CORPORATE GOVERNANCE AND DIGITALISATION: A BIBLIOMETRIC-SYSTEMATIC LITERATURE REVIEW

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Abstract

Digitalisation transforms corporate governance by enhancing transparency, compliance, and decision-making processes. This study profiles the research landscape of digitalisation as a corporate governance mechanism through a bibliometric-systematic literature review (B-SLR) of 93 articles published between 2019 and 2024 from the Scopus database. Bibliometric techniques, including co-citation analysis and bibliographic coupling, were combined with systematic content analysis using Atlas.ti to identify thematic clusters and emerging trends. The findings reveal an upward trend in publications, particularly after 2019, with four major themes emerging: risk management, corporate governance, digitalisation, and sustainable development. Key technologies, including blockchain, artificial intelligence (AI), and Industry 4.0, appear as pivotal elements in digital governance frameworks. Sustainability has emerged as a growing concern, indicating the integration of environmental, social, and governance (ESG) goals into digital transformation strategies. However, gaps persist regarding sector-specific applications and empirical insights on practical implementations. While digitalisation demonstrates transformative potential for strengthening accountability, operational efficiency, and stakeholder engagement, limited exploration of contextual factors highlights the need for deeper investigations into industry-specific dynamics. This study advances theoretical understanding while providing actionable insights for practitioners and policymakers navigating digital governance transformation.

Keywords: Digitalisation, Corporate Governance, Bibliometric-Systematic Literature Review, Sustainability, Blockchain, Artificial Intelligence, Risk Management

Authors' individual contribution: Conceptualization — B.T.; Methodology — B.T.; Investigation — B.T. and D.P.; Resources — D.P. and B.T.; Writing — Original Draft — B.T. and D.P.; Writing — Review & Editing — B.T. and D.P.; Visualization — B.T. and D.P.; Supervision — D.P.

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1. INTRODUCTION

The increasing role of digitalisation in enhancing corporate governance mechanisms is a critical area of study, as it fundamentally transforms how organisations operate and interact with stakeholders. Digitalisation facilitates improved transparency, accountability, and efficiency within governance frameworks, fostering stakeholder trust and engagement. For instance, integrating digital technologies such as blockchain and artificial intelligence (AI) has been shown to significantly enhance the transparency of governance processes by providing immutable records and enabling real-time data analysis, which can lead to more informed decision-making (Torres & Augusto, 2020). Furthermore, deploying e-government initiatives has increased public trust in government institutions, as

these platforms allow for greater citizen participation and oversight (Poufinas et al., 2023).

Moreover, digitalisation serves as a mechanism for compliance with regulatory frameworks, allowing organisations to better adhere to legal requirements and ethical standards. Using digital tools in monitoring and reporting can streamline compliance processes, reducing the risk of corruption and enhancing the integrity of governance systems (Burinskienė & Medineckienė, 2022). That is particularly relevant in the context of public administration, where digitalisation can lead to more effective management of resources and improved service delivery to citizens (Agostino et al., 2022). Additionally, the COVID-19 pandemic has accelerated the adoption of digital technologies in governance, highlighting their importance in crisis management and the need for agile governance structures that can adapt to rapidly changing circumstances (Janssen & van der Voort, 2020).

Integrating digital technologies into governance structures is a strategic imperative and a policy necessity for enhancing corporate governance effectiveness. Digital transformation enables organisations to streamline operations, improve transparency, and foster accountability, which is essential for building stakeholder trust and ensuring compliance with regulatory frameworks. For instance, adopting technologies such as big data analytics and AI allows managers to monitor real-time changes in production and sales, facilitating more responsive and informed decision-making (Dami & Kim, 2023). Furthermore, digital tools can significantly enhance the efficiency of governance processes by automating routine tasks and providing comprehensive data insights, which can lead to better resource allocation and risk management (Ziniuk et al., 2022). The shift towards digital governance also aligns with global trends emphasising sustainability and corporate social responsibility, as organisations increasingly leverage digital platforms to enhance their environmental, social, and governance (ESG) practices (Zhang & Jin, 2023). As such, the relevance of this study lies in its potential to inform policymakers and corporate leaders about the transformative impact of digital technologies on governance structures, thereby guiding the development of frameworks that promote transparency, efficiency, and ethical conduct in corporate governance (Sun et al., 2024).

Prior studies on digitalisation and corporate governance have highlighted the transformative potential of digital technologies in enhancing governance frameworks. However, significant gaps remain in understanding the full scope of this integration. Research has shown that blockchain and AI technologies can improve corporate governance structures' transparency, accountability, and decision-making processes. Furthermore, studies have indicated that corporate digital transformation positively impacts financial performance and governance quality, suggesting that firms with higher digital maturity are better positioned to navigate complex regulatory environments (Riaz et al., 2022). However, despite the growing body of literature, there is a notable lack of comprehensive bibliometric analyses that systematically map the evolution of research in this domain, particularly about emerging digital technologies and their implications for corporate governance practices.

This study aims to address this knowledge gap by employing a bibliometric-systematic literature review (B-SLR) approach to provide a structured overview of existing research, identify key themes, and outline future research directions in the intersection of digitalisation and corporate governance (Fullaondo et al., 2023).

The primary aim of this study is to profile the research landscape of digitalisation as a mechanism for corporate governance by employing a B-SLR. This study seeks to identify key digitalisation technologies, assess their influence on corporate governance decision-making, and explore emerging trends that enhance governance mechanisms. The study pursues the following specific objectives:

1) to identify and analyse key digitalisation technologies impacting corporate governance;

2) to examine how digitalisation influences decision-making processes in corporate governance;

3) to explore emerging trends in digitalisation that improve corporate governance mechanisms.

The research questions guiding this inquiry are:

RQ1: What are the key digitalisation technologies impacting corporate governance?

RQ2: How does digitalisation influence decision-making processes in corporate governance?

RQ3: What are the emerging trends in digitalisation for improving corporate governance mechanisms?

In this study, we systematically explore the evolving landscape of digitalisation as a mechanism for corporate governance, guided by a structured methodology that integrates bibliometric analysis with systematic literature review techniques.

The paper is organised into several key sections: following this introduction, Section 2 will detail the research methodology, including the study design, data collection methods, and analytical techniques employed to achieve the study's objectives. Section 3 will present the results of the bibliometric analysis, highlighting key clusters of research, influential authors, and emerging themes within the literature. In Section 4, we will discuss the implications of our findings, compare them with existing literature and identify both theoretical contributions and practical applications for corporate governance frameworks. Finally, Section 5 will conclude the paper by summarising the key insights, addressing the study's limitations and proposing directions for future research.

2. LITERATURE REVIEW

The literature on digitalisation as a mechanism for corporate governance is extensive and evolving, reflecting broader changes in technology and management practices. Central to this discourse are several key themes, including *risk management*, *corporate governance*, *digitalisation*, and *sustainable development*, which frame the conversation on how corporate structures adapt to and leverage digital technologies. Nevertheless, *risk management* is increasingly recognised as a fundamental aspect of contemporary corporate governance. Yan and Yu (2023) elucidate the influence of hierarchical dynamics within organisations, particularly regarding how power distribution affects risk and decision-making. This theme emphasises

the importance of integrating effective risk management strategies within governance frameworks, indicating that digital tools can enhance visibility and control over various risk factors. Furthermore, Cheng and Zhang (2023) highlight the concept of corporate digital responsibility, underscoring the necessity for organisations to interpret data ethically in decision-making. This intertwining of risk management with ethical considerations illustrates an ongoing evolution in governance models that incorporate accountability as organisations digitalise. The evolving theme of risk management within corporate governance highlights the critical need for organisations to adopt comprehensive and adaptable strategies that integrate digital tools and frameworks. Addressing the identified gaps will not only strengthen the theoretical foundations of risk management in corporate governance. Still, it will also enhance the practical implementation of effective governance strategies in the face of burgeoning digital challenges (Dömötör, 2023).

Over the past 30 years, *corporate governance* has been central to understanding the evolving role of digitalisation within organisational structures. Existing literature highlights the critical importance of robust governance frameworks in ensuring transparency, accountability, and effective decision-making processes (Chua & Lee, 2024). As organisations embrace digital technologies, the need to integrate these tools into comprehensive governance models has become increasingly apparent. Several studies have examined the relationship between corporate governance mechanisms and cash holdings, a key aspect of financial management. For instance, Ahmed and Hussain (2024) found that board characteristics, such as gender diversity and chief executive officer (CEO) experience, can influence the value of cash holdings and the overall cash management strategies of firms. This suggests that the integration of digital tools into governance practices must consider the nuanced dynamics of corporate decision-making and resource allocation. Furthermore, Choi et al. (2020) emphasise the role of corporate governance in mitigating agency conflicts and ensuring the efficient deployment of financial resources, underscoring the importance of aligning digital transformation with robust oversight and control mechanisms. The corporate governance highlights the critical need for organisations to develop comprehensive governance models that effectively incorporate digital tools and technologies. The existing literature provides a foundation for understanding the theoretical linkages between governance mechanisms and financial management. Still, more research is needed to explore the practical applications and sector-specific challenges associated with digitalising corporate governance practices. This will not only advance academic discourse but also guide practitioners in navigating the complexities of the digital age while maintaining robust, transparent, and accountable governance structures.

On the other hand, *digitalisation* serves as the foundational element for transformative corporate practices. As organisations embrace technologies like blockchain, AI, and data analytics, digitalisation emerges as a pivotal driver of improved governance efficiencies and decision-making processes. Husain et al. (2024) advocate for systematic reviews that identify trends and gaps in management accounting research, illustrating the dynamic interplay between digital innovations and decision-making in corporate settings. As digitalisation continues to gain traction, research must focus on real-world applications of digital technologies in corporate governance, addressing the disparities that exist between theoretical advancements and practical implementations. This emphasis will not only enrich the academic discourse. Still, it will also guide practitioners in effectively navigating the digital transformation journey while ensuring robust governance frameworks that promote sustainability and resilience.

Moreover, the integration of *sustainable development* within the digitalisation narrative signifies a growing awareness of the corporate social responsibilities inherent in digital governance. Garrett et al. (2021) argue for the necessity of aligning digital strategies with sustainability objectives, reinforcing the argument that modern governance frameworks must encompass broader societal goals. Despite the emergence of sustainability as a theme, the literature indicates gaps in empirical research focusing on sector-specific applications of digital governance, which could provide valuable contexts for implementation (Guandalini, 2022). These contradictions and gaps in the literature indicate the need for further exploration of how digitalisation can be leveraged to enhance the integration of sustainable development within corporate governance frameworks. Scholars must investigate sector-specific case studies and explore the interplay between digital technologies, sustainability, and governance practices to provide actionable insights for organisations navigating the complexities of the digital age (Bulis & Onževs, 2023). By addressing these research gaps, the academic community can contribute to the development of more robust and holistic governance models that align with the principles of sustainable development.

The conceptual framework shown in Figure 1 below, which aims to understand the intersection of digitalisation and corporate governance, is grounded in several theoretical foundations, notably stakeholder theory, institutional theory, and technology adoption models. The stakeholder theory posits that organisations must consider the interests of all stakeholders — including shareholders, employees, customers, and the community — when making decisions, emphasising the importance of transparency and accountability in governance practices (Wa & Zhang, 2023). This theory is particularly relevant in digitalisation, as blockchain can enhance stakeholder engagement by providing real-time data and fostering trust through transparent processes (Chatterjee et al., 2024). Institutional theory complements this perspective by highlighting how external pressures, such as regulatory requirements and societal expectations, influence organisations' adoption of digital technologies (Falwadiya & Dhingra, 2022). This theory suggests that firms are motivated to adopt digital tools for competitive advantage and to conform to institutional norms and expectations regarding governance practices (Adnan et al., 2021).

Figure 1. Theoretical framework
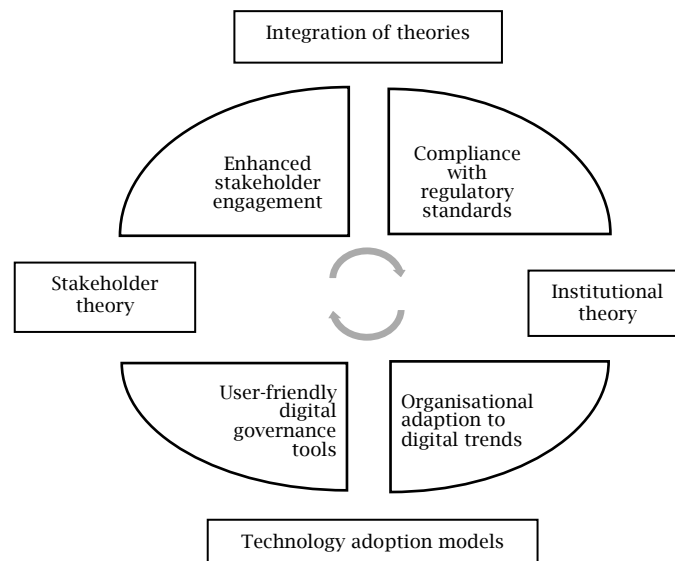
Source: Authors' elaboration.

Furthermore, technology adoption models, including the unified theory of acceptance and use of technology and the technology acceptance model, provide insights into the factors that influence the adoption of digital technologies within governance frameworks (Zhang & Li, 2022). These models emphasise the role of perceived usefulness, ease of use, and social influence in shaping individuals' and organisations' attitudes toward technology adoption (Salam & Ali, 2020). By integrating these theoretical perspectives, the proposed conceptual framework illustrates how digitalisation can enhance corporate governance by aligning stakeholder interests, complying with institutional pressures, and facilitating technology adoption. This multifaceted approach not only addresses existing gaps in the literature regarding the interplay between digitalisation and governance but also sets the stage for future research to explore the implications of these theories in practice (Sabani, 2021).

Therefore, sustainable development underscores the growing imperative for organisations to adopt a comprehensive approach to governance that balances economic, social, and environmental considerations. As digitalisation continues to transform the corporate landscape, the literature suggests that the effective integration of sustainability within digital governance strategies will be crucial for ensuring long-term organisational resilience and societal well-being. Consequently, this paper offers insights into a very recent phenomenon, i.e., the landscape of digitalisation as a mechanism for corporate governance, employing a B-SLR approach.

3. METHODOLOGY

This study employs a B-SLR approach, which combines bibliometric analysis with systematic literature review techniques to provide a comprehensive understanding of the research landscape surrounding digitalisation as a mechanism for corporate governance. The B-SLR approach is particularly advantageous as it allows for integrating quantitative bibliometric data — such as publication trends, citation analysis, and co-authorship networks — with qualitative insights derived from systematic content analysis of the literature (Boţa-Avram, 2024). This dual methodology facilitates a thorough mapping of existing research and enhances the synthesis of findings across diverse studies, thereby contributing to theory development in the field.

The justification for combining bibliometric analysis with a systematic literature review lies in the complementary strengths of both methods. The bibliometric analysis provides a quantitative foundation that reveals patterns and trends in the literature, such as identifying influential authors, key publications, and emerging research themes (Waye et al., 2023). In contrast, systematic literature reviews offer a structured approach to synthesising qualitative data, allowing for a deeper exploration of the context and implications of the identified trends (Zomer et al., 2024). By integrating these methodologies, this study aims to profile the current state of digitalisation and corporate governance research, identify literature gaps, and propose future research directions to advance understanding in this critical area (Zahumenna & Kuzmenko, 2022).

3.1. Setting

For this study, the Scopus database was selected as the primary source for data extraction due to its extensive coverage and reputation as one of the academic community's largest abstract and citation databases. Scopus indexes over 24,000 peer-reviewed journals, providing access to vast scientific literature across various disciplines, including business, management, and social sciences (Mansour et al., 2022). The database is particularly advantageous for bibliometric analyses because it offers comprehensive citation data, allowing researchers to track publication trends, citation impacts, and collaboration networks effectively. Furthermore, Scopus is known for its rigorous

indexing criteria, ensuring that the articles included are of high quality and relevance, which enhances the reliability of the findings derived from the data (Deta et al., 2024). By utilising Scopus, this study aims to capture a holistic view of the research landscape concerning digitalisation and corporate governance, facilitating a robust analysis of existing literature and identification of research gaps.

criteria that included publication years (2019–2024), subject area (business, management, and accounting), document type (peer-reviewed articles), exact keyword relevance, English language, and open-access availability. This rigorous screening process resulted in a final selection of 93 high-quality articles that met all inclusion criteria for analysis.

3.2. Study population and sampling strategy

The initial search yielded 4,980 documents, which were systematically filtered through inclusion

Table 1. Inclusion and exclusion criteria for article selection

Filter	Setting (inclusion criteria)	Number of documents after filter	Number of documents excluded
Initial search	"Digitalisation", "Corporate Governance", "Digitalisation"	4980	-
Year range	2019–2024	4618	362
Subject area	Business, management and accounting	2352	2266
Document type	Article	1729	623
Publication stage	Final	1507	222
Keyword	LIMIT-TO (EXACTKEYWORD, "Digitalisation") OR LIMIT-TO (EXACTKEYWORD, "Corporate Governance")	195	1312
Source type	Journal	195	0
Language	English	192	3
Open access	All open access	93	99
Final documents included			93

Source: Authors' elaboration.

3.3. Data collection

The data collection process for this study involved a systematic search strategy utilising specific keywords, search strings, and Boolean operators to identify relevant literature within the Scopus database. The search string employed was: "Digitalisation" "Corporate Governance" "Digitalisation" AND PUBYEAR > 2018 AND PUBYEAR < 2025 AND (LIMIT-TO (SUBJAREA, "BUSI")) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (PUBSTAGE, "final")) AND (LIMIT-TO (EXACTKEYWORD, "Digitalisation") OR LIMIT-TO (EXACTKEYWORD, "Corporate Governance") OR LIMIT-TO (EXACTKEYWORD, "Digitalisation")) AND (LIMIT-TO (SRCTYPE, "j")) AND (LIMIT-TO (LANGUAGE, "English")) AND (LIMIT-TO (OA, "all")). This search strategy was designed to capture a comprehensive range of articles that specifically address the intersection of digitalisation and corporate governance while ensuring that only high-quality, peer-reviewed journal articles in English were included. Following the initial search, the data screening process adhered to the preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines, which provide

a structured framework for conducting systematic reviews. The PRISMA process involves several key steps:

1. *Identification*: The initial search yielded 4,980 documents. After applying the year range filter (2019–2024), the number of documents was reduced to 4,618.

2. *Screening*: Further filtering by subject area (business, management, and accounting) resulted in 2,352 documents. The selection was then narrowed to 1,729 articles by limiting the document type to peer-reviewed articles.

3. *Eligibility*: The publication stage filter (final publications) reduced the count to 1,507 documents. Additional keyword relevance checks led to 195 documents.

4. *Inclusion*: Finally, applying the language and open access filters resulted in a final selection of 93 articles that met all inclusion criteria. This rigorous data collection and screening process ensures that the literature reviewed is both relevant and of high scholarly quality, thereby providing a solid foundation for the subsequent analysis and synthesis of findings in this study (Widyastuti & Wahyuningsih, 2024).

Figure 2. PRISMA framework
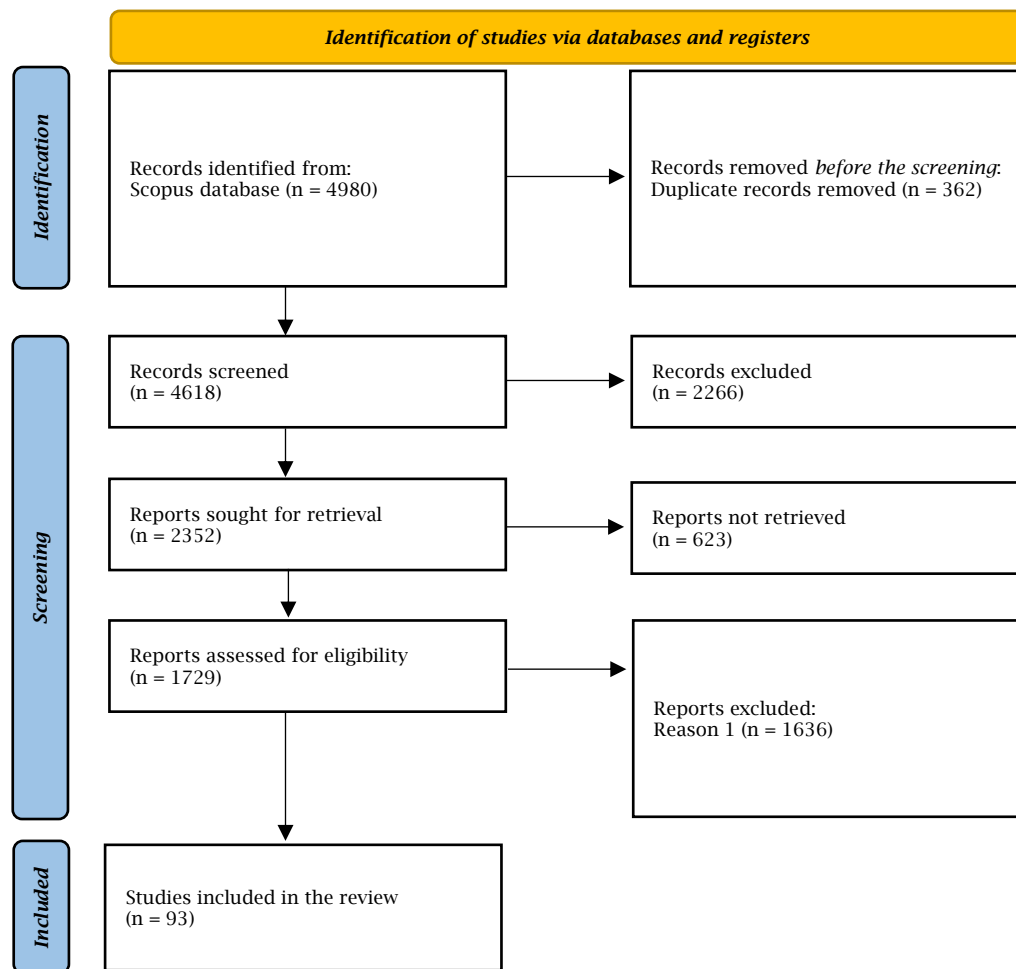
Source: Authors' elaboration.

3.4. Data analysis

The data analysis for this study involved a comprehensive bibliometric analysis and thematic content analysis to provide a detailed understanding of the research landscape concerning digitalisation and corporate governance. For the bibliometric analysis, VOSviewer software was utilised to perform a co-occurrence analysis of author keywords, allowing for the visualisation of relationships among key terms and identifying prevalent research themes (Yilmaz & Tuzlukaya, 2024). VOSviewer software facilitates the creation of various bibliometric maps, including network, density, and overlay visualisations, which help to illustrate the connections between different research topics and the evolution of scholarly discourse in this field. In addition to keyword co-occurrence analysis, the Biblioshiny application was employed to generate thematic maps, providing a visual and quantitative understanding of the specific topic area (Ritchie & Tsalaporta, 2022). This approach enables the identification of clusters of research that share common themes, thereby highlighting emerging trends and gaps in the literature. The thematic content analysis was conducted using Atlas.ti, which allowed for a qualitative examination of the identified clusters, facilitating a deeper exploration of the context and implications of the research findings (Ellili, 2022). By integrating both quantitative and qualitative methods, this study aims to deliver a comprehensive overview of the current state of research on digitalisation as a mechanism for corporate governance, ultimately contributing to the development of theoretical insights and practical applications in this domain (Umaquinga et al., 2024).

3.5. Ethical considerations

This study adhered to ethical compliance throughout the literature selection and analysis process by ensuring that all data utilised were sourced from publicly accessible academic publications within the Scopus database. The research followed established guidelines for conducting systematic reviews, emphasising the importance of transparency, integrity, and respect for intellectual property. Ethical clearance was not required because the study does not involve human subjects or sensitive data; the focus was solely on the analysis of existing literature, ensuring that proper citations and acknowledgements were made for all referenced works, thereby upholding academic integrity and contributing to the scholarly discourse on digitalisation and corporate governance.

4. RESULTS

4.1. Overview of the bibliometric analysis

The annual scientific production in digitalisation and corporate governance demonstrates a discernible upward trend, particularly notable from 2019 to 2024. As illustrated in Figure 3, the number of published articles increased from 4 in 2019 to 29 in 2023, followed by 28 articles in 2024, highlighting a growing research interest and engagement in this domain. This surge suggests a growing recognition of the critical role digital transformation plays in corporate governance structures, particularly as businesses navigate the complexities of the digital economy. However, the fluctuation in publication rates — evident from the drop from 29 articles in 2023 to 28 in 2024 — raises questions about potential saturation or shifting research priorities among scholars. This increase in literature also suggests that while foundational works have emerged, substantial gaps remain regarding the contextual application of these findings across different industries and geographical locations, particularly in understanding how nuanced factors such as political connections and media influence digital governance practices (Xiao et al., 2024).

Notably, emerging themes regarding the complexities of the digital economy and its implications for corporate social responsibility and ESG performance are gaining traction (Kong et al., 2024). Such themes highlight critical contradictions, as some studies suggest digital transformation can enhance governance and accountability, while others reveal potential increases in corporate malfeasance amid digitalisation efforts (Wang et al., 2024). These insights suggest a need for further empirical research that examines the integrative mechanisms and effectiveness of digital tools across various corporate governance frameworks. Future studies should focus on comparative analyses and case studies that consider sectoral differences and regional governance structures to fully leverage the transformative power of digital technologies within corporate environments (Meng et al., 2022).

Figure 3. Annual scientific production
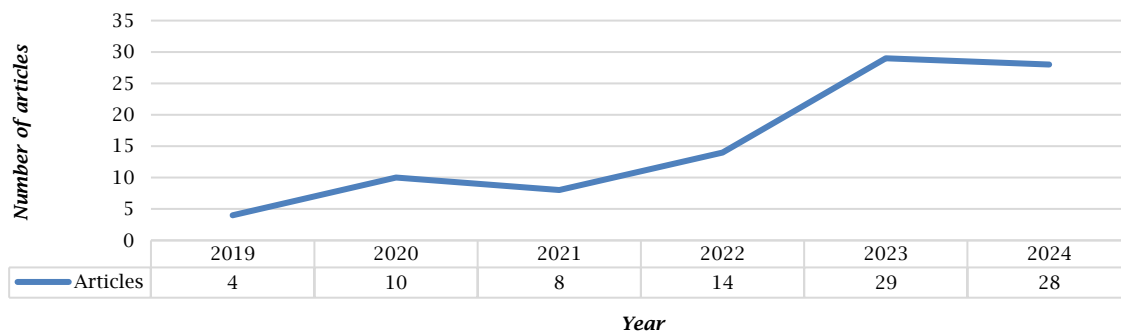
Source: Authors' elaboration.

Table 2 reveals that publications from 2021 achieved the highest average citations per article (73.12), despite representing only eight documents, indicating particularly influential research during this period. In contrast, while 2023 and 2024 show increased publication volumes (29 and 28 articles, respectively), their average citations per article dropped significantly to 15.69 and 6.11, suggesting either delayed citation accumulation typical in rapidly evolving fields or potential dilution of novelty in recent contributions. This pattern indicates a need for longitudinal studies to evaluate the long-term effects of digitalisation on governance practices and identify factors contributing to high-citation research.

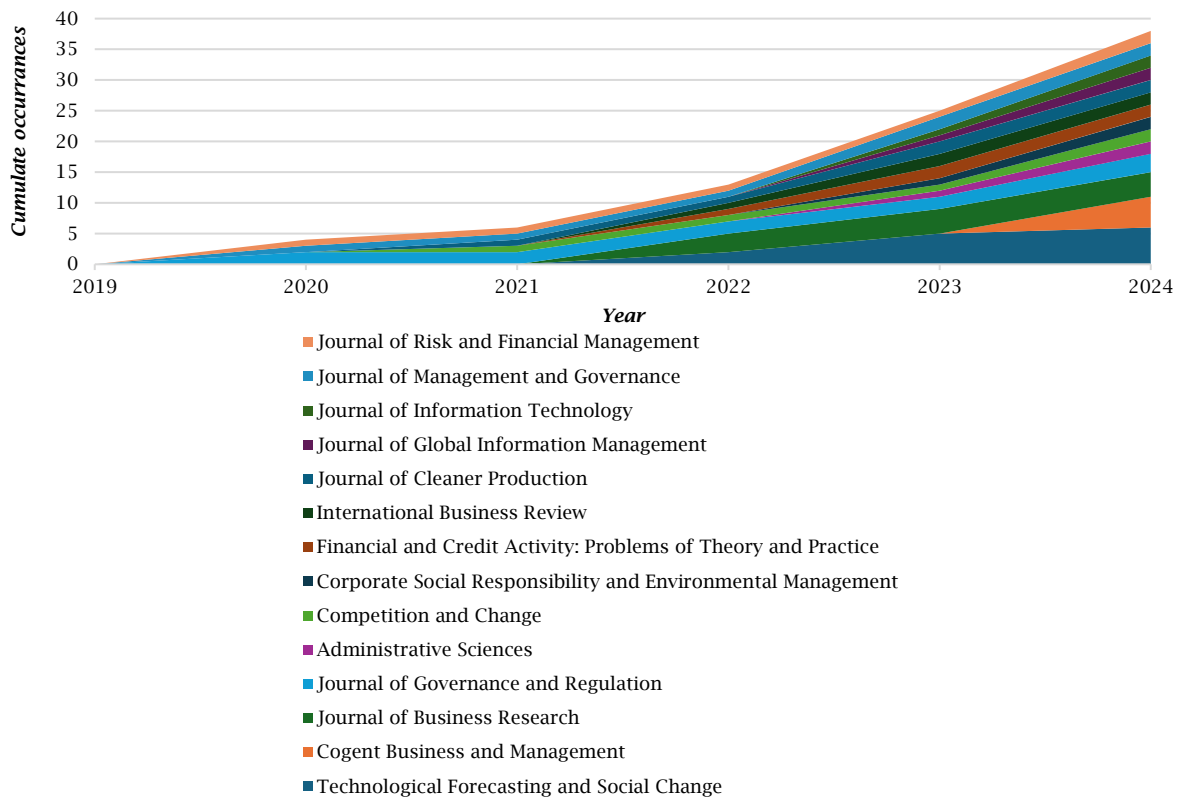**Table 2.** Average citations per year

Year	Mean total citation per article	Number of documents per year	Mean total citation per year	Citable years
2019	17.00	4	2.43	7
2020	28.60	10	4.77	6
2021	73.12	8	14.62	5
2022	29.57	14	7.39	4
2023	15.69	29	5.23	3
2024	6.11	28	3.06	2

Source: Authors' elaboration.

Figure 4 shows minimal publication activity from 2019 to 2020, followed by significant growth by 2023, particularly in high-impact journals such as the *Journal of Business Research* and *International Business Review.* This pattern reflects the field's evolution from a nascent interest to an established research focus. However, inconsistent contributions across journals suggest underutilization of some publication platforms for disseminating digital governance research.

Figure 4. Sources' production over time

Legend:
- Journal of Risk and Financial Management
- Journal of Management and Governance
- Journal of Information Technology
- Journal of Global Information Management
- Journal of Cleaner Production
- International Business Review
- Financial and Credit Activity: Problems of Theory and Practice
- Corporate Social Responsibility and Environmental Management
- Competition and Change
- Administrative Sciences
- Journal of Governance and Regulation
- Journal of Business Research
- Cogent Business and Management
- Technological Forecasting and Social Change

Source: Authors' elaboration.

Figures 5–7 present a visual summary derived from keyword co-occurrence analysis and a word cloud representation, highlighting significant research themes within the intersection of digitalisation and corporate governance literature. The study reveals distinct patterns, showcasing digitalisation as the central nexus connected closely to key technologies such as digital transformation, blockchain, AI, and Industry 4.0. These technologies often coexist with corporate governance and sustainability, underscoring their crucial role as catalysts for improved decision-making, transparency, and efficiency in governance mechanisms. The emergence of "sustainable development" as a highly prominent keyword suggests an increasing scholarly emphasis on sustainability issues within the digital governance discourse. However, the analysis also reveals potential contradictions and gaps. At the same time, themes such as AI, blockchain, and risk management appear well-represented, and there is limited visibility regarding specific applications or sector-specific studies, indicating opportunities for targeted empirical research. Notably, concepts such as corporate social responsibility and green innovation, although identified, are less extensively integrated into current discussions, highlighting a gap that warrants further exploration. The findings underscore theoretical implications by suggesting that current literature predominantly focuses on generic technological impacts rather than sector-specific implementations, indicating an area ripe for further theoretical development. Organisations must understand how to integrate these emerging technologies to enhance the effectiveness of operational governance. Finally, future research directions should focus on the underexplored relationship between digital governance mechanisms and their practical application in various industry contexts, particularly by examining the nuanced impacts of emerging technologies on governance decision-making processes.

4.2. Cluster analysis and thematic insights

The cluster analysis identifies four primary themes: risk management, corporate governance, digitalisation, and sustainable development (Table 3). Digitalisation emerges as the central node with the highest betweenness score (248.367), indicating its pivotal role in connecting governance concepts. Risk management and corporate governance cluster together, suggesting their foundational interconnection in digital transformation contexts. However, themes such as corporate social responsibility and green innovations show lower integration scores, indicating gaps in the mainstream research dialogue. This analysis reveals that while generic technological impacts are well-represented, sector-specific applications remain underexplored, highlighting opportunities for targeted empirical research.

4.3. Analysis of strategic themes

The four strategic themes — risk management, corporate governance, digitalisation, and sustainable development — demonstrate apparent interconnections within digital governance

frameworks. Risk management and corporate governance show strong foundational connections, while digitalisation serves as the central hub linking emerging technologies to governance practices. However, sustainability themes show lower integration scores, indicating incomplete incorporation into mainstream digital governance discussions. These findings suggest the need for more comprehensive models that effectively integrate technological advancement with sustainability goals, particularly through empirical studies examining practical applications across different sectors.

Figure 5. Keyword co-occurrence

Source: Authors' elaboration.

Figure 6. Co-occurrence network
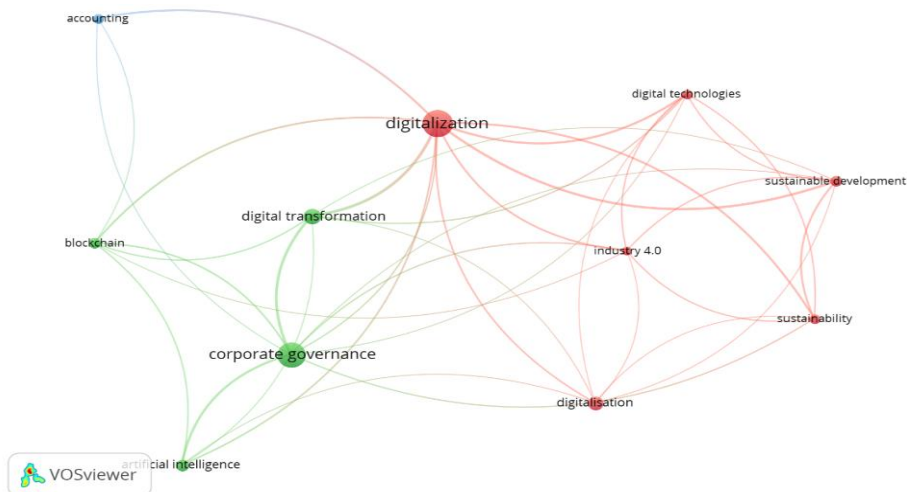
Source: Authors' elaboration.

Figure 7. Wordcloud

Source: Authors' elaboration.

Table 3. Cluster analysis and thematic insights

Keywords	Cluster	Betweenness	Closeness	PageRank
Risk management	1	23.333	0.022	0.051
Corporate governance	1	0	0.015	0.017
Risk assessment	1	0	0.021	0.027
Digitalisation	2	248.367	0.038	0.291
Digital transformation	2	2.5	0.022	0.058
Sustainable development	2	3	0.022	0.068
Competition	2	0.2	0.021	0.035
Decision making	2	0	0.02	0.016
Multinational enterprise	2	0	0.02	0.016
Business models	2	0	0.02	0.016
Business process	2	0	0.02	0.016
Corporate social responsibility	2	0	0.02	0.016
Digital technologies	2	0	0.021	0.026
Efficiency	2	0	0.02	0.016
Green innovations	2	0	0.02	0.016
Industrial research	2	0	0.02	0.016
Industry 4.0	2	0	0.021	0.026
Sustainability	2	0	0.021	0.026
Technological innovation	2	0	0.021	0.026
China	3	23	0.022	0.04
Corporates	3	0	0.014	0.017
Digitisation	4	0	0.021	0.031
Innovation	4	3.6	0.023	0.063
Economics	4	0	0.021	0.036
Technological development	4	0	0.021	0.036

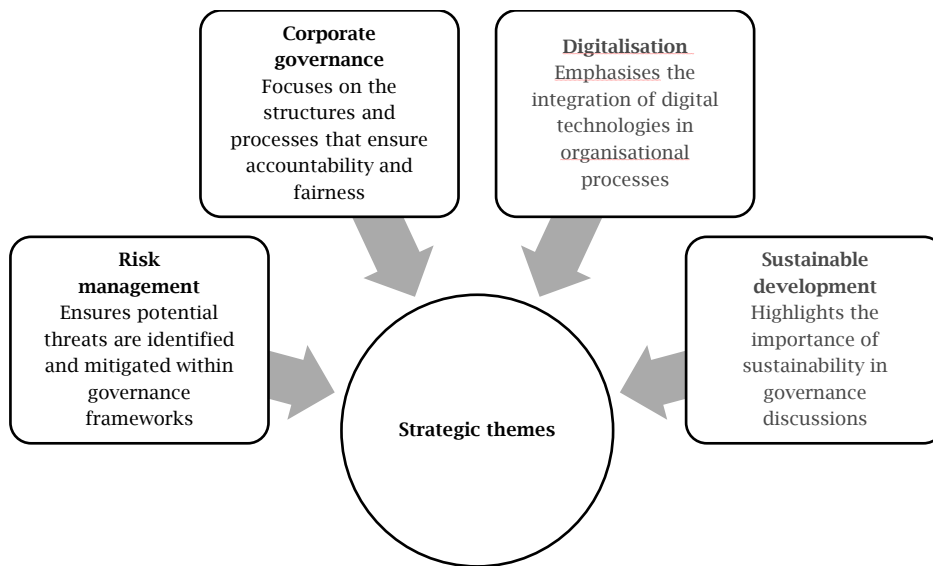*Source: Authors' elaboration.*

The implications for theory are substantial; the findings call for developing comprehensive models that more effectively integrate these diverse themes, especially regarding the interplay between corporate governance and digital technologies. For practitioners, insights from these connections can inform more robust governance frameworks that align with technological advancement and sustainability goals (Evans, 2019). Future research should address the identified gaps by focusing on empirical studies examining the practical implications of these themes across various sectors, particularly as they relate to the challenges faced during digital transformation initiatives.

Strategic themes are presented in Figure 8 below. The analysis of strategic themes derived from the cluster analysis highlights four significant themes: *risk management*, *corporate governance*, *digitalisation*, and *sustainable development*, illustrating their interrelated nature in the context of corporate governance frameworks. Risk management emerges as a critical theme that underscores the necessity of assessing and mitigating risks associated with digital technologies — a fundamental component of effective governance mechanisms. That is closely tied to corporate governance, which serves as the broader framework within which organisations must navigate these technological transformations while ensuring accountability and transparency in decision-making processes (Buchert et al., 2022; Ryan et al., 2023). The theme of digitalisation encapsulates the technologies and processes that enable organisations to adapt to the evolving landscape, enhancing governance capabilities (Aghimien et al., 2024). Lastly, sustainable development reflects the growing emphasis on integrating environmental and social considerations into governance, urging organisations to align their digital strategies with sustainability goals.

The exploration of these themes directly addresses the primary aim of this study: to profile the research landscape of digitalisation as a mechanism for corporate governance. Specifically, the identified themes facilitate the study's objectives by elucidating the key digitalisation technologies impacting governance frameworks and outlining the foundational principles that guide decision-making processes in a digital context. Understanding these themes will not only aid in identifying emerging trends but also provide insights into how organisations can implement effective governance mechanisms as they embrace digitalisation (Alenezi, 2022; Martens & Zscheischler, 2022). Furthermore, while the themes highlight critical focus areas, they expose certain contradictions and gaps in the literature. For instance, although sustainable development is gaining traction, the literature indicates a disparity in integrating sustainability into digital governance frameworks (Son et al., 2021; Hagberg & Jönsson, 2022).

The implications of these findings suggest a need for more holistic research that connects these thematic areas, providing a richer understanding of how digital technologies can be leveraged to enhance corporate governance while promoting sustainability (Tomaževič et al., 2023). Future research should focus on empirical studies that investigate the practical applications of these themes across different sectors, understanding the nuanced challenges and opportunities that arise within varying contexts, thus informing both theory and practice (Ross et al., 2024).

Figure 8. Analysis of strategic themes
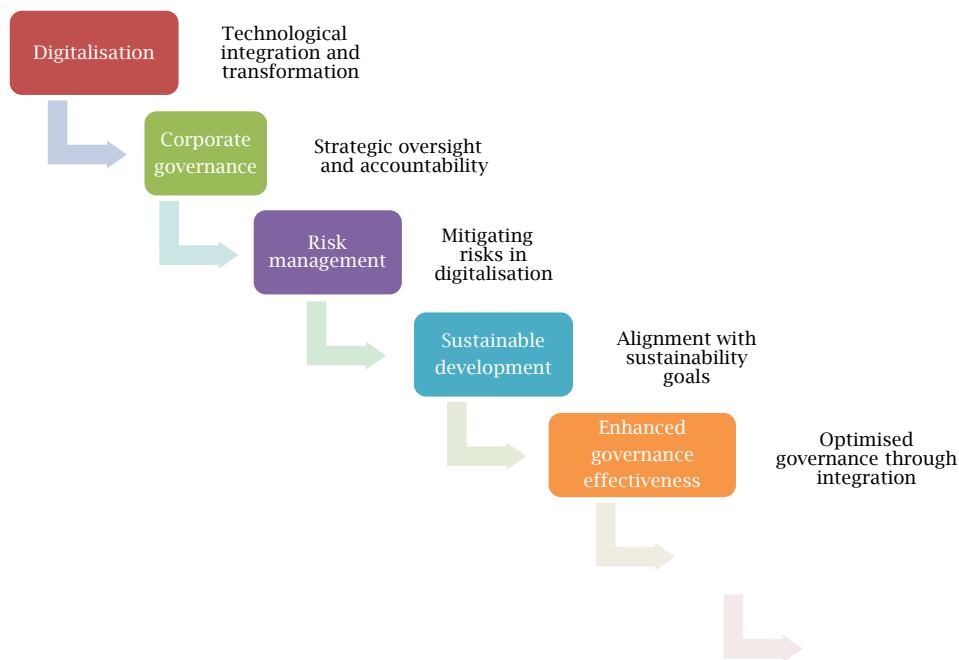

Source: Authors' elaboration.

5. DISCUSSION

The key findings of this study, derived from the bibliometric and systematic literature analysis, reveal critical thematic insights centred around the major themes of risk management, corporate governance, digitalisation, and sustainable development. These themes are intricately connected, reflecting their central role in shaping the discourse surrounding digital governance. As illustrated in Figure 6, digitalisation serves as the intersectional hub linking emergent technologies, such as blockchain, AI, and Industry 4.0, to core governance practices and sustainability objectives. The finding highlights a significant trend where organisations increasingly leverage digital technologies to enhance decision-making quality, transparency, and operational efficiency within governance frameworks (Zhang & Jin, 2023; Hu et al., 2024). Furthermore, the prominence of sustainable development as a key theme emphasises a growing academic focus on integrating sustainability considerations into digital governance practices, a crucial step towards achieving ESG goals (Karaboğa et al., 2021; Shenkoya, 2023).

The findings from this study provide a nuanced understanding of the interplay between digitalisation and corporate governance, revealing major themes, including risk management, corporate governance, digitalisation, and sustainable development, that align with and extend prior reviews in the field. This thematic exploration resonates with existing literature highlighting the critical role of digitalisation as a transformative agent for enhancing governance structures and processes, a perspective supported by studies that assert that effective governance frameworks must adapt to incorporate digital technologies, particularly in efforts to bolster transparency and stakeholder engagement (Onesti & Palumbo, 2023). The significant emphasis on risk management elucidates its importance in the governance discourse, especially in digital transformation, where companies must navigate new vulnerabilities and opportunities posed by technological advancements (Martínez-Ferrero & García-Meca, 2020).

The bibliometric analysis reveals four interconnected themes — risk management, corporate governance, digitalisation, and sustainable development — that shape digital governance discourse. Digitalisation serves as the central hub connecting emerging technologies like blockchain and AI to governance practices and sustainability objectives. While these technologies show promise for enhancing transparency and operational efficiency, significant gaps remain in sector-specific applications and practical implementation frameworks. The proposed digital governance integration model (Figure 9) demonstrates how organisations can strategically integrate these elements to enhance governance effectiveness. However, current literature focuses predominantly on generic technological impacts rather than contextualised applications, indicating the need for empirical studies examining real-world implementation challenges across different industries and regulatory environments.

Figure 9. Digital governance integration model

Source: Authors' elaboration.

The model showcases the dynamic interplay among digitalisation, corporate governance, risk management, and sustainable development, suggesting pathways for enhanced governance effectiveness through technological integration.

6. CONCLUSION

This study demonstrates that digitalisation serves as a transformative mechanism within corporate governance, enhancing transparency, decision-making, and sustainability practices. The four identified themes — risk management, corporate governance, digitalisation, and sustainable development — reveal their interconnected nature in modern governance frameworks. While digitalisation shows significant potential for strengthening accountability and operational efficiency, gaps persist in sector-specific applications and practical implementation insights. The findings underscore the need for updated digital governance regulations that address the complexities of evolving corporate landscapes while providing frameworks for effective risk management. Future research should focus on empirical studies examining the practical applications of digital transformation across different sectors, particularly how organisations can operationalise digital transformation while maintaining their sustainability commitments. The study has limitations, including the exclusion of grey literature and non-English publications, which may restrict comprehensiveness and global applicability. Future research should incorporate broader sources to enhance understanding across different geographical and cultural contexts. The findings offer significant implications across three domains. Academically, the four identified themes provide a theoretical framework for understanding technology-governance relationships and guide future research development. Managerially, organisations should integrate AI, blockchain, and data analytics into governance practices while aligning digital transformation with sustainability goals to enhance transparency and stakeholder trust. From a policy perspective, updated regulatory frameworks are needed that promote digital innovation while addressing risk management and accountability challenges, supporting sustainable business practices aligned with Sustainable Development Goals.

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