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**ESG Integration as Strategic Capability: Telecommunications Firms
Under Institutional Pressure: Systematic Literature Review**

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Abstract

Purpose: This study investigates the role of Environmental, Social, and Governance (ESG) integration as a strategic capability that enhances sustainable competitive advantage in telecommunications firms, particularly under institutional pressures.

Methodology: A systematic review of 35 studies published between 2018 and 2026 was conducted, focusing on telecommunications firms integrating ESG practices. The review followed Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines, with data synthesized through thematic analysis to identify recurring patterns in ESG's strategic impact.

Findings: ESG integration is therefore shown in the existing literature as a strategic capability that contributes to enhanced operational stability, fosters

stronger relationships with stakeholders, and bolsters long-term competitive advantage. The review further found that firms leveraging ESG strategies proactively respond to regulatory, societal, and environmentally sustainable capabilities.

Unique Contribution to theory, Practice and Policy: The study offers new insights into how ESG practices drive sustainable competitive advantage. Practically, it provides guidance for firms integrating ESG as a strategic tool. Policy-wise, it advocates for clearer regulatory frameworks to support ESG adoption across sectors.

Keywords: *Institutional Pressure, Strategic Capability, ESG practices, Competitive Advantage, Telecommunication*

INTRODUCTION

Background of the Study

Telecommunications firms play a crucial role in today's digital infrastructure, serving as the backbone for communication, business, education, and healthcare (Oladele, 2024). However, these firms are increasingly under pressure to address their environmental impact, ensure social inclusion, and adopt transparent governance practices. This shift is driven by institutional pressures from governments, regulators, and social stakeholders, which demand that firms go beyond profit maximization and integrate Environmental, Social, and Governance (ESG) considerations into their corporate strategies (Chen & Lee, 2024). ESG practices are no longer just a trend but a necessity for firms to maintain long-term sustainability and competitiveness in a rapidly evolving digital world.

The integration of ESG practices within telecommunications infrastructure has become particularly urgent due to the 5G energy paradox. Although 5G technology is more energy-efficient per bit transmitted, its deployment has significantly increased overall energy demand because of the much higher density of base stations and antennas required. In 2026, 5G infrastructure has emerged as the primary driver of telecom carbon footprints, making ESG integration a mechanical necessity rather than a voluntary choice for operators. From an environmental perspective, ESG integration involves reducing carbon footprints, transitioning to renewable energy sources, and enhancing energy efficiency in network operations. Socially, ESG in telecommunications promotes inclusivity and ensures workers' rights, while governance focuses on ethical conduct, leadership integrity, and transparency in decision-making (Al Amosh & Khatib, 2026).

Institutional pressures surrounding ESG adoption are especially prominent in developed markets, where stricter environmental regulations are pushing firms to take social responsibility seriously. However, the challenges are magnified in emerging markets, where institutional frameworks for sustainability are often weaker. In Africa, the rapid digital transformation is driving socio-economic progress, yet many telecommunications firms face significant hurdles in embedding effective ESG strategies into their core operations.

In countries like Kenya and Uganda, a regulatory vacuum exists due to evolving and often weakly enforced regulatory frameworks. This creates uncertainty and limits local institutional pressures, forcing firms to rely heavily on international ESG standards driven by coercive pressure from global investors and partners, as local laws continue to lag (Akware, 2023). Safaricom's experience clearly illustrates this gap: while the company has made notable environmental progress, such as solarizing base stations and pursuing net-zero ambitions, governance elements (e.g., board oversight and anti-corruption measures) and deeper social commitments (e.g., comprehensive digital inclusion and community impact assessment) remain underdeveloped due to inconsistent regulatory support and enforcement (Oyugi et al., 2025). This disparity between ESG theory and practice in developing economies stems from diluted coercive, normative, and mimetic pressures under Institutional Theory, where resource constraints and competing priorities further hinder systematic adoption compared to more mature markets.

Theoretical Evaluation

ESG and Strategic Capability

Strategic capability refers to an organization's ability to leverage its unique bundle of resources and competencies to achieve and sustain competitive advantage (Barney, 1991; Prahalad &

Hamel, 1990). According to the resource-based view (RBV), resources and capabilities must be Valuable, Rare, Inimitable, and Organized (VRIO) to deliver sustained competitive advantage. While individual ESG practices such as solar-powered telecom towers have become common industry parity by 2026 and are no longer rare, what remains difficult to imitate is the internal coordination and organization (the “O” in VRIO) of these practices. This includes the ability to seamlessly integrate ESG into core operations through advanced systems such as AI-driven grid-load switching, real-time energy optimization across networks, and synchronized governance mechanisms that align environmental, social, and operational decisions.

Prahalad and Hamel (1990) complement this perspective by emphasizing core competencies as the collective learning and integrated skills within the organization, the "roots" that underpin products, services, and diversification. In the context of ESG integration, strategic capability extends beyond mere adoption of visible practices to the deeply embedded organizational routines and coordination mechanisms that make ESG initiatives truly valuable and inimitable. For telecommunications firms, this organized integration enables them to proactively address institutional pressures, achieve superior operational efficiencies, enhance reputational capital, and create differentiated offerings in a highly competitive, technology-driven industry (Lee et al., 2025). This theoretical foundation, rooted in the resource-based view and core competencies, underpins the present study, which explores how the effective organization and coordination of ESG practices contribute to telecommunications firms’ strategic capabilities and long-term competitiveness.

Stakeholder Theory

Stakeholder theory, initially developed by Freeman in 1984, posits that organizations must consider the interests and expectations of all their stakeholders, not just shareholders, to ensure legitimacy and long-term success (Freeman, 1984). Stakeholders include any individuals or groups who can affect or are affected by an organization’s actions, such as employees, customers, investors, and regulatory bodies. By addressing the concerns of these stakeholders, organizations can build stronger relationships and improve their reputational standing. In the context of telecommunications firms, ESG practices become essential for addressing the diverse needs of stakeholders. Integrating ESG principles into corporate strategies enables firms to reduce reputational risks, enhance customer trust, and improve relationships with employees, regulators, and investors (Chen & Lee, 2024). Therefore, for telecommunications companies, aligning with ESG expectations helps maintain legitimacy in an increasingly regulated environment, ensuring long-term stability and success.

Institutional Theory

Institutional theory, developed by Meyer and Rowan (1977), explores how external pressures from regulatory bodies, societal expectations, and industry norms influence organizational behavior. The theory suggests that organizations adopt practices to gain legitimacy and ensure survival. For telecommunications firms, ESG integration is a direct response to these institutional pressures, which include regulatory frameworks, environmental demands, and social expectations. However, when institutional pressures are weak, as is often the case in several African markets, firms may engage in decoupling or greenwashing, adopting the language and symbolic ESG policies without genuinely embedding the practices into their operations. This highlights that only the development of true strategic capability enables firms to move beyond superficial adoption and achieve substantive, value-creating ESG integration. The strength and nature of institutional pressures ultimately determine whether ESG practices remain ceremonial or become deeply embedded as strategic capabilities within the firm’s

operations and governance (Mutswiri, 2024). This review therefore applies institutional theory to examine how varying levels of external pressure shape the extent and authenticity of ESG integration in telecommunications firms, particularly in the African context.

METHODOLOGY (PRISMA)

The study utilized the systematic review which adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure a rigorous and transparent review process (Liberati et al., 2009). A comprehensive search was conducted across major databases, including Google Scholar, Scopus, and Web of Science, using relevant keywords such as "ESG integration," "telecommunications," and "strategic capability." The search focused on studies published between 2018 and 2026, with a specific emphasis on telecommunications firms that have incorporated ESG practices into their core strategies. A total of 35 studies were selected based on their relevance to the research questions, ensuring the inclusion of high-quality empirical data and addressing the relationship between ESG integration and firm performance. The methodology focused on identifying key themes rather than emphasizing longitudinal data, ensuring a broad understanding of ESG integration across diverse contexts.

The inclusion criteria for studies required that they focus on telecommunications firms, specifically examining the integration of ESG practices within firm strategy and assessing the effects of this integration on operational stability and competitive sustainability. Exclusion criteria eliminated studies that did not focus on telecommunications firms, lacked empirical data, or failed to link ESG to measurable firm performance. ESG practices, theoretical frameworks (such as stakeholder and institutional theories), and the institutional pressures (e.g., regulatory or societal) were examined. Thematic synthesis was employed to analyze the extracted data and identify recurring patterns. The quality of the included studies was assessed using a tailored checklist based on the Mixed Methods Appraisal Tool (MMAT). This evaluation focused on factors such as methodological transparency, analytical rigor, relevance to the review questions, and overall credibility. Only studies of medium to high quality were included to ensure the reliability and robustness of the synthesized findings, minimizing bias and enhancing the trustworthiness of the evidence on ESG, strategic capabilities and institutional pressures in banking.

Table 1: PRISMA Table

Stage	Description	Number of Records
Identification	Records identified through databases	249
Duplicates removed	Records removed	89
Screening	Records screened (titles/abstracts)	160
Records excluded	Irrelevant or off-topic	76
Eligibility	Full-text articles assessed	84
Full-text excluded	Did not meet inclusion criteria	49
Included	Studies included in review	35

A total of 35 articles were included in the final review after screening for relevance, quality, and methodological rigor. The reviewed articles confirmed four core themes in ESG integration: decarbonization of infrastructure, digital inclusion, circular economy practices, and governance transparency. Through these themes, telecom providers transform ESG into a resource-based strategic asset that delivers both cost advantages and competitive differentiation.

LITERATURE REVIEW

Research increasingly positions ESG integration as a core strategic capability that bolsters firms' long-term competitiveness and organizational resilience. Studies demonstrate that embedding ESG practices into corporate strategy enables organizations to achieve sustained performance improvements by addressing environmental and social risks proactively (Liang et al., 2022). This integration transforms ESG from a peripheral concern into a value-creating asset, allowing firms to anticipate and respond to regulatory pressures, market shifts, and evolving consumer demands more effectively than competitors (Khurshid et al., 2026). Moreover, strong ESG practices foster deeper stakeholder relationships and trust, which contribute to greater operational stability and reduced exposure to reputational or market volatility (Liang et al., 2022). Collectively, these insights highlight ESG's role as a strategic lever for building enduring competitive positioning in uncertain environments.

Institutional Theory provides a robust framework for understanding how external pressures compel organizations to adopt and integrate ESG practices. The theory posits that firms conform to institutional norms through coercive (regulatory mandates), normative (professional and societal expectations), and mimetic (imitation of successful peers) mechanisms to gain legitimacy and ensure survival (DiMaggio & Powell, 1983; Scott, 2008). In the ESG domain, formal regulatory frameworks and informal societal expectations exert significant influence, driving firms to embed sustainability into their strategies rather than treating it as optional compliance (Ding & Wang, 2025; Zhang & Zhu, 2025).

Empirical evidence underscores the positive effects of robust ESG practices on operational stability and long-term competitive sustainability. Firms with strong ESG commitments exhibit reduced volatility and improved resilience, particularly in regulated sectors where external disruptions pose ongoing threats (Lin, 2024; Xu et al., 2024). By prioritizing ESG, organizations enhance innovation, resource efficiency, and stakeholder loyalty, which collectively contribute to durable competitive advantages and enduring success (Zhan et al., 2026).

In the telecommunications sector, ESG is far from a superficial "trend" or feel-good initiative; it is evolving into a genuine strategic capability that directly influences operational viability, market positioning, and access to capital. Telecom firms operate in a capital-intensive, high-impact industry characterized by extensive physical infrastructure and broad societal reach. In 2026, the biggest ESG risk for telecom operators is no longer their own direct energy consumption, but Scope 3 emissions embedded in the hardware, components, and devices procured from global vendors. Effective supply chain governance has therefore become a critical strategic imperative. Literature identifies four core themes in telecom ESG integration: decarbonization of infrastructure, supply chain governance (Scope 3 emissions), circular economy practices, and market development through digital inclusion.

Through decarbonization of infrastructure, telecom providers integrate renewable energy sources and AI-driven energy optimization with traditional network assets to lower costs and achieve net-zero alignment. Supply chain governance addresses the dominant Scope 3 emissions challenge by enforcing strict environmental and social standards across suppliers, transforming procurement into a source of competitive advantage. Circular economy practices focus on responsible e-waste management, refurbishment, and recycling of network equipment and customer devices.

Crucially, market development through digital inclusion has emerged as a powerful strategic capability, especially in emerging markets. Far from being mere CSR, connecting rural areas,

low-income communities, and underserved populations represents long-term revenue insurance. By expanding connectivity, telecom firms deliberately build their future customer base, open new markets, and secure sustained revenue streams while addressing social objectives. Firms that strategically orchestrate these four themes convert ESG from a compliance burden into a resource-based strategic asset. This delivers cost efficiencies, secures a social license to operate, attracts ESG-focused investors, and positions them for resilient growth and sustained market leadership.

THEMATIC FINDINGS

ESG as Strategic Capability

ESG practices are increasingly integrated into firms' core strategies as strategic capabilities that enable organizations to achieve and sustain competitive advantage in volatile, uncertain, and regulatory-intensive environments. As global regulations tighten and societal expectations rise, telecommunications firms and other industries leverage ESG as a key strategic tool to adapt to external pressures, enhance operational stability, mitigate risks, and drive long-term performance (Khurshid et al., 2026). Liang, Lee, and Jung (2022) argue that integrating ESG strategies is essential for achieving sustainable management performance, building resilience against environmental and social risks.

The inimitable core of this strategic capability in telecoms lies in data-centricity. Unlike generic "being green" initiatives (such as solar panels or supplier codes that competitors can readily copy), telecommunications operators possess unparalleled access to massive, real-time data streams generated by their networks; billions of data points daily from thousands of base stations, user traffic patterns, IoT sensors, core network telemetry, and environmental monitors. This data asset forms the foundation of a rare and difficult-to-imitate strategic capability under the VRIO framework (Value, Rarity, Imitability, Organization).

By applying advanced analytics, AI, and machine learning directly to these proprietary network data flows, telecoms can dynamically optimize power consumption across base stations adjusting output in real time based on traffic loads, weather, time of day, and user density. This yields substantial reductions in energy use and carbon emissions while maintaining service quality, directly translating environmental performance into cost savings and regulatory compliance advantages.

Few industries generate and control data at the scale and granularity of telecom networks. The combination of geographic coverage, always-on infrastructure, and granular usage telemetry creates a unique dataset that cannot be easily replicated by non-telecom players or new entrants. Competitors cannot quickly imitate this capability because it depends on owning and operating the physical network infrastructure that continuously produces the data. Legacy systems, spectrum licenses, tower locations, and the historical accumulation of network-specific telemetry create path-dependent barriers. A rival building similar models would require not only equivalent infrastructure investment but also years of operational data history and integration with proprietary network management systems making replication costly, time-consuming, and imperfect. This data-driven optimization of energy across base stations is thus causally ambiguous and socially complex, satisfying VRIO's inimitability criterion far beyond superficial ESG reporting or one-off green projects.

Leading telecom firms organize around this capability by embedding data science teams within network operations, creating cross-functional ESG-tech platforms, and aligning incentives to treat network data as a strategic ESG asset rather than a mere operational byproduct.

This data-centric ESG capability allows telecommunications firms to anticipate shifts in regulations and consumer preferences more effectively than peers, fostering stronger stakeholder relationships (Liang et al., 2022). Khurshid et al. (2026) highlight how embedding ESG into business models powered here by network data enables superior navigation of external shocks, turning potential disruptions into opportunities for transformation. Yang and Yang (2022) further support that strategic ESG reporting and transparency, enriched by verifiable data-driven metrics from network optimization, enhance stakeholder engagement and performance.

Tufan and Mert (2023) show that absorptive capacity and strategic agility amplify these benefits; telecoms with strong data pipelines can rapidly assimilate new information (e.g., regulatory changes or climate models) and apply it to their optimization algorithms. Similarly, Bhadra et al. (2024) demonstrate that innovation and agility in integrating sustainability practices drive superior outcomes precisely what data-centric network management achieves in telecom through continuous, algorithmically guided improvements. In the Kenyan context, Oyugi et al. (2025) reinforce that transparent ESG disclosure, grounded in tangible operational data, strengthens legitimacy and financial performance on the Nairobi Securities Exchange.

Thus, when ESG is treated as a strategic capability in telecommunications, its true power and inimitability derive from data-centricity: using proprietary, high-volume network data streams to intelligently optimize power across thousands of base stations. This goes well beyond generic sustainability efforts, delivering measurable environmental gains, cost efficiencies, resilience, and a sustained competitive edge that is exceptionally difficult for competitors to replicate. Telecom firms that fully organize around this data-driven approach are best positioned to thrive amid evolving technological, regulatory, and societal demands.

Institutional Pressures and ESG Integration

While the preceding analysis underscores the multifaceted role of institutional pressures, both formal and informal, in driving ESG adoption and integration across contexts like Chinese listed firms (Ding & Wang, 2025), disruptive digital innovation (Zhang & Zhu, 2025), emerging-market multinationals (Lee et al., 2025), international joint ventures (Duan et al., 2025), and African agribusiness (Mutswiri, 2025), a more critical lens reveals important limitations in how these pressures translate into genuine sustainability gains, particularly through digital mechanisms.

A key acknowledgment is warranted regarding Zhang and Zhu's (2025) emphasis on real-time data as a cornerstone of digital institutional pressures that unlock ESG value. Real-time data streams enabled by digital platforms for monitoring, reporting, and stakeholder engagement can indeed facilitate compliance and operational efficiencies, as seen in their example of telecommunications firms. However, such data can also be leveraged to mask underlying poor performance when the algorithms governing collection, aggregation, or visualization lack full transparency. Opaque or proprietary algorithms may allow selective filtering of metrics, real-time "greenwashing" through curated dashboards, or algorithmic smoothing that downplays negative trends, creating an illusion of progress without verifiable accountability. This risk is amplified in high-pressure environments where firms prioritize legitimacy over substance, turning digital tools into instruments of symbolic rather than substantive change.

A broader critique of the reviewed literature centers on whether these digital pressures (and the institutional forces amplifying them) genuinely drive superior ESG outcomes or primarily enable faster, more polished reporting. Studies such as Ding and Wang (2025), Lee et al. (2025), and Zhang and Zhu (2025) optimistically portray digitalization as an enhancer of

compliance, innovation, and stakeholder engagement, often framing it as a pathway to competitive advantage and long-term performance. Yet this perspective risks overemphasizing adoption and integration metrics while under-examining decoupling, the well-documented phenomenon where enhanced reporting outpaces actual environmental, social, or governance improvements. Real-time data and digital transformation may accelerate disclosure cycles and improve data granularity, but without mandatory third-party verification, standardized audit trails, or open-source algorithmic scrutiny, they can incentivize superficial compliance: firms report more frequently and appear more responsive without addressing root causes like supply-chain emissions, labor practices, or governance failures.

Empirical gaps in the literature further weaken claims of superior outcomes. While digital capabilities are shown to moderate ESG strategy in emerging markets (Lee et al., 2025) or support informal pressure responses (Duan et al., 2025; Mutswiri, 2025), few of these works rigorously isolate causal impacts on real-world metrics such as verified emission reductions, biodiversity gains, or social equity improvements versus proxy indicators like reporting volume or ESG scores. Emerging evidence from related research highlights persistent greenwashing risks: companies exploit data complexity and real-time visualization to obscure deficiencies, with textual obfuscation or selective metrics becoming easier under digital regimes. Institutional pressures may compel faster reporting, but they do not inherently guarantee accountability if regulatory enforcement remains weak or if market incentives reward perception over performance. In short, the literature convincingly demonstrates that digital pressures accelerate ESG integration into strategy (often for legitimacy), yet it falls short of proving they deliver better outcomes beyond more efficient, investor-friendly reporting. Future scholarship should prioritize longitudinal studies with outcome-based audits and transparency benchmarks to distinguish symbolic digital conformity from transformative impact.

Impact of ESG on Operational Stability and Competitive Sustainability

The integration of ESG practices into corporate strategies has increasingly become a key determinant of long-term competitive advantage. As firms face heightened regulatory scrutiny, consumer demands for sustainability, and rising global concerns about environmental and social issues, the question arises: How does ESG integration contribute to a firm's ability to sustain its competitive position in the marketplace? Lin (2024) explores the relationship between corporate ESG performance and long-term sustainable competitive advantage. The study suggests that firms that invest in strong ESG performance can develop a unique competitive edge by differentiating themselves from competitors, improving operational efficiencies, and building stronger relationships with stakeholders. The key question here is whether ESG adoption is uniformly beneficial across industries or if its impact varies depending on the sector and external pressures. She argues that ESG strategies that focus on long-term sustainability rather than short-term compliance are more likely to lead to sustained competitive advantages. For telecommunications firms, for example, ESG can be used to develop more efficient network infrastructures, reduce energy consumption, and meet evolving consumer demands for green and responsible services, ultimately driving competitive durability.

Zhan, Zhan, and Li (2026) provide a dual perspective on the relationship between ESG performance and enterprise competitiveness, emphasizing supply chain stability and competitive strategy. They suggest that ESG performance is not just about compliance or risk management; it also plays a critical role in strengthening supply chain resilience. ESG practices help firms mitigate risks associated with environmental disruptions, regulatory changes, and social unrest, which in turn helps them maintain stable operations and long-term

competitiveness. Their argument is particularly relevant for global industries, where disruptions in one part of the supply chain can have cascading effects on overall performance. Firms that embed ESG principles throughout their supply chains tend to develop more resilient and adaptable operations, which can enhance their competitive durability in an unpredictable market environment.

Xu et al. (2024) contribute to this discussion by linking ESG performance with corporate resilience. Their empirical study highlights that firms with robust ESG strategies are better equipped to navigate economic downturns, environmental catastrophes, and social upheaval. This resilience translates directly into competitive durability, as resilient firms can sustain operations and maintain their market positions when facing external shocks. For instance, firms in the telecommunications industry that focus on governance and social inclusion may find that these elements help them build trust with regulators and communities, leading to a more favorable operating environment.

Dkhili (2024) further emphasizes the moderating role of competitive advantage in linking ESG to market performance. His study finds that ESG adoption significantly affects market performance, but its impact is stronger for firms that already possess a competitive advantage. This finding raises an important question: Does ESG have a more pronounced effect on companies that are already leaders in their sectors, or can it help lagging firms catch up to the competition? For firms striving to catch up, ESG may offer an opportunity to differentiate and build credibility, but its effect on competitiveness will depend on how effectively it is integrated into the broader business strategy. Farag (2026) concurs with this argument, stating that sustainability-driven business excellence, facilitated through ESG integration, can unlock long-term competitiveness by aligning environmental and social goals with business objectives. He suggests that businesses must continuously innovate and adapt their ESG strategies to maintain their competitive edge, rather than merely fulfilling basic compliance requirements.

In Kenya, Mwika (2025) and Atieno et al. (2025) explore how integrating sustainability into corporate strategies affects firms' access to finance, resilience, and overall sustainability. The studies underline the importance of ESG in ensuring that firms remain competitive by attracting investment and ensuring long-term financial health. This integration leads to better asset quality and more stable financial performance, further strengthening competitive durability. Therefore, ESG integration is more than a compliance tool since it is a dynamic and strategic capability that contributes to long-term competitive durability. ESG practices enhance operational resilience, improve stakeholder relationships, and create new opportunities for innovation and differentiation. However, the full potential of ESG as a driver of competitive advantage depends on how firms strategically align ESG goals with their core business objectives, supply chain strategies, and resilience planning.

Discussion

Theoretical Contribution

Drawing from institutional theory, the study underscores how external pressures such as regulations and societal expectations compel firms to adopt ESG practices, not merely for compliance but as strategic responses that build resilience and long-term sustainability. Firms that embed ESG within their core operations can effectively mitigate risks and adapt to external disruptions, which is crucial for maintaining competitive advantages. The study also emphasizes the role of stakeholder theory, highlighting that aligning with ESG principles enhances legitimacy and strengthens relationships with critical stakeholders (Chen & Lee,

2024). Furthermore, it is evident that the competitive advantages derived from ESG are amplified when firms have the capability to leverage digital tools for better ESG reporting and supply chain management, as indicated by Lee et al. (2025) and Zhang & Zhu (2025). Thus, ESG is not just a compliance measure but a strategic capability that, when integrated thoughtfully, fosters resilience and strengthens competitive durability in an increasingly complex and regulated business environment.

Empirical Contribution

This study offers significant empirical contributions to the understanding of how ESG integration impacts competitive durability, particularly in telecommunications firms. The research synthesizes findings from multiple studies that emphasize the role of ESG strategic capability, which enables firms to respond to institutional pressures and achieve long-term competitive advantages. Empirical studies by Lee et al. (2025) and Zhang & Zhu (2025) further support this view, showing that firms leveraging digitalization to report and manage ESG initiatives are better positioned to enhance their competitive sustainability in regulated markets. Furthermore, the study empirically reinforces the view that ESG integration is not merely a compliance tool, but a strategic capability that firms can strategically deploy to build long-term resilience, a finding supported by Xu et al. (2024) and Dkhili (2024). Therefore, this study empirically contributes to the growing body of knowledge by showing how ESG integration functions as a competitive asset, fostering resilience, and sustaining competitive positions for firms in both developed and emerging markets.

Managerial Contribution

The findings from this study offer valuable managerial implications for executives in telecommunications and other industries seeking to integrate ESG practices into their corporate strategies. One of the key managerial contributions is the demonstration that ESG integration can serve as a strategic capability, enhancing long-term competitive durability. Managers can leverage ESG not only to comply with regulatory requirements but also as a tool for innovation and strategic advantage. This study also suggests that managerial focus should extend beyond the basic implementation of ESG practices to continuously adapting and refining ESG strategies in response to changing external pressures. Moreover, managers in emerging markets should recognize the dual nature of institutional pressures formal regulations and informal societal expectations and tailor their ESG strategies to address both.

Policy Implications

The findings of this study have significant policy implications for governments, regulatory bodies, and industry associations seeking to promote effective ESG integration in telecommunications and other sectors. Policymakers should prioritize the development and adoption of a Harmonized Digital Taxonomy a unified, machine-readable classification system for ESG factors that aligns environmental, social, and governance metrics with digital reporting standards across jurisdictions. This taxonomy would reduce fragmentation, enhance comparability for investors and stakeholders, and enable seamless data interoperability for multinational firms operating in diverse regulatory environments. In parallel, clear and comprehensive regulatory frameworks should not only mandate ESG disclosures but also incentivize firms to embed ESG practices into their core strategies. Managers should be required to integrate ESG metrics directly into their enterprise resource planning (ERP) systems in real time, rather than treating them as after-the-fact additions to annual reports. This operational-level integration would drive genuine accountability, improve decision-making, and allow for continuous monitoring and performance optimization. Finally, governments

should foster structured collaboration between the private sector, civil society, and technology providers to refine the Harmonized Digital Taxonomy and address broader social and environmental challenges through shared digital platforms and data ecosystem

Limitations and Future Research

While this study contributes to understanding the role of ESG integration in competitive sustainability, further research is needed to explore different sectors, geographical contexts, and internal organizational factors. Longitudinal studies and comparative research will also help provide a more comprehensive understanding of how ESG practices influence firm performance in the long run.

CONCLUSION AND RECOMMENDATIONS

Conclusion

In conclusion, this study highlights the critical role of ESG integration as a strategic capability that enhances the sustainable competitive advantage of telecommunications firms. By embedding ESG practices into their core strategies, firms can respond proactively to institutional pressures, build resilience, and improve long-term performance. The findings underscore that ESG adoption is not merely a compliance tool but a strategic asset that drives operational stability, strengthens stakeholder relationships, and enhances competitive positioning, particularly in response to evolving regulatory and societal expectations. The study contributes to the growing body of knowledge on ESG by linking it to strategic capabilities, showing how firms can leverage ESG to achieve sustained competitive advantages.

Recommendations

Future research should explore ESG integration across diverse industries, regions, and organizational contexts to deepen our understanding of its long-term effects. Ultimately, ESG represents a key driver of business resilience and success in today's complex, rapidly changing global market.

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