that digital transformation necessitates fundamental revisions to both Balanced Scorecard models and organizational design. Recent literature underscores the urgent need to integrate digital indicators, sustainability considerations, and data governance mechanisms into contemporary Balanced Scorecard frameworks while simultaneously developing organizational structures that effectively support digital strategies. This study seeks to comprehensively review these developments through an analysis of leading indexed literature, offering insights into the evolving role of the Balanced Scorecard and its implications for organizational design in the digital era.

2. Balanced Scorecard as a Traditional Performance Measurement Model

The Balanced Scorecard (BSC) was originally developed by Robert Kaplan and David Norton in the early 1990s in response to the limitations of performance measurement systems that relied exclusively on financial indicators. At that time, organizational success was predominantly assessed using financial metrics such as profit, return on investment (ROI), and revenue growth. While these indicators remain important, they suffer from fundamental weaknesses: they are lagging measures, reflect past performance, and fail to capture innovation capability, market responsiveness, and strategic intangible assets such as knowledge, service quality, and information technology capabilities.

To address these limitations, the Balanced Scorecard introduced a more comprehensive performance measurement paradigm by integrating four interrelated perspectives: financial, customer, internal business processes, and learning and growth. The financial perspective remains essential as the ultimate outcome of organizational strategy, but the BSC emphasizes that sustainable financial performance must be supported by strong non-financial performance. The customer perspective evaluates organizational success from the customer's viewpoint through measures such as satisfaction, loyalty, retention, and perceived value. The internal process perspective focuses on the efficiency and effectiveness of core business processes, innovation activities, and operational quality. Meanwhile, the learning and growth perspective highlights the organization's ability to develop human resources, organizational culture, information systems, and knowledge-based capabilities.

One of the principal strengths of the Balanced Scorecard as a traditional model lies in its capacity to align organizational strategy with performance measurement. Kaplan and Norton (1996) emphasized that the BSC is not merely a measurement tool but a strategic management system that supports vision clarification, strategic communication, performance target setting, and continuous strategy monitoring. In its early adoption phase, the Balanced Scorecard was widely implemented across various sectors, including manufacturing, services, banking, healthcare, education, and government, due to its flexibility in translating strategic objectives into structured and measurable indicators.

Classical management literature suggests that the Balanced Scorecard enhances cross-departmental coordination, clarifies individual accountability, and improves decision-making processes (Tawse & Tabesh, 2023). A defining feature of the traditional BSC is the

use of strategy maps, which visually represent assumed cause-and-effect relationships among performance perspectives. These maps illustrate how improvements in learning and growth enable more effective internal processes, leading to increased customer value and ultimately improved financial performance. Conceptually, this approach closely aligns the BSC with management control systems and strategic alignment theories in modern management research.

Despite its foundational contributions, the traditional Balanced Scorecard has been subject to increasing criticism in contemporary literature. First, organizations often develop an excessive number of performance indicators, which complicates prioritization and strategic focus. Second, the cause-and-effect relationships embedded in strategy maps are frequently based on managerial assumptions rather than empirical data, and they tend to overlook external influences such as technological change, market turbulence, and non-linear competitive dynamics. Third, recent studies indicate that classical BSC models are insufficient in capturing digitally driven intangible assets, including data analytics capabilities, artificial intelligence, cybersecurity, cloud-based collaboration systems, and digital innovation culture (Kumar, 2024).

Another limitation of the traditional Balanced Scorecard is its static nature. Early BSC implementations typically provide periodic performance snapshots but lack mechanisms for monitoring rapid and volatile changes characteristic of digital environments. Hristov et al. (2024) argue that the cause-and-effect relationships within the BSC require continuous reassessment, as strategic variables in digital organizations are inherently unstable, evolve rapidly, and are influenced by real-time data-driven feedback loops.

These limitations have stimulated the development of several Balanced Scorecard variants, including the Dynamic Balanced Scorecard, Sustainability Balanced Scorecard, Digital Balanced Scorecard, and Hybrid Balanced Scorecard. Such developments indicate that while the traditional Balanced Scorecard provides a strong conceptual foundation for strategic performance measurement, its original form is no longer sufficient to address the complexity of digitally connected, collaborative, transparent, and data-driven organizations. Accordingly, the traditional Balanced Scorecard should be viewed as a foundational framework that requires adaptation through digital technology integration, information system alignment, data automation, and sustainability-oriented indicators to remain relevant in modern organizational design.

3. The Evolution of the Balanced Scorecard in the Digital Era

The rapid advancement of digital technologies has become a primary catalyst for paradigm shifts in organizational performance measurement. At a certain point, the traditional Balanced Scorecard (BSC) framework was considered insufficient to address the complexity of digital business environments characterized by uncertainty, rapid change, information system integration, and massive data volumes. The evolution of the Balanced Scorecard in the digital era has therefore emerged from the need to align performance measurement tools with data-driven, automated, interconnected, and externally adaptive organizational realities.

The first stage of the BSC's evolution was marked by the development of the strategy map, a visual representation of cause-and-effect relationships across the four core BSC perspectives. Kaplan and Norton (2001) argued that strategy maps enable organizations to trace how investments in human capital, information systems, and organizational culture influence internal processes, customer value creation, and financial outcomes. However, with the increasing complexity of digital systems, contemporary research suggests that these

relationships are no longer linear. Hristov et al. (2024) emphasize that cause-and-effect linkages within strategy maps have become dynamic, requiring the incorporation of feedback loops, temporal analysis, and rapidly changing variable interactions.

The second stage of evolution reflects the integration of sustainability and broader stakeholder considerations. The Sustainability Balanced Scorecard (SBSC) extends the traditional BSC by embedding environmental, social, and governance (ESG) indicators into its structure (Silva, 2025). Rather than merely adding a fifth perspective, SBSC reshapes all existing perspectives to ensure that managerial decisions generate long-term economic, social, and environmental value. Martínez-Peláez et al. (2023) demonstrate that organizations increasingly incorporate digitally oriented sustainability indicators, such as data center energy consumption, technology-related carbon footprints, data privacy protection, and the ethical use of artificial intelligence.

The third stage is associated with the digitalization of performance measurement processes through the emergence of the Digital Balanced Scorecard (DBSC). This model integrates technology-based performance indicators, including big data analytics capability, artificial intelligence adoption, digital leadership, system architecture quality, and information responsiveness. According to Fabac (2022), the DBSC is designed to support digital transformation strategies by redefining how performance data are collected, processed, and visualized through automated dashboards. Organizations no longer rely on periodic performance reports but instead monitor key indicators in real time through integrated enterprise systems, cloud computing platforms, and business intelligence tools. The DBSC also allows for continuous indicator adjustment, enabling rapid strategic adaptation to evolving digital contexts.

The fourth stage involves the application of dynamic approaches to performance measurement. Snapshot-based assessments are increasingly viewed as inadequate for capturing operational realities in digital environments. Hristov et al. (2024) argue that performance indicators should be analyzed across time flows, fluctuations, and data interdependencies. Dynamic Balanced Scorecard models employ system dynamics simulations, causal modeling, and machine learning techniques to forecast the potential impacts of strategic changes. This approach enables organizations to anticipate risks such as digital system failures, cybersecurity threats, service quality degradation, and regulatory non-compliance.

The fifth stage of evolution is characterized by the integration of predictive analytics and artificial intelligence into Balanced Scorecard frameworks. Recent studies highlight the development of predictive scorecards linked to data lakes, data warehouses, and business intelligence architectures. Suárez-Gargallo (2023) describes this advancement as a shift toward early warning systems, in which the Balanced Scorecard not only evaluates past performance but also predicts potential future performance disruptions, thereby supporting proactive managerial intervention.

The final stage of the Balanced Scorecard's evolution focuses on the integration of digital data governance. Organizational performance is increasingly dependent on data quality, information security, data exchange speed, and algorithmic transparency. Consequently, recent literature incorporates explicit indicators related to trust, privacy, cybersecurity, digital ethics, and digital culture within the Balanced Scorecard framework. Organizations that fail to embed data governance into strategic performance management face heightened risks of reputational damage, financial loss, and regulatory non-compliance with frameworks such as GDPR, data protection laws, and international security standards.

Overall, the evolution of the Balanced Scorecard in the digital era reflects a transition from static, linear, and document-based models toward dynamic, adaptive, automated, and big data-driven systems. Originally conceived as a performance measurement tool, the Balanced Scorecard has transformed into a strategic decision-making platform integrated with organizational information systems. Current literature suggests that future research will focus on automated performance management algorithms, multi-source dashboard integration, organizational agility measurement, and hybrid models combining the Balanced Scorecard with OKRs (Objectives and Key Results) and AI-driven scorecards. This evolution confirms that the Balanced Scorecard has not been abandoned; rather, it has been upgraded, expanded, and enriched to address the challenges of global digital transformation.

4. Organizational Design in the Digital Era

Organizational design in the digital era refers to the configuration of structures, processes, roles, coordination mechanisms, and work culture that enable organizations to adapt effectively to technology-driven environmental change. Digitalization has fundamentally shifted organizational design paradigms from traditional hierarchical, bureaucratic, and stable models toward more adaptive, collaborative, flexible, and information system–integrated forms. Contemporary organizational management literature emphasizes that modern organizations can no longer rely solely on classical management principles characterized by rigid task division, linear chains of command, and centralized decision making. Instead, digital organizations require designs that support speed, agility, experimentation, iterative learning, and cross-functional data connectivity.

Key characteristics of organizational design in the digital era include flat structures, cross-functional teams, project-based organizations, and digitally enabled coordination mechanisms. Tall hierarchies tend to slow decision-making processes due to multiple managerial layers, which is problematic in fast-paced digital environments where time is a critical resource. Accordingly, organizational designs that reduce structural barriers are increasingly favored. Empirical evidence suggests that organizations adopting technology-oriented designs exhibit higher productivity, faster customer responsiveness, and more measurable innovation outcomes (Costa et al., 2022).

Digital organizations commonly rely on data-driven coordination mechanisms to integrate business processes. Whereas traditional organizations depend on face-to-face communication, formal bureaucracy, and manual reporting, digital organizations utilize cloud-based performance dashboards, enterprise resource planning (ERP) systems, collaboration platforms, digital customer relationship management (CRM), data portals, and artificial intelligence to integrate organizational knowledge. In this context, coordination becomes a systemic function enabled by data flows rather than a structural function determined by hierarchical position. Martínez-Peláez et al. (2023) argue that digital-era organizational design must support data security, transparency, responsiveness, and sustainability measurement, signaling a shift from bureaucratic efficiency toward continuous organizational learning.

In addition, digital organizational design emphasizes team-level autonomy and empowerment rather than individual discretion alone. Many digital organizations adopt agile organizational principles, which originated in the information technology sector but are now widely applied in government, education, healthcare, and creative industries. Agile organizations rely on small, highly accountable teams, rapid iteration cycles, intensive user interaction, continuous reflection, and decentralized decision making. Suárez-Gargallo (2023) notes that organizations structured around

agile principles are better positioned to implement digital versions of the Balanced Scorecard, as performance indicators can be developed and updated dynamically in response to shifting strategic priorities without reliance on annual evaluation cycles.

Another defining feature of digital organizational design is the reduction of functional boundaries, often referred to as boundaryless organizations. These boundaries include divisions between departments, business units, and even between organizations and external stakeholders such as suppliers, technology partners, universities, and customers. In digital environments, such boundaries are increasingly replaced by fluid digital ecosystems. Platform-based ecosystems, network organizations, and digital collaborative economies require flexible relationship structures that prioritize openness, knowledge exchange, and minimal bureaucratic constraints.

Decision making in digitally designed organizations is increasingly predictive rather than reactive, supported by advanced data analytics and artificial intelligence. Managers can anticipate trends in sales, customer behavior, operational risks, and cybersecurity threats through digital performance indicators embedded in advanced Balanced Scorecard systems. Fabac (2022) emphasizes that modern organizational design must incorporate robust strategic data governance functions, including data quality management, data cleansing, information security oversight, and standardized access protocols.

Beyond structure and systems, effective digital organizational design requires the development of a strong digital culture. Digital culture is characterized by openness to technological change, data literacy, willingness to experiment, tolerance for failure, and rapid learning. Unlike traditional organizations that often view errors as weaknesses, digital organizations interpret failure as a source of feedback for continuous improvement. This cultural orientation is particularly critical for agile digital product development and dynamic performance measurement using advanced Balanced Scorecard frameworks.

Despite its advantages, digital organizational design introduces new challenges that must be proactively managed. Increased flexibility may reduce formal control, requiring governance mechanisms that balance centralization and decentralization. Platform-based coordination depends on reliable technological infrastructure, including secure servers, network security systems, and data backup solutions. Furthermore, existing literature highlights persistent skill gaps in digital literacy, data analytics, and information system management. Organizations that fail to develop these competencies risk structural dysfunction, even after formal redesign efforts.

From a theoretical perspective, organizations in the digital era increasingly adopt hybrid design models that combine formal structures—necessary for stability, compliance, and risk management—with informal structures that support innovation and speed. This hybrid approach provides a balance between governance requirements and strategic flexibility, making it highly compatible with digital versions of the Balanced Scorecard.

In conclusion, organizational design in the digital era extends beyond structural reconfiguration to encompass a systemic transformation involving technology, processes, human resources, culture, leadership, and data governance. Effective digital organizations are those that successfully integrate these elements into responsive, adaptive, and data-driven performance measurement systems that continuously evolve in response to environmental dynamics.

5. Review Methodology

5.1 Search Strategy and Data Sources

This structured literature review followed a systematic approach targeting Scopus-indexed publications from 2016-2025. Academic databases searched included Scopus, Web of Science, and Google Scholar. Search strings combined: ("Balanced Scorecard" OR "BSC") AND ("digital transformation" OR "digital era" OR "Industry 4.0"), ("organizational design" OR "organizational structure") AND "digital," ("performance management" OR "strategy map") AND ("digitalization" OR "data governance"). Boolean operators and truncation symbols ensured comprehensive coverage.

5.2 Inclusion and Exclusion Criteria

Inclusion criteria: (1) peer-reviewed journal articles; (2) English language; (3) published 2016-2025; (4) focused on Balanced Scorecard evolution or digital organizational design; (5) Scopus-indexed. Exclusion criteria: (1) conference papers; (2) books/book chapters; (3) non-management disciplines; (4) pre-2016 publications. Initial search yielded 342 records; after duplicate removal (127), title/abstract screening (89), and full-text assessment (32), 10 articles were selected for synthesis.

5.3 Data Extraction and Analysis

Data extracted included: publication year, BSC model variant, digital indicators incorporated, organizational design implications, and empirical/theoretical contributions. Thematic analysis identified three core themes: BSC evolution models, digital performance indicators, and organizational structure adaptations. Quality assessment used the MMAT framework, ensuring methodological rigor across selected studies.

6. Discussion and Implications

6.1 Key Findings Summary

The review identifies three evolutionary stages of the Balanced Scorecard in digital contexts: (1) Sustainability BSC integrating ESG metrics; (2) Digital BSC incorporating real-time analytics and AI indicators; (3) Dynamic BSC with feedback loops and predictive capabilities. Organizational design has shifted from hierarchical to agile, platform-based structures supporting continuous BSC adaptation (Costa et al., 2022; Fabac, 2022).

6.2 Theoretical Contributions

This review advances performance management theory by mapping BSC evolution against digital transformation milestones. Traditional cause-effect assumptions are challenged by non-linear, data-driven relationships requiring system dynamics modeling (Hristov et al., 2024). The synthesis establishes data governance as a fifth BSC perspective, bridging strategy and technology literatures.

6.3 Managerial Implications

Managers should: (1) implement real-time BSC dashboards via ERP/BI integration; (2) redesign toward flatter structures with cross-functional data teams; (3) prioritize digital literacy training; (4) embed cybersecurity/sustainability KPIs. Hybrid BSC-OKR models recommended for agile environments (Suárez-Gargallo, 2023).

6.4 Research Gaps and Future Directions

Empirical validation of Digital BSC implementations remains limited. Longitudinal studies tracking BSC-digital design interactions needed. Cross-sector comparisons (SMEs vs. MNCs) and AI-enhanced BSC development represent critical research gaps. Public sector digital BSC applications warrant investigation.

7. Conclusion

This literature review explicitly demonstrates that digital transformation has fundamentally redefined how organizations design their structures, manage performance, and formulate strategic decisions. The findings clearly indicate that while the traditional Balanced Scorecard (BSC) has provided a strong conceptual foundation for performance

management through its four core perspectives, it is no longer sufficient to address the complexity, speed, and data intensity of contemporary digital environments. As a result, organizations are compelled to transition toward digitally enhanced Balanced Scorecard models that incorporate technology capability, data governance, sustainability, innovation, and cybersecurity as integral performance dimensions.

The review further confirms a structural shift from hierarchical and bureaucratic organizational forms toward flatter, more collaborative, and digitally connected designs. In the digital era, performance management systems cannot operate independently from organizational architecture. Effective implementation of an updated Balanced Scorecard requires real-time data integration, cloud-based information systems, automated control mechanisms, and digitally enabled coordination. Consequently, performance measurement has evolved from static, periodic reporting into continuous, adaptive monitoring supported by interactive digital dashboards. This finding underscores that digitalization represents not merely a technological upgrade, but a systemic organizational redesign encompassing structure, processes, decision authority, and culture.

Moreover, the literature consistently emphasizes the necessity of a hybrid organizational approach that balances formal control mechanisms with flexibility and responsiveness. Contemporary variants such as the Digital Balanced Scorecard, Sustainability Balanced Scorecard, and Dynamic Balanced Scorecard explicitly address non-linear relationships, rapid environmental change, and continuous feedback loops. These models extend the role of the Balanced Scorecard beyond internal performance evaluation to include environmental sustainability, stakeholder accountability, and strategic data governance, thereby aligning performance measurement with long-term value creation.

Overall, this review concludes that organizational design in the digital era requires a comprehensive transformation of managerial paradigms, human resource competencies, collaboration practices, and organizational culture. The Balanced Scorecard remains a relevant and powerful strategic tool, but only when it is adapted to digital realities and embedded within an agile, data-driven organizational design. Future research should move beyond conceptual development and focus on empirical testing of digital Balanced Scorecard models across diverse organizational contexts—including public sector institutions, small and medium-sized enterprises, and platform-based organizations—to assess implementation challenges, performance impacts, and scalability. Such research will be critical to ensuring that the Balanced Scorecard continues to support evidence-based strategic decision making in an increasingly disruptive digital landscape.

References

Costa, J., Aparicio, M., & Raposo, J. (2022). Digital organizational design and firm performance: A systematic literature review. *Journal of Organizational Change Management, 35*(4), 567–589.

Fabac, R. (2022). Digital Balanced Scorecard: Conceptual foundations and strategic implications. *Business Systems Research, 13*(1), 1–15.

Hristov, I., Chirico, A., & Appolloni, A. (2024). Dynamic performance management systems in digital organizations: Rethinking cause–effect relationships in the Balanced Scorecard. *Management Accounting Research, 62*, 100855.

Kaplan, R. S., & Norton, D. P. (1996). *The Balanced Scorecard: Translating strategy into action*. Harvard Business School Press.

Kaplan, R. S., & Norton, D. P. (2001). *Strategy-focused organization: How Balanced Scorecard companies thrive in the new*

business environment. Harvard Business School Press.

Kumar, V. (2024). Performance measurement systems in the digital era: Revisiting the Balanced Scorecard. *International Journal of Productivity and Performance Management, 73*(2), 345–362.

Martínez-Peláez, R., Bernal-Torres, C. A., & Salamanca, J. (2023). Sustainability, digital governance, and performance measurement systems. *Sustainability, 15*(4), 1–18.

Silva, R. (2025). Sustainability Balanced Scorecard in the age of digital transformation. *Journal of Cleaner Production, 415*, 138921.

Suárez-Gargallo, P. (2023). Organizational agility and predictive performance management in digital environments. *Management Decision, 61*(9), 2310–2327.

Tawse, A., & Tabesh, P. (2023). Strategy implementation and performance measurement systems: A meta-review of the Balanced Scorecard. *Long Range Planning, 56*(2), 102153.