

MAPPING TWO DECADES OF PERFORMANCE MANAGEMENT AND BALANCED SCORECARD RESEARCH (2004–2024): TRENDS, GAPS, AND EMERGING DIRECTIONS

Michaela Blahová

E-mail: mblahova@utb.cz

ORCID: <https://orcid.org/0000-0003-1981-7865>

Affiliation: Faculty of Management and Economics, Tomas Bata University in Zlín, Czech Republic

ROR: <https://ror.org/04nayfw11>

Kim Anh Dao

E-mail: kim@utb.cz

ORCID: [0000-0002-8636-6438](https://orcid.org/0000-0002-8636-6438)

Affiliation: Faculty of Management and Economics, Tomas Bata University in Zlín, Czech Republic

ROR: <https://ror.org/04nayfw11>

Alex Ntsiful

E-mail: ntsiful@utb.cz

ORCID: [0000-0002-8337-7596](https://orcid.org/0000-0002-8337-7596)

Affiliation: Faculty of Management and Economics, Tomas Bata University in Zlín, Czech Republic

ROR: <https://ror.org/04nayfw11>

Přemysl Pálka

E-mail: ppalka@utb.cz

ORCID: [0000-0002-9506-4861](https://orcid.org/0000-0002-9506-4861)

Affiliation: Faculty of Management and Economics, Tomas Bata University in Zlín, Czech Republic

ROR: <https://ror.org/04nayfw11>

Michael Adu Kwarteng

E-mail: kwarteng@utb.cz

ORCID: <https://orcid.org/0000-0002-6787-0401>

Affiliation: Faculty of Management and Economics, Tomas Bata University in Zlín, Czech Republic

ROR: <https://ror.org/04nayfw11>

Annotation. This study conducts a comprehensive bibliometric analysis of 100 relevant research publications on performance management systems (PMS) and Balanced Scorecard (BSC) adoption from 2004 to 2024. While conducting the analysis, publication trends, influential authors, citations, and keywords are all taken into consideration in order to uncover the intellectual structure and development of the field. It is clear from the findings that the BSC continues to be an essential instrument for coordinating strategic goals with operational procedures. This is demonstrated by the fact that it is frequently mentioned and holds a central position in the research literature. Emerging topics such as sustainability, business intelligence, and technological integration are examples of how the focus on contemporary challenges is shifting along with the times. On the other hand, the study identifies research gaps, particularly in the areas of applications for the public sector and the incorporation of advanced digital tools.

Keywords: bibliometric analysis, performance management system, balance scorecard, adoption, systematic review.

JEL classification: M21, M20.

Introduction

The contemporary business landscape is marked by rapid changes and growing complexity, which necessitate continuous improvements in organisational effectiveness. Performance management systems (PMS) have become essential tools for aligning strategic objectives with daily operational activities, enabling organisations to assess performance comprehensively and facilitate strategic execution (Koufteros *et al.*, 2014; Melnyk *et al.*, 2014; Bourne *et al.*, 2018). Among the various methodologies that have gained traction, the Balanced Scorecard (BSC), developed by Kaplan and Norton in the early 1990s (Kaplan and Norton, 1992), stands out for its holistic approach to performance evaluation. Unlike traditional models focused solely on financial metrics, the BSC incorporates four key dimensions: financial, customer, internal business processes, and learning and growth. This multifaceted framework supports organisations in balancing short-term results with long-term strategic sustainability by integrating non-financial aspects such as customer satisfaction, process efficiency, and organisational learning and innovation. The BSC has been hailed as a widely used and highly influential management tool (Olson and Slater, 2002; Niven, 2014; Humphreys, 2023) that has been studied extensively in a wide variety of research and industry contexts (Elbanna *et al.*, 2022).

The BSC is a significant evolution in performance measurement systems, representing a transition from traditional models focused on finances to a framework that is more comprehensive and aligned with strategy (De Geuser *et al.*, 2009; Kaplan and Norton, 2010). This shift reflects the increasing complexity and diversity of objectives that modern organisations have, and it highlights the necessity of tools that integrate operational activities with long-term strategic goals. The fact that the BSC has been adopted across a variety of industries demonstrates both its adaptability and its efficiency in aligning organisational functions with strategy (Guerra *et al.*, 2018; Wanderley *et al.*, 2021; Rezaei *et al.*, 2024). It provides a balanced evaluation of performance by incorporating financial, customer, internal process, and learning and growth perspectives. This enables organisations to achieve strategic coherence, which is a significant benefit.

The body of research that has been conducted on performance measurement systems. The BSC has highlighted the crucial role it plays in the promotion of strategic alignment by establishing a connection between day-to-day operations and more comprehensive organisational goals. In today's highly competitive and resource-constrained environments, this combination is necessary due to its enabling organisations to balance between reaching short-term goals and achieve sustainable long-term success (Jassem *et al.*, 2020; Mariani *et al.*, 2025).

The significance and novelty of this research are twofold. First, it distinguishes itself by synthesising a diverse array of empirical studies, case analyses, and theoretical frameworks into a cohesive narrative. This approach addresses the fragmented nature of existing literature, offering a comprehensive perspective on performance management systems and the Balanced Scorecard (BSC). Notably, the study develops one of the first taxonomies in this domain, identifying unexplored areas and research gaps. This contribution not only informs future academic inquiries but also challenges established paradigms, thereby fostering innovation in performance management and BSC methodologies. Second, the study provides a novel meta-analytic perspective by examining publication trends, influential authors, and citation networks. This analysis uncovers the intellectual structure of the field, highlighting foundational works and emerging thought leaders shaping its evolution. The following research questions have been identified:

- What are the trends in publications over time in the field of performance management and Balanced Scorecard adoption?
- Which authors, citations, and keywords have most influenced the core intellectual structure of this field?

- What emerging trends and future research directions are evident in the literature on performance management and Balanced Scorecard adoption?

1. Literature Review

In the context of rapidly evolving organisational environments, performance measurement and management have emerged as critical levers for achieving strategic coherence, operational efficiency, and long-term value creation. As organisations grapple with increasing complexity, digital transformation, and heightened stakeholder expectations, traditional performance management tools have proven insufficient to meet the demands of modern governance and accountability. This has prompted a shift toward more integrated, dynamic, and multidimensional systems that not only monitor outcomes but also drive strategic alignment, learning, and adaptability (Neely, 2005). Among the most widely studied and applied frameworks in this evolution is the Balanced Scorecard (BSC), which complements broader performance management systems (PMS) by translating strategic objectives into actionable performance indicators. The following sections examine the theoretical foundations, practical developments, and contemporary challenges associated with performance management systems and Balanced Scorecard, drawing on recent empirical findings and highlighting areas for further research and innovation.

1.1 Performance Management Systems

Recent research in corporate performance management systems highlights a shift toward tightly integrated frameworks that link long-term strategic goals with day-to-day operations. These frameworks enable more effective resource utilisation and provide robust feedback loops, fostering alignment across organisational levels. In response to the increasing volatility of the business environment, such systems are becoming more adaptive and context-aware (Bititci, 2015; Franco-Santos *et al.*, 2012; Nudurupati *et al.*, 2021). A growing reliance on digital technologies, particularly artificial intelligence and sophisticated data analytics, further enhances their capacity to support agile decision-making and maintain competitiveness in rapidly changing markets (Varma *et al.*, 2024).

Traditional financial indicators are increasingly being supplemented with broader, multidimensional performance metrics that capture operational efficiency, customer satisfaction, and environmental and social dimensions. This evolution reflects a growing recognition of the need for organisations to address sustainability and corporate social responsibility more comprehensively (Bourne *et al.*, 2018; Mio *et al.*, 2022). By integrating these non-financial indicators, firms are better equipped to navigate contemporary challenges and align performance management with long-term value creation.

Recent developments highlight the increasing dynamism and adaptability of performance management systems in response to emerging organisational challenges, such as the demand for greater agility, faster feedback loops, digitalisation and more participatory forms of governance (Caplanova, Dimelis, 2025). Sardi *et al.* (2020) have outlined the evolutionary trajectories of PMS, while Rock and Jones (2015) demonstrated how leading global firms like Adobe, Deloitte, and GE have shifted away from traditional models toward more flexible, dialogue-based approaches that emphasise short-term goal setting and continuous interaction.

In line with the growing emphasis on agility, adaptability, and strategic alignment, performance management systems are not only reshaping organisational processes but also influencing employee behaviour and motivation (Nguyen, 2024; Shahzad *et al.*, 2024). This is particularly evident in the domain of human resource management, where these systems function as critical tools for identifying, evaluating, developing, and aligning individual and team performance with the broader strategic objectives of the organisation (Aguinis, 2012).

Performance management systems are also an essential component of human resource management. Their primary purpose is to regulate employee behaviour and ensure that it is aligned with the objectives of the organisation. Although they are used in a wide variety of contexts, there are significant differences in their interpretation and impact.

Broadbent and Laughlin (2009) describe how performance management systems (PMS) have the potential to improve structured performance assessment, accountability, and employee development in both the public and private sectors when they are used effectively. A culture within an organisation that places a high value on transparency and ongoing improvement is the most conducive to the successful implementation of a performance management system (PMS). It is essential that the PMS be aligned with the company's strategy; if this is not done, the systems run the risk of being ineffective. Zuo (2012) highlights the fact that traditional project management systems frequently deviate from strategic goals, implying that a strategy-oriented approach is required for meaningful implementation and results.

The successful adoption of PMS faces notable obstacles, including a lack of organisational support and insufficient communication. Thusi (2023) highlights that effective performance management depends on continuous interaction and a process that builds commitment between managers and employees, promoting both organisational and personal development. Similarly, Kaupa and Atiku (2020) identify insufficient interaction during performance reviews as a significant hindrance in Namibia's public sector, which impedes successful implementation. These insights underscore the importance of robust communication channels and proactive support systems to facilitate the proper functioning of PMS and to enhance their overall effectiveness.

Motivations behind the implementation of PMS further influence their efficacy. Research by Sutheewasinnon *et al.* (2016) indicates that in Thailand, PMS were adopted primarily for legitimacy rather than performance improvement, which affected their overall impact. This underscores the idea that genuine commitment to PMS is crucial for their success. Biron *et al.* (2011) argue that when PMS are designed to facilitate and support employees, they can create a beneficial trickle-down effect throughout the organisation, improving performance outcomes. Ultimately, the literature suggests that for PMS to be effective, they must be strategically aligned, supported by strong communication, and adopted with sincere intent, thereby promoting continuous improvement and reinforcing their role in organisational success.

Current research trends suggest that effective PMS are no longer conceived as isolated control tools. Instead, they are increasingly understood as open, adaptive, and value-driven systems that foster strategic learning, organisational adaptation, and sustainable development. Prominent approaches in recent years reflect the growing complexity and uncertainty of contemporary organisational environments. The trajectory of development points toward a more holistic understanding of performance management, one that synthesises formal metrics with informal, cultural, behavioural, and value-laden dimensions (Nudurupati *et al.*, 2021; Aman *et al.*, 2023; Xu *et al.*, 2024). This integrated approach enables organisations to align performance management with their core mission, purpose, and evolving societal expectations.

1.2 Balanced Scorecard Adoption

The Balanced Scorecard (BSC) has gained substantial acceptance across various sectors, including manufacturing and healthcare, as a robust framework for aligning daily operations with strategic objectives and enhancing decision-making (Naranjo-Gil, 2009). Conceived by Kaplan and Norton (1992), the BSC assesses performance through four critical perspectives: internal business processes, customer insights, innovation and learning, and financial outcomes.

This multidimensional approach ensures a comprehensive understanding of an organisation's performance, bridging the gap between short-term results and long-term goals. Researchers, such as Nørreklit (2003), underscore the BSC's capacity to translate strategic visions into actionable targets, thereby enhancing communication and alignment across various levels within an organisation. This can be observed in a study on Australian government departments by Hoque and Adams (2011), where the implementation of BSC measures correlated with improved programme effectiveness and efficiency. Similarly, Chavan (2009) highlights how the BSC fosters a balanced approach to performance management by integrating retrospective performance metrics with forward-looking indicators that drive future success.

However, despite its advantages, the implementation of the BSC is not without challenges. Greiling (2010) points out that incomplete or underdeveloped BSC applications can lead to suboptimal outcomes, as evidenced in her research on German non-profit organisations. This suggests that effectiveness of BSC heavily relies on the knowledge and commitment of its implementers. Zangouinezhad and Moshabaki (2011) further emphasise that strategic alignment is vital, as without it, BSC initiatives may fall short of their objectives. In addition, Braam *et al.* (2007) and Fechete and Nedelcu (2015) note that inadequate training and limited top management involvement can erode momentum post-adoption, impacting long-term success. The contextual aspects, such as organisational size, industry, and culture, also play a crucial role in the BSC's efficacy, as highlighted by Nair (2004).

However, when effectively implemented, the BSC supports continuous feedback and adaptation, allowing organisations to navigate internal and external changes efficiently (Ronay, Basar, 2009). This adaptability solidifies the role of BSC in fostering strategic alignment, sustainability, and continuous improvement, making it an essential tool in contemporary performance management systems.

2. Materials and Methods

2.1 Article Search and Selection

The methodology employed in this review is based on bibliometrics, which involves the statistical analysis of scholarly communication through publications (Garfield, 1955; Pritchard, 1969). Advanced bibliometric techniques were notably introduced to strategic management research by Ramos-Rodríguez and Ruíz-Navarro (2004), who analysed citations within the leading journals of the field to map its intellectual structure over its first two decades. This review sourced bibliographic data from Clarivate Analytics' *Web of Science* (WoS) database, a platform internationally respected for its stringent quality standards. WoS is recognised for its comprehensive coverage of high-impact journals, enabling an inclusive search of relevant academic resources and facilitating a broad perspective on the topic.

For this study, the search strategy employed the keywords "Performance management systems* AND Balanced Scorecard adoption*", which initially yielded 106 documents. Through meticulous curation, the dataset was refined to include 100 records, ensuring the exclusion of irrelevant or insufficient entries. This selection process encompassed journal articles, conference proceedings, and book chapters, ensuring a comprehensive compilation of scholarly materials relevant to the study. The timeframe chosen for this review spans from 2004 to 2024, enabling an in-depth exploration of recent advancements and longitudinal trends in performance management system adoption and Balanced Scorecard adoption research.

2.2 Bibliometric Data Analysis

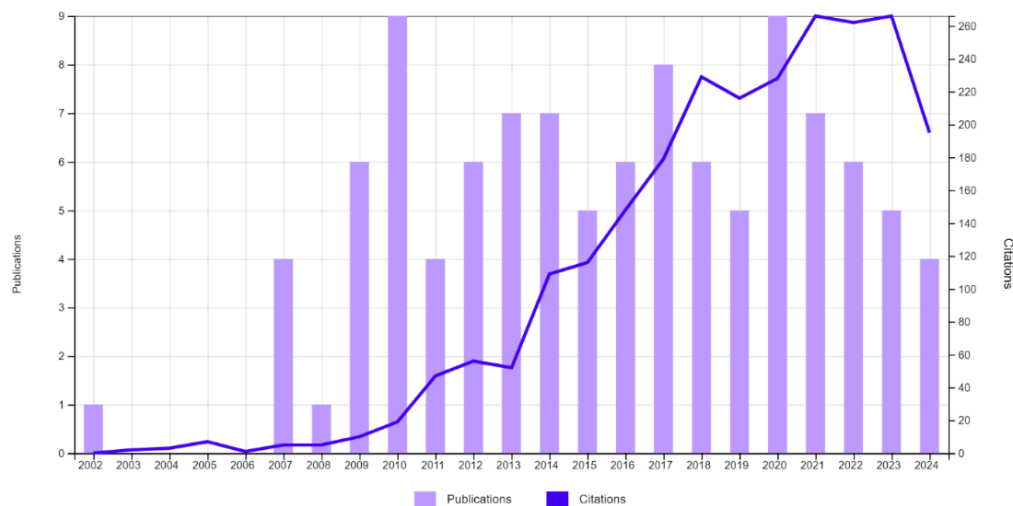
Bibliometric methodology employs quantitative tools like bibliometric and citation analysis applied to publication and citation data (Donthu *et al.*, 2021). By systematically examining literature with metrics such as citation counts, co-authorship networks, and keyword frequency, researchers can map the conceptual framework and progression of a research field. This approach has become essential for identifying leading publications, influential authors, key themes, and emerging trends, thus offering valuable insights into the state and development of specific research areas. According to Hallinger (2023), bibliometric reviews help bridge theories across disciplines and track the evolution of research topics, making them particularly valuable for emerging fields. What is more, bibliometric reviews have the potential to be an important instrument for developing areas, since they can assist in identifying gaps in the existing body of literature and recommending potential avenues for future research (Hallinger, 2023). In order for researchers to successfully situate their work within broader academic conversations, it is essential for them to have the ability to visualise the development of a field.

3. Results

To gain a comprehensive understanding of the academic landscape surrounding the topic under investigation, it is essential to examine both temporal and geographical patterns in scholarly output. Bibliometric analysis enables the identification of trends in publication activity and citation impact over time, while also highlighting the contributions of individual countries to the development of the field. The following sections present an overview of these dimensions, offering insights into the evolution, global reach, and growing academic significance of the topic.

3.1 Publication Trends

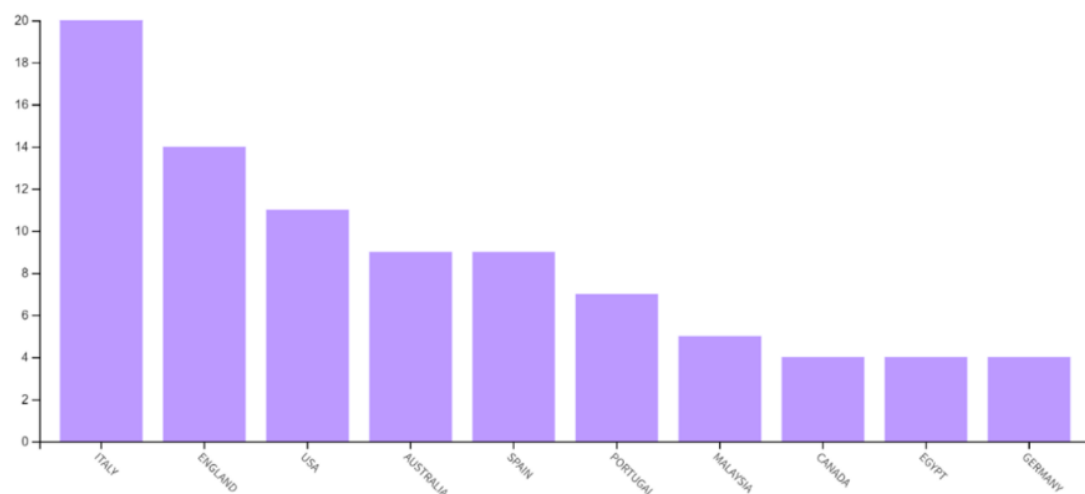
Figure 1 illustrates the publication and citation trends for the period 2004–2024. Annual publication counts are represented by light purple bars, while citation trends are depicted by a dark blue line. Initially, both metrics remained low; however, a notable increase in publication activity began around 2007, reaching a peak in 2010 and stabilising thereafter with minor fluctuations. Citation counts, although modest in the early years, exhibit a pronounced upward trajectory from 2011 onward, culminating in a peak between 2021 and 2023. This trend reflects a growing scholarly recognition of the research, suggesting that the field has evolved significantly, with sustained academic interest and increasing relevance within the broader scientific discourse.



Source: own processing based on WoS data.

Figure 1. Publication and Citation Trends on the Research Topic (2004–2024)

The geographical distribution of publications related to the research topic is illustrated in Figure 2. Italy emerges as the leading contributor, accounting for 20 publications. England also demonstrates substantial research engagement, with a total of 14 publications. The United States is third, producing 11 publications. Australia and Spain exhibit comparable levels of output. In contrast, countries such as Portugal, Malaysia, Canada, Egypt, and Germany report fewer than 10 publications, indicating moderate to limited scholarly activity in this area. Notably, the publication output from Canada, Egypt, and Germany remains significantly lower than that of leading contributors such as Italy and England.



Source: own processing based on WoS data.

Figure 2. Geographical Distribution of Publications on the Research Topic (2004–2024)

Table 1 displays the academics' perceptions of quality and effect through the ABS (Academic Journal Guide) and ABDC rankings for the listed journals. Top-tier journals such as the *European Journal of Information Systems* and *International Journal of Operations & Production Management* have an ABS score of 4 and ABDC rankings of A*, indicating their influence and reputation. *Accounting, Auditing & Accountability Journal* and *Decision Support Systems* both have an ABS score of 3 and A* in ABDC, indicating their significant impact on academic and practical research. *Information Development*, which ranks lower (ABS 1 and ABDC B), has a more specialist focus. While some publications in this list are known for their rigorous work and broad influence, others focus on narrower or emerging academic and professional fields.

Table 1. Top 10 Journal Publishers, ABS, ABDC Ranking and Documents

Source	ABS Ranking	ABDC Ranking	Documents
<i>International Journal of Productivity and Performance Management</i>	2	B	8
<i>Accounting, Auditing & Accountability Journal</i>	3	A*	3
<i>Journal of Accounting and Organizational Change</i>	2	B	3
<i>Decision Support Systems</i>	3	A*	2
<i>European Journal of Information Systems</i>	4	A*	2
<i>Financial Accountability & Management</i>	2	A	2
<i>Information Development</i>	1	B	2
<i>International Journal of Operations & Production Management</i>	4	A*	2
<i>Journal of Management and Governance</i>	2	B	2
<i>Management Accounting Research</i>	3	A*	2

Note: The ABS rankings range from 1 (lowest, i.e. recognised) to 4 (highest, i.e. world elite), while the ABDC rankings range from C (lowest, i.e. recognised) to A* (highest, i.e. best/leading).

Source: own processing.

3.2 Pattern of Citation and Authorship

Table 2 summarises the patterns of author collaboration, citation frequencies, and connection strengths within the examined research domain. Garengo, P. emerges as the most collaborative author, having established nine co-authorship links and accumulating 110 citations, which is an indication of both scholarly influence and an extensive academic network. In contrast, Busco, C., despite engaging in only three collaborative efforts, registers the highest citation count (146), underscoring a pronounced scientific impact. Rodrigues, L. has participated in four co-authored publications, but with fewer citations and connections, suggesting a moderate level of influence. Authors such as Caniato and Luzzini exhibit similar profiles, each involved in two collaborations and receiving 43 citations along with six connection links, indicative of comparable levels of engagement and impact. The remaining authors, characterised by a single collaboration, seven citations, and six connection links, demonstrate limited co-authorship activity and moderate scholarly visibility.

Table 2. Author's Co-Authorship

<i>Authors</i>	<i>Numbers of collaborative efforts</i>	<i>Citations</i>	<i>Link strength</i>
Garengo, P.	5	110	9
Rodrigues, L.	4	14	8
Busco, C.	3	146	7
Caniato, F.	2	43	6
Correia, A.	1	7	6
Dantas, R.	1	7	6
Luzzini, D.	2	43	6
Maqbool, S.	1	7	6
Martin, J.	1	7	6
Mata, M.	1	7	6

Source: own processing.

Table 3 presents a comparative overview of publication output, citation impact, and connection strength among key academic institutions contributing to the research field. The University of Padua (Italy) stands out as the most prolific institution, with the highest number of publications and citations; however, its moderate link strength suggests a more limited degree of inter-institutional collaboration. In contrast, the University of Galway (Ireland), despite a lower publication count, exhibits the highest citation impact, highlighting the academic influence and quality of its research contributions.

Portuguese institutions such as the Polytechnic Institute of Cávado and Ave and the University of Minho demonstrate balanced performance, characterised by consistent citation metrics and connection strength, reflecting both scholarly visibility and collaborative engagement. A similar trend is observed at the University of Santiago de Compostela (Spain), indicating a comparable institutional research profile. Meanwhile, Bocconi University (Italy) and La Trobe University (Australia) report relatively fewer publications but high citation counts, suggesting that although their research output is limited in volume, it is of high scholarly relevance and impact.

Table 3. Top 10 Publication by Organisation

<i>Organization</i>	<i>Number of publications</i>	<i>Citation</i>	<i>Link strength</i>
Polytechnic Institute of Cávado and Ave, Portugal	3	14	6
University of Minho, Portugal	4	14	6
University of Santiago de Compostela, Spain	3	14	6
University of Padua, Italy	5	110	4
Bocconi University, Italy	2	93	2
La Trobe University, Australia	2	47	2
University of Galway, Ireland	3	146	2
University of East Anglia, England	2	29	2
University of Kent, England	2	30	2
Universiti Terengganu, Malaysia	2	47	2

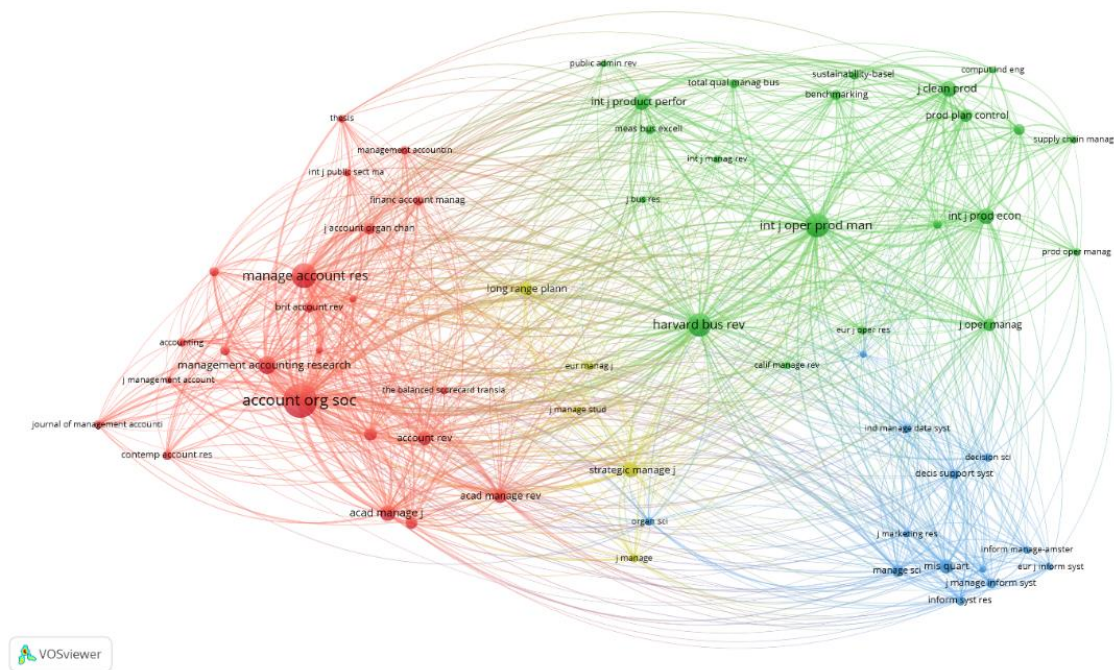
Source: own processing.

Table 4 identifies the most frequently cited authors within the field, reflecting their influence on the intellectual development of performance management and strategic alignment research. Robert Kaplan and David Norton stand out as the most dominant figures, with 267 citations and a link strength of 159, underscoring their foundational role, particularly through the development of the Balanced Scorecard framework. Other leading contributors include Chenhall (68 citations; link strength 60), Ittner (61; 54), and Neely (60; 49), each of whom has significantly shaped discourse on performance measurement, management control systems, and strategic integration. Authors such as Hoque (44; 40), Malmi (32; 30), and Nørreklit (31; 29) also exhibit substantial influence, particularly in areas related to behavioural accounting and theoretical critiques of performance models. Bourne (31; 27), Bititci (29; 24), and a secondary citation to Kaplan and Norton (26; 25) suggest continued engagement with their work in applied and evolving contexts. The link strength values indicate a high degree of co-citation connectivity, emphasising the centrality of these authors within the scholarly network and their contribution to shaping key research trajectories.

Table 4. Most referenced authors

<i>Cited authors</i>	<i>Citations</i>	<i>Link strength</i>
Kaplan, R. and Norton, D.	267	159
Chenhall, R.	68	60
Ittner, C.	61	54
Neely, A.	60	49
Hoque, Z.	44	40
Malmi, T.	32	30
Norreklit, H.	31	29
Bourne, M.	31	27
Kaplan, R. and Norton, D.	26	25
Bititci, U.	29	24

Source: own processing.



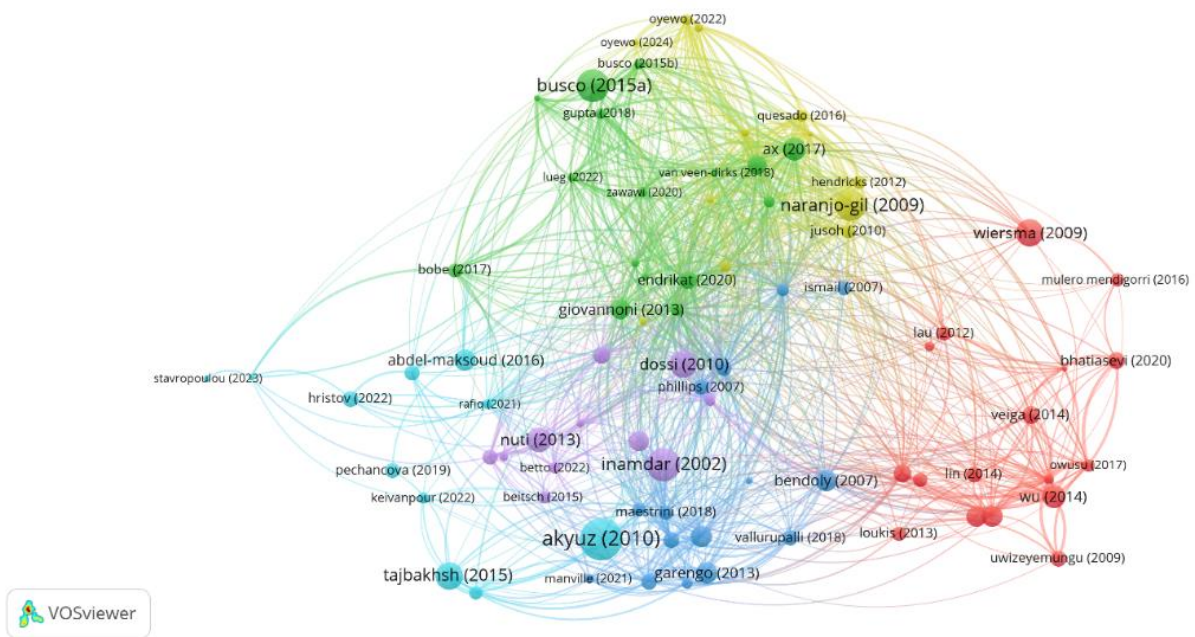
Source: own processing based on WoS data.

Figure 3. Source of Co-Citation

Figure 3 visualises the intellectual structure of the literature through citation network clustering. The red cluster predominantly represents research on management accounting, while the green cluster encompasses studies related to strategic planning and operations management. The blue cluster groups literature on management information systems and decision support, and the yellow cluster reflects contributions in the area of strategic management. Node size and link thickness further illustrate the relative influence and interconnectedness of individual sources, revealing the diversity of research strands within performance management and strategic alignment.

Figure 4 maps the intellectual structure of key contributors to the fields of strategic management and performance measurement systems, based on co-citation clustering. Authors such as Busco (2015) and Naranjo-Gil (2009) are positioned within the green cluster, which centres on strategic performance integration. The red cluster includes Wiersma (2009) and Wu (2014), whose work focuses on operational and accounting performance dimensions. Prominent Balanced Scorecard scholars, including Inamdar (2002) and Akyuz (2010), are grouped within the blue cluster, reflecting their shared emphasis on performance frameworks that align strategy and execution.

The yellow and purple clusters encompass more specialised contributions, with authors such as Dossi (2010) and Nuti (2013) representing niche areas within the broader domain. The thickness of the lines connecting nodes represents the strength of shared references, serving as a proxy for intellectual proximity and thematic cohesion among authors. This co-citation visualisation highlights the collaborative and interconnected nature of research in performance management and strategic alignment, revealing how various conceptual streams influence and reinforce one another within the scholarly ecosystem.



Source: own processing based on WoS data.

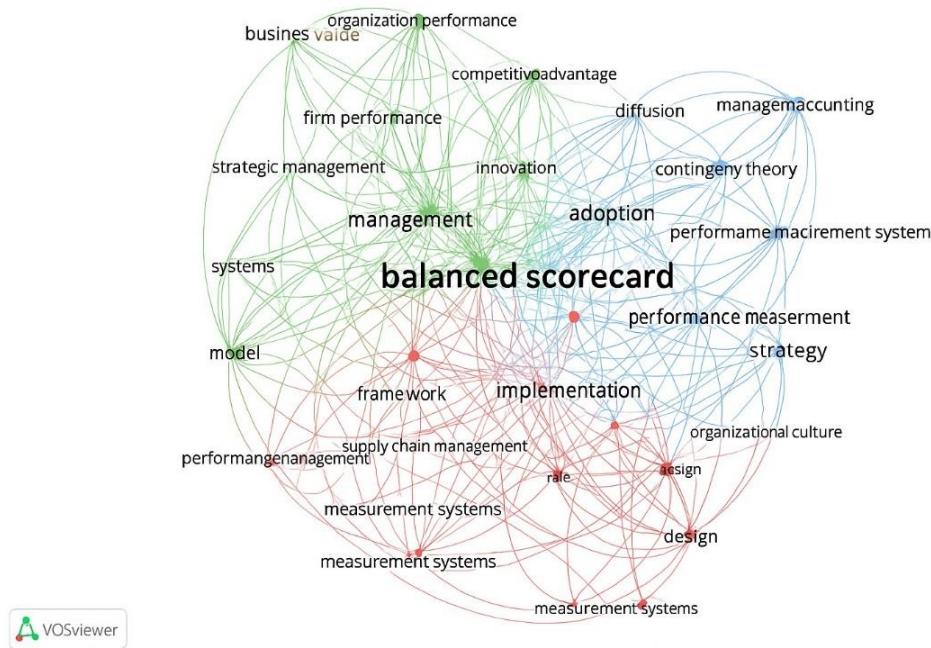
Figure 4. Bibliometric Coupling

Table 5 presents major research terms, with “Balanced Scorecard” appearing 47 times and having the highest link strength (32), indicating its importance in the literature. “Performance measurement” and “performance management” are prominent but less linked, suggesting their relevance but reduced interconnectivity. The moderate presence of “adoption” and “organizational performance” suggests developing or specialised study interests. The data highlights both the primary and secondary themes of performance management studies.

Table 5. Most reference documents

Key words	Number of occurrences	Link strength
Balanced Scorecard	47	32
Performance measurement	17	10
Performance management	9	6
Adoption	5	5
Management accounting	6	5
Organizational performance	7	5
Business intelligence	4	4
Organization culture	4	4
Public sector	4	4
Performance management system	4	4

Source: own processing.



Source: own processing based on WoS data.

Figure 5. Visualised Co-Occurrence Network by All Keywords

Figure 5 depicts research keywords' associations as clusters representing related themes. The green cluster links the "Balanced Scorecard" to "organizational performance", "strategic management", and "innovation", emphasising its role in management and competitive advantage talks. The red cluster encompasses "performance measurement", "framework", and "challenges", with a focus on the design and execution of performance management systems. The blue cluster contains keywords such as "management accounting", "contingency theory", and "control systems", which are indicative of theoretical and accounting studies. The co-occurrence and thickness of lines show how these concepts interact in Balanced Scorecard and performance management studies. Moreover, the density visualisation map shows author keyword concentration and significance in research. "Balanced Scorecard" is a staple term in the profession. Strategic and theoretical discussions of the Balanced Scorecard often include keywords like "strategy", "contingency theory", and "management accounting", which are in the green cluster. The red cluster encompasses terms such as "organizational performance", "business intelligence", and "performance measurement system", all of which are centred around performance management applications and outcomes. The blue and yellow clusters, which present as research themes and prospective topics for further study, contain "adoption", "organizational culture", and "performance management systems" (see Figure 6).

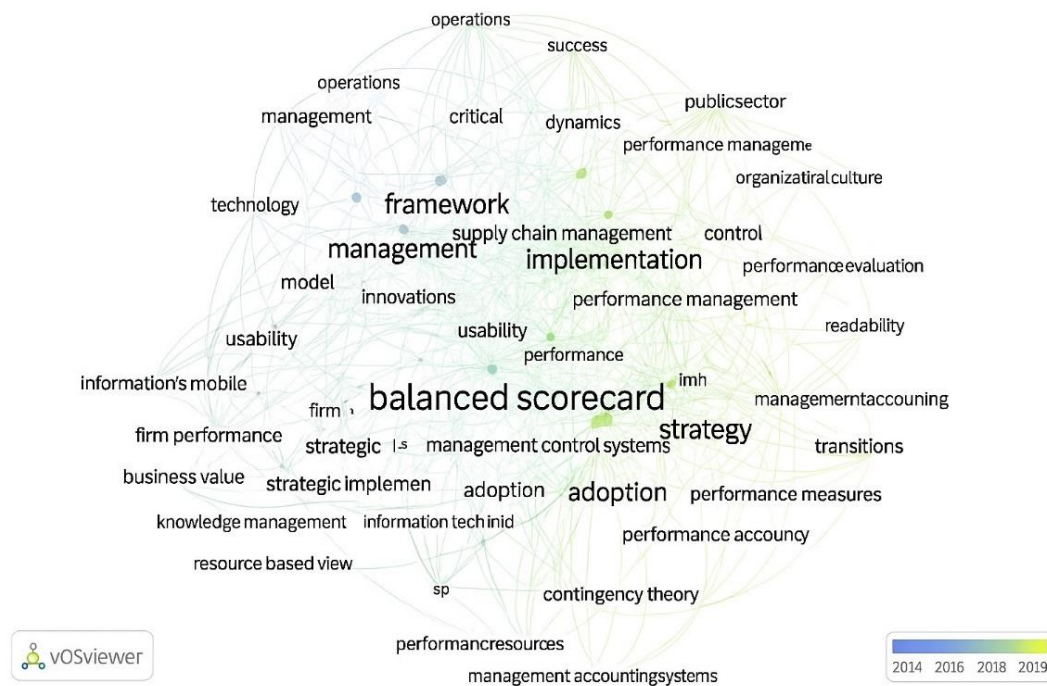


Source: own processing based on WoS data.

Figure 6. Density Visualisation of Author Keywords

The overlay visualisation map illustrates the temporal evolution and thematic interconnections within the research domain, with the Balanced Scorecard serving as the central conceptual anchor. The colour gradient: from blue (indicating earlier research activity, around 2014) to yellow (representing more recent contributions, circa 2019), depicts the chronological progression of scholarly attention. Core themes such as “strategic management”, “performance management”, and “implementation” remain enduring focal points, underscoring their continued relevance within the literature. In contrast, emerging areas of inquiry, such as “sustainability” and “performance measurement systems”, are visualised in lighter hues, reflecting their more recent prominence.

The overlay further reveals the increasing integration of performance management research with new dimensions, including “environmental performance” and “adoption”, signalling an expanding scope of application. Strong keyword associations, particularly with terms such as “framework”, “model”, and “management accounting”, highlight the conceptual foundations of the field and its evolving methodological landscape (see Figure 7).



Source: own processing based on WoS Data.

Figure 7. Overlaying the Visualisation Network of Research Topics

4. Discussion

From 2004 to 2024, research output on performance management systems (PMS) and Balanced Scorecard (BSC) usage increased, culminating in the late 2010s. This shows that PMS and BSC are crucial for strategy-performance evaluation alignment. The strong citation counts and steady publishing pace in the early 2020s demonstrate academic interest and relevance. The Academic Journal Guide (ABS) and Australian Business Deans Council (ABDC) rankings show the perceived quality and impact of journals contributing to this study. Leading journals like the *European Journal of Information Systems* and the *International Journal of Operations & Production Management* (ABS 4 and ABDC A*) have spread influential works, raising the field's profile and academic rigor. Moreover, the ABS and ABDC rankings show that high-impact journal research is well-regarded and crucial to PMS and BSC discussions. Rigorous, peer-reviewed research in the *Accounting, Auditing & Accountability Journal* and *Decision Support Systems* (ABS 3 and ABDC A*) has also helped the literature grow and deepen. In contrast, journals with lower ABS and ABDC ranks, such as *Information Development* (ABS 1 and ABDC B), may interact with specific or emerging subjects but have less impact on broader trends. The academic scene is diverse, with top-tier publications supporting high-impact research and specialist journals investigating new fields.

According to their high citation impact and connection strength in co-citation analyses, fundamental individuals like Kaplan and Norton (1992) have greatly influenced the intellectual core of PMS and BSC literature, based on an analysis of important contributors. Their research has laid the groundwork for later investigations into the strategic uses of the BSC in organisational management. Notably, academics like Busco (2015) and Naranjo-Gil (2009) have made significant contributions, especially in relation to the BSC's strategic integration and its

function in coordinating performance metrics with more general organisational objectives. Keywords that are often used, including “Balanced Scorecard”, “performance measurement”, and “performance management”, show that the BSC is still being discussed as a comprehensive instrument for tying operational performance and strategic management together. The co-occurrence of these keywords with related terms demonstrates an interdisciplinary approach that links organisational studies, strategic planning, and management accounting.

The final research question specifically addresses recent developments and possible trajectories. Current trends indicate that PMS and BSC research emphasises factors beyond mere financial and operational performance metrics. It also examines sustainability and adaptation. Terms such as “sustainability”, “environmental performance”, and “adoption” signify the subject’s progression in addressing modern challenges, including fostering innovation and aligning PMS with sustainability goals. Terms like “public sector” and “organizational culture” indicate an increased focus on tailoring BSC and PMS to diverse organisational contexts, including non-profit and governmental entities. The advent of notions such as “business intelligence” indicates that technology is progressively enhancing PMS frameworks. Future research should persist in exploring the interaction between Performance Management Systems (PMS) and Balanced Scorecards (BSC) with digital technologies, sustainability practices, and cross-industry comparative analyses to adapt to the growing corporate the field and emerging strategic demands.

Research Implications of the Study for Policy and Practice

This systematic literature review on performance management systems (PMS) and the Balanced Scorecard (BSC) contributes to the academic field by integrating contemporary research trends, theoretical frameworks, and practical investigations. It assists scholars in gaining deeper insights by illustrating the evolution of PMS and BSC within academic discourse, underlining their value, challenges, and critical success elements. This analysis identifies gaps in the research by examining multiple studies, highlighting insufficiently explored elements that influence the use of BSC across various enterprises and organisations. It establishes a foundation for future research by proposing novel avenues, such as the integration of emerging technologies with PMS and BSC frameworks.

This literature analysis provides essential insights for corporate executives, managers, and policymakers seeking to develop or enhance PMS and BSC frameworks within their firms. It emphasises optimal practices and frequent errors identified in practical applications, allowing practitioners to make educated choices that enhance the congruence of individual and corporate objectives. The amalgamation of case studies and empirical facts yields actionable advice, emphasising the significance of leadership commitment, cultural preparedness, and transparent communication for effective implementation. The review aids managers in formulating strategic plans that consider the challenges faced during BSC adoption, hence improving the system’s overall efficacy. This research acts as a resource for firms aiming to enhance their performance management strategies and cultivate a culture of continuous improvement and strategic alignment.

Conclusions

This study offers a comprehensive synthesis of two decades of research on performance management systems (PMS) and Balanced Scorecard (BSC) adoption, revealing the sustained academic interest and practical significance of these frameworks in aligning strategic objectives with performance evaluation. The bibliometric findings demonstrate a steady increase in scholarly output, particularly in the late 2010s and early 2020s, affirming the centrality of PMS and BSC in organisational and strategic management discourse.

The analysis of journal rankings through ABS and ABDC classifications highlights the pivotal role of high-impact, peer-reviewed outlets, such as the *European Journal of Information Systems*, *International Journal of Operations & Production Management*, and *Accounting, Auditing & Accountability Journal*, in shaping the intellectual rigour and visibility of the field. Simultaneously, specialised and emerging-topic journals contribute to broadening the field's scope, although with relatively lower citation impact.

Co-citation and keyword analyses confirm the foundational influence of seminal authors like Kaplan and Norton, whose contributions continue to underpin contemporary BSC applications. Emerging contributors such as Busco and Naranjo-Gil have further advanced the strategic dimensions of PMS and BSC, particularly in relation to organisational integration and contextual adaptability. The prevalence of terms such as “sustainability”, “environmental performance”, “adoption”, and “organizational culture” signals a paradigmatic shift in the field from a focus on traditional performance metrics to broader concerns that encompass social, environmental, and technological dimensions.

The interdisciplinary convergence of strategic management, organisational studies, and management accounting is evident in both keyword networks and thematic clusters, illustrating a complex yet coherent knowledge structure. This reinforces the value of PMS and BSC not only as technical tools but also as adaptive, context-sensitive systems capable of supporting innovation, digital transformation, and public sector accountability.

Future research should further explore the integration of PMS and BSC with advanced digital technologies (e.g., business intelligence, AI), sustainability frameworks, and sector-specific needs, particularly within non-profit and public organisations. Cross-sectoral and cross-cultural comparative studies may yield new insights into the contextual effectiveness of these systems, contributing to both theory development and improved practice.

Despite its contributions, this study is subject to several limitations that should be acknowledged. First, the bibliometric analysis relies exclusively on data retrieved from the *Web of Science* (WoS) database. While WoS provides a robust foundation for high-quality academic literature, it may exclude relevant research published in other databases or in non-indexed outlets, such as practitioner-oriented journals, conference proceedings, or policy reports. Second, the methodological approach based on keyword co-occurrence and citation analysis offers valuable insights into thematic trends and intellectual structure, yet it does not capture the full contextual depth or nuanced theoretical contributions of individual studies. Third, although the time span (2004–2024) allows for a longitudinal perspective, it may omit very recent publications and emerging research trends that have not yet accumulated sufficient citation activity to appear prominently in co-citation networks.

To address these limitations, future research should incorporate a broader array of data sources, including gray literature, industry white papers, and sector-specific case studies, to ensure a more holistic view of performance management system (PMS) and Balanced Scorecard (BSC) development and application. Additionally, comparative studies across industries, institutional settings, and geographic regions could provide deeper insights into the contextual determinants shaping the design, adoption, and effectiveness of PMS frameworks.

Literature

Aguinis, H. (2012), *Performance management*. London: Pearson. ISBN 9780132556385.

Aman, S., Seuring, S., Khalid, R.U. (2023), “Sustainability performance measurement in risk and uncertainty management: an analysis of base of the pyramid supply chain literature”, *Business Strategy and the Environment*, Vol. 32, No 4, pp.2373-2398. <https://doi.org/10.1002/bse.3254>.

- Biron, M., Farndale, E., Paauwe, J. (2011), "Performance management effectiveness: lessons from world-leading firms", *The International Journal of Human Resource Management*, Vol. 22, No 6, pp.1294–1311. <https://doi.org/10.1080/09585192.2011.559100>.
- Bititci, U.S. (2015), *Managing business performance: the science and the art*. Chichester: John Wiley & Sons. ISBN 9781119025672.
- Bourne, M.; Franco-Santos, M.; Micheli, P., Pavlov, A. (2018), "Performance measurement and management: a system of systems perspective", *International Journal of Production Research*, Vol. 56, No 8, pp.2788–2799. <https://doi.org/10.1080/00207543.2017.1404159>.
- Braam, G.J.M., Benders, J., Heusinkveld, S. (2007), "The balanced scorecard in the Netherlands: an analysis of its evolution using print-media indicators", *Journal of Organizational Change Management*, Vol. 20, No 6, pp.866–879. <https://doi.org/10.1108/09534810710831064>.
- Broadbent, J., Laughlin, R. (2009), "Performance management systems: a conceptual model", *Management Accounting Research*, Vol. 20, No 4, pp.283–295. <https://doi.org/10.1016/j.mar.2009.07.004>.
- Caplanova, A., Dimelis, S. (2025), "The digital performance and competitiveness of public sector institutions in Southern Asia", *Journal of Competitiveness*, Vol. 17, No 1, pp.101–126. <https://doi.org/10.7441/joc.2025.01.06>.
- Chavan, M. (2009), "The balanced scorecard: a new challenge", *Journal of Management Development*, Vol. 28, No 5, pp.393–406. <https://doi.org/10.1108/02621710910955930>.
- Chenhall, R.H. (2003), "Management control systems design within its organizational context: findings from contingency-based research and directions for the future", *Accounting Organizations and Society*, Vol. 28, No 2-3, pp.127–168. [https://doi.org/10.1016/S0361-3682\(01\)00027-7](https://doi.org/10.1016/S0361-3682(01)00027-7).
- De Geusesr, F., Mooraj, S., Oyon, D. (2009), « Does the balanced scorecard add value? Empirical evidence on its effects on performance », *European Accounting Review*, Vol. 18, No 1, pp.93–122. <https://doi.org/10.1080/09638180802481698>.
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., Lim, W. M. (2021), "How to conduct a bibliometric analysis: an overview and guidelines", *Journal of Business Research*, Vol. 133, pp.285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>.
- Elbanna, S., Kamel, H., Fatima, T., Eid, R. (2022). "An investigation of the causality links in the balanced scorecard: the case of the Gulf cooperation council hospitality industry", *Tourism Management Perspectives*, Vol. 41, pp.100934. <https://doi.org/10.1016/j.tmp.2021.100934>.
- Fechete, F., Nedelcu, A. (2015), "Improving the industrial system performance by using the balanced scorecard instrument", *Applied Mechanics and Materials*, Vol. 808, pp.370–375. <https://doi.org/10.4028/www.scientific.net/amm.808.370>.
- Franco-Santos, M.; Lucianetti, L., Bourne, M. (2012), "Contemporary performance measurement systems: a review of their consequences and a framework for research", *Management Accounting Research*, Vol. 23, No 2, pp.79–119. <https://doi.org/10.1016/j.mar.2012.04.001>.
- Garfield, E. (1955), "Citation indexes for science: a new dimension in documentation through association of ideas", *Science*, Vol. 122, No 3159, pp.108–111. <https://doi.org/10.1126/science.122.3159.108>.
- Greiling, D. (2010), "Balanced scorecard implementation in German non-profit organisations", *International Journal of Productivity and Performance Management*, Vol. 59, No 6, pp.534–554. <https://doi.org/10.1108/17410401011063939>.
- Guerra, J.B.S.O.A., Garcia, J., Lima, M.A., Barbosa, S.B., Heerdt, M.L., Berchin, I.I. (2018), "A proposal of a balanced scorecard for an environmental education program at universities", *Journal of Cleaner Production*, Vol. 172, January 2018, pp.1674–1690. <https://doi.org/10.1016/j.jclepro.2016.11.179>.
- Hallinger, P. (2023), "Bibliometric review methodology and state of the science bibliometric review of research on problem-based learning, 2017–2021", *Interdisciplinary Journal of Problem-Based Learning*, Vol. 17, No 2. <https://doi.org/10.14434/ijpbl.v17i2.35761>.

- Hoque, Z., Adams, C. (2011), "The rise and use of balanced scorecard measures in Australian government departments", *Financial Accountability and Management*, Vol. 27, No 3, pp.308–334. <https://doi.org/10.1111/j.1468-0408.2011.00527.x>.
- Humphreys, K.A. (2023), "The balanced scorecard: do managers need a strategy map when evaluating performance?" *Accounting and Finance*, Vol. 63, No 4, pp.4357-4373. <https://doi.org/10.1111/acfi.13097>.
- Jassem, S., Zakaria, Z., Azmi, C.A.A. (2020), "Sustainability Balanced Scorecard architecture and environmental investment decision-making", *Foundations of Management*, Vol. 12, No 1, pp.193-210. <https://doi.org/10.2478/fman-2020-0015>.
- Kaplan, R.S., Norton, D. (1992), "The balanced scorecard: measures that drive performance", *Harvard Business Review*, Vol. 70, No 1, pp.71-79. <https://hbr.org/1992/01/the-balanced-scorecard-measures-that-drive-performance-2>.
- Kaplan, R.S., Norton, D. (1993), "Putting the balanced scorecard to work", *Harvard Business Review*, Vol. 71, No 5, pp.134-142. <https://hbr.org/1993/09/putting-the-balanced-scorecard-to-work>.
- Kaplan, R.S., Norton, D. (1996), "Using the balanced scorecard as a strategic management system", *Harvard Business Review*, Vol. 74, No 1, pp.75-85. <https://www.hbs.edu/faculty/Pages/item.aspx?num=9200>.
- Kaplan, R.S., Norton, D. (2001), *The strategy-focused organization: how Balanced Scorecard companies thrive in the new business environment*. Boston: Harvard Business School Press. ISBN 9781578512508.
- Kaplan, R.S., Norton, D., Rugelsjoen, B. (2010), "Managing alliances with the balanced scorecard", *Harvard Business Review*, Vol. 88, No 1-2, pp.114-120. <https://www.phoenixcg.com/wp-content/uploads/2020/07/Kaplan-et-al-Managing-alliances.pdf>.
- Kaupa, S., Atiku, S.O. (2020), "Challenges in the implementation of performance management system in Namibian public sector", *International Journal of Innovation and Economic Development*, Vol. 6, No 2, pp.25–34. <https://doi.org/10.18775/ijied.1849-7551-7020.2015.62.2003>.
- Koufteros, X., Verghese, A., Lucianetti, L. (2014), "The effect of performance measurement systems on firm performance: a cross-sectional and a longitudinal study", *Journal of Operations Management*, Vol. 32, No 6, pp.313-336. <https://doi.org/10.1016/j.jom.2014.06.003>.
- Mariani, C., Caccialanza, A., Bugarcic, M., Slavkovic, M., Mancini, M. (2025), "Enhancing project-based organization performance through ESG practices: the role of organizational agility", *Management Decision*, Vol. ahead-of-print, No. ahead-of-print. <https://doi.org/10.1108/MD-04-2024-0967>.
- Melnyk, S.A., Bititci, U.S., Platts, K., Tobias, J., Andersen, B. (2014), "Is performance measurement and management fit for the future?" *Management Accounting Research*, Vol. 25, No 2, pp.173-186. <https://doi.org/10.1016/j.mar.2013.07.007>.
- Mio, C., Costantini, A., Panfilo, S. (2022), "Performance measurement tools for sustainable business: a systematic literature review on the sustainability balanced scorecard use", *Corporate Social Responsibility and Environmental Management*, Vol. 29, No 2, pp.367-384. <https://doi.org/10.1002/csr.2206>.
- Nair, M. (2004), *Essentials of Balanced Scorecard*. Hoboken: John Wiley & Sons. ISBN 9780471569732.
- Naranjo-Gil, D. (2009), "Strategic performance in hospitals", *Health Care Management Review*, Vol. 34, No 2, pp.161–170. <https://doi.org/10.1097/hmr.0b013e31819e8fd0>.
- Neely, A. (2005), "The evolution of performance measurement research. Developments in the last decade and a research agenda for the next.", *International Journal of Operations & Production Management*, Vol. 19, No 2, pp.205-228. <https://doi.org/10.1108/01443579910247437>.
- Nguyen, P.D. (2024), "The impact of intellectual capital on firm performance: a study of Vietnamese firms listed on Vietnam stock exchange", *Journal of Competitiveness*, Vol. 16, No 1, pp.26-45. <https://doi.org/10.7441/joc.2024.01.02>.
- Niven, P.R. (2014), *Balanced Scorecard evolution: a dynamic approach to strategy execution*. Hoboken: John Wiley & Sons. ISBN 9781118939017.

- Nørreklit, H. (2003), "The balanced scorecard: What is the score? A rhetorical analysis of the balanced scorecard", *Accounting, Organizations and Society*, Vol. 28, No 6, pp.591–619. [https://doi.org/10.1016/s0361-3682\(02\)00097-1](https://doi.org/10.1016/s0361-3682(02)00097-1).
- Nudurupati, S.S., Garengo, P.; Bititci, U.S. (2021), "Impact of the changing business environment on performance measurement and management practices", *International Journal of Production Economics*, Vol. 232, pp.107942. <https://doi.org/10.1016/j.ijpe.2020.107942>.
- Olson, E.M., Slater, S.F. (2002), "The balanced scorecard, competitive strategy, and performance", *Business Horizons*, Vol. 45, No 3, pp.11-16. [https://doi.org/10.1016/S0007-6813\(02\)00198-2](https://doi.org/10.1016/S0007-6813(02)00198-2).
- Pritchard, A. (1969), "Statistical bibliography or bibliometrics", *Journal of Documentation*, Vol. 25, No 4, pp.348-349.
- Ramos-Rodríguez, A.R., Ruíz-Navarro, J. (2004), "Changes in the intellectual structure of strategic management research: a bibliometric study of the Strategic Management Journal, 1980–2000", *Strategic Management Journal*, Vol. 25, pp.981-1004. <https://doi.org/10.1002/smj.397>.
- Rezaei, G., Sadeghzadehmaharluie, M., Ebrahimi, M., Ebrahimi, M. (2024), "Assessing midwifery services in Iran via the balanced scorecard framework", *Health Policy and Planning*, Vol. 39, No 1, pp.32-43. <https://doi.org/10.1093/heapol/czad110>.
- Rock, D., Jones, B. (2015), "Why more and more companies are ditching performance ratings", *Harvard Business Review*, available at, <https://hbr.org/2015/09/why-more-and-more-companies-are-ditching-performance-ratings>, referred on 16/04/2025.
- Ronay, A., Basar, Ö. (2009), "Performance measurement of insurance companies by using Balanced Scorecard and ANP", in *Proceedings of the International Symposium on the Analytic Hierarchy Process*. <https://doi.org/10.13033/isahp.y2009.069>.
- Sardi, A., Sorano, E., Ferraris, A., Garengo, P. (2020), "Evolutionary paths of performance measurement and management system: the longitudinal case study of a leading SME", *Measuring Business Excellence*. Vol. 24, No 4, pp.495-510. <https://doi.org/10.1108/MBE-01-2020-0016>.
- Shahzad, M.A., Du, J., Junaid, M., Shahzad, F., Zalfiqar, A. (2024), "Associating leadership style with firm performance: mediating - moderating effects of learning orientation and organizational culture", *Journal of Competitiveness*, Vol. 16, No 3, pp.26-52. <https://doi.org/10.7441/joc.2024.03.02>.
- Sutheewasinnon, P., Hoque, Z., Nyamori, R.O. (2016), "Development of a performance management system in the Thailand public sector: isomorphism and the role and strategies of institutional entrepreneurs", *Critical Perspectives on Accounting*, Vol. 40, pp.26–44. <https://doi.org/10.1016/j.cpa.2015.06.002>.
- Thusi, X. (2023) "Performance management systems (PMS): challenges and opportunities in the public sector", *International Journal of Social Science Research and Review*, Vol. 6, No 6, pp.19–31. <https://doi.org/10.47814/ijssrr.v6i6.1251>.
- Varma, A.; Pereira, V., Patel, P. (2024), "Artificial intelligence and performance management", *Organizational Dynamics*, Vol. 53, No 1, pp.101037. <https://doi.org/10.1016/j.orgdyn.2024.101037>.
- Wanderley, C.A., Cullen, J., Tsamenyi, M. (2021), „The unfolding rationales surrounding management accounting innovations: a balanced scorecard case", *Accounting, Auditing & Accountability Journal*, Vol. 35, No 5, pp.1212-1238. <https://doi.org/10.1108/AAAJ-05-2019-4001>.
- Xu, S., Li, H., Cheng, J., Huo, J, Kuang, X. (2024), "Sustainable competitiveness through ESG performance: An empirical study on corporate resilience", *Journal of Competitiveness*, Vol. 16, No 3, pp.53-72. <https://doi.org/10.7441/joc.2024.03.03>.
- Zangoueinezhad, A., Moshabaki, A. (2011), "Measuring university performance using a knowledge - based balanced scorecard", *International Journal of Productivity and Performance Management*, Vol. 60, No 8, pp.824 - 843. <https://doi.org/10.1108/17410401111182215>.
- Zuo, J. L. (2012), "Systematic research on building strategy-oriented management system of local party and government leaders' environmental – protection performances", *Key Engineering Materials*, Vol. 531–532, pp.712–715. <https://doi.org/10.4028/www.scientific.net/kem.531-532.712>.

DVIEJŲ DEŠIMTMEČIŲ (2004–2024) VEIKLOS VALDYMO IR SUBALANSUOTŲ RODIKLIŲ SISTEMOS TYRIMŲ APŽVALGA: TENDENCIJOS, TRŪKUMAI IR NAUJOS KRYPTYS

Michaela Blahova, Premysl Palka, Kim Anh Dao, Michael Adu Kwarteng, Alex Ntsiful

Santrauka. Šiuo tyrimu atlikta išsami bibliometrinė analizė, apimanti 100 aktualių mokslinių publikacijų apie veiklos valdymo sistemas (PMS) ir subalansuotų rodiklių sistemos (BSC) taikymą 2004–2024 m. Tyrimė atsižvelgti į publikacijų tendencijas, reikšmingus autorius, citatas ir reikšminius žodžius, siekiant atskleisti šios srities intelektualinę struktūrą ir raidą. Rezultatai atskleidė, kad BSC yra esminis instrumentas koordinuojant strateginius tikslus ir veiklos procedūras. Tai patvirtina dažnas BSC minėjimas ir pagrindinė vieta moksliniuose leidiniuose. Pavyzdžiui, viena vertus, aktualios temos, tokios kaip tvarumas, verslo informacijos valdymas ir technologinė integracija žymi šiuolaikiniams iššūkiams skiriamo dėmesio raidą. Kita vertus, tyrimo metu nustatyti mokslinių tyrimų trūkumai, ypač pasitaikantys taikymo viešajame sektoriuje ir pažangių skaitmeninių priemonių įtraukimo srityse.

Reikšminiai žodžiai: bibliometrinė analizė; veiklos valdymo sistema; subalansuotų rodiklių sistema; diegimas; sisteminė apžvalga.