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# ESG-Based Corporate Governance and Knowledge Management: Implications for Public Enterprises

## ESG 기반 기업지배구조와 지식경영: 공기업에 대한 시사점

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### 〈 Abstract 〉

Environmental, Social, and Governance (ESG) refers to factors that are important for assessing a firm's social and environmental effect, as well as its governance standards. This paper investigates the relationship between ESG-based corporate governance and SDGs strategy implementation by discussing about incorporating ESG issues into corporate operations. It digs into the advantages and disadvantages of aligning corporate governance with the SDGs, demonstrating the potential for delivering long-term value for both firms and society as a whole. In this paper, we investigate ESG-Based Knowledge Management (ESG-KM), a knowledge management system that incorporates sustainability principles. More specifically, the paper investigates how the synergy between ESG-KM and ESG-Based Corporate Governance (ESG-CG) might influence firms' long-term value creation, stakeholder involvement, and sustainable decision-making. Finally, this paper investigates how public organizations might use knowledge management to improve the implementation and effect of ESG-CG principles, resulting in better sustainable outcomes. Public enterprises may support responsible decision-making, increase stakeholder involvement, and achieve long-term performance by linking ESG principles with corporate governance standards. The paper then explores how ESG-KM might help public firms integrate these concepts into their governance structures. The scientific novelty of this paper resides in its thorough investigation, realistic implementation methodologies, and novel combination of ESG principles, corporate governance, and knowledge management. Furthermore, by providing actionable insights and emphasizing the application of these concepts in the context of public enterprises, the paper makes a valuable contribution to the field of management, propelling the discourse on responsible and sustainable business practices in both the private and public sectors.

Key words: ESG, Corporate governance, Knowledge management, Public enterprises, SDGs

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## 1. Introduction

The incorporation of Environmental, Social, and Governance (ESG) factors into corporate governance has gained substantial traction in recent years (Cho, 2020; Lee et al., 2008; Park et al., 2021). As businesses recognize their role in addressing global challenges such as climate change, social inequality, and responsible governance (World Commission on Environment and Development, 1987), the concept of Sustainable Development Goals (SDGs) has emerged as a guiding framework (United Nations, 2015). Historically, corporate governance systems have prioritized shareholder value over broader socioeconomic and environmental issues. However, as the globe faces enormous issues such as climate change, social inequity, and ethical failings, stakeholders are calling for more responsible and sustainable corporate practices. As a result of this paradigm change, ESG-based corporate governance has emerged as a mechanism of incorporating sustainable development considerations into business decision-making processes. ESG considerations have emerged as significant components in developing corporate sustainability and responsible business practices.

This paper provides an in-depth examination of ESG-based corporate governance and its importance in supporting sustainable practices inside firms. The paper investigates the ESG framework, its relation to the Sustainable Development Goals (SDGs), and the benefits of adopting ESG principles into corporate governance. Furthermore, the paper includes extensive tables to show data and information relevant to ESG performance, reporting requirements, and key stakeholders, providing a comprehensive perspective on ESG-based corporate governance. The following section of this paper delves into the developing area of ESG-based Knowledge Management (ESG-KM) and its implications for sustainable business administration. The paper provides an in-depth examination of ESG-KM, including its theoretical foundations, implementation methodologies, and potential business benefits. The paper illustrates the transformative significance of ESG-KM in achieving long-term sustainable growth and competitive advantage through a thorough evaluation of the research. This paper also investigates the relationship between ESG-KM and ESG-Based Corporate Governance (ESG-CG). It investigates how incorporating ESG concepts into knowledge management procedures might strengthen corporate governance practices, leading to improved sustainability performance and shareholder value. Finally, the paper analyzes how public organizations might use ESG-CG concepts effectively using Knowledge Management (KM).

## 2. ESG-Based Corporate Governance from the Perspective of SDGs Strategies

Corporate governance is critical in developing a company's sustainability policies and commitment to larger social goals. The United Nations' SDGs are 17 SDGs that provide a universally accepted framework for addressing global challenges and fostering sustainable development (United Nations, 2015). They include various dimensions such as poverty eradication, clean energy, gender equality, responsible consumption, and climate action. Aligning corporate governance with the SDGs enables enterprises to focus on specific sustainability challenges while also contributing to a more sustainable and equitable world (Griggs et al., 2013).

The incorporation of ESG considerations into corporate governance has evolved as a means of driving long-term business practices. Environmental, Social, and Governance (ESG) elements are the three basic pillars of sustainability (MSCI, 2022; Refinitiv, 2022; United Nations Environmental Programme Finance Initiative, 2005). ESG-based corporate governance means incorporating these elements into an organization's entire strategy, risk management, and operational processes (Delgado-Ceballos et al., 2022). Corporations can integrate their ambitions with the broader goals of sustainability and the SDGs by examining environmental implications, social responsibilities, and ethical governance practices (Van Zanten & Van Tulder, 2021). Companies must assess and report their performance on key indicators in order to properly integrate ESG issues. <Table 1> provides an overview of some major ESG performance metrics and standardized reporting standards:

Stakeholder engagement is important to the effectiveness of ESG-based corporate governance. Boards of directors must demonstrate a strong commitment to sustainability by including ESG concerns into decision-making processes and reporting progress on a regular basis (Bamahros et al., 2022). Companies should engage with stakeholders such as employees, investors, customers, and communities to better understand their concerns and match SDGs strategies (Montiel et al., 2021). Companies must build reliable means to monitor and report the tangible consequences of their SDGs initiatives since transparent and comprehensive ESG reporting is critical for stakeholders to assess a company's sustainability performance and alignment with the SDGs (van Zanten et al., 2022). <Table 2> summarizes numerous stakeholder engagement initiatives and their importance:

<Table 3> includes the benefits of ESG-Based Corporate Governance in SDGs Strategies (Jebe, 2019; Alsayegh et al., 2020; Wang et al., 2020; Bermejo et al., 2021; Huang, 2021; MacNeil & Esser, 2022): First, organizations that actively seek SDGs through ESG-based governance are viewed as more responsible and ethical, which improves their reputation and stakeholder trust. Second, by taking ESG aspects into account, businesses may more effectively identify and manage risks, resulting in enhanced long-term financial performance and sustainable value generation. Third, investors are increasingly considering ESG performance

〈Table 1〉 Key ESG Performance Indicators and Reporting Standards

| ESG Category | Performance Indicators | Reporting Standards |
|---|---|---|
| Environmental | Carbon emissions, energy efficiency, waste management | Global Reporting Initiative (GRI) Standards |
| Social | Employee diversity, community engagement, labor rights | Sustainability Accounting Standards Board (SASB) |
| Governance | Board independence, executive compensation, ethics | International Integrated Reporting Council (IIRC) |

Sources: MSCI (2022); Refinitiv (2022); United Nations Environmental Programme Finance Initiative (2005)

〈Table 2〉 Stakeholder Engagement Strategies

| Stakeholder | Engagement Strategies | Significance |
|---|---|---|
| Employees | Regular feedback sessions, diversity initiatives | Enhances employee satisfaction and loyalty |
| Investors | ESG-focused investor meetings, transparent reporting | Attracts responsible investors |
| Local Communities | Community outreach programs, partnerships | Builds strong community relationships |

Sources: Montiel et al. (2021); Bamahros et al. (2022); van Zanten et al. (2022)

when making investment decisions, giving companies that follow sustainable strategies greater access to money. Fourth, by demonstrating a strong commitment to the SDGs through ESG-based governance, organizations may attract and retain exceptional employees who are driven by a sense of purpose and social impact.

Despite the benefits listed above, organizations may face hurdles in implementing ESG-based corporate governance (Jebe, 2019; Alsayegh et al., 2020; Wang et al., 2020; Bermejo et al., 2021; Huang, 2021; MacNeil & Esser, 2022). The first difficulty is a lack of standardization. The lack of standardized ESG reporting frameworks and criteria might impede meaningful comparison and benchmarking of company sustainability performance. The second obstacle is short-termism. Many firms are under pressure from short-term financial interests, which may limit their ability to participate in long-term sustainable projects aligned with the SDGs. The third issue is greenwashing. A business may participate in greenwashing, giving the impression of sustainability initiatives when there are no significant activities or impacts. <Table 4> outlines these problems and suggests mitigation options:

To summarize, ESG-based corporate governance provides an effective tool for firms to constructively contribute to society and the environment while pursuing the SDGs. Companies may build long-term value, improve their reputation, and make substantial progress toward a more sustainable future by embracing sustainability and incorporating ESG concepts into their governance structures. As the world confronts serious global challenges, ESG-based corporate governance offers firms a transformative potential to become essential actors in attaining the SDGs.

## 3. The Synergistic Relationship between ESG-Based Knowledge Management and ESG-Based Corporate Governance

### 3.1. ESG-Based Knowledge Management: A Pathway to Sustainable and Responsible Business Practices

Knowledge Management (KM) has emerged as a critical

〈Table 3〉 Benefits of ESG-Based Corporate Governance

| Benefits | Explanation |
|---|---|
| Enhanced Reputation | Demonstrating a commitment to ESG principles improves a company's reputation among stakeholders. |
| Long-term Value Creation | Integrating ESG factors leads to better risk management and long-term financial performance. |
| Access to Capital | Investors are increasingly attracted to sustainable companies, granting them greater access to capital. |
| Talent Attraction | ESG-focused companies appeal to purpose-driven employees, facilitating talent attraction and retention. |

Sources: Jebe (2019); Alsayegh et al. (2020); Wang et al. (2020); Bermejo et al. (2021); Huang (2021); MacNeil and Esser (2022)

〈Table 4〉 Challenges and Mitigation Strategies

| Challenges | Mitigation Strategies |
|---|---|
| Lack of Standardization | Support the development of universal ESG standards. |
| Short-term Financial Pressures | Educate stakeholders on the long-term benefits of ESG. |
| Greenwashing | Implement third-party verification of ESG claims. |

Sources: Jebe (2019); Alsayegh et al. (2020); Wang et al. (2020); Bermejo et al. (2021); Huang (2021); MacNeil and Esser (2022) driver of organizational performance, assisting firms in using their intellectual assets to gain a competitive advantage. KM is a well-established discipline that enables businesses to successfully create, exchange, and use knowledge. However, the changing business world necessitates a more comprehensive approach that incorporates ESG factors into KM methods. Environmental sustainability, social responsibility, and effective governance are all ESG concepts, and incorporating them into KM may create ethical and responsible decision-making, strengthen stakeholder relationships, and contribute to long-term value creation. The triple bottom line approach (Elkington, 1997), which emphasizes the importance of balancing environmental, social, and economic goals, provides a solid foundation for incorporating ESG into KM procedures.

ESG-KM is a sustainable paradigm for business administration that aligns company strategy with societal and environmental principles. The incorporation of ESG principles into knowledge management methods is critical for developing responsible and ethical decision-making, maintaining long-term corporate sustainability, and contributing to a more sustainable global economy (Xia et al., 2022). Organizations can improve their ability to develop, distribute, and use knowledge in ways that line with larger societal and environmental goals by combining ESG principles with knowledge management practices. Furthermore, the firm's Knowledge-Based View (KBV) assists in understanding how knowledge resources can contribute to competitive advantage, while ESG variables influence the creation and exploitation of such resources. ESG-KM deployment requires a methodical methodology that aligns ESG principles with existing KM procedures.

〈Table 5〉 Benefits of key ESG-KM practices

| ESG-KM Practice | Benefits |
|---|---|
| Increased efficiencies and ROI | Integrating ESG data into knowledge management systems can lead to better operational and financial outcomes. By leveraging ESG data, organizations can identify areas for improvement and optimize their processes, resulting in increased efficiencies and higher returns on investment. |
| Improved risk management | Integrating ESG into enterprise risk management can improve the consistency and cohesiveness of sustainability-related risk management. Knowledge management can support this process by providing access to relevant information and expertise, enabling organizations to make informed decisions and mitigate risks effectively. |
| Enhanced stakeholder engagement | ESG-oriented knowledge sharing enhances stakeholder engagement and trust. ESG initiatives emphasize the engagement and collaboration with stakeholders, including employees, suppliers, and communities. Effective knowledge management can facilitate the sharing of information and knowledge among stakeholders, leading to better decision-making and innovation. |
| Better decision-making | ESG-informed knowledge utilization facilitates responsible decision-making. Integrating ESG data into knowledge management systems can provide organizations with a more comprehensive view of their practices, enabling them to make better-informed decisions. By leveraging ESG data, organizations can identify opportunities for improvement and make strategic decisions that align with their sustainability goals. |
| Attracting talent and improving employee loyalty | ESG initiatives can help organizations attract and retain talent by demonstrating their commitment to sustainability and ethical business practices. ESG-driven knowledge governance ensures ethical practices and transparency. Knowledge management can support this process by facilitating the sharing of information and knowledge among employees, leading to better collaboration and innovation. |

Sources: Kalia (2021); BDO (2022); Raphael (2023); Yasar (2023)

ESG-KM is critical to the advancement of sustainable business operations. By adding ESG factors into KM, firms can identify emerging environmental and social risks and opportunities. Furthermore, ESG-KM helps firms to align their goals with the SDGs while also positively contributing to societal and environmental concerns. ESG-KM can improve financial performance, risk management, and long-term sustainability by supporting responsible behaviors and cultivating stakeholder trust. However, problems with data availability, stakeholder alignment, and corporate culture may occur.

Organizations may foster innovation, promote sustainability, and achieve long-term success by leveraging ESG data and knowledge management systems (Kalia, 2021; BDO, 2022; Raphael, 2023; Yasar, 2023). Organizations can benefit from integrating ESG and knowledge management in a variety of ways, including higher efficiencies, improved risk management, increased stakeholder participation, better decision-making, attracting talent, and boosting employee loyalty. For example, ESG-focused knowledge development promotes eco-innovation and long-term R&D. <Table 5> below summarizes significant ESG-KM practices and their associated benefits:

## 3.2. Symbiotic relationship between ESG-KM and ESG-CG

ESG-based knowledge management and corporate governance are intertwined in enhancing organizational openness, accountability, and sustainability (Aldowaish et al., 2022; de Souza Barbosa et al., 2023; Ahmad et al., 2023). Because incorporating an integrated ESG approach into organizations can foster a culture of responsibility, transparency, and long-term value creation, the convergence of ESG principles with knowledge management and corporate governance provides organizations with an unprecedented opportunity to embed sustainability into their core strategies. ESG-KM, in particular, tries to incorporate ESG factors into knowledge generation, distribution, and consumption, whereas ESG-CG entails aligning governance procedures with responsible and ethical standards.

On the one hand, ESG-KM incorporates ESG concepts into multiple knowledge management dimensions, resulting in a framework that encourages responsible decision-making and long-term innovation. To begin, ESG-driven knowledge production entails identifying and developing knowledge assets that address environmental, social, and governance issues. Integrating sustainability-focused R&D techniques ensures that the firm remains nimble and responsive to evolving ESG problems. Second, ESG-oriented knowledge sharing entails spreading sustainability-focused knowledge throughout the firm and its stakeholders. The open exchange of best practices and insights strengthens the organization’s ability to handle ESG problems and establish stakeholder trust. Third, ESG-informed information use guarantees that ESG factors are considered in decision-making processes. This strategy encourages responsible and ethical decisions that are consistent with the organization’s commitment to sustainability and responsible practices. <Table 6> summarizes the ESG-KM dimensions and their functions in fostering sustainable business practices:

ESG-CG, on the other hand, covers governance approaches that prioritize ESG considerations and stakeholder interests. Effective ESG-CG establishes a solid platform for incorporating ESG concepts into the

〈Table 6〉 ESG-KM Dimensions and Role in Sustainable Business

| ESG-KM Dimension | Description | Role in Sustainable Business |
|---|---|---|
| ESG-Driven Knowledge Creation | Identifying and generating knowledge assets that address ESG challenges | - Stimulates eco-innovation and sustainable R&D<br>- Enhances the organization's agility to respond to ESG issues<br>- Aligns knowledge creation with sustainable business objectives |
| ESG-Oriented Knowledge Sharing | Disseminating sustainability-focused knowledge across stakeholders | - Builds stakeholder trust and engagement<br>- Fosters transparency in knowledge dissemination<br>- Encourages adoption of best practices and ESG insights |
| ESG-Informed Knowledge Utilization | Incorporating ESG factors in decision-making processes | - Promotes responsible and ethical decision-making<br>- Aligns organizational strategies with ESG objectives<br>- Drives value creation through sustainability-focused practices |

Sources: Aldowaish et al. (2022); de Souza Barbosa et al. (2023); Ahmad et al. (2023)

organization's strategic decision-making processes. First, environmental governance focuses on reducing an organization's environmental effect through sustainable practices, resource efficiency, and carbon emissions reduction. ESG-KM can help with this dimension by giving insights and data-driven solutions to manage environmental hazards. Second, social governance focuses on cultivating strong relationships with employees, communities, and other stakeholders. ESG-KM contributes to this by allowing firms to integrate social responsibility into their knowledge sharing and consumption procedures. Third, governance for stakeholder accountability promotes transparency, disclosure, and engagement with stakeholders. ESG-KM promotes open communication with stakeholders by increasing data transparency and sharing essential ESG information.

Then, how does ESG-KM help ESG-CG? Integration of ESG-KM and ESG-CG results in a symbiotic relationship that improves organizational sustainability and responsible governance practices. First, ESG-KM gives essential insights on developing ESG trends, allowing boards and management to make educated decisions that match with long-term goals and stakeholder expectations. Second, ESG-KM improves risk identification and analysis by including ESG elements into risk assessments. This enables proactive risk mitigation and ensures the organization's resilience to environmental and social shocks. Third, ESG-KM promotes effective stakeholder involvement by assuring the transmission of accurate and relevant ESG information. Involving stakeholders in the knowledge-sharing process develops trust and productive connections. <Table 7> highlights the major characteristics of synergy between ESG-KM and ESG-CG, which leads to better decision-making, risk management, and stakeholder engagement for enterprises:

To summarize, the integration of ESG-based knowledge management with ESG-based corporate governance is a transformative approach to supporting sustainable and responsible business practices. ESG activities can help with knowledge management processes by promoting data collecting, stakeholder involvement, and risk management. Furthermore, the incorporation of ESG concerns into corporate governance procedures can stimulate innovation through the effective application of knowledge and experience. Organizations may strengthen ESG-CG processes and make informed decisions that match with long-term

〈Table 7〉 The Synergy between ESG-KM and ESG-CG

| Synergy Aspect | Description |
|---|---|
| Informed Decision-Making | - ESG-KM provides critical insights on emerging ESG trends, aiding informed decisions<br>- Aligns decision-making with sustainability objectives and stakeholder expectations<br>- Enhances the board and management' s understanding of ESG implications |
| Risk Management | - ESG-KM incorporates ESG factors into risk assessments, enhancing risk management<br>- Promotes proactive risk mitigation and organizational resilience<br>- Identifies and addresses potential ESG-related risks and vulnerabilities |
| Stakeholder Engagement | - ESG-KM facilitates effective stakeholder engagement through knowledge sharing<br>- Builds trust and collaborative relationships with stakeholders<br>- Enhances communication and transparency in sharing ESG information |

Sources: Created by authors

goals and stakeholder expectations by harnessing ESG-KM's capabilities in knowledge generation, sharing, and utilization. Embracing this symbiotic relationship will not only provide a competitive edge, but will also contribute to the larger aims of a sustainable and fair future. Despite the synergistic potential, integrating ESG-KM and ESG-CG presents hurdles such as data complexity, cultural opposition, and cross-departmental collaboration. Organizations that overcome these obstacles, on the other hand, can grab possibilities for long-term value development, sustained distinctiveness, and increased brand reputation.

## 4. Leveraging ESG-Based Corporate Governance and Knowledge Management for Public Enterprises

In Korea, ESG-based corporate governance is still in its early stages, with few private enterprises adopting it. Applying ESG-based corporate governance to the context of Korean private companies, and even Korean public enterprises, where corporate governance knowledge is quite low, is more difficult. As a result, it is necessary to discuss whether the challenges and mitigation strategies <Table 4>, benefits of key ESG-KM practices <Table 5>, ESG-KM dimensions and role in sustainable business <Table 6>, and synergy between ESG-KM and ESG-CG <Table 7> are applicable to both public and private enterprises, or whether there are fundamental differences.

A public corporation is essentially an entity that aims to be profitable, efficient, and public all at the same time. Thus, public enterprises play an important role in creating the socioeconomic landscape and bear a greater duty to prioritize ESG issues in their operations. The integration of ESG-KM and ESG-CG provides an opportunity for public organizations to improve their governance procedures and knowledge-sharing processes, ultimately leading to better-informed decisions that address environmental and social concerns.

The following tactics can be used by public enterprises to drive the application of ESG-CG principles: First, ESG-Informed Decision-Making: KM makes it easier to gather, analyze, and disseminate ESG-related information to assist board decision-making processes. By incorporating ESG data into board deliberations, public firms can make informed decisions that are consistent with long-term goals and stakeholder expectations. Second, Stakeholder Engagement Through Knowledge Sharing: Effective KM platforms enable public firms to share knowledge about sustainability with stakeholders. Transparent communication with stakeholders builds confidence, facilitates debate, and encourages active engagement in creating corporate governance standards. Third, establish comprehensive ESG-Knowledge Governance to ensure that the correct knowledge reaches the right stakeholders at the right time. The identification, appraisal, and application of ESG knowledge for responsible decision-making is guided by effective governance procedures.

As a result, as indicated in <Table 8>, we can draw numerous implications of ESG-KM and ESG-CG for public organizations:

The first implication is long-term decision-making. ESG-KM provides useful insights and data on ESG aspects to public organizations, allowing for better informed and responsible decision-making. Public firms can discover possibilities for sustainable growth and avoid possible risks connected with environmental and social repercussions by including ESG issues into board meetings and strategy formulation. The second implication is stakeholder participation and transparency. ESG-KM and ESG-CG work together to promote stakeholder involvement and transparency. ESG-KM can be used by public companies to transmit sustainability-focused knowledge to stakeholders, ensuring active participation in decision-making processes and creating trust among the general public, investors, and other stakeholders.

The third implication is vulnerability to ESG risks. Climate change consequences, community relations, and regulatory compliance are just a few of the ESG risks that public organizations face. ESG-KM aids in the identification and understanding of these risks, whilst

〈Table 8〉 Implications of ESG-KM and ESG-CG for Public Enterprises

| Aspect | Implications |
|---|---|
| Sustainable Decision-Making | - Enhanced decision-making through ESG insights<br>- Identification of sustainable growth opportunities<br>- Mitigation of ESG-related risks |
| Stakeholder Engagement | - Improved stakeholder engagement through transparency<br>- Active involvement of stakeholders in decision-making<br>- Increased public trust and support for public enterprises |
| Resilience to ESG Risks | - Better understanding and management of ESG risks<br>- Proactive measures to address environmental and social challenges<br>- Strengthened organizational resilience |
| Alignment with Public Welfare | - Socially responsible practices aligned with public welfare<br>- Addressing public concerns and priorities<br>- Contribution to sustainable development and government objectives |
| Long-Term Value Creation | - Optimized resource allocation and operational efficiency<br>- Improved financial and non-financial performance<br>- Long-term value creation and sustainability outcomes |
| Policy and Regulatory Implications | - Potential influence on policy development and incentives<br>- Recognition and support for ESG-integrated public enterprises<br>- Promotion of a culture of sustainability within the public sector |

Sources: Created by authors

ESG-CG ensures that appropriate governance mechanisms are in place to handle them. This synergy enables public organizations to build resilience and tackle ESG-related risks proactively. Alignment with public good is the fourth implication. Public enterprises have a social responsibility to connect their goals with the well-being of the communities they serve. Public firms can improve their societal effect, address public concerns, and promote sustainable development by incorporating ESG concepts into knowledge management and corporate governance in accordance with government policies and global sustainability agendas.

The fifth implication is the production of long-term value. The integration of ESG-KM and ESG-CG leads to the production of long-term value for public organizations. By implementing sustainable practices, these organizations can improve resource allocation, operational efficiency, and stakeholder relationships, resulting in improved financial and non-financial performance over time. Sixth, we can make policy and regulatory conclusions. In public enterprises, the synergy between ESG-KM and ESG-CG may impact the formulation of laws and regulations that encourage sustainable practices and responsible governance. Policymakers can recognize and reward public firms that demonstrate a commitment to ESG integration, thereby creating a larger culture of sustainability throughout the public sector. However, hurdles to implementing ESG-KM and ESG-CG in public companies include data availability, resource limits, and stakeholder resistance to change.

However, with strategic planning, capacity building, and leveraging existing sustainable frameworks and standards, public organizations can overcome these challenges. <Table 9> provides a concise overview of the challenges faced by public enterprises in integrating ESG-KM and ESG-CG, emphasizing the importance of long-term value creation, stakeholder engagement, risk management, and sustainable decision-making, while addressing potential obstacles and strategies for successful implementation:

To summarize, the incorporation of ESG-CG concepts via Knowledge Management provides a strategic method for public organizations to embrace sustainability, accountability, and transparency. Public organizations can traverse the complexity of sustainable governance more successfully by employing KM to educate decision-making, engage stakeholders, and govern ESG knowledge. This integrated strategy strengthens the commitment of public enterprises to societal welfare, builds confidence among stakeholders,

〈Table 9〉 Challenges and Effective Implementation for Public Enterprises

| Challenges | Effective Implementation |
|---|---|
| Data Availability | – Develop robust data collection and monitoring mechanisms<br>– Collaborate with stakeholders for data sharing and analysis<br>– Invest in technology and data analytics capabilities |
| Resource Constraints | – Prioritize ESG integration in organizational budgeting<br>– Identify and allocate resources efficiently<br>– Seek partnerships and support from external stakeholders |
| Stakeholder Resistance to Change | – Communicate the benefits and importance of ESG integration<br>– Engage stakeholders in decision-making and implementation<br>– Demonstrate positive outcomes and impact of ESG initiatives |

Sources: Created by authors

and ensures a sustainable and responsible future.

# 5. Conclusions

## 5.1. Main findings of the present study

ESG comprises essential criteria for analyzing a company's influence on society and the environment, as well as its governance standards. In recent years, ESG issues have gained popularity as critical aspects in assessing business sustainability and responsibility. ESG-based corporate governance is an effective instrument for firms to achieve long-term value while contributing to the SDGs. Companies may improve their reputation, attract ethical investors, and play a critical role in creating positive social and environmental change by implementing ESG principles.

As a result, this paper examined ESG-CG and its significance in encouraging sustainable behaviors within enterprises. The paper delves into the ESG framework, its connection to the SDGs, and the benefits of incorporating ESG principles into corporate governance by offering an overview of important ESG-CG principles like as transparency, accountability, and stakeholder engagement. Furthermore, the paper included specific implementation ideas to help firms align their operations with the SDGs. The paper used detailed tables to present data and insights relevant to ESG performance, reporting standards, and important stakeholders in order to provide a holistic outlook on ESG-CG.

Next, this paper explored the complementary link between these two critical components and the influence of their combined impact on organizational sustainability. ESG-CG is a complete framework for integrating ESG concepts into governance procedures, whereas Knowledge Management enables the effective use of corporate knowledge. Integrating ESG concepts into knowledge management techniques has the potential to improve organizational decision-making, stimulate innovation, and connect commercial plans with societal and environmental goals.

## 5.2. Implications of the study

Organizations may boost their competitiveness while also contributing to a more sustainable and inclusive global economy by implementing ESG principles into their knowledge management strategies. As a long-term paradigm for business administration, ESG- KM represents a disruptive approach to responsible business practices, allowing firms to integrate their plans with societal and environmental priorities. Companies can gain long-term competitive advantage and sustainable growth by incorporating ESG principles into KM processes. ESG-KM is a critical enabler of responsible decision-making and value creation as ESG factors continue to impact the global corporate landscape. As a result, integrating ESG-CG concepts with KM provides numerous benefits, including improved decision-making, stakeholder trust, and long-term value development.

The incorporation of ESG principles, in particular, into knowledge management procedures and corporate governance, has significant consequences for public businesses. Public firms serve an important role in serving the public interest and are increasingly under pressure to operate properly. By developing a culture of accountability and openness, public organizations can more effectively manage difficult ESG concerns, guaranteeing alignment with society expectations and positively contributing to the overall welfare of the people they serve.

This paper investigated how public firms might use ESG-CG concepts effectively using KM. Public firms can make ethical decisions, involve stakeholders, and achieve long-term performance by integrating ESG factors into corporate governance processes. Strategies such as ESG-informed decision-making, information sharing for stakeholder participation, and ESG-knowledge governance were highlighted in the report.

Public enterprises can use knowledge management to strengthen their commitment to societal welfare and to promote sustainable and responsible governance. Furthermore, combining ESG-based knowledge management with ESG-based corporate governance offers transformative prospects for public organizations. Public enterprises can accomplish sustainable decision-making, stakeholder engagement, and value creation by utilizing this synergy, meeting their societal responsibilities and enhancing the well-being of the communities they serve. The route to a more sustainable and responsible future needs a consistent commitment to the integrated approach of ESG-KM and ESG-CG within the public enterprise landscape.

However, public organizations may confront problems such as complications in data administration, cultural resistance, and resource limits. Overcoming these obstacles necessitates a dedication to organizational reform and continual improvement. Governments and regulatory authorities can provide legislative frameworks, financing support, and capacity-building programs to incentivize and support public firms in implementing ESG-CG practices through KM.

### 5.3. The scientific novelty and strength of the study

This study adds substantial scientific novelty to the field of management by focusing on ESG issues, corporate governance, and knowledge management. The paper's uniqueness stems from its full analysis and integration of these essential components, which results in a more holistic understanding of how organizations may drive sustainable practices and responsible decision-making. First, the article creatively incorporates ESG into the framework of the Sustainable Development Goals (SDGs). This link emphasizes the broader societal impact and purpose that ESG activities can serve. This viewpoint lends weight to the incorporation of ESG principles by demonstrating how firms may directly contribute to global sustainability goals.

Second, the article takes an unconventional approach by highlighting the incorporation of ESG concepts within corporate governance frameworks. While environmental, social, and governance (ESG) factors have received academic and practical attention, this paper goes beyond a simple overview by digging into the practical implementation of ESG concepts within governance frameworks. It provides a roadmap for firms wanting to integrate their governance processes with sustainability goals by defining tangible measures and analyzing real-world ramifications. Third, the research offers a novel paradigm for combining ESG-KM with ESG-CG. This collaboration uses knowledge management procedures to improve decision-making, stakeholder involvement, and risk management in the context of ESG considerations. This integrated approach provides a fresh look at how businesses might maximize their knowledge resources to drive responsible and sustainable behaviors.

Fourth, by focusing on the application of ESG-CG concepts to public firms, this study broadens its originality. When it comes to aligning with ESG objectives, public sector businesses frequently confront particular hurdles. This gap is bridged by the paper, which provides insights into how ESG-KM can enable public organizations to make informed decisions, involve stakeholders, and create value for both the organization and society. This component expands on previous studies by customizing ESG-CG integration to the specific situation of public firms. Fifth, in addition to theoretical exploration, the study offers actionable implementation solutions for enterprises to effectively use ESG-CG and ESG-KM principles. This practical factor provides uniqueness by guiding academics on how to operationalize these ideas within their organizations rather than just contemplating concept integration. Finally, the study recognizes and addresses issues such as data complexity, stakeholder opposition, and resource restrictions. This practical assessment of problems and mitigation options adds uniqueness by providing a well-rounded view on the real-world obstacles organizations may face when implementing ESG-CG and ESG-KM procedures.

To summarize, the strength of this study resides in its thorough investigation, realistic implementation methodologies, and novel combination of ESG principles, corporate governance, and knowledge management. Furthermore, by providing actionable insights and emphasizing the application of these concepts in the context of public enterprises, the paper makes a valuable contribution to the field of management, propelling the discourse on responsible and sustainable business practices in both the private and public sectors.

## 5.4. Limitation of the study

While this study provides essential insights and novel perspectives on the integration of ESG principles with corporate governance and knowledge management, it is vital to recognize several limits that should be considered by both readers and possible reviewers. To begin, in terms of scope and depth, due to the complexity and range of the issues discussed, the article presents an overview of ESG-CG, ESG-KM, and their synergistic relationship. However, the level of investigation for each component may leave researchers desiring more detailed insights into specific issues.

Second, in terms of generalizability, the article primarily tackles the conceptual integration of ESG principles, corporate governance, and knowledge management. The practical application of the offered solutions may differ depending on industry, organizational size, and geographical setting. Variations in the real world may have an impact on the feasibility and success of the recommended implementation solutions. Third, in light of the paucity of actual evidence, the study is more theoretical in nature, depending on existing literature and conceptual frameworks. While it provides practical techniques, the lack of empirical case studies or quantitative data analysis makes it difficult to fully assess the effectiveness and consequences of the offered ways.

Fourth, the article assumes an ideal implementation of an ESG-based knowledge management and corporate governance integration process that is reasonably straightforward.

However, in practice, businesses frequently face difficulties, resistance to change, and implementation challenges that were not adequately addressed in the curriculum. Fifth, in the context of public enterprises, the discussion on public enterprises is informative, but its relevance may be limited to locations or jurisdictions where such entities are common. The study may not fully address the unique issues that public firms face in various circumstances.

Sixth, because ESG and governance practices are continuously evolving due to changing rules, industry standards, and stakeholder expectations, the paper's analyses and tactics may need to be revised on a regular basis to reflect the most recent advances in these domains' standards and practices. The seventh section of the study focuses on the advantages and potential of combining ESG principles and knowledge management with corporate governance. A more balanced study of counterarguments, on the other hand, could have highlighted potential downsides, criticisms, or counterarguments to present a more complete picture.

Eighth, while the paper discusses the societal and ethical ramifications of ESG integration, it might have gone deeper into the potential unintended repercussions or ethical quandaries that may come from aligning business operations with external norms and objectives. Ninth, while the report emphasizes the synergy between ESG-KM and ESG-CG, the dynamic nature of knowledge management and developing technology may impair the success of these strategies over time. The paper's tenth section focuses on the organizational benefits of merging ESG-KM and ESG-CG. A more in-depth examination of the viewpoints and expectations of various stakeholders, including as employees, investors, and local communities, would provide a more comprehensive picture.

To summarize, while the study provides novel insights into the integration of ESG principles, corporate governance, and knowledge management, these limitations should be acknowledged in order to ensure a fair and informed understanding of the concepts and techniques offered. Addressing these constraints through additional research, empirical studies, and continuous development of the offered techniques would lead to a more robust and comprehensive management discourse.

## 5.5. Recommendation for future research direction

Building on the analytical investigation of integrating ESG principles with corporate governance and knowledge management, there are several possible future study directions that might help to a deeper understanding and practical application of these concepts. The following research directions and recommendations are proposed. The first study aim is to perform extensive empirical investigations on the actual impact of incorporating ESG principles into knowledge management methods and corporate governance in various industries and organizational settings. Quantitative analysis and case studies can provide concrete proof of the proposed solutions' effectiveness, obstacles, and consequences.

Second, given the dynamic nature of ESG trends and governance practices, longitudinal studies tracking the growth of businesses' ESG integration through time can provide useful insights into the long-term effects on performance, stakeholder engagement, and sustainable value generation. The third study topic is to investigate how the integration of ESG principles and knowledge management differs across different cultural and regional contexts. A cross-cultural analysis can look into the impact of cultural values, regulatory settings, and societal norms on the implementation and outcomes of these techniques.

The fourth research objective is delving further into the opinions of numerous stakeholders like as employees, investors, customers, and local communities. This multi-stakeholder research can shed light on stakeholder expectations, motivations, and reactions to firms' ESG initiatives and knowledge management processes. The fifth study priority is to investigate the ethical consequences of aligning company activities with external ESG standards. Potential ethical quandaries, conflicts of interest, and unintended effects of prioritizing ESG objectives and knowledge management in corporate governance, for example, can be investigated. The sixth study agenda compares businesses that have effectively integrated ESG principles and knowledge management to those that have not, measuring disparities in financial performance, innovation, stakeholder interactions, and overall sustainability outcomes.

The seventh research agenda will look into the role of emerging technologies like artificial intelligence, blockchain, and big data analytics in improving the integration of ESG principles and knowledge management. It is possible to investigate how these technologies might help with data gathering, analysis, and reporting for ESG-related projects. The eighth research agenda is to investigate how collaboration across organizations, industry groups, and regulatory agencies can help organizations implement ESG-based corporate governance and knowledge management. Collaborative network research might concentrate on knowledge sharing, best practices, and collaborative initiatives to address global sustainability concerns. The ninth research agenda calls for the creation and validation of comprehensive measurement and reporting systems for assessing the effectiveness and impact of ESG integration with knowledge management and corporate governance. This measuring and reporting frameworks research may contain standardized measurements, indices, and benchmarks.

The tenth research agenda focuses on the implications for education, training, and public policy. One study will look into the role of education and training in helping stakeholders, including as board members, executives, employees, and investors, gain a better understanding of ESG concepts and knowledge management. Another study will look into the impact of government policies, regulations, and incentives on encouraging firms to implement ESG-CG concepts through KM. The harmonization of policy frameworks with sustainable business practices could be the focus of research. Finally, the obstacles and possibilities that small and medium-sized firms (SMEs) confront when combining ESG principles with knowledge management and corporate governance might be discussed. Strategies for making ESG-KM and ESG-CG accessible and feasible for smaller enterprises can also be researched.

In conclusion, this paper lays the groundwork for future research into the integration of ESG principles, knowledge management, and corporate governance. Adopting these proposed paths can help to provide a more thorough understanding of the benefits, limitations, and implications of these integrative approaches, resulting in better informed decision-making, enhanced sustainable practices, and beneficial social effect.

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## 저 자 소 개

### 최 충 익 (Choongik Choi)

서울대학교에서 도시계획학 박사학위를 취득하고(2004), 현재 강원대학교 행정학과 교수로 재직하고 있다. 주요 관심분야는 재난관리, 환경정책, 도시재생, 빅데이터 분석 등이며 주요 논문으로는 “An Analysis of the Effects of Development-Restricted Areas on Land Price Using Spatial Analysis”(2021, LAND), “Factors Contributing to the Relationship between Driving Mileage and Crash Frequency of Older Drivers”(2019, SUSTAINABILITY) 등이 있다.

### 이 광 훈 (Kwang-Hoon Lee)

스위스 로잔대학교에서 행정학 박사학위를 취득하고(2014), 현재 강원대학교 행정학과 부교수로 재직하고 있다. 주요 관심분야는 지방자치, 지역혁신, 정부규제, 성과평가 등이며 주요 논문으로는 “The Distribution of Work-Life Integration against COVID-19 and its Implications: Focusing on Remote Work in Switzerland”(2023, JDS), “Does the introduction of qualitative evaluation for RD projects actually increase qualitative performance? A DID analysis”(2020, AJTI) 등이 있다.

〈 국문초록 〉

# ESG 기반 기업지배구조와 지식경영: 공기업에 대한 시사점

최충익*, 이광훈**

환경, 사회, 거버넌스, 즉 ESG의 개념은 기업이 사회와 환경에 미치는 영향과 거버넌스 관행을 평가하는 데 중요한 요소를 포괄한다. 최근 ESG를 기업 경영에 통합하는 것이 큰 주목을 받고 있다. 이 논문은 ESG 기반 기업 거버넌스와 SDG 전략의 실행 사이의 중요한 연결고리를 탐구하였다. 또한 기업 거버넌스를 SDG에 맞추는 것과 관련된 이점과 도전 과제를 살펴보고 궁극적으로 기업과 사회 전반을 위한 지속 가능한 가치 창출의 잠재력을 강조하였다. 이와 동시에 지식 관리(KM)는 기업이 지적 자산을 활용하여 경쟁 우위를 확보할 수 있도록 지원하는 조직 성공의 핵심 동인으로 부상하고 있다. 이 논문에서는 지속 가능성 원칙을 지식 관리 프레임워크에 통합하는 ESG 기반 지식 관리(ESG-KM)에 대해 살펴보았다. ESG 기반 지식 관리는 기업 전략을 사회 및 환경적 가치와 연계하는 지속 가능한 경영 패러다임을 의미한다. 조직은 KM 관행에 ESG 원칙을 통합함으로써 경쟁력을 강화하는 동시에 보다 지속가능하고 포용적인 글로벌 경제에 기여할 수 있다. 다음으로, 이 논문은 이 두 가지 필수 요소 간의 상호 보완적인 관계와 조직의 지속가능성에 미치는 영향을 탐색하였다. 보다 구체적으로, 이 논문에서는 ESG 기반 지식 경영(ESG-KM)과 ESG 기반 기업 지배구조(ESG-CG) 간의 시너지가 기업의 지속 가능한 의사결정, 이해관계자 참여, 장기적 가치 창출에 어떤 영향을 미칠 수 있는지 살펴보았다. 마지막으로, 이 논문은 공기업이 KM을 활용하여 ESG-CG 원칙의 이행과 영향을 강화하여 지속 가능성 성과를 개선할 수 있는 방법을 살펴보았다. 환경, 사회, 거버넌스(ESG) 고려 사항을 기업 거버넌스 관행과 연계함으로써 공기업은 책임 있는 의사결정을 촉진하고 이해관계자 참여를 강화하며 지속 가능한 성과를 달성할 수 있다. 이 논문에서는 투명성, 책임성, 이해관계자 참여와 같은 주요 ESG-CG 원칙에 대한 개요를 바탕으로, ESG-KM이 이러한 원칙을 공기업의 거버넌스 구조에 통합하는 것을 어떻게 지원할 수 있는지를 논의하였다.

주제어: ESG, 기업지배구조, 지식경영, 공기업, 지속가능발전목표

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