

DIGITAL TRANSFORMATION AND CORPORATE GOVERNANCE: A SYSTEMATIC LITERATURE REVIEW

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Abstract: *Digital transformation has emerged as a transformative force in higher education institutions, driven by advancements in the Fourth Industrial Revolution and further accelerated by the global disruptions caused by the COVID-19 pandemic. This systematic literature review investigates the comprehensive impact of digital transformation on higher education, particularly in relation to institutional governance, sustainability practices, risk management, and academic performance. The study addresses a critical gap in understanding how digital technologies are reshaping administrative functions, stakeholder engagement, and decision-making frameworks within higher education. Using the PRISMA methodology and an advanced search strategy applied to the Scopus database; an initial pool of 265 documents was identified. Following a rigorous selection process involving screening, eligibility assessment, and quality appraisal, a final sample of 31 peer-reviewed journal articles and conference papers published between 2020 and 2025 was chosen for in-depth analysis. These studies were thematically synthesized into three dominant themes: governance mechanisms and institutional reform, sustainability and environmental, social, and governance innovation, and digital risk management alongside performance enhancement. The findings demonstrate that digital transformation improves transparency, supports responsive and inclusive governance structures, and enables evidence-based policy development. It also contributes to sustainability through digitalised operations, such as paperless systems and remote learning, while enhancing institutional resilience and operational efficiency. Despite these advancements, higher education institutions continue to face challenges including digital inequality, cybersecurity vulnerabilities, and a lack of digital leadership capacity. Overall, the review highlights digital transformation as a strategic enabler of innovation and resilience in higher education. It provides valuable insights for policymakers, academic leaders, and institutional planners aiming to optimise digital initiatives to support long-term sustainability, adaptability, and performance improvement across the higher education sector.*

Keywords: *Digital transformation; Corporate governance; Systematic Literature Review; PRISMA.*

Introduction

The 21st century has witnessed an intensifying convergence of corporate governance and digital transformation, an evolving camaraderie that holds extensive ramifications for organizational functioning and stakeholder engagement. Digital transformation involves the integration of emerging technologies into business operations, enabling companies to respond to evolving market demands and rising stakeholder expectations (Зінюк et al., 2022). Aside from the adoption of new tools, this transformation is a strategic alignment with the requirement for greater agility, improved risk management, and ongoing value creation in a world in flux (Dahlberg & Nokkala, 2015). Side by side, corporate governance is the system by which power is directed and controlled that has begun transforming as a result of digital innovation (Dami & Kim, 2023). This emerging relationship requires close academic scrutiny, given its implications for organizational sustainability, accountability, and long-term survival (Wang et al., 2024).

New research points to the positive impact of digitalization on governance systems, particularly through higher levels of transparency and data-driven decision-making. For example, advanced analytics tools assist in enhancing governance by enabling real-time tracking of finances and operations, reducing fraud risks and regulating compliance (Zhang et al., 2023). In addition to that, blockchain technology facilitates corporate responsibility through tamper-proof and transparent record creation, providing transaction traceability and reporting misconduct (Shui et al., 2022). Nevertheless, the emerging technologies introduce emerging governance challenges such as cybersecurity threats, algorithmic bias, and greater data privacy concerns. These call for existing governance frameworks to be reconfigured so they can effectively address digital risk without sacrificing ethical norms (Санникова, 2022).

The evolving digital landscape means corporate boards must be digitally literate and strategically knowledgeable along with their classical governance abilities. Board members must now be able to critically assess technology expenditures, uphold ethics, and become drivers of the strategic approach of digital initiatives (Jiang et al., 2023). Therefore, digital transformation is neither a technical nor a structural change but a structural one inherent in the governance architecture of organizations (Pinchot & Soltanifar, 2020). To effectively make this transition, researchers must research the readiness of governance systems, board members' digital capabilities, and the adequacy of existing regulatory frameworks underpinning digital firms (Shan & Troshani, 2020). Comparison across industries, as well as across world regions, is also necessary to develop a refined knowledge base on the application and use of digital governance practices (Li & Shen, 2021).

As organizations are digitally transformed, its socio-technical dimensions must also be addressed. Organizational culture, leadership, and worker engagement are some of the key determinants in deciding how much digital technologies are used in governance models (Ionescu et al., 2022). A comprehensive approach that involves all of these will be required to uphold core governance principles of accountability, justice, transparency, and responsibility. This piece is going to analyze the dynamic relationship between corporate governance and digital transformation, shedding light on emerging governance arrangements and revealing major enablers and inhibitors that affect good governance in a rapidly digitizing world.

Literature Review

Brief Overview of Digital Transformation (DT) and Its Increasing Relevance –

Digital transformation (DT) is a paradigm shift in organizational dynamics, which fundamentally emanates from the adoption of digital technologies. Nadkarni and Prügl (2021) assert that DT leads to deep transformations across an organization's processes, structures, capabilities, and business models. This transformation is not merely the digitization of processes but instead represents a broader restructuring of strategic and cultural elements of businesses (Reis et al., 2023).

In today's business world, characterized by rapid technological advancements and changing customer needs, digital transformation has shifted from being considered an optional innovation to a strategic imperative. Businesses are compelled to embrace DT as a means of managing the ever more volatile, uncertain, complex, and ambiguous (VUCA) environments in which they operate. According to Shao (2025), those businesses that invest in digital transformation have a higher chance of enhancing their resilience and flexibility, which eventually leads to greater alignment with market dynamics.

Empirical studies offer concrete evidence that adopting DT in organizations has a profound impact on their operations. A study conducted by Vo et al. (2024) discovers that digital-transformational companies are more agile, become more effective in operations, and have enhanced innovation capability. These attributes are critical in environments where adapting to change translates to survival and competitiveness.

Moreover, deployment of advanced digital technologies such as analytics, automation, and connected systems supports cost minimization and streamlining of processes. According to Ayeisha and Anggoro (2024), in addition to process optimization, these tools assist in the improvement of customer experiences and the development of an ongoing culture of innovation. This reinforces stakeholders' hopes for agile digitally enabling organizations, endorsing the notion that DT is not only necessary to address near-future operational, but also to secure sustainable long-term survival and competitiveness.

Importance of Corporate Governance (CG) in the Digital Era

Corporate governance (CG) has also come under immense transformation with the increased complexity prompted by digitalization. For quite some time, CG was only concerned with financial management, strategic direction, and shareholder accountability, but now it must also address a more sophisticated set of issues such as data privacy, cyber-security, and ethics-based AI and algorithmic systems governance (Samara et al., 2024; Зірюк et al., 2022). The pervasive intrusiveness of digital technologies into sectors necessitates a paradigm shift in governance priorities to include management of digital risks and ethical responsibilities. Therefore, boardroom landscapes are transforming, with greater demands for directors to deliver transparency, accountability, and ethical conduct in technologically advanced environments (Jelovac et al., 2021).

To that end, corporate boards need to acquire digital literacy as well as traditional governance skills. Proper governance in the digital era currently implies having experience in emerging technologies in order to make informed decisions about the use of AI, data governance, and digital investment strategies (Cui et al., 2022; Samara et al., 2024). Boards lacking digital competence are most vulnerable to cybersecurity threats, reputational damage, and strategic

failure (Зінюк et al., 2022; Sklavos et al., 2024). Conversely, those organizations that proactively embed digital capabilities in their governance structures are best placed to mitigate technological risks and react to the demands of an ever-changing digital economy (Jelovac et al., 2021; Ziniuk, 2019).

Furthermore, modern corporate governance must be ready to address emerging risks such as cyberattacks, algorithmic bias, and ethical lapses in technology adoption (Capurro et al., 2023). These risks can annihilate stakeholder trust and drain corporate legitimacy, especially in data-dependent industries. In the wake of such threats, many organizations are incorporating digital governance within their enterprise risk management systems, adding board members or advisory roles who have immediate expertise in cybersecurity and AI (Fatima et al., 2021; Shao et al., 2022). This alignment of digital planning and ethical governance strengthens not only organizational resilience but also aligns digital transformation with long-term strategic objectives and public accountability demands (Tayachi et al., 2021; Capurro et al., 2023).

Rationale for Reviewing the Intersection of DT and CG

The convergence of corporate governance (CG) and digital transformation (DT) is a significant but under-analyzed area in the theoretical literature. Whereas both individually have been extensively studied, with impressive volumes of research in empirical terms, scarce empirical studies are available analyzing how DT influences governance processes and structures, or how robustness in CG frameworks influences digital project performance. For instance, Sun and Guo (2024) emphasize the transformational role of AI and big data in stakeholder management, openness to information, and green governance, showing DT is not merely creating new technological capabilities but revolutionizing the traditional paradigms of governance.

Similarly, Guerrero-Avendaño et al. (2023) propose a conceptual model of governance that intertwines innovation, technology, and digital transformation as core features of management systems, holding that DT constitutes an inherent driver of governance evolution. Such convergence is also backed by empirical evidence, as it turns out: digital transformation has been shown to enhance corporate green governance—such as guaranteeing greater transparency and operational efficiency with a measurable positive effect on sustainability practices across companies (Wang et al., 2024).

Given the rapid pace of digital adoption spurred by post-pandemic shocks, ESG and digital ethics regulatory pressures, and growing stakeholder expectations, a precise, methodical analysis of DT–CG linkages is timely as well as crucial. An inquiry will help synthesize current knowledge, identify theoretical and empirical gaps, clarify the effect of digital maturity on the quality of governance, and inform future research priorities on digital governance.

Materials and Methods

Identification

The identification phase is the first and foundational step in the SLR process, according to the PRISMA guidelines (Pérez-Neri et al., 2022). The objective at this step is to ensure that all the studies that may be of interest are identified using a comprehensive and well-designed search strategy. It involves developing search strings, selecting pertinent academic databases, and obtaining a large collection of bibliographic records without initially imposing inclusion or exclusion criteria. This broad initial collection serves as the basis for systematic screening and eligibility decisions in later stages. All of the major terms were identified, and Scopus database

strings were formulated (refer to Table 1) as Scopus is highly reputed for having a large compilation of peer-reviewed scholarly literature, hence being an appropriate and credible platform to conduct a systematic search in line with the objective of this study (Arya et al., 2021). As a result of the implementation of this search strategy, 265 research articles were found. These records form the preliminary dataset and will be further screened against rigorous criteria for their relevance, quality, and appropriateness to the research problems.

Table 1: Search Results from Scopus Database on Digital Transformation and Corporate Governance

Scopus	TITLE-ABS-KEY (digital AND transformation AND "corporate governance") AND PUBYEAR > 2020 AND PUBYEAR < 2025 Date of Access: June 2025
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Screening

Having 265 Scopus records identified using the keywords "digital transformation" AND "corporate governance," the second process step in the Systematic Literature Review (SLR) was screening of the retrieved studies. This stage is structured to refine the initial dataset by applying clear-cut inclusion criteria, thereby only leaving the most appropriate, up-to-date, and top-ranking publications amenable to a closer examination (Page et al., 2021). Screening is the critical phase that ensures optimal validity and specificity of the review by eliminating those studies that are incompatible with the given research objective.

In our study, some of the screening criteria have been formulated to guide the selection process. First, only publications printed in the English language were considered, considering that English is the dominant language for academic publications and enables consistent analysis (Moylan et al., 2022). Second, the publications should be between 2020 and 2025 to obtain the most recent and relevant advancements in digital transformation and corporate governance fields. This era embodies the accelerating pace of technology innovation and increasing influence on organizational governance structures during the post-pandemic era (Singh & El-Kassar, 2023).

In addition, it was made certain that only peer-reviewed journal articles and conference proceedings were retained to determine academic rigor and credibility. This selection is in agreement with existing conventions within systematic reviews that emphasize sources that have undergone scholarly peer review (Boell & Cecez-Kecmanovic, 2015). The review further limited itself to conference papers and original research articles while retaining other forms of documents like review articles, editorials, and book chapters, which do not normally consist of empirical data or primary findings.

After the application of these filters, 114 records were excluded from the initial dataset. These included mostly reasons such as non-English language, published before 2020, or content not being a journal paper or conference paper. Therefore, 151 records were left to be assessed further at the eligibility stage.

The screening phase is critical in enhancing the quality and relevance of the SLR. By focusing on contemporary, peer-reviewed, data-driven literature, the review maintains a high level of academic rigor since it restricts its scope to studies containing useful insights on how digital transformation is redefining corporate governance across varied organizational and industrial contexts.

Table 2: The Selection Criterion in Searching

Criterion	Inclusion	Exclusion
Language	English	Non-English
Time line	2020 – 2025	< 2020
Document type	Journal (Article), Conference proceeding	Book chapter, review, book
Publication Stage	Final	In Press

Eligibility

In the third step, known as the eligibility phase, 151 articles were prepared for review. During this stage, the titles and key content of all articles were carefully examined to ensure they met the inclusion criteria and aligned with the current research objectives. Consequently, 120 papers and articles were excluded as they did not qualify due to the out of field, title not significantly, abstract not related on the objective of the study and no full text access founded on empirical evidence. As a result, a total of 31 articles remain for the upcoming review.

Data Abstraction and Analysis

Following the screening stage, where 151 records were retained, the next process in the SLR was a rigorous eligibility check to ensure that all the articles met the inclusion criteria and aligned well with the research questions. In this process, the titles, abstracts, and, where necessary, the full texts of the remaining articles were examined thoroughly. The main aim was to make sure the research provided relevant empirical insight into the nexus of corporate governance and digital transformation.

During this process, 120 articles were excluded in total. Several relevant reasons were behind their exclusion. A few studies were out of scope to begin with because their nature did not possess a direct relationship with either digital transformation or corporate governance. A few articles contained unclear or irrelevant abstracts or titles to the current research agenda. Finally, some studies were excluded due to limited access to full-text articles, hindering a thorough evaluation of their contribution.

As a result, 31 articles were deemed eligible and selected for data extraction. These articles represent the most relevant, recent, and methodologically sound contributions to the field. They will serve as the foundation for the subsequent analysis phase, where detailed information such as publication year, authorship, research design, geographical focus, key findings, and implications will be systematically extracted. This careful selection and extraction process ensures that the review remains focused, credible, and aligned with the intended research objectives, ultimately contributing to a clearer understanding of how digital transformation is reshaping corporate governance practices.

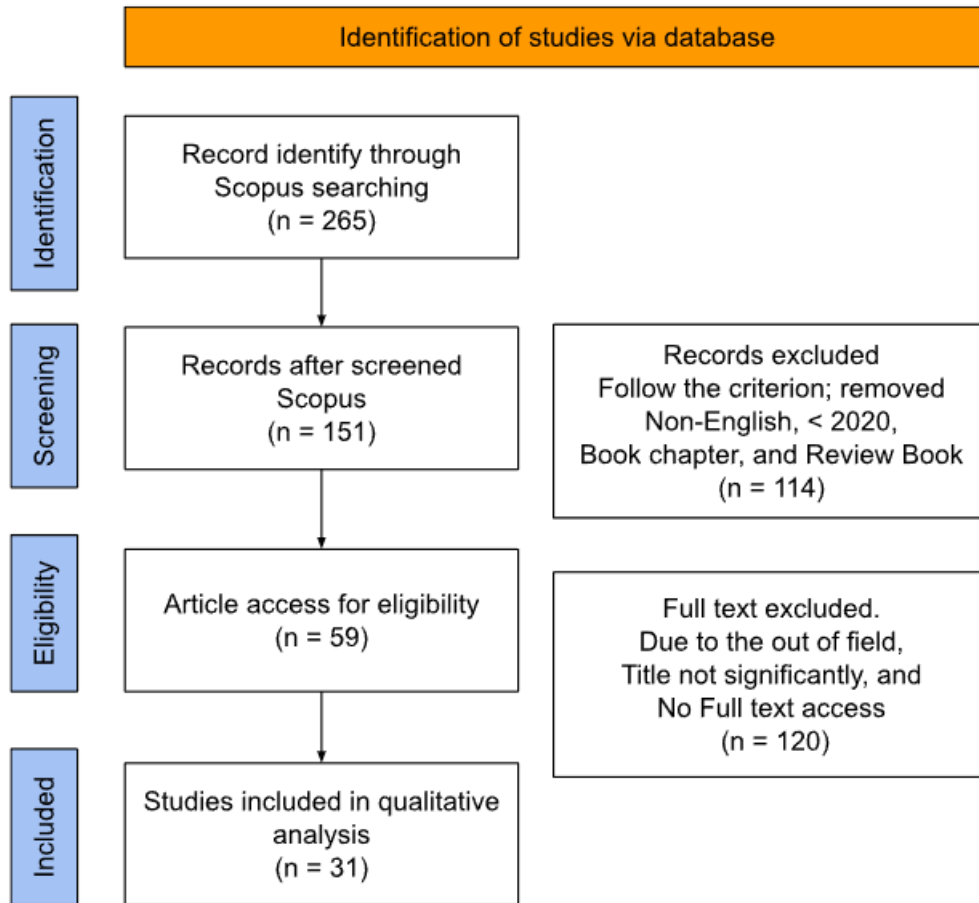


Figure 1: Flow diagram of the proposed searching study

Table 3: Number and details of Primary Studies (PS) using SCOPUS Database

No	Authors	Title	Year	Source Title
1	Li Z.	ESG Concept Leading: Exploring How Digital Transformation Can Help High-Tech Enterprises Improve Performance - The Application of The Mediation Moderation Model	2025	Journal of Combinatorial Mathematics and Combinatorial Computing
2	Oanh L.T.T.; Ngoc B.T.; Dung N.T.; Trang N.T.; Anh V.T.K.	The Impact of Digital Transformation In Management Accounting on Governance Efficiency: The Intermediary Role of Accounting Information Quality	2025	Journal of Governance and Regulation
3	Laptev V.A.; Feyzrakhmanova D.R.	Digitalization of Institutions of Corporate Law: Current Trends And Future Prospects	2021	Laws
4	Zhao T.; Yan N.; Ji L.	Digital Transformation, Life Cycle And Internal Control Effectiveness: Evidence From China	2023	Finance Research Letters
5	Lara J.E.; Batista A.S.	Corporate Digital Transformation: Companies Towards Industry 4.0;	2023	International Journal of Innovation

	Ribeiro R.M.; Tissot-Lara T.A.	[Transformação Digital Corporativa: A Empresa Rumo À Indústria 4.0]; [Transformación Digital Corporativa: Empresas Rumo À La Indústria 4.0]		
6	Osei A.	Exploring The Governance–Digital Transformation Nexus: Empirical Evidence on Sustainability Reporting Using 2sIs, Lsdv Models, Heterogeneity Effects, And Cluster Analysis	2025	Cogent Business and Management
7	Thi M.D.; Thu T.D.	How Internal Factors Determine Digital Transformation: The Moderating Role of Leader's Project Management Competence	2025	Journal of Project Management (Canada)
8	Zhai H.; Yang F.; Gao F.; Sindakis S.; Showkat G.	Digital Transformation And Over- Investment: Exploring The Role of Rational Decision-Making And Resource Surplus In The Knowledge Economy	2023	Journal of the Knowledge Economy
9	Xu P.; Chen L.; Dai H.	Pathways To Sustainable Development: Corporate Digital Transformation And Environmental Performance In China	2023	Sustainability (Switzerland)
10	Cheng Y.; Li H.	The Impact of ESG Performance on Corporate Digital Transformation	2025	Environment, Development and Sustainability
11	Wang C.; Wang D.; Deng X.; Wang S.	Research on The Impact of Enterprise Digital Transformation on Internal Control	2023	Sustainability (Switzerland)
12	Ziniuk M.; Dyeyeva N.; Bogatyrova K.; Melnychenko S.; Fayvishenko D.; Shevchun M.	Digital Transformation of Corporate Governance	2022	Financial and Credit Activity: Problems of Theory and Practice
13	Li J.; Zhang X.	Digital Transformation And The Choice of Management Control Modes In Enterprise Groups	2025	PLoS ONE
14	Li H.; Liu J.; Liu Y.; Yang G.; Zhang L.; Yang X.	Can Digital Transformation Drive Green Innovation In China's Construction Industry Under A Dual-Carbon Vision?	2024	Sustainability (Switzerland)
15	Siswanti I.; Riyadh H.A.;	The Impact of Digital Transformation For Sustainable	2024	Cogent Business and Management

	Nawangsari L.C.; Mohd Yusoff Y.; Wibowo M.W.	Business: The Meditating Role of Corporate Governance And Financial Performance		
16	Yang Q.; Kong C.; Jin S.	Digital Transformation And Corporate Carbon Emissions: The Moderating Role of Corporate Governance	2025	Systems
17	Xi L.; Wang H.	The Influence of Green Innovation And Digital Transformation on The High-Quality Development of Enterprises: The Mediating Role of ESG Management	2024	Sustainability (Switzerland)
18	Wagan S.M.; Sidra S.	The Impact of Digital Transformation on Risk-Taking: An Empirical Study of Japanese Companies	2024	Review of Business and Economics Studies
19	Li C.; Wang Y.	Digital Transformation And Enterprise Resilience: Enabling Or Burdening?	2024	PLoS ONE
20	Fang Q.; Yu N.; Xu H.	Governance Effects of Digital Transformation: From The Perspective of Accounting Quality	2023	China Journal of Accounting Studies
21	Zhou H.; Xu L.	Bank Digital Transformation And Enterprise Innovation—Evidence From China	2023	Sustainability (Switzerland)
22	Yang S.; Tai Y.; Liu J.	Mechanism Analysis And Path Study of Digital Transformation on Corporate Governance: Evidence From Chinese Listed Companies	2024	Sustainability (Switzerland)
23	Feng Y.; Zhang Z.; Zhang J.	Navigating The Digital Transformation Terrain: Insights Into The Interplay of Compensation, Incentives, And Managerial Behavior	2024	Journal of the Knowledge Economy
24	Peng Y.; Chen H.; Li T.	The Impact of Digital Transformation on ESG: A Case Study of Chinese-Listed Companies	2023	Sustainability (Switzerland)
25	Yang Q.; Jin S.	Exploring The Impact of Digital Transformation on Manufacturing Environment, Social Responsibility, And Corporate Governance Performance: The Moderating Role of Top Management Teams	2024	Sustainability (Switzerland)
26	Sang Y.; Loganathan K.; Lin L.	Digital Transformation And Firm ESG Performance: The Mediating Role of Corporate Risk-Taking And	2024	Sustainability (Switzerland)

		The Moderating Role of Top Management Team		
27	Yin N.	Will Digital Transformation Empower Corporate ESG Performance: Moderated Mediation Analysis Through The Prism of Executives' Foreign Experience	2025	Polish Journal of Environmental Studies
28	Wang L.; Liu S.; Xiong W.	The Impact of Digital Transformation on Corporate Environment Performance: Evidence from China	2022	International Journal of Environmental Research and Public Health
29	Chang Q.; Kong C.; Jin S.	Exploring the Impact of Digital Transformation on Corporate Violations in China's A-Share Market	2024	Systems
30	Cui L.; Wang Y.	Can Corporate Digital Transformation Alleviate Financial Distress?	2023	Finance Research Letters
31	Zhao X.; Cai L.	Digital Transformation and Corporate ESG: Evidence From China	2023	Finance Research Letters

Results and Findings

The finding was grouped into three themes to structure the systematic literature review as mentioned in Table 4. This table shows how the reviewed articles are grouped into three main themes based on their focus related to digital transformation and corporate governance. Theme 1: Digital Transformation and Corporate Governance Structures & Mechanisms; includes 9 articles that look at how digital transformation changes corporate structures and internal controls. These studies explain how digital tools are reshaping the way companies are managed and how decisions are made. Theme 2: Digital Transformation and ESG / Sustainability / Green Innovation has the most articles with 12. The research in these articles focuses on how digital transformation helps companies improve their environmental, social, and governance (ESG) activities, as well as green innovation and sustainability projects. Theme 3: Digital Transformation, Risk, Control & Financial Performance comprises 10 articles that present how financial control, risk management, and a firm's ability to survive difficulties are influenced by digital transformation. These articles present different ways in which performance is improved and risks are reduced with the use of digital tools. All these three themes provide an evident and organized framework for the review so that there is a specific and complete analysis.

Table 3: Themes Identified in SLR

No	Themes	Focus	Articles Covered
1	Governance Mechanisms	Digital transformation's direct effect on corporate governance structures and controls.	9 articles (3, 6, 7, 12, 13, 20, 22, 23, 29)
2	ESG & Sustainability	Role of digital transformation in enhancing ESG performance and sustainability.	12 articles (1, 10, 14, 15, 16, 17, 24, 25, 26, 27, 28, 31)
3	Risk & Performance	Impact on financial control, risk, and organizational resilience.	10 articles (2, 4, 5, 8, 9, 11, 18, 19, 21, 30)

Theme 1: Digital Transformation and Corporate Governance Structures & Mechanisms

The intersection of digital transformation and corporate governance systems has increasingly been pivotal in shaping the way organizations respond to internal and external challenges. Various studies shed light on how digital technologies have revolutionized conventional corporate structures by enabling the redefinition of concepts and mechanisms under corporate law. As Laptev and Feyzrakhmanova state, incorporation of digital technologies such as AI in corporate governance activities has led to the creation of digital legal personalities, decentralized autonomous organizations, and digitalization of corporate assets. These modifications transcend procedure but are fundamental changes as far as conceptualizing and regulating corporations (Laptev & Feyzrakhmanova, 2021). In a similar way, Ziniuk et al. discuss the functionalities and implications of digital corporate governance systems, such as the use of pre-established systems or specially designed ones. These changes are beneficial but pose weaknesses, like the potential for corporate blackmail through electronics (Ziniuk et al., 2022).

The governance impact of digital transformation is further reinforced by empirical analyses. Osei's study in the MENA region indicates that digital transformation amplifies the influence of governance structures on sustainable business practices. Specific governance characteristics like board expertise, gender and age diversity enhance sustainability, while factors like board independence may have adverse effects. The presence of digital systems appears to enhance the capacity of these governance mechanisms to drive change, with significant variation across industries and firm ownership types (Osei, 2025). This finding is echoed in the work of Yang, Tai, and Liu, who underscore that digital transformation improves governance through innovation stimulation, reduction in information asymmetry, and promotion of sustainable strategies. Their evidence from Chinese listed companies affirms the strategic integration of digital tools to optimize corporate sustainability outcomes (Yang et al., 2024).

Another critical area involves internal corporate dynamics, particularly in management control and project leadership. Li and Zhang find that digital transformation encourages decentralized control structures within enterprise groups, especially in state-owned firms or under high environmental uncertainty. The transformation enhances internal controls and mitigates agency issues between parent and subsidiary firms (Li & Zhang, 2025). Parallel to this, Thi and Thu point to the decisive role of internal capabilities, particularly leaders' project management competence, in determining the success of digital transformation initiatives in SMEs. Their research finds that leadership capabilities mediate and amplify the relationship between digital readiness and transformation outcomes (Thi & Thu, 2025).

Digital transformation's influence also extends to corporate transparency and ethical behavior. Fang, Yu, and Xu reveal that firms undergoing more advanced digital transformation tend to demonstrate higher accounting quality and lower earnings management. These improvements are attributed to better internal control and enhanced analyst oversight, thereby improving governance standards, especially in non-state and long-term-oriented firms (Fang et al., 2023). Chang, Kong, and Jin support this conclusion with findings that digital technologies help mitigate corporate violations. Their study identifies how mechanisms like audit quality and media scrutiny enhance the disciplinary effect of digital transformation, with more pronounced effects in large and manufacturing firms (Chang et al., 2024).

Furthermore, organizational motivational frameworks are part of the process of digital transformation. Feng, Zhang, and Zhang examine the influence managerial incentives have on the success of digital transformation. They discover there is a nonlinear relationship between reward and outcome, with emphasis on recommending that financial incentives are crucial yet too many short-term incentives may clog long-term transformation goals. Equity-based incentive is viewed as a superior long-term digital innovation motivator. Their findings agree with agency theory and place emphasis on the need for governance reforms that will align managerial interests with organizational transformation objectives (Feng et al., 2024).

Theme 2: Digital Transformation and ESG / Sustainability / Green Innovation

This paper discusses how digital transformation (DT) enables or limits business performance against environmental, social, and governance (ESG) requirements, green innovation, and sustainable development practices. Increasingly, DT has emerged as a prime mover of ESG goal advancement, particularly for environmentally and sustainability-focused companies. Increasing research indicates that DT is essential in the attainment of improved ESG outcomes via diverse mediating and moderating avenues.

Cheng and Li (2025) found that better ESG performance is one of the driving forces of enabling DT because it increases the quality of governance and reduces financial constraints. In the same way, Peng, Chen, and Li (2023) observed that DT not only optimizes the framework of human capital but also improves operating efficiency, which enables ESG performance. In the manufacturing sector, Yang and Jin (2024) found that DT positively influences ESG performance, especially when moderated by senior executives' professional background and competencies, stressing human capital's facilitating role in digital transformation.

DT's role in driving green innovation is particularly realized in sectors such as construction and manufacturing. Li et al. (2024) illustrated that DT enables green innovation in China's construction industry through promoting planned risk-taking and governance mechanisms. This effect is particularly enhanced under stricter environmental regulations. Xi and Wang (2024) emphasized the mediating role played by ESG management in bridging DT and green innovation and overall enterprise quality, reiterating the applicability of ESG as a strategic path towards sustainable development. Yin (2025) also elaborated that DT facilitates ESG performance by influencing green innovation and that globally experienced leaders have the propensity to consolidate the linkage, which means international exposure assists in accelerating ESG integration to be more digitally effective.

The interactions among governance structures, internal controls, and financial performance have also emerged as a primary driver of DT-ESG dynamics. Li Z. (2025) demonstrated that even when executive compensation undermines the effect of DT on company performance, strong internal control systems mediate positively in this relationship. Siswanti et al. (2024), working with Islamic rural banks, identified that governance structures do not have a direct effect on sustainability outcomes by themselves, but financial performance mediates to pass DT into successful business sustainability. Yang, Kong, and Jin (2025) also argued that audit quality, internal controls, and environmental disclosure can effectively moderate the impact of DT on carbon emissions and asserted that the quality of governance infrastructure plays a key role in converting digital initiatives into material sustainability outcomes.

Another area of growing importance is the capacity of DT to reduce environmental pollution and achieve carbon neutrality. Wang, Liu, and Xiong (2022) found that DT reduces emissions

of polluting gases such as waste gas and wastewater through improved total factor productivity and green innovation. This link is most evident between state-owned players and high-emission industries, as noted by Zhao and Cai (2023), who also indicated that firms that have a higher level of digitalization perform well in ESG. This suggests the strategic need to align digital abilities with traditional environmental management practices, primarily in high-environmental impact industries.

External factors such as digital infrastructure, industry profiles, and regional policy milieus also contribute to the effectiveness of DT in promoting sustainability at the firm level. Cheng and Li (2025) noted that the ability of ESG to enable DT is significantly enhanced in technologically advanced firms, highly competitive industries, and countries well-equipped with strong digital infrastructure. Peng, Chen, and Li (2023) supported this result, further arguing that low-carbon-emitting and capital-intensive firms gain more ESG benefits from DT. These contextual findings demonstrate that while DT has broad potential, its real influence is moderated by firm-specific and environment factors.

Combined, these works emphasize that digital transformation is not a cure-all but a multifaceted instrument to which leadership capabilities, governance quality, environmental policies, and industry forces can be subject. Under integrated application in ESG and sustainability applications, DT yields measurable improvements in corporate performance, fosters green innovation, and achieves environmental outcomes. This body of evidence gives good advice to practitioners, policymakers, and corporate leaders who wish to harness the potential of digital transformation to achieve sustainable development.

Theme 3: Digital Transformation, Risk, Control & Financial Performance

Digital transformation (DT) is increasingly realized to be a driver for enhancing every element of firm governance, namely through more effective internal control systems, decision-making performance, and organizational resilience. Different studies have demonstrated that DT introduces measurable improvements in governance efficiency through an effect on critical financial and operating mechanisms. For instance, Oanh et al. (2025) confirmed that DT positively impacts governance through better accounting information quality, which also mediates the impact of digital tools on managerial efficiency. Likewise, Zhao et al. (2023) demonstrated that DT reduces agency costs and information asymmetry and, as such, improves internal control systems, especially for firms amid growth and maturity phases. Wang et al. (2023) reaffirmed that DT strengthens internal control structures, particularly in the face of high market competition, which encourages more active and reactive forms of governance.

The literature also converges on the theme of DT as a tool for mitigating excessive investment and operational inefficiencies. Zhai et al. (2023) reported that digital initiatives reduce over-investment tendencies, especially in high-tech and non-state-owned enterprises, by fostering rational decision-making and strengthening governance structures. Wagan and Sidra (2024) further highlighted that DT boosts firms' risk-taking capabilities, with more pronounced effects observed in non-state-owned firms, suggesting a differentiated impact based on ownership structure. Meanwhile, Cui and Wang (2023) indicated that DT helps alleviate financial distress by reducing operational risk and easing financing constraints, which ultimately reinforces financial stability and supports sustainable corporate performance.

One of the key implications of DT is how it enables innovation and environmental sustainability, thereby linking governance gains with other corporate responsibilities. Xu et al.

(2023) discovered that digitalization in banking has positive spillover effects on borrowing firms, particularly on innovation output in terms of patent applications. Bank-level digital capabilities were shown to enhance borrower innovation through improved governance and reduced financial constraints. Parallel findings by Xu, Chen, and Dai (2022) revealed that DT facilitates green innovation and enhances environmental performance, with state-owned and polluting firms showing stronger effects. These studies collectively underline the importance of governance in amplifying the benefits of DT across both financial and environmental domains.

DT also enhances corporate resilience and adaptability, allowing governance mechanisms to deal with micro-level organizational issues as well as macro-level threats. Li and Wang (2024) provided evidence that DT increases resilience by ensuring transparency, reducing agency costs, and mitigating financing constraints. Heterogeneity analysis also underscored the intervening role of firm characteristics and regional conditions in ensuring the effectiveness of DT. This is echoed by Lara et al. (2023), who cited that innovation and customer focus, which are both the most significant governance levers in counteracting competitive and technological disruption, are the most significant drivers of DT among Brazilian firms.

Generally, the replicability of results across empirical contexts underscores the multi-faceted role of DT to effect corporate governance, notably through control intensification, financial constraint, innovation promotion, and resilience building. The intermediary function of in-house processes such as accounting quality, risk management, and innovation capacity appears to be the key to successful governance outcomes. Hence, DT is not only an enabler technology but also a governance strategy enhancing firm-level decision-making, sustainability, and long-term performance.

Discussion and Conclusion

The studies of digital transformation in various corporate settings attest to its central role in redesigning governance structures, improving control over operations, and enabling sustainable performance outcomes. The use of digital technology and tools has continually been able to improve the quality of financial reporting, refine systems of internal control, and enable accounting procedures. Such developments result in improved monitoring, disclosure, and managerial decision-making, which enables improved governance effectiveness. As far as business behavior is concerned, technological developments appear to decrease excessively low investment tendencies and reduce financial pressure by suggesting higher rationality, data-based decision frameworks and less information asymmetry. Furthermore, businesses that have undergone digital integration have manifested higher immunity to external uncertainties and been more capable of adjusting to alterations in competitive environments. These effects are most observable in high-tech firms, non-state-owned enterprises, and organizations exposed to intense competition in the marketplace. Meanwhile, digitalization has supported green innovation and improved environmental performance, as evidence of a more widespread corporate commitment fueled by technological expertise.

The effects of digitalization are not only limited to the internal operations but are also projected at firm interfaces with banks, where digitalization of banks assists in supporting the innovation contributions of borrowing firms. Additionally, digitalization makes for better risk management capacity, encouraging optimal capital investment and cautious risk-taking, especially in firms that are seeking high returns in the presence of volatile market conditions. Generally, digital transformation gets increasingly woven into business governance strategies as an integral

component, driving increased financial resilience, internal responsibility, strategic innovation, and sustainable longevity. Its impacts vary based on organizational characteristics such as life cycle stage, form of ownership, and industry sector, meaning contextual adaption is required to achieve maximum benefit. As companies increasingly integrate digital technologies, the evidence highlights the importance of aligning these efforts with governance goals to achieve the balance between innovation and control, resilience and agility, and performance and responsibility. Such an integrated perspective underlies a better understanding of how digital transformation not just enhances business processes but also achieves the underlying mechanisms that support sound corporate governance.

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