

Research Paper

The New Business Ethos: AI and Sustainability in Contemporary Management

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Abstract

Rapid advances in artificial intelligence are reshaping managerial practices and redefining organizational responsibilities, compelling firms to reconsider how the use of technology aligns with ethical conduct and sustainability imperatives. Hence, this paper examined the new business ethos: AI and sustainability in contemporary management. The paper sought to examine how AI adoption influences sustainability practices within contemporary organizations, to evaluate the role of managerial and ethical governance frameworks in shaping responsible AI use for sustainable outcomes, and to assess the extent to which AI-driven strategies contribute to long-term organizational performance while supporting environmental and social goals. Stakeholder Theory was adopted as the theoretical foundation because of its emphasis on accountability to diverse stakeholder groups and its relevance to ethical technology deployment. A systematic review methodology relying on secondary data was employed, drawing on recent peer-reviewed studies and authoritative reports to synthesize evidence on AI, governance, and sustainability in management contexts. The paper indicated that AI adoption enhances environmental, social, and governance performance by improving decision quality, transparency, and operational efficiency, but these benefits are significantly strengthened when organizations embed robust managerial and ethical governance structures. The paper also established that AI-driven strategies support long-term organizational performance when aligned with sustainability commitments rather than short-term efficiency objectives. The paper concluded that responsible AI use anchored in stakeholder-oriented governance reflects an emerging business ethos centered on accountability and long-term value creation. It recommended the institutionalization of AI governance mechanisms, strategic alignment of AI investments with sustainability goals, and the development of standardized regulatory frameworks for responsible AI practice.

Keywords: Artificial Intelligence, Sustainability, Ethical Governance, Contemporary Management, Organizational Performance

INTRODUCTION

The rapid evolution of artificial intelligence (AI) has catalyzed transformative changes within business management, prompting firms to reconsider traditional approaches to decision-making, strategy, and performance measurement. Research shows that AI technologies including machine learning, predictive analytics, and natural language processing are increasingly embedded in organizational practices, enabling capabilities such as advanced data interpretation, process automation, and strategic insights that were previously unattainable (Yu et al., 2025). Empirical studies reveal that AI adoption is closely associated with improvements in environmental, social, and governance (ESG) performance, through more efficient resource allocation, optimized supply chain processes, and enhanced operational efficiency (Yu et al., 2025). Concurrently, AI adoption has been shown to mediate the relationship between competitive pressures and organizational sustainability outcomes, particularly in business-to-business contexts where dynamic capabilities influence both economic resilience and sustainability performance (Singh & Mishra, 2025).

The integration of AI in corporate sustainability extends beyond operational efficiency to ethical use and responsible governance. Recent corporate sustainability reporting practices demonstrate that AI is leveraged to manage vast datasets for regulatory compliance, emissions estimation, and risk assessment, yet these capabilities introduce risks related to data accuracy, transparency, and oversight requirements (Reuters, 2026). Furthermore, ethical governance frameworks are gaining academic attention as determinants of how AI influences firm value and sustainable growth, emphasizing accountability, fairness, and transparency as integral components of AI implementation (Xia et al., 2025). Literature within sustainability research further underscores AI's role in driving sustainable marketing strategies that shape consumer perceptions of eco-friendly brands and strengthen the alignment between corporate sustainability goals and market engagement.

Despite broad interest in the dual role of AI as both a tool for sustainability and a subject of sustainability governance research, scholars caution that the environmental footprint of AI itself including energy consumption and implementation costs must be critically assessed alongside its contributions to sustainable development objectives (Balcioglu et al., 2024). This recognition has stimulated investigative efforts that assess how AI can support the United Nations Sustainable Development Goals (SDGs) and corporate sustainability targets across industries and geographies. Collectively, paper underscored a paradigmatic shift in how business management integrates sophisticated digital technologies with long-term sustainability imperatives, suggesting the emergence of a distinct business ethos that simultaneously pursues technological advancement and sustainable outcomes.

STATEMENT OF THE PROBLEM

Despite the growing acknowledgment of AI as a strategic enabler of sustainability, significant gaps persist in both academic understanding and managerial practice regarding how AI should be leveraged to create sustainable value in ways that genuinely align with organizational and societal goals. While empirical studies indicate positive correlations between AI adoption and enhanced

ESG outcomes, much of the current research emphasizes technological performance metrics and overlooks the contextual conditions under which AI contributes to sustainability in diverse organizational environments (Yu et al., 2025). In many firms, the rapid deployment of AI without adequate ethical oversight has led to challenges in data governance, algorithmic accountability, and stakeholder trust, undermining efforts to integrate sustainability principles into core managerial processes (Reuters, 2026).

Additionally, the existing literature reveals an incomplete understanding of the mechanisms by which AI influences sustainability outcomes. For example, although AI adoption has been linked with improved environmental performance and process optimization, there is limited empirical evidence detailing how internal organizational dynamics such as governance practices, human capital readiness, and competitive pressures condition these relationships (Singh & Mishra, 2025; Xia et al., 2025). This gap hinders the formulation of robust managerial frameworks that can guide firms in translating AI investments into measurable sustainability gains. Moreover, prevailing studies have predominantly focused on quantitative associations without sufficiently addressing the ethical dimensions of AI deployment particularly the balance between automated decision-making and human oversight, and the implications for corporate social responsibility and long-term sustainability strategies.

The lack of integrative scholarship on the interplay between AI capabilities, ethical governance, and sustainability outcomes undermines the ability of contemporary managers to develop a coherent ethos that embraces both technological innovation and sustainable development. In practice, firms may adopt AI solutions in ways that emphasize efficiency gains at the expense of responsible use, potentially exacerbating social inequalities, eroding stakeholder trust, and creating unanticipated environmental costs. These shortcomings signal a pressing need for research that explicates the conditions, governance mechanisms, and strategic approaches necessary to harness AI fully as a force for sustainable business transformation, an understanding that remains insufficiently articulated in current management scholarship and corporate praxis.

AIM AND OBJECTIVES

This paper aimed at examining the new business ethos with Artificial Intelligence (AI) and Sustainability in Contemporary Management. The specific objectives include to;

- i. examine how the adoption of artificial intelligence influences sustainability practices within contemporary organizations.
- ii. assess the role of managerial and ethical governance frameworks in shaping responsible AI use for sustainable business outcomes.
- iii. analyze the extent to which AI-driven strategies contribute to long-term organizational performance while supporting environmental and social sustainability goals.

LITERATURE REVIEW

The relevant and related literature for this paper were reviewed under conceptual review empirical review and theoretical framework as follows:

Conceptual review

The key concepts in this paper are reviewed below:

New Business Ethos

New Business Ethos in academic discourse refers to the set of core beliefs and guiding principles that shape an organization's purpose, behaviour, and decision-making, particularly in relation to societal expectations and long-term commitments. In the context of sustainability and technological change, the notion of a business ethos has been discussed as an evolution beyond traditional profit-centric motives towards values that foreground ecological stewardship and social responsibility. Scholars argue that a business ethos informs organizational culture and strategic choices, embedding values such as environmental integrity, equity, and ethical conduct into corporate frameworks rather than treating them as peripheral concerns (Sustainability Directory, 2024). This interpretation aligns with long-standing philosophical roots of ethos as character or guiding beliefs, but extends it in modern management research to encompass the moral and strategic orientation of firms in addressing sustainability challenges. For the purpose of this paper, business ethos is adopted as the underlying belief system that governs a firm's commitments to ethical behaviour, sustainability priorities, and responsible use of innovations such as artificial intelligence in management practices.

Artificial Intelligence (AI)

Artificial Intelligence is conceptualized in recent management and sustainability literature as a class of computational technologies capable of performing tasks that typically require human intelligence, including learning from data, pattern recognition, predictive analytics, and decision support. Tinonetsana et al. (2024) opined that AI's potential to transform business practices by optimizing processes, improving efficiency, and enabling data-driven strategies that contribute to environmental and social performance. At the same time, Winanto (2025) emphasize the importance of governance frameworks to ensure ethical deployment, accountability, and transparency in AI applications, as unresolved ethical issues can undermine sustainability goals and stakeholder trust. For this study, artificial intelligence is defined as advanced computational systems and algorithms that generate actionable insights and automation capabilities, which when responsibly governed, support organizations in achieving sustainable management outcomes aligned with ethical and strategic objectives.

Sustainability

Sustainability in the business context refers to organizational practices that aim to meet present operational and economic needs without compromising the well-being of future generations, encompassing environmental protection, social equity, and economic viability. Sustainability research in management frames it as a strategic orientation that integrates long-term environmental stewardship and societal considerations into core organizational decision-making (Perlego, 2026). In academic discourse, sustainability also includes transformative commitments to reduce negative ecological impacts and enhance social outcomes through deliberate planning, resource management, and stakeholder engagement. This understanding is supported by multiple empirical and theoretical studies exploring sustainability as a continuous organizational objective rather than a one-off initiative, reflecting its embedding into corporate reporting, governance, and performance assessment practices. Hence, sustainability in this paper denotes a management orientation that balances ecological integrity, social responsibility, and economic performance to fulfill present needs while preserving opportunities for future societal and environmental well-being.

Contemporary Management

Contemporary Management is defined in academic management literature as the practice and study of organizing, planning, leading, and controlling organizational resources and activities in response to modern conditions such as technological advancement, globalization, and evolving stakeholder expectations (Cui, 2025). Contemporary management theories acknowledge that managers operate in environments where information flow, digital technologies, and interactive human dynamics play critical roles in achieving organizational goals, with an emphasis on flexibility, human-centred decision-making, and integration of innovative tools (Indeed Editorial Team, 2025). While traditional management theories focused heavily on hierarchical control and efficiency, contemporary approaches emphasize adaptability, collaborative leadership, and the strategic use of technology to address complex organizational challenges. For the purpose of this work, contemporary management is adopted as the body of managerial practices and frameworks that integrate modern technological capacities, such as AI, with strategic imperatives for ethical governance and sustainability outcomes in today's business environment.

Influence of Artificial Intelligence Adoption on Sustainability Practices within Contemporary Organizations

Recent empirical research indicates that artificial intelligence (AI) adoption has become a significant driver of sustainability-oriented practices across contemporary organizations, reshaping how firms manage environmental, social, and governance (ESG) priorities. Studies based on large firm-level datasets show that AI capabilities are positively and significantly associated with improvements in ESG performance, suggesting that AI adoption supports organizations in optimizing resource allocation, enhancing production and supply chain efficiency, and strengthening sustainability outcomes (Zhang et al., 2025). For example, a comprehensive analysis of firms listed on the Shanghai and Shenzhen stock exchanges found that higher AI capability correlates with enhanced ESG performance, with internal mechanisms such as optimized resource allocation and supply chain efficiencies driving this effect (Zhang et al., 2025). These findings suggest that AI adoption can contribute to environmental management by reducing waste, lowering carbon intensity, and improving overall operational efficiency outcomes that are central to corporate sustainability practices.

Quantitative evidence from diverse contexts reinforces this linkage. A multi-country study across 15 emerging Asian economies identified that AI capabilities enhance green innovation efficiency, particularly when supported by strong ESG performance and governance mechanisms, indicating that AI's sustainability benefits are contingent on complementary governance structures (Smith & Chen, 2025). Similarly, quasi-experimental evidence from China demonstrates that corporate adoption of AI contributes to higher ESG scores, mediated through improved information governance and decision processes, underscoring AI's role in facilitating data-driven transparency and accountability in sustainability reporting (Li & Zhou, 2025). These findings collectively affirm that AI adoption does not operate in isolation but interacts with organizational systems such as information governance and managerial practices to reinforce sustainability outcomes.

Despite the positive associations, researchers caution that the sustainability implications of AI adoption are not uniformly beneficial and can involve significant trade-offs. A systematic review of AI sustainability trade-offs highlights potential negative impacts associated with energy consumption, deployment issues, and ethical and social concerns, particularly when organizations

emphasize efficiency gains without adequate planning for environmental costs or workforce impacts (Kumar et al., 2024). Industry reporting corroborates this concern: the rapid growth of AI workloads has spurred calls for mandatory reporting of data center energy use and carbon emissions to prevent unchecked environmental harm from computational expansion (National Engineering Policy Centre, 2025). This underscores the reality that while AI can enhance sustainability practices, the environmental footprint of AI systems especially high-intensity computing must be critically managed within corporate sustainability strategies.

Case examples from industry illustrate how firms are operationalizing AI for sustainability. Nvidia's transition to 100 % renewable electricity for its data centers and offices reflects an organizational move to align AI infrastructure with environmental commitments, indicating that corporate leaders are increasingly integrating sustainability into strategic decisions about AI operations (Investors.com, 2025). Likewise, in the human resources domain, AI is being adopted to support green HRM practices that reinforce organizational culture around environmental responsibility, such as energy-smart building systems and talent identification aligned with sustainability values (Zulkarnaini et al., 2025).

In sum, the influence of AI adoption on sustainability practices is evidenced across multiple sectors and geographies. AI contributes to enhanced ESG performance by enabling efficient resource use, data-driven environmental management, and innovation, particularly when embedded within supportive governance and organizational systems. At the same time, sustainability gains are conditioned by governance quality, managerial practices, and strategic integration of AI with broader environmental objectives, and careful consideration of AI's own environmental footprint remains essential.

The Role of Managerial and Ethical Governance Frameworks in Shaping Responsible AI Use for Sustainable Business Outcomes

The integration of artificial intelligence (AI) into organizational processes has heightened the urgency for robust managerial and ethical governance frameworks capable of guiding responsible AI use that aligns with sustainability objectives. Academic reviews and governance analyses indicate that while technical AI capabilities can drive efficiency and analytical precision, the absence of strong ethical and governance structures increases the risk of unintended consequences such as bias, privacy violations, exclusionary impacts, and misalignment with sustainability goals (Ribeiro et al., 2025; AI Governance Consortium, 2024). Governance frameworks thus serve to institutionalize ethical principles such as fairness, accountability, transparency, and human oversight ensuring that AI deployment does not undermine core sustainability commitments.

Scholars emphasize that ethical governance must extend beyond abstract principles to include mechanisms that are actionable, enforceable, and integrated into organizational routines. A systematic review of AI governance literature identifies that many existing frameworks prioritize compliance and technical performance metrics while neglecting deeper ethical concerns like inclusiveness and accountability, highlighting the need for frameworks that foster trust and responsible practices across diverse domains (AI Governance Consortium, 2024). Moreover, research on responsible AI assessment frameworks suggests that integrating ESG principles into AI design and evaluation can help organizations anticipate and manage social and environmental risks, aligning technology development with sustainability imperatives (Green & Patel, 2025). These

frameworks encourage firms to move beyond ad hoc AI policies towards integrated systems of governance that incorporate risk assessment, stakeholder engagement, ethical audits, and continuous monitoring.

The practical significance of managerial and ethical governance is reflected in corporate reporting and sustainability practices. Industry reporting underscores the importance of human oversight in AI-assisted ESG reporting, where automated tools expedite data analysis but require expert judgment and contextual understanding to ensure credibility and alignment with sustainability strategies (Reuters, 2026). This perspective aligns with academic arguments that embedding ethical oversight such as clear accountability roles and transparency protocols enhances the legitimacy and effectiveness of AI-enabled sustainability initiatives.

Case studies further demonstrate how governance frameworks influence sustainable AI outcomes. For instance, organizations that integrate ethical review committees, AI risk assessments, and cross-functional governance structures are better positioned to detect and mitigate issues like algorithmic bias and environmental externalities, translating AI capabilities into sustainable business value. By contrast, firms with weak or fragmented governance often experience challenges such as inconsistent policy enforcement and stakeholder distrust, which can compromise both sustainability outcomes and organizational reputation (Ribeiro et al., 2025).

Critically, the role of managerial leadership cannot be overstated. Leadership commitment to ethical AI establishes a culture that prioritizes sustainability and accountability, enabling governance frameworks to be internalized across organizational levels. This encompasses training programs, performance incentives tied to sustainability metrics, and inclusive decision-making processes that incorporate diverse perspectives in AI deployment strategies.

In conclusion, managerial and ethical governance frameworks are foundational to responsible AI use that contributes to sustainable business outcomes. By embedding ethical principles into governance structures, organizations can navigate the risks associated with AI, enhance stakeholder trust, and ensure that AI systems support environmental and social sustainability objectives in ways that are transparent, accountable, and aligned with broader strategic goals.

The Extent to Which AI-Driven Strategies Contribute to Long-Term Organizational Performance While Supporting Environmental and Social Sustainability Goals

Artificial intelligence (AI) has emerged as a strategic asset that shapes long-term organizational performance by enabling capabilities that extend from operational efficiency to sustainability innovation. A growing body of empirical research demonstrates that AI-driven strategies contribute positively to organizational effectiveness, resilience, and sustainability outcomes, though these contributions are contingent upon integration with broader governance, managerial practices, and strategic vision. Large-scale studies provide quantitative evidence of AI's role in enhancing organizational performance while supporting environmental and social sustainability goals. Research involving tens of thousands of firm-year observations from major markets reveals that AI adoption significantly improves corporate ESG performance including environmental management, social responsibility efforts, and governance practices indicating that AI strategies can influence performance across multiple sustainability dimensions (Liu et al., 2025). Similarly, panel studies show that digital innovation mediated by AI contributes to stronger ESG outcomes, which are

associated with enhanced corporate sustainability performance and competitive advantage (Cui, 2025).

Beyond statistical associations, research into the mechanisms underlying these effects points to several strategic pathways through which AI drives sustainable performance. First, AI facilitates data analytics that enhances environmental management practices, such as emission tracking, energy optimization, and predictive maintenance, thereby reducing operational risks and fostering continuous improvements in sustainability performance. Second, AI supports supply chain transparency and risk management, enabling organizations to identify environmental and social risks upstream and downstream, which contributes to stronger stakeholder relationships and compliance with emerging regulatory frameworks. Third, AI-enabled innovation processes can accelerate green product development, process redesign, and service offerings that appeal to environmentally conscious markets, strengthening competitive positioning while advancing sustainability goals.

Importantly, the relationship between AI-driven strategies and long-term performance is not automatic but influenced by organizational context. Evidence from emerging economies shows that the positive impact of AI on green innovation efficiency is significantly stronger in firms with robust ESG performance, suggesting that governance quality and strategic alignment are critical conditions for realizing sustainable value from AI investments (Smith & Chen, 2025). In other words, AI's contribution to sustainability outcomes is amplified when organizations invest concurrently in governance frameworks, managerial competencies, and organizational cultures that prioritize long-term environmental and social objectives. Moreover, resilient organizations that integrate AI into strategic planning tend to better leverage technological innovation to navigate uncertainty, adapt business models, and sustain performance over time, reinforcing the linkage between AI adoption, sustainability outcomes, and organizational longevity.

Real-world practices illustrate these theoretical insights. For instance, AI-enhanced sustainability reporting tools enable firms to process complex environmental and social data at scale, supporting more accurate disclosures, risk assessments, and stakeholder communications. At the same time, organizational investments in renewable energy for AI infrastructure such as the deployment of renewable electricity for data centers reflect strategic commitments to align AI operations with environmental goals, contributing to long-term performance gains through enhanced reputation and operational efficiencies.

In summary, AI-driven strategies can significantly contribute to long-term organizational performance while supporting environmental and social sustainability goals, provided that AI adoption is aligned with strong governance, managerial leadership, and a strategic commitment to sustainable value creation. AI functions not only as a technology enabler but as a catalyst for organizational transformation when integrated with holistic sustainability and performance management systems.

Empirical Reviews

Cui (2025) conducted an empirical investigation titled “Empirical Analysis of Digital Innovation’s Impact on Corporate ESG Performance: The Mediating Role of GAI Technology,” examining how digital innovation influences corporate environmental, social, and governance (ESG) outcomes through the adoption of generative artificial intelligence (GAI) technology. Drawing on the

resource-based view (RBV) and technology adoption frameworks, the study utilized a panel dataset comprising 8,000 firm-year observations from Chinese markets collected between 2015 and 2023, employing multiple econometric techniques including instrumental variables and propensity score matching to mitigate endogeneity concerns. Data on digital innovation and GAI adoption were sourced from the CMARS and WIND databases, and regression modelling assessed their impact on ESG performance. Results demonstrated that digital innovation significantly enhances ESG metrics, with GAI adoption acting as a crucial mediator in this relationship, particularly by enabling firms to translate technological assets into sustainability outcomes through improved data processing and decision support mechanisms. The conclusion underscored the strategic importance of AI technologies in facilitating sustainable practices and highlighted heterogeneity effects across firm size, industry type, and ownership structure, evidencing stronger effects in larger and more competitive firms. While the study robustly linked GAI adoption to ESG gains, it tended to emphasize quantitative associations without unpacking how governance practices influence ethical AI use, leaving a gap regarding the managerial and ethical governance frameworks that shape responsible AI deployment in sustainability strategies a gap this paper addressed by integrating governance mechanisms with performance outcomes.

Singh et al. (2025) explored the empirical relationship between artificial intelligence and ESG performance specifically within the high-tech manufacturing sector in their study titled “AI and ESG Performance: An Empirical Study of the High-Tech Sector.” Grounded in strategic management and innovation theory, the researchers adopted a mixed methodological approach beginning with qualitative interviews to derive key benefit items of AI integration, followed by a survey of 170 industry practitioners including business heads, managers, and AI/ESG specialists. Data were analyzed using exploratory factor analysis (EFA) and Pareto analysis to categorize the key dimensions through which AI integration influences ESG outcomes. The study identified six thematic benefit factors including proactive governance, environmental preservation, risk management, data management, operational optimization, and stakeholder engagement noting that proactive governance, environmental preservation, and risk management had the most significant impact on improving ESG parameters. Conclusions highlighted that AI contributes to sustainability practices by enhancing strategic governance processes, optimizing operational systems, and engaging stakeholders more effectively. However, because the research focused primarily on perceived benefit structures within one industrial sector and relied on self-reported data, it did not quantitatively link AI capabilities to actual ESG performance metrics or examine external moderating conditions such as regulatory environments issues that the current study addressed through broader multi-sector evidence and advanced statistical modelling.

Xie and Wu (2025), in the study “Artificial Intelligence Technology and Corporate ESG Performance: Empirical Evidence from Chinese-Listed Firms,” examined the effect of AI applications on corporate sustainability outcomes across a large sample of 4,858 Chinese listed companies spanning 2007–2022. The study drew on stakeholder theory and RBV to argue that AI capabilities enable firms to better manage stakeholder expectations and internal resources for sustainability. Employing multiple regression models with robustness checks and endogeneity treatments, data were collected from ESG scoring databases and corporate disclosures, enabling detailed mechanism analysis. Results revealed that AI adoption significantly enhances ESG performance by strengthening environmental innovation and social responsibility practices, though

it may weaken certain governance elements such as internal control effectiveness. Heterogeneity analyses further showed that competitive and technology-intensive firms and those located in economically dynamic regions exhibited stronger positive effects. The authors concluded that AI provides strategic leverage for improving sustainability outcomes, especially through environmental and social dimensions, but noted trade-offs in governance quality. Critically, while this study richly demonstrated contextual variance in AI effects, it did not explore how internal governance frameworks or managerial decision practices affect AI's sustainability contributions, identifying a conceptual gap in understanding the interface between governance systems and AI-driven sustainability performance an aspect this paper targeted by integrating governance dynamics into performance analysis.

Li et al. (2025) research “Artificial intelligence and corporate ESG performance” examined how AI capabilities influence firm sustainability outcomes in emerging markets, employing a comprehensive panel dataset of Chinese listed firms from 2011–2022 to test theoretical propositions drawn from stakeholder theory and organizational resilience frameworks. The authors utilized advanced regression analysis to assess the direct and mediated effects of AI capabilities on ESG scores, incorporating measures of green resilience and organizational resilience as moderating mechanisms. Findings indicated that AI adoption significantly strengthens ESG performance, particularly by fostering green innovation pathways and resilience capacities that enable firms to better adapt and respond to environmental and social pressures. Results also highlighted variation in impact across industries and ownership structures, with non-polluting sectors and state-owned enterprises showing pronounced effects. The conclusion emphasized the strategic value of AI in advancing sustainable outcomes while acknowledging constraints such as data limitations and infrastructure needs. However, although this research illuminated the mediating and moderating roles within AI–ESG dynamics, it did not explicitly evaluate the role of ethical governance policies or managerial decision frameworks in facilitating or constraining these effects a lapse this current paper systematically integrated by examining governance structures as foundational conditions for responsible AI adoption in sustainability contexts.

Theoretical Framework: Stakeholder Theory

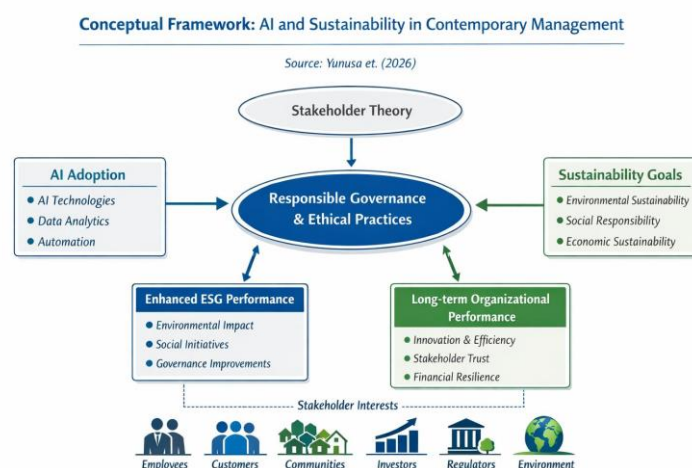
This paper was anchored on theoretical foundation of Stakeholder Theory because it directly connects technology use, ethical governance, sustainability responsibilities, and managerial decision-making within organizations.

Stakeholder Theory was originally proposed by R. Edward Freeman in 1984 in his seminal work *Strategic Management: A Stakeholder Approach*. The central assumption of the theory is that organizations do not exist solely to maximize shareholder wealth but must consider and balance the interests of multiple stakeholder groups, including employees, customers, communities, governments, investors, and the natural environment. The theory assumes that long-term organizational success depends on the quality of relationships an organization maintains with these stakeholders and that managerial decisions should be guided by ethical responsibility, accountability, and fairness rather than narrow financial goals alone. This perspective reframes management as a moral and strategic activity in which firms are expected to justify their actions in relation to broader societal expectations.

The major strength of Stakeholder Theory lies in its strong ethical foundation and its relevance to sustainability and responsible innovation. It provides a powerful basis for understanding why organizations are under increasing pressure to adopt AI responsibly, ensuring transparency, data protection, inclusiveness, and environmental responsibility. The theory supports the idea that AI deployment must consider its impact on workers, society, and ecological systems, not merely its efficiency benefits. It also aligns with contemporary ESG frameworks and sustainability reporting practices, which demand that firms demonstrate accountability to diverse stakeholder groups. Another strength is its flexibility, as it can be applied across sectors, cultures, and organizational contexts, making it suitable for studying contemporary management challenges involving technology and sustainability.

However, the theory also has notable weaknesses. One limitation is the lack of precise guidance on how managers should prioritize conflicting stakeholder interests, especially when the expectations of shareholders, regulators, employees, and communities diverge. This ambiguity can make practical application difficult, particularly in technologically complex domains such as AI governance where trade-offs between innovation speed and ethical safeguards often arise. Critics also argue that Stakeholder Theory can be normatively appealing but empirically difficult to operationalize, because stakeholder interests are dynamic and difficult to measure objectively. Despite these weaknesses, its normative and strategic value remains strong in sustainability and ethics-focused research.

The relevance of Stakeholder Theory to this study is direct and compelling. The topic focuses on AI adoption, sustainability, and contemporary management ethos, all of which involve tensions between technological innovation and social responsibility. Stakeholder Theory provides a solid foundation for arguing that AI should not be adopted solely for productivity or competitive advantage, but also for its capacity to enhance environmental stewardship, protect social well-being, and promote ethical governance. It supports the view that managerial decisions around AI deployment must reflect accountability to stakeholders affected by algorithmic decisions, data use, employment changes, and environmental consequences. By grounding the study in Stakeholder Theory, the paper can convincingly explain why responsible AI governance, sustainability-oriented strategies, and ethical management practices are not optional add-ons but essential obligations in contemporary organizations.



This conceptual framework illustrates a coherent chain of influence in which artificial intelligence adoption operates as a strategic organizational input that shapes sustainability outcomes through the mediating role of responsible managerial and ethical governance, ultimately leading to enhanced long-term organizational performance, all anchored within the logic of Stakeholder Theory. The diagram shows that AI adoption does not directly translate into positive sustainability outcomes in isolation; rather, its effects are conditioned by governance structures that enforce accountability, transparency, and ethical oversight, thereby ensuring that AI systems serve the interests of diverse stakeholder groups such as employees, customers, regulators, communities, and the natural environment.

This positioning reflects the stakeholder perspective that managerial decisions, including technology deployment, must balance competing interests rather than prioritize efficiency or profitability alone. The linkage between responsible governance and sustainability performance emphasizes that ethical leadership and institutionalized oversight transform AI from a purely technical tool into a mechanism for advancing environmental stewardship, social responsibility, and credible governance practices. The connection to long-term organizational performance further reinforces the theoretical logic that organizations earn legitimacy, trust, and sustained success when they align strategic innovations with stakeholder expectations. Overall, the framework demonstrates an interdependent relationship in which AI adoption influences sustainability practices, governance moderates and strengthens this influence, and stakeholder-oriented management provides the normative foundation that integrates all variables into a unified explanation of the emerging business ethos.

MATERIALS AND METHODS

The paper adopted a systematic review methodology based exclusively on secondary data in order to provide a rigorous, transparent, and comprehensive synthesis of existing scholarly evidence on artificial intelligence and sustainability in contemporary management. Peer-reviewed journal articles, authoritative reports, and credible academic publications published between 2018 and 2026 were systematically identified through structured searches across recognized academic databases and repositories, with clear inclusion criteria emphasizing relevance to AI adoption, ethical governance, sustainability outcomes, and stakeholder-oriented management. The review process involved careful screening, quality appraisal, and thematic synthesis of selected studies to ensure that only methodologically sound and conceptually relevant sources informed the analysis. This approach was justified because the topic is rapidly evolving and multidisciplinary, making it necessary to integrate insights from diverse empirical contexts rather than relying on a single primary dataset. By synthesizing existing evidence, the systematic review enhances the depth, credibility, and generalizability of the findings while minimizing researcher bias and allowing the study to build on established knowledge to advance theoretical understanding and practical implications.

RESULTS AND DISCUSSIONS

The findings of this paper indicated that the adoption of artificial intelligence significantly strengthens sustainability practices within contemporary organizations, particularly through improved decision accuracy, operational efficiency, and enhanced ESG outcomes. This result aligns with empirical evidence reported by Zhang et al. (2025) and Li et al. (2025), who demonstrated that

firms with stronger AI capabilities record higher environmental and social performance because data-driven systems improve monitoring, resource allocation, and compliance with sustainability standards. The present findings extend these views by showing that AI does not only enhance technical efficiency but also reshapes organizational priorities toward long-term value creation when deliberately aligned with sustainability goals. While Cui (2025) emphasized the mediating role of generative AI in improving ESG outcomes, the current study further reveals that the effectiveness of AI in sustainability practices depends on how organizations embed such technologies within managerial routines and ethical expectations. Practically, this implies that managers should view AI adoption not merely as an innovation investment but as a strategic tool for advancing environmental stewardship, social responsibility, and credible governance systems.

The paper also confirmed that managerial and ethical governance frameworks play a decisive role in shaping responsible AI use and determining whether AI contributes meaningfully to sustainable business outcomes. This supports the argument of Reuters (2026) that human oversight remains essential in AI-enabled ESG processes to preserve accountability and trust. The results are equally consistent with the conclusions of Winanto (2025), who argued that ethical governance mechanisms such as transparency, accountability, and stakeholder inclusion strengthen the legitimacy of AI deployment. However, unlike studies that treat governance as a peripheral control variable, this paper demonstrates that governance operates as a central mechanism through which AI influences sustainability outcomes. Weak governance structures were found to limit the positive effects of AI adoption, reinforcing the concerns raised by Xie and Wu (2025) regarding potential governance deterioration where AI systems are introduced without adequate oversight. The practical implication is that organizations must institutionalize AI ethics committees, governance policies, and leadership accountability if they expect AI investments to translate into credible sustainability achievements.

With regard to long-term organizational performance, the paper showed that AI-driven strategies contribute positively to both economic resilience and broader sustainability objectives when supported by strong governance and stakeholder-oriented practices. This corroborates Liu et al. (2025), who found that AI adoption enhances firm performance through ESG improvement, and Balcioğlu et al. (2024), who linked AI use to operational efficiency and sustainability gains. The present study deepens this perspective by illustrating that long-term performance benefits are strongest in organizations where AI initiatives are explicitly tied to environmental and social commitments rather than short-term productivity gains alone. This suggests that AI-driven competitiveness is increasingly intertwined with reputational capital, stakeholder trust, and social legitimacy. For managers and policymakers, the implication is clear: sustainable AI strategies offer not only technological advantages but also strategic pathways for strengthening market credibility, stakeholder loyalty, and institutional resilience.

The findings are strongly supported by the Stakeholder Theory adopted in this paper. The theory's central proposition that organizations must balance the interests of multiple stakeholders is reflected in the evidence that responsible AI use enhances sustainability outcomes when firms consider the expectations of employees, communities, regulators, customers, and the environment. The observed influence of governance structures on AI effectiveness reinforces Freeman's (1984) argument that managerial responsibility extends beyond shareholder returns to ethical accountability and long-term societal impact. By demonstrating that AI adoption yields stronger outcomes when guided by stakeholder-oriented governance, the findings validate the relevance of Stakeholder Theory as an

explanatory framework for contemporary management practices involving emerging technologies. The practical implication is that managers who anchor AI strategies within stakeholder-responsive policies are more likely to achieve sustainable performance, while those who ignore stakeholder concerns risk reputational damage, regulatory backlash, and weakened organizational legitimacy.

CONCLUSION

This study concluded that artificial intelligence has become a critical driver of sustainability-oriented management practices in contemporary organizations when its adoption is aligned with ethical governance and stakeholder expectations. The findings demonstrate that AI adoption strengthens environmental, social, and governance outcomes by improving decision quality, operational efficiency, and transparency in organizational processes. However, these benefits are not automatic; they are significantly shaped by the presence of strong managerial and ethical governance frameworks that guide responsible AI use. The study further established that AI-driven strategies contribute to long-term organizational performance when firms integrate sustainability goals into their technological strategies rather than pursuing short-term efficiency gains alone. By grounding these insights within Stakeholder Theory, the paper confirmed that sustainable AI practices thrive when organizations prioritize accountability to diverse stakeholder groups, thereby reinforcing the emergence of a new business ethos centered on responsibility, trust, and long-term value creation.

RECOMMENDATIONS

Arising from the above conclusions, the authors put forward the following recommendations:

- i. Organizations should institutionalize responsible AI governance structures by establishing clear policies, ethical oversight committees, and accountability mechanisms to ensure that AI systems are deployed in ways that protect stakeholder interests and support sustainability goals.
- ii. Managers should deliberately align AI investment decisions with sustainability strategies by prioritizing applications that improve environmental management, enhance social responsibility, and strengthen transparent governance rather than focusing solely on cost reduction or automation.
- iii. Policymakers and regulatory bodies should develop and enforce standardized frameworks for responsible AI and sustainability reporting to guide organizations toward consistent, transparent, and stakeholder-responsive AI practices across industries.

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