Knowledge Management Processess and Cultural Context in ESG Disclosure: A SIPOC Conceptual Framework

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Abstract: Environmental, Social, and Governance (ESG) disclosure has become a central organisational practice through which sustainability-related knowledge is created, shared, and communicated to internal and external stakeholders. While prior research has extensively examined ESG reporting from regulatory, compliance, and performance-oriented perspectives, comparatively limited attention has been paid to the role of organizational culture in shaping the underlying knowledge management (KM) processes that support disclosure transparency. This gap is salient in culturally diverse organisational contexts, where ESG information depends on coordinated knowledge flows across hierarchical, functional, and inter-organisational boundaries. This paper develops a conceptual framework that integrates core KM processes with Hofstede's cultural dimensions, focusing on power distance and uncertainty avoidance, to explain variations in ESG disclosure practices. A Suppliers, Inputs, Processes, Outputs, Customers-SIPOC based perspective is adopted as a KM mapping tool that structures sustainability-related knowledge flows from their sources, through organisational processing, to disclosure outputs and stakeholder use. Organisational culture is positioned as a contextual moderator influencing how ESG knowledge is sourced, shared, formalised, and validated. To support the conceptual development, a structured content analysis approach is proposed using a SIPOC-aligned coding scheme that captures key KM activities—knowledge sourcing, codification, sharing, and disclosure—in ESG reports. The coded indicators are interpreted through the lens of power distance and uncertainty avoidance, enabling a culturally sensitive understanding of ESG knowledge transparency. The framework is grounded in a logical reasoning mechanism that explains ESG disclosure outcomes as emerging from the interaction between knowledge management processes and organizational culture, with disclosure quality reflecting the effectiveness of sustainability-related knowledge management. By foregrounding cultural context in ESG-related knowledge management, this study contributes to KM research by clarifying how organizational culture shapes transparency and accountability in sustainability reporting. The proposed framework further provides a foundation for future empirical research through multi-country comparative analyses of ESG-related knowledge flows based on publicly available reports.

Keywords: Knowledge management, Organisational culture, ESG reporting, Cultural dimensions, Quality management

1. Introduction

Environmental, Social, and Governance (ESG) disclosure has increasingly become a central organisational practice through which sustainability-related information is generated, structured, and communicated to stakeholders. Beyond its regulatory and reporting functions, ESG disclosure represents a knowledge-intensive activity, involving the creation, sharing, validation, and integration of sustainability-related knowledge across multiple organisational units and external partners. However, the dominant body of ESG research has largely focused on regulatory compliance, reporting standards, and performance indicators, with comparatively limited attention given to the knowledge management (KM) processes that underpin the production and dissemination of ESG information. This limitation is particularly significant in complex organisational settings where ESG knowledge flows across hierarchical, functional, and inter-organisational boundaries. Within such environments, organisational culture may play a critical role in shaping how sustainability-related knowledge is exchanged, validated, and ultimately disclosed.

Addressing this gap, the present study develops a conceptual framework that integrates KM processes, organisational culture, and a SIPOC-based knowledge flow perspective to explain variations in ESG disclosure transparency. The framework specifically focuses on the Hofstede cultural dimensions of power distance and uncertainty avoidance, which influence organisational hierarchy, participation in knowledge sharing, and the formalisation of reporting processes. Five core research propositions guide the conceptual development: (P1) ESG disclosure quality is positively associated with the effectiveness of organisational KM processes; (P2) lower power distance facilitates decentralised ESG knowledge sharing and employee participation, supporting greater transparency; (P3) higher uncertainty avoidance increases the formalisation and standardisation of ESG knowledge through policies and management systems; (P4) a SIPOC-based knowledge flow perspective enhances the visibility of ESG knowledge dependencies across organisational and inter-organisational boundaries; and (P5) cultural context moderates the relationship between KM processes and ESG disclosure outcomes.

By integrating KM theory, cultural analysis, and process-mapping logic, the study contributes to a more comprehensive understanding of ESG disclosure as a knowledge management phenomenon. The remainder of the paper presents the theoretical background, outlines the methodological approach, discusses the conceptual results, and concludes with implications for future empirical research.

2. Theoretical Background

ESG disclosure is a knowledge-intensive practice for creating, structuring, and communicating sustainability information to stakeholders. In this context, knowledge management (KM) plays a critical role in supporting these processes, providing the tools, databases, and collaboration platforms necessary to enhance the transparency, credibility, and accessibility of ESG information (Krawczyk, 2025). By framing ESG reporting within KM, organisations can not only meet regulatory and performance requirements but also leverage structured knowledge flows to systematically manage sustainability-related information, ensuring it is actionable and effectively disseminated.

In addition, KM contributes to the co-creation of sustainable value, highlighting knowledge approaches that support stakeholder engagement and enhance transparency in sustainability reporting (Berardi et al., 2025). The intersection of KM and corporate social responsibility (CSR), which closely aligns with ESG principles, underscores the challenges of translating knowledge into practice. Integrating KM with CSR requires organisations to formalise processes for capturing, sharing, and validating sustainability-related knowledge, thereby strengthening both reporting quality and organisational learning (Krawczyk, 2022). These perspectives collectively situate ESG disclosure as a domain where knowledge management is both foundational and strategic, providing mechanisms to structure complex information flows across organisational units.

Cultural differences further influence how ESG knowledge is generated and shared. Hofstede's cultural dimensions—such as power distance, uncertainty avoidance, individualism, and masculinity versus femininity—help explain variation in ESG disclosure practices across countries and organisational contexts (Hofstede et al., 2010). Empirical evidence shows that cultures characterised by individualism and femininity are associated with higher levels of ESG disclosure, highlighting the importance of cultural values in shaping transparency and communication behaviours (Helfaya et al., 2023). Similarly, studies on cultural and gender diversity emphasise that cultural context affects how organisations share knowledge related to ESG activities, particularly in multi-actor environments such as European banks, where knowledge flows cross hierarchical and functional boundaries (Paolone et al., 2024).

Recent research and policy frameworks further stress that KM processes underpin the effective management and communication of sustainability-related information. The OECD Corporate Governance Factbook (2025) provides a practical illustration of how sustainability-related disclosure requirements are embedded in formal governance frameworks, demonstrating that structured KM processes are essential for managing ESG information and ensuring its accountability to stakeholders. Collectively, these studies justify integrating KM and cultural perspectives to develop frameworks that explain variations in ESG disclosure quality and transparency.

Despite the growing attention to ESG reporting, much of the existing literature remains compliance-driven and heavily focused on quantitative indicators, such as regulatory metrics and performance benchmarks. This approach, while useful for standardisation, tends to overlook the systemic and knowledge-intensive nature of

ESG practices, including the ways in which sustainability-related knowledge is created, shared, and internalised within organisations. Klingenberg and Rothberg (2022) argue that effective sustainability management requires KM models, such as the SECI (Socialisation, Externalisation, Combination, Internalisation) framework, to enable organisations to leverage tacit knowledge and shared understanding for sustainable practices. This perspective underscores that ESG disclosure is not merely a matter of compliance reporting but a complex knowledge transformation process embedded in organisational routines and culture.

Similarly, organisational learning has been shown to influence ESG performance, with knowledge creation and sharing processes shaping how sustainability initiatives are implemented. However, the role of learning in structuring ESG disclosure processes remains underexplored (Xia, 2022). Internal ESG management activities, including decision-making and communication practices, also impact organisational trust and employee commitment, pointing to intra-organisational knowledge dynamics that are critical for effective sustainability reporting (Jeong, Sung, & Shin, 2025). These studies underscore that ESG reporting is inherently a knowledge-intensive process, relying on effective codification, dissemination, and validation of sustainability-related information within organisations. Nevertheless, the scientific literature reveals that, despite its rapid growth, ESG disclosure research remains conceptually fragmented, with limited integration of knowledge management processes to fully explain variations in transparency, accountability, and organisational outcomes (Bosi *et al.*, 2022).

This fragmentation call for conceptual frameworks that integrate cultural dimensions, knowledge flows, and process-oriented perspectives. Such frameworks may move beyond purely indicator-focused approaches, offering a more comprehensive understanding of how ESG-related knowledge is generated, shared, and communicated across complex, multi-actor organisations.

Notably, power distance, an important cultural dimension, influences how knowledge management processes are structured, how people participate in them, and how transparent they are. In turn, this can help explain systematic differences in ESG disclosure practices. For example, as shown in Table 1, in low power distance contexts the weaker hierarchical barriers encourage more participatory and decentralised knowledge flows. This often allows suppliers to be more involved in ESG reporting, strengthens cross-functional governance, and leads to clearer disclosure of internal decision-making processes, ultimately supporting greater transparency in sustainability reporting. By contrast, in high power distance environments, authority and information tend to be more centralised. As a result, ESG disclosures often highlight formal hierarchical approval structures and top-down validation processes, with sustainability information typically passing through several managerial levels before it is communicated externally.

Table 1: ESG information linked to Power Distance (PD) dimension of Hofstede's cultural theory

ESG information	Cultural dimension PD
Supplier participation in ESG reporting	Low PD
Cross-functional ESG governance	Low PD
Disclosure of internal decision processes	Low PD
Transparency about ESG shortcomings	Low PD
Hierarchical approval descriptions	High PD

These differences indicate that power distance shapes not only governance arrangements in ESG reporting but also how sustainability knowledge is shared, validated, and communicated within organisations. Prior research similarly shows that national cultural characteristics influence corporate sustainability strategies and disclosure practices, highlighting the role of cultural context in shaping transparency in ESG reporting (Tehrani *et al.*, 2021; Lu and Wang, 2021).

Moreover, variations in ESG disclosure practices can also be interpreted through the lens of uncertainty avoidance (UA) within Hofstede's cultural dimensions. For instance, as shown in Table 2, in organizational contexts characterized by high uncertainty avoidance, firms tend to rely more strongly on formal structures, procedures, and measurable indicators in order to reduce ambiguity in sustainability reporting. This tendency is reflected in the use of standardized ESG reporting templates, a higher number of quantitative indicators relative to narrative explanations, and frequent references to recognized regulatory or normative frameworks (e.g. the Corporate Sustainability Reporting Directive-CSRD, ISO standards, or the Voluntary Sustainability Reporting Standard for SMEs-VSME). Additionally, organizations operating in high-UA contexts typically provide detailed and formalized disclosures on ESG-related risk management, emphasizing structured governance and control mechanisms. In contrast, in low-UA contexts, ESG disclosures may exhibit greater flexibility, with more narrative interpretation of sustainability objectives and less rigid reporting structures. These differences suggest that uncertainty avoidance shapes the degree of formalization, standardization, and quantification of sustainability knowledge within ESG reporting practices. Empirical studies similarly highlight that national cultural characteristics influence how organizations structure sustainability disclosures and adopt formal reporting frameworks to manage uncertainty in stakeholder communication (Hassanein, Bani-Mustafa and Nimer, 2024; Hsiao et al., 2024).

Table 2: ESG information linked to Uncertainty Avoidance (UA) dimension of Hofstede's cultural theory

ESG information	Cultural dimension UA
Use of standardized ESG templates	High UA
Number of quantitative indicators vs narrative	High UA
References to relevant ESG standards (e.g. CSRD/ISO/VSME)	High UA
Formal risk management disclosures	High UA
Flexibility in ESG goals	Low UA

Finally, it can be concluded that knowledge management in the context of ESG disclosure is significantly influenced by the cultural environment in which the reporting process takes place. As shown in Table 3, the ESG information supporting disclosure transparency can be interpreted through the lens of Hofstede's cultural theory, particularly the dimensions of power distance and uncertainty avoidance, which shape how sustainability-related knowledge is generated, validated, and communicated within organisations.

Table 3: Cultural context in ESG disclosure characteristics

ESG knowledge characteristics	Cultural context
Highly standardized and opaque ESG disclosure	High PD and High UA
Rich narrative, stakeholders-oriented ESG disclosure	Low PD and Low UA
Consistent but rigid ESG reporting	High UA
Transparent but less standardized ESG reporting	Low UA

Consequently, these cultural dimensions i.e. PD and UA shape knowledge management process characteristics—including hierarchy, participation, formalisation, and control—that ultimately influence how sustainability knowledge is organised, validated, and communicated through ESG disclosure practices.

3. Methodology

To analyse the visibility of ESG-related knowledge dependencies across organisational and inter-organisational boundaries, this study adopts a conceptual and analytical research approach that combines knowledge management (KM) processes with cultural dimensions. The aim is to examine ESG disclosure as a structured flow of knowledge within and between organisations.

The methodological framework is based on the KM stages proposed by Jashapara (2011), which organise knowledge management activities into four interconnected phases: knowledge generation, knowledge evaluation, knowledge sharing, and knowledge leverage.

- Knowledge generation refers to the creation and acquisition of new knowledge through organisational learning, research activities, and collaboration with external partners.
- Knowledge evaluation involves assessing the relevance, reliability, and usefulness of information before it is integrated into organisational processes.
- Knowledge sharing focuses on the dissemination of knowledge through networks, communities of practice, and digital platforms.
- Knowledge leverage refers to the strategic use of knowledge to support organisational performance and decision-making (Jashapara, 2011).

These stages reflect widely recognised knowledge management cycles and are consistent with the principles of ISO 30401:2018, which emphasises the systematic management of organisational knowledge in order to support value creation and informed decision-making (International Organization for Standardization, 2018).

Building on this KM perspective, a SIPOC-based perspective was adopted as a KM mapping tool that structures ESG-related knowledge flows within organisations from their sources, through organisational processing, to disclosure outputs and stakeholder use (Table 4). According to the International Institute of Business Analysis (2015), SIPOC is traditionally used in process management, and for the purpose of this research is adapted to represent the transformation of sustainability-related information from its sources to its final disclosure. In this context, *knowledge sourcing* corresponds to the acquisition of ESG information from internal organisational units, suppliers, logistics partners, and other stakeholders. *Knowledge validation* reflects the evaluation stage, where ESG data are verified, approved, and subjected to quality control procedures. *Knowledge codification* involves documenting and standardising sustainability information, transforming tacit or dispersed knowledge into explicit formats suitable for reporting. *Knowledge sharing* captures the internal and external dissemination of ESG information through organisational networks and digital systems. Finally, *knowledge disclosure* represents the leveraging phase, where validated and codified information is integrated into ESG reports and sustainability datasets communicated to stakeholders.

Table 4: SIPOC and knowledge management focused on ESG disclosure

SIPOC Element	Knowledge Management in ESG context
Suppliers	Internal departments (operations, logistics, HR, compliance), external suppliers and logistics partners, industry associations, ESG data providers
Inputs	ESG-related data (environmental indicators, social metrics, governance information), tacit sustainability knowledge, regulatory requirements (CSRD, VSME), best practices from KM associations
Process	Knowledge sourcing → validation → codification → sharing → disclosure by integration into ESG reporting processes, structured through KM systems aligned with ISO 30401
Outputs	ESG disclosures, sustainability reports, standardized ESG datasets, decision-useful sustainability information
Customers	Regulators, investors, supply chain partners, customers, employees, and other stakeholders

By aligning SIPOC elements with KM stages, this methodological approach demonstrates the suitability of KM-based analysis for understanding ESG reporting processes, highlighting how sustainability-related knowledge is systematically generated (Suppliers), evaluated (Inputs and Outputs), structured (Processes-KM stages), and communicated (Customers) within organisational and inter-organisational contexts. This framework also enables the integration of Hofstede's cultural dimensions—particularly power distance and uncertainty avoidance—into the analysis, allowing the study to further explore how cultural context influences the structure and transparency of ESG knowledge flows.

4. Research Results

Within the proposed framework, the SIPOC model is used as a process-oriented analytical tool to systematically identify the key elements of ESG reporting: the suppliers of ESG data, the knowledge inputs, the core reporting processes, the disclosure outputs, and the information needs of stakeholders. This approach also helps explore how cultural dimensions, particularly power distance and uncertainty avoidance may influence the transparency and structure of ESG reporting processes. In addition, applying SIPOC as a knowledge flow mapping tool can support organisational learning and help align ESG disclosure practices with the principles of knowledge management systems described in ISO 30401.

To operationalise the analysis, Table 5 shows a structured content analysis approach based on a SIPOC-aligned coding scheme that captures key knowledge management activities reflected in ESG reports, including knowledge sourcing, codification, sharing, and disclosure. Through this analytical structure, ESG disclosures can be examined not only in terms of their content but also in terms of the underlying knowledge processes that shape sustainability reporting practices. The coded indicators are interpreted through the lens of Hofstede's cultural dimensions of power distance and uncertainty avoidance, enabling a culturally sensitive interpretation of ESG knowledge transparency. Within this framework, organisational culture acts as a contextual moderator, influencing how sustainability-related knowledge is collected, validated, formalised, and communicated within and across organisational boundaries.

Table 5: SIPOC-based knowledge flow structures and dependencies

SIPOC code	ESG-related knowledge	KM focus	Cultural dimensions (PD/UA)
Supplier – as ESG knowledge sources			
S1	Explicit inclusion of supplier contributions in ESG data	knowledge sourcing	Low PD
S2	A centralized approach to collecting ESG data across multiple tiers of local organizations	knowledge control and validation	High PD
S3	Provision of ESG training and guidance to suppliers to support ESG data sharing and reporting quality	knowledge sharing	Low PD
S4	Limited supplier ESG data disclosure	knowledge completeness and transparency	High PD
Inputs – as ESG knowledge content			
I1	Qualitative ESG data and indicators	Codified knowledge	High UA
I2	Qualitative and narrative ESG information	Tacit knowledge	Low UA
I3	References to existing ESG standards	Standardized knowledge	High UA
I4	Usage of international best practices	External knowledge	Low UA
Process – as ESG knowledge stages			
P1	Multiple internal approval layers for ESG data	Knowledge validation	High PD
P2	Digital systems and a repository for ESG data	Knowledge codification	High UA
P3	Cross-functional ESG teams coordinating reporting	Knowledge sharing	Low PD
P4	Formal ESG disclosure to internal and external stakeholders	Knowledge disclosure	High UA
Outputs – as ESG knowledge characteristics			
O1	High level of ESG datasets	Knowledge richness	Low PD
O2	Standardized ESG formats	Knowledge consistency	High UA
O3	Explicit ESG data limitations	Knowledge transparency	Low PD
O4	Vague ESG disclosure	Knowledge concealment	High PD
Customer – as ESG knowledge user			
C1	Stakeholders engagement described	Knowledge feedback loops	Low PD
C2	Investor-focused disclosure	Decision-usefulness	Low PD
C3	Regulator-driven disclosures	Knowledge compliance orientation	High UA
C4	Limited feedback mechanism	Weak learning	High PD

Source: Own work

The framework is grounded in a logical reasoning mechanism that explains ESG disclosure outcomes as emerging from the interaction between knowledge management processes and organizational culture, with disclosure quality reflecting the effectiveness of sustainability-related knowledge management. Lower levels of power distance are expected to reduce hierarchical barriers to information exchange, enabling decentralised knowledge sharing and greater employee participation, thereby enhancing transparency. Conversely, higher levels of uncertainty avoidance are theorised to promote formalisation and standardisation through rules, procedures, and management systems, shaping the structure and consistency of sustainability disclosures.

5. Discussion

The proposed framework builds on recent scholarship that increasingly views ESG disclosure as a knowledge-based organisational activity, rather than solely as a compliance-driven reporting exercise. Sustainability reporting typically requires the integration of diverse organisational knowledge sources, including operational data, environmental indicators, and stakeholder information. In this sense, ESG disclosure can be understood as a process through which sustainability-related knowledge is generated, structured, and communicated within and beyond the organisation. Recent studies suggest that knowledge management capabilities—such as knowledge integration, collaborative knowledge sharing, and structured information management—can support the development of sustainability strategies and reporting practices (Secundo *et al.*, 2017; Di Vaio *et al.*, 2021). From this perspective, ESG disclosure may be interpreted as the outcome of organisational mechanisms that transform dispersed sustainability knowledge into structured information accessible to stakeholders.

While ESG research has largely focused on reporting standards, performance indicators, and regulatory drivers, less attention has been given to the organisational processes through which sustainability information is generated and managed (Velte, 2021; Nicolò, Zanellato and Tiron-Tudor, 2020). In response, this study adopts a process-oriented perspective, integrating KM stages with a SIPOC-based framework to examine how knowledge sourcing, validation, codification, and dissemination shape ESG disclosure, thereby offering a complementary lens on how sustainability knowledge is developed and formalised within organisations.

Within this context, the SIPOC (Supplier–Input–Process–Output–Customer) logic is proposed as a useful analytical tool for mapping ESG-related knowledge flows. By clarifying the relationships between knowledge sources, internal processing mechanisms, and disclosure outputs, the SIPOC perspective can help illustrate how sustainability information moves across organisational and supply-chain boundaries. Such a structured representation may contribute to improving the transparency and traceability of ESG-related knowledge processes, particularly in complex organisational environments where multiple actors contribute to sustainability reporting.

An additional implication concerns the role of organisational culture, which is interpreted here as a moderating context rather than a direct determinant of ESG disclosure practices. Cultural characteristics – PD and UA - can influence organisational structures, communication patterns, and decision-making practices, thereby shaping the conditions under which knowledge management activities take place. Recent studies suggest that organisational culture may either facilitate or constrain knowledge sharing and collaboration, particularly in sustainability initiatives that require coordination across different organisational actors (Paolone *et al.*, 2024). From this perspective, cultural dimensions such as power distance and uncertainty avoidance may not directly determine the level of ESG transparency, but can influence the structure and effectiveness of knowledge management processes supporting sustainability reporting.

Several important challenges may arise when considering the applicability of Hofstede's cultural dimensions across different levels of organizations and society:

1. Limits of transferring Hofstede's cultural dimensions across levels: power distance (PD) and uncertainty avoidance (UA), originally defined at the societal level, present conceptual limitations when directly applied to organisational or sub-organisational contexts. Accordingly, this study treats them not as deterministic factors, but as analytical proxies for interpreting KM tendencies, while accounting for contextual variability.
2. Divergence between national and organizational cultural values highlights the non-homogeneous nature of culture across levels of analysis. Accordingly, PD and UA were interpreted as contextual influences rather than fixed determinants, with organizational culture acting as a moderating layer shaped by local practices, structures, and interactions.
3. Culture as a dynamic construct in the context of knowledge-sharing processes, including ESG-related flows, are shaped not only by cultural tendencies but also by governance structures, project dynamics, and relational factors. Accordingly, cultural dimensions are treated as interpretive lenses rather than predictive variables, reflecting the non-linear and context-dependent nature of their influence and reinforcing the exploratory character of the model.
4. Methodological challenges in measuring cultural dimensions introduces important constraints, particularly regarding the design and validity of instruments. This study addresses such limitations by relying on secondary data, where cultural dimensions are indirectly inferred through observable disclosure practices using a SIPOC-aligned coding approach. However, this indirect operationalisation may introduce bias and limits causal interpretation.
5. Implications for future research: given its conceptual nature, the proposed framework should be regarded as an exploratory model lacking empirical validation. To enhance robustness, future research should adopt mixed-method approaches—combining content analysis with surveys and qualitative methods—to enable more context-sensitive assessments and improve construct validity.

Empirical extensions using ESG reports and SIPOC-aligned coding schemes, particularly in multi-country comparative studies, could further clarify how cultural dimensions such as power distance and uncertainty avoidance interact with KM processes to shape ESG disclosure transparency across diverse contexts.

6. Conclusions

The paper explores the intersection between knowledge management, organizational culture, and ESG disclosure, proposing a conceptual framework that uses the SIPOC logic to illustrate how sustainability-related knowledge flows across organizational processes. By bringing together these perspectives, the study aims to offer a structured way of understanding how ESG information is generated, organized, and communicated within organizations. In doing so, it may provide useful insights for both researchers and practitioners interested in knowledge flows, sustainability reporting practices, and cross-functional collaboration, particularly in complex environments.

To support the conceptual discussion, the study proposes a structured content analysis approach based on a SIPOC-aligned coding scheme that captures key knowledge management activities reflected in ESG reports, including knowledge sourcing, codification, sharing, and disclosure. The interpretation of these indicators is guided by Hofstede's cultural dimensions of power distance and uncertainty avoidance, which help illustrate how cultural contexts may influence the ESG knowledge processes. In this perspective, lower levels of power distance may encourage more open knowledge sharing and reduce hierarchical barriers to transparency, while higher levels of uncertainty avoidance may support stronger formalization and codification of ESG knowledge, although potentially with less flexibility for adaptive sustainability learning.

By drawing attention to the role of cultural context in ESG-related knowledge management, the study contributes to ongoing discussions in the KM literature on how organizational conditions influence transparency and accountability in sustainability reporting. While the framework remains conceptual, it offers a foundation for future empirical research that could further examine ESG knowledge flows through multi-country comparative analyses of publicly available ESG and sustainability reports. Such research could help deepen the understanding of how cultural dimensions interact with organizational knowledge processes in shaping ESG disclosure practices.

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