



Green Management and Corporate Sustainability Outcomes (A Systematic Review of ESG, Governance, and Triple Bottom Line Integration)

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Abstract. *Green management has evolved from operational environmental practice into a strategic capability embedded in governance and organizational decision making. Yet evidence on its effects on corporate sustainability remains fragmented and context dependent. This study conducts a Systematic Literature Review following PRISMA 2020 using peer-reviewed studies indexed in Scopus and Web of Science. From 2,484 records, 32 studies were retained for in-depth synthesis. The evidence is organized into four themes: governance and leadership, sustainability reporting and disclosure credibility, operational integration through innovation, controls and human resource management, and sustainability outcomes involving trade-offs, non-linearities and risks. Green management generally improves ESG and Triple Bottom Line outcomes when supported by strong governance, credible disclosure and internal capabilities. However, the literature also identifies non-linear ESG-performance relationships, greenwashing risks and sectoral or institutional contingencies. Integrating resource-based, stakeholder, legitimacy, signaling and agency perspectives, the review conceptualizes green management as a multi-level organizational capability and identifies priorities for more comparable measurement, stronger causal designs and context-sensitive sustainability research.*

Keywords: *Corporate Governance; ESG Integration; Green Management; Sustainability Performance; Triple Bottom Line.*

1. INTRODUCTION

Green management has shifted from a compliance-oriented environmental function toward a strategic capability embedded in leadership, governance, and corporate decision making. Firms increasingly connect environmental management systems, green human resource management (GHRM), innovation, and supply-chain practices with long-term value creation and risk management (Sancha et al., 2022; Qalati et al., 2024). This transition positions sustainability as an organizational concern rather than a stand-alone environmental program.

This shift has occurred alongside the growing integration of Environmental, Social, and Governance (ESG) and Triple Bottom Line (TBL) perspectives. Evidence links green management with environmental performance, employee pro-environmental behavior, reputation, stakeholder engagement, and competitive positioning (Ansari et al., 2020; Yong et al., 2022; Elshaer et al., 2023). ESG adds governance, transparency, and accountability to the economic, social, and environmental orientation of TBL, making corporate sustainability increasingly dependent on both internal capabilities and credible external reporting (Maama & Marimuthu, 2023; Thawornsujaritkul & Boonnual, 2024).

Adoption is driven by interacting regulatory, market, and organizational pressures. Disclosure requirements, investor and consumer expectations, and alignment between sustainability goals and organizational culture can accelerate ESG-oriented practices (Ma,

2023; Ahmad et al., 2023; Bachtiar & Arief, 2024). Their effectiveness nevertheless varies across industries and regions because environmental exposure, regulatory scrutiny, institutional quality, and enforcement differ substantially (Alsayegh et al., 2020; Nguyen et al., 2022; Kaakeh & Kaakeh, 2025).

The empirical literature therefore remains inconsistent. Although many studies report positive associations between ESG practices and firm outcomes, others identify diminishing returns, inverted U-shaped effects, or results that vary by sector and institutional context (Teng et al., 2022; Dossa, 2025; Maji & Lohia, 2024). These differences suggest that green management outcomes depend not only on adoption intensity but also on governance quality, disclosure credibility, internal implementation mechanisms, and contextual contingencies (Liu & Song, 2025; Nugroho et al., 2024).

Against this fragmented evidence, this systematic literature review synthesizes how green management influences corporate sustainability outcomes through governance mechanisms, disclosure practices, and internal integration systems. It identifies recurring mechanisms, contingencies, and paradoxes across the literature and develops an integrated interpretation of green management through ESG and TBL lenses. The review thereby clarifies when green management is more likely to generate substantive sustainable value and where conceptual and methodological gaps remain.

2. LITERATURE REVIEW

Green management research draws on complementary theoretical perspectives that explain how internal capabilities and external governance pressures shape sustainability outcomes. Capability-based theories emphasize the strategic value of environmental resources and routines, while stakeholder, legitimacy, signaling, and agency perspectives explain why firms disclose, govern, and communicate sustainability commitments. Together, these perspectives provide the conceptual basis for interpreting ESG and TBL outcomes.

Figure 1 integrates these theoretical lenses by linking resource-based capabilities with governance and disclosure mechanisms and showing that sustainability outcomes remain contingent on organizational and institutional conditions.



Figure 1. Theoretical Foundations Of Green Management: Integrating Resource-Based And Governance-Oriented Perspectives.

Natural Resource-Based View (NRBV) and Resource-Based View (RBV)

The Resource-Based View (RBV) explains competitive advantage through valuable, rare, inimitable, and non-substitutable resources. In green management, environmental innovation, sustainability-oriented HRM, and green supply-chain practices can become firm-specific capabilities that improve efficiency, differentiation, and long-term performance (Sekimoto & Amran, 2025).

The Natural Resource-Based View (NRBV) extends this logic by treating ecological capabilities and resource efficiency as strategic assets. Environmental protection can therefore stimulate innovation rather than operate solely as a constraint, particularly when ecological commitments are incorporated into strategic planning and organizational routines (Ooi et al., 2024).

Together, RBV and NRBV explain how pollution prevention, product stewardship, sustainable development, and related green practices can generate ecological value while strengthening reputation, legitimacy, and competitive advantage (Daugaard & Ding, 2022).

Governance and Disclosure Mechanisms: Theoretical Foundations

Governance and disclosure are explained through four complementary lenses. Stakeholder theory views ESG disclosure as accountability to multiple constituencies (Alsayegh et al., 2020); legitimacy theory interprets disclosure as a response to societal expectations and legitimacy pressures (Cosma et al., 2022); signaling theory highlights credible disclosure as a means of reducing information asymmetry (Huang, 2021); and agency theory emphasizes monitoring and incentive structures that align managerial sustainability decisions with organizational interests (Khatib et al., 2022; Abdelkader & Gao, 2023).

ESG–Performance Linkages and Symbolic vs. Substantive Practices

A further theoretical issue concerns the ESG-performance relationship. Evidence increasingly suggests that benefits may be non-linear: moderate ESG engagement can improve performance, whereas underinvestment may fail to satisfy stakeholders and excessive investment may generate diminishing returns (Long et al., 2023). Industry conditions, market maturity, and stakeholder engagement further shape these effects (Zhang et al., 2022; Ren et al., 2023; Xu et al., 2024).

The literature also distinguishes substantive sustainability, in which environmental and social commitments are embedded in routines and performance systems, from symbolic practices that emphasize communication without equivalent organizational change. The latter creates greenwashing and legitimacy risks (Baah et al., 2021; Khatter, 2025). Governance and assurance mechanisms can reduce this gap by strengthening the credibility of sustainability claims (Zhen & Rahman, 2024).

These perspectives guide the thematic synthesis in the Results and Discussion section, where evidence is organized around governance and leadership, disclosure credibility, operational capabilities, and the conditional outcomes and risks of green management.

3. RESEARCH METHOD

This study employs a Systematic Literature Review (SLR) following the PRISMA 2020 framework to identify, screen, evaluate, and synthesize research on green management, ESG, and corporate sustainability. The approach supports transparent and reproducible evidence synthesis (Ed-Dafali et al., 2024; Rahman et al., 2025).

Search Strategy

Peer-reviewed literature was retrieved from Scopus and Web of Science because of their interdisciplinary coverage of management, sustainability, governance, and environmental research. Search strings combined terms for green management and environmental or sustainability management with ESG disclosure/reporting and TBL-related economic, social, and environmental outcomes.

Boolean operators and keyword clusters were used to connect these concepts. Searches were limited to English-language peer-reviewed journal articles within a 15-year period, balancing contemporary relevance with sufficient temporal coverage (Karki, 2025).

Inclusion and Exclusion Criteria

Studies were included when they examined organizational-level green management, assessed ESG or TBL-related sustainability outcomes, addressed governance or managerial

mechanisms, and were peer-reviewed articles indexed in Scopus or Web of Science. Studies were excluded when they were primarily technical or engineering oriented without managerial relevance, operated only at macro-policy level, were non-peer-reviewed or conference/editorial sources, or lacked sufficient methodological information for synthesis.

Screening and Selection Process

The PRISMA screening involved identification, screening, eligibility, and inclusion. The search produced 2,484 records; after removing 564 duplicates, 1,918 unique records were screened by title and abstract. Of these, 118 proceeded to full-text assessment and 32 met all criteria for final inclusion (Zhou et al., 2025; Rahman et al., 2025).

Multiple reviewers evaluated eligibility, with disagreements resolved through discussion. Included studies were coded by author, year, sector, country, method, theoretical lens, green management mechanism, governance feature, ESG/TBL outcome, and principal finding.

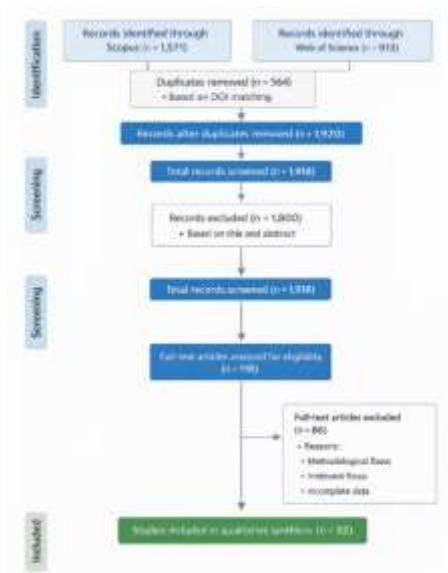


Figure 2. Prisma Flow Diagram.

Quality Assessment

Quality assessment considered selection bias, study design, confounding, data collection, and reporting transparency for empirical studies, while conceptual studies were assessed for theoretical clarity, originality, and contribution. Studies without adequate rigor or construct reporting were excluded (Rahman et al., 2025).

Impact of Methodological Choices

Using two databases broadened disciplinary coverage, while clustered search terms improved topical precision. PRISMA documentation made inclusion, exclusion, and coding decisions traceable and supported the credibility of the synthesis (Lima et al., 2024).

4. RESULTS AND DISCUSSION

Governance and Leadership Mechanisms Driving Green Management Effectiveness

The first theme comprises 12 studies examining how leadership commitment, board and ownership structures, firm-level governance, and institutional pressures shape green management effectiveness (Table 1). Across the evidence, governance acts as an enabling capability that converts sustainability priorities into organizational action while conditioning the credibility and direction of ESG and TBL outcomes.

Figure 3 summarizes three recurring pathways: behavioral translation through leadership, structural alignment through governance arrangements, and institutional interaction with external pressures.



Figure 3. Governance And Leadership Pathways Shaping Green Management Effectiveness.

Leadership is a prominent mechanism. Senior management commitment and green transformational leadership improve environmental outcomes and employee green behavior, often through GHRM as an implementation channel (Qalati et al., 2024; Cahyadi et al., 2023). In SMEs, managerial commitment and operational fairness also support green competitiveness under resource constraints (Campos et al., 2023).

Governance effects extend beyond leadership. Ownership structure and firm size condition the relationship between sustainable supply-chain practices and TBL outcomes, while CEO and firm-level characteristics explain substantial variation across ESG dimensions (Ramli et al., 2025; Jum'a et al., 2024; Crace & Gehman, 2023). Institutional pressures and crisis conditions can further reprioritize sustainability dimensions, and some studies reveal non-linear tensions between social and environmental strategies (Pasamar et al., 2025; Viera et al., 2024; Martin-Rocanin et al., 2025).

At the strategic level, governance is increasingly treated as integral to sustainability architecture rather than a background condition. Governance capital and differentiated oversight across TBL dimensions improve strategic alignment and long-term value creation (Cantele et al., 2024; Gallardo-Vázquez, 2025; Del Gesso et al., 2025). This pattern is

consistent with agency and stakeholder perspectives, which emphasize monitoring, accountability, and alignment between organizational decisions and stakeholder expectations.

Table 1. Governance and Leadership Mechanisms Driving Green Management Effectiveness.

Study	Mechanism / context	Main sustainability implication
Crace & Gehman (2023)	CEO and firm-level governance	Internal governance explains substantial ESG variance; effects differ by dimension.
Cantele et al. (2024)	Governance as sustainability pillar	Governance complements TBL and improves multidimensional measurement.
Pasamar et al. (2025)	Institutional pressure and strategy	Governance-mediated responses shape TBL outcomes, especially environmental performance.
Qalati et al. (2024)	Senior management commitment; GHRM	Leadership improves environmental outcomes directly and through GHRM.
Cahyadi et al. (2023)	Green transformational leadership; GHRM	GHRM mediates leadership effects on employee green behavior.
Ramli et al. (2025)	Ownership; green supply chain	Ownership conditions the green management-TBL relationship.
Gallardo-Vázquez (2025)	Strategic governance of CSR/TBL	Dimension-specific governance strengthens strategic alignment.
Del Gesso et al. (2025)	Governance capital	Governance capital supports long-term sustainable value creation.
Martin-Rocanin et al. (2025)	Social-environmental leadership balance	Governance effects can be non-linear across sustainability dimensions.
Viera et al. (2024)	Crisis decision making	External shocks reprioritize TBL dimensions toward social concerns.
Campos et al. (2023)	SME managerial drivers	Pragmatic governance and green practices support competitiveness.
Jum'a et al. (2024)	Firm size / governance capacity	Governance capacity conditions sustainable supply-chain outcomes.

Sustainability Reporting, Disclosure Credibility, and Stakeholder Pressure

The second theme synthesizes 11 studies on sustainability reporting, disclosure credibility, and stakeholder pressure (Table 2). The evidence shows that disclosure contributes to sustainability only when reporting is sufficiently balanced, transparent, and supported by governance mechanisms that make organizational claims credible.

Figure 4 distinguishes credible disclosure, which strengthens legitimacy and trust, from symbolic disclosure, which increases greenwashing and reputational risk.



Figure 4. Sustainability disclosure as a legitimacy and signaling mechanism under stakeholder pressure.

Several studies identify asymmetry in TBL communication, with economic or financial dimensions often receiving greater emphasis than environmental or social dimensions (Sánchez-Chaparro et al., 2022; Lock & Araujo, 2020). Disaggregated ESG measures likewise reveal that aggregated disclosure can conceal heterogeneous drivers and outcomes (Crace & Gehman, 2023).

Credibility improves when disclosure is reinforced by assurance, transparency, stakeholder engagement, and structured reporting. Such mechanisms strengthen strategic alignment and reduce skepticism, while weak TBL implementation increases the risk that reporting outpaces substantive performance (Gallardo-Vázquez, 2025; Pasamar et al., 2025; Dosmanbetova et al., 2025; Kwarto et al., 2024).

Alignment with SDGs and transparent business-model tools can further strengthen coherence and stakeholder understanding (Azmat et al., 2023; Singh & Rahman, 2021; Landoni & Trabucchi, 2024). Crisis conditions may nevertheless alter the priorities firms disclose, reinforcing the view that reporting is both a signaling mechanism and a context-sensitive governance practice (Viera et al., 2024).

Table 2. Sustainability Reporting, Disclosure Credibility, and Stakeholder Pressure.

Study	Disclosure / credibility mechanism	Main sustainability implication
Sánchez-Chaparro et al. (2022)	Website sustainability communication	Imbalanced TBL communication affects sustainability identity and reputation.
Lock & Araujo (2020)	Visual ESG communication	Profit-dominant communication increases symbolic sustainability risk.
Crace & Gehman (2023)	Disaggregated ESG disclosure	Aggregation can conceal heterogeneous drivers and outcomes.
Kwarto et al. (2024)	Reporting consistency	Weak TBL implementation increases greenwashing and legitimacy risk.
Azmat et al. (2023)	SDG-aligned reporting	Integrated reporting improves legitimacy and strategic coherence.
Singh & Rahman (2021)	Stakeholder-oriented SDG-TBL reporting	Stakeholder orientation strengthens sustainability alignment.

Study	Disclosure / credibility mechanism	Main sustainability implication
Viera et al. (2024)	Crisis disclosure priorities	External shocks reshape disclosed sustainability priorities.
Dosmanbetova et al. (2025)	ESG-financial transparency	Disclosure can strengthen financial sustainability under shocks.
Gallardo-Vázquez (2025)	Granular CSR disclosure	Disaggregation clarifies strategic sustainability effects.
Pasamar et al. (2025)	Institutional signaling	Reporting responds to coercive and normative pressures.
Landoni & Trabucchi (2024)	Business-model transparency	Transparent models improve stakeholder understanding of TBL integration.

Operational Integration: Innovation, Controls, HRM, and Capability Pathways

The third theme covers 11 studies on innovation, management controls, GHRM, learning, and other internal systems that translate sustainability strategy into operational outcomes (Table 3). These mechanisms explain why similar green intentions can produce different ESG and TBL results across firms.

Figure 5 summarizes the interaction of innovation, control systems, HRM, learning, and feedback as the internal architecture of operational integration.



Figure 5. Internal Capability Pathways Translating Green Management Into Sustainability Outcomes.

Innovation and learning are recurring mediators. Sustainability-oriented innovation, absorptive capacity, organizational learning, and supply-chain learning strengthen links between green orientation and TBL performance, although innovation uncertainty can delay or weaken short-term gains (Ahmad et al., 2024; Marzouk & El Ebrashi, 2024; Onofrei et al., 2024). Digital transformation similarly reshapes business-model capabilities and expands the traditional sustainability logic (Pérez-Moure, 2025).

GHRM and sustainable HRM institutionalize sustainability through employee participation, behavioral alignment, and long-term orientation (Cahyadi et al., 2023; Kutaula

et al., 2025). Management and project-control practices can also reinforce TBL objectives, but integration is not automatically beneficial: lean-sustainability combinations may generate over-optimization and negative interaction effects (Silva et al., 2022; Tran et al., 2024).

Evidence from SMEs and supply chains further shows that workable internal routines and evaluation systems matter as much as formal strategy. Operational fairness can enable sustainability in resource-constrained firms, whereas internal economic metrics may conflict with external social and environmental assessments (Campos et al., 2023; Gürül et al., 2024). Overall, the findings support RBV and NRBV arguments that sustainable value depends on the configuration and orchestration of internal capabilities.

Table 3. Operational Integration: Innovation, Controls, HRM, and Capability Pathways.

Study	Internal capability / mechanism	Main sustainability implication
Tran et al. (2024)	Lean-sustainability integration	Positive direct effects may coexist with adverse interaction effects.
Ahmad et al. (2024)	Sustainability-oriented innovation	Innovation improves TBL outcomes, but uncertainty can dampen returns.
Marzouk & El Ebrashi (2024)	Learning and absorptive capacity	Sequential learning mechanisms strengthen green orientation-TBL links.
Onofrei et al. (2024)	Supply-chain learning	Learning mediates entrepreneurial orientation and TBL performance.
Silva et al. (2022)	Agile project management	Integrated project practices reinforce social, environmental, and economic goals.
Latip et al. (2025)	Innovation capability	Innovation mediates organizational support and sustainability intention.
Cahyadi et al. (2023)	GHRM	GHRM translates leadership into employee-level green behavior.
Kutaula et al. (2025)	Sustainable HRM	Participation and long-term orientation strengthen sustainability performance.
Pérez-Moure (2025)	Digital transformation	Digital capability reshapes sustainability-oriented business models.
Campos et al. (2023)	Operational fairness	Simple integrated practices enable sustainability in resource-constrained SMEs.
Gürül et al. (2024)	Internal-external evaluation	Economic priorities may conflict with social/environmental assessments.

Outcomes, Trade-offs, Non-linearities, and Risks in Green Management and ESG Integration

The final theme consolidates 12 studies showing that green management and ESG integration do not generate uniformly positive or linear outcomes (Table 4). Performance varies with investment intensity, governance quality, sector, institutional setting, crisis conditions, and the balance between substantive practice and external communication.

Figure 6 depicts this conditional relationship through non-linear performance effects, contextual moderators, and risks such as greenwashing and over-optimization.



Figure 6. Trade-Offs, Non-Linearities, And Risk Dynamics In Green Management And ESG Integration.

Non-linearity is evident in inverted U-shaped or U-shaped relationships between ESG intensity, profitability, and environmental strategy adoption (Long et al., 2023; Martin-Rocanin et al., 2025). Disaggregated ESG analysis also shows that drivers differ by dimension and can be obscured by aggregate scores (Crace & Gehman, 2023).

Context changes both outcomes and priorities. Institutional pressure, crisis conditions, and strategy alignment generate uneven TBL effects, while external shocks can make ESG disclosure more valuable for resilience (Pasamar et al., 2025; Viera et al., 2024; Dosmanbetova et al., 2025).

A second risk arises when symbolic communication exceeds substantive implementation. Unbalanced disclosure can increase greenwashing and legitimacy risk, while excessive operational integration may create unintended trade-offs (Kwarto et al., 2024; Lock & Araujo, 2020; Tran et al., 2024). Innovation uncertainty and internal-external evaluation differences add further complexity (Ahmad et al., 2024; Gürül et al., 2024). These findings support a contingent interpretation of green management rather than a simple linear cause-effect model.

Table 4. Outcomes, Trade-offs, Non-linearities, and Risks in Green Management and ESG Integration.

Study	Risk / effect pattern	Main implication
Tran et al. (2024)	Paradoxical interaction	Combining lean and sustainability practices can erode overall TBL effects.
Martin-Rocanin et al. (2025)	U-shaped relationship	Social and environmental strategies may shift from tension to synergy.
Crace & Gehman (2023)	Asymmetric ESG effects	Aggregate scores can mask dimension-specific risks.
Kwarto et al. (2024)	Greenwashing	Incomplete TBL implementation increases reporting and legitimacy risk.

Study	Risk / effect pattern	Main implication
Lock & Araujo (2020)	Symbolic sustainability	Profit-heavy communication weakens substantive credibility.
Ahmad et al. (2024)	Delayed / indirect effects	Innovation uncertainty can reduce short-term sustainability gains.
Dosmanbetova et al. (2025)	Shock-contingent effect	ESG can improve resilience under external shocks.
Viera et al. (2024)	Crisis reprioritization	Crises alter the balance among TBL dimensions.
Gallardo-Vázquez (2025)	Dimension-specific effects	Single-dimension emphasis can distort overall sustainability outcomes.
Gürül et al. (2024)	Internal-external imbalance	Economic and socio-environmental assessments may diverge.
Pérez-Moure (2025)	TBL structural limitation	Digitalization motivates an expanded sustainability framework.
Pasamar et al. (2025)	Strategy-contingent effects	Institutional pressure yields uneven outcomes when strategy is misaligned.

Discussion

Across the four themes, green management is best understood as a multi-dimensional and context-contingent organizational capability. Governance establishes accountability and strategic direction; credible disclosure connects organizational practice with stakeholder trust; and internal capabilities translate sustainability commitments into operational outcomes. Weakness in any of these layers can create a gap between reported ESG engagement and substantive TBL performance.

Two cross-cutting findings are particularly important. First, ESG-performance relationships may be non-linear and depend on industry, institutional quality, stakeholder engagement, and crisis conditions (Tran et al., 2024; Long et al., 2023; Xu et al., 2024). Second, the distinction between symbolic and substantive sustainability is central: communication without operational integration increases greenwashing risk, whereas integration through HRM, innovation, controls, and business-model capabilities strengthens credibility and performance (Lock & Araujo, 2020; Kwarto et al., 2024; Cahyadi et al., 2023; Ahmad et al., 2024).

Methodologically, the field remains constrained by heterogeneous ESG ratings and construct definitions, limited comparability across settings, endogeneity, and insufficient longitudinal evidence (Pizzi et al., 2024; Ruan & Liu, 2021; Mendonca et al., 2025). Future research should therefore prioritize harmonized ESG measures, longitudinal and quasi-experimental designs, and sector- and region-specific analysis. Emerging analytical tools,

including machine learning and natural language processing, may also improve the detection of symbolic practices and the assessment of ESG risks (Sultana & Zeya, 2025).

5. CONCLUSION AND RECOMENDATION

This systematic literature review synthesized 32 studies on green management and corporate sustainability through ESG, governance, and TBL perspectives. The evidence shows that green management is most effective when sustainability is embedded in governance and leadership, supported by credible disclosure, and translated into daily operations through innovation, learning, control systems, and human resource management.

The review also demonstrates that sustainability outcomes are conditional rather than universally positive. Non-linear ESG-performance relationships, sectoral and institutional differences, crisis-driven reprioritization, measurement inconsistency, and greenwashing can weaken or redirect expected benefits. Green management should therefore be evaluated by the depth and coherence of organizational integration, not merely by the presence of ESG initiatives or disclosure.

Theoretically, the study integrates resource-based and governance-oriented perspectives to explain how internal capabilities interact with stakeholder, legitimacy, signaling, and agency mechanisms. Practically, it highlights the need for managers and policymakers to align governance, operations, and reporting so that sustainability claims are supported by substantive organizational change.

Future research should strengthen causal inference, harmonize ESG measures, expand longitudinal evidence, and examine sectoral and regional contingencies. Greater attention to digital analytical tools may also improve the identification of symbolic practices and the assessment of sustainability risks. These directions can help move the field from fragmented evidence toward more comparable and context-sensitive explanations of sustainable value creation.

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